500 Kent Avenue EIS

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Con Edison Periodic Review Report (October 2017 – October 2018)

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ASH PIT REMEDIAL ACTION WORK PLAN

FORMER KENT AVENUE GENERATING STATION

500 KENT AVENUE
BROOKLYN, NEW YORK

PROJECT NO. 126649

September 2009

Submitted to:

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Long Island City, New York

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GLOSSARY OF TERMS

AOC	Area of Concern
bgs	below ground surface
DRO	Diesel Range Organic compounds
ft.	feet
FSSR	Feasibility Study Summary Report
HASP	Health and Safety Plan
MGP	Manufactured Gas Plant
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MDL	method detection limit
MSDS	Material Safety Data Sheet
mg/kg	milligrams per kilogram
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCBs	Polychlorinated Biphenyls
PID	photoionization detector
ppm	parts per million
psi	pounds per square inch
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RISR	Remedial Investigation Summary Report
Shaw	Shaw Environmental Inc.
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

1.0 Site Location and Description

The former Con Edison Kent Avenue Generating Station (the "Site") is located at 500 Kent Avenue, Brooklyn, New York. As shown on **Figure 1**, the Site is bounded by Division Avenue to the north, the Brooklyn Navy Yard to the south, Kent Avenue to the east and Wallabout Channel to the west. The total area of the Site is approximately 4 acres; of which approximately 2.6 acres was the location of an electrical power generating station housed in a seven to nine story structure; the structure has recently been demolished. The remaining approximate 1.4 acres consists of a vacant lot on the southern portion of the property, a concrete walkway and bulkhead in the western portion, and a small concrete/unpaved side yard in the northern portion. The vacant lot is the site of a former electrical generating station that was dedicated to the generation of power for the local subway system. Although the lot is vacant, the foundation and basement of the subway generating station remain below grade.

The ash pit is located in the northwestern portion of the Site, between the former generating station building and Wallabout Channel, an inlet of the East River. **Figure 2** provides a site plan. The pit appears to have been constructed in the late 1920s or 1930s. It is constructed of poured concrete walls underlain by iron reinforcing bars. The dimensions of the pit are approximately 68 ft. by 27 ft.; available engineering drawings indicate that the pit is approximately 24 feet deep, and suggest the presence of a concrete bottom. It is currently filled with sludge, trash and debris, and standing water. According to Con Edison personnel, during the time the ash pit was in operation, ash from the station boilers was mixed with water and discharged to the pit through one or more sluice gates. A pump house was formerly located adjacent to the north side of the pit; the pump house location is currently a separate pit adjacent to the ash pit, and is filled with debris and weeds. Open-ended pipes are visible on the north, east, and south ash pit walls. Three additional open-ended pipes are visible on the Wallabout Channel (west) side of the former pump house location. **Figure 3** provides a scaled plan view, and a cross-sectional view of the south wall of the pit. Available construction plans indicate that the bottom of the pit is approximately 24 feet bgs; however only the top 10 feet are visible at the interior of the pit above the water and mud line.

1.1 Contemplated Redevelopment Plan

Con Edison currently has no plans to use the property for utility operations, but is considering marketing it for sale. Based on recent property developments in the Kent Avenue site area, it is anticipated that a buyer would redevelop the site for residential and/or commercial use.

1.2 Description of Surrounding Properties

Adjacent to the Site on the north is Division Avenue; beyond this dead-end street is a commercial lumber yard. Adjacent to the south is the former Brooklyn Navy Yard property, of which the portion adjacent to Con Edison's Kent Avenue site was the Nassau Gas Works, a former MGP site that is being addressed by National Grid. This adjacent property is currently occupied by the New York City Sanitation Department and is used for salt storage. To the east is Kent Avenue; beyond the avenue is a public park. To the west is Wallabout Channel, a tidal tributary to the East River. The neighborhood is currently a mix of commercial, industrial, and residential uses; however historical land use was primarily industrial.

2.0 Scope of Remedial Action

This RAWP summarizes the results of remedial investigations to date, summarizes the results of a feasibility study completed for a specific remedial technology, and outlines a proposed course of remedial action for the ash pit, considered a single Area of Concern (AOC), or operable unit at the Site. A second AOC consists of five locations of contaminated soil to the south, southeast, southwest, and north of the former generating station building. Plans for the remediation of this second operable unit will be outlined in a separate RAWP.

3.0 Description of Site Investigations to Date

3.1 December 1999 Initial Investigation

In December 1999 and February 2000, Lawler, Matusky, and Skelly (LMS) performed a limited-scope investigation of the ash pit. Using a Ponar dredge sampler, one surficial sludge sample "AP-1" was collected from the west side of the pit, and a (second) surficial sludge sample "AP-2" was collected from the pit's eastern side. The collected samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Laboratory analysis reported:

- Total VOC concentrations of 0.708 mg/kg and 0.134 mg/kg in AP-1 and AP-2, respectively;

- Total SVOC concentrations of 23.06 mg/kg and 52.92 mg/kg in AP-1 and AP-2, respectively. It should be noted that all SVOCs except one were reported at either below MDLs or at estimated values below the quantitation limit. Bis (2-Ethylhexyl) phthalate was reported at 13.4 mg/kg in AP-1 and at 8.44 mg/kg (estimated value) in AP-2. Shaw notes that this compound is frequently reported in environmental chemical analyses, and is often attributed to contamination introduced in the field or in the laboratory. One reference indicated that bis (2-Ethylhexyl) phthalate may leach from plastic products used in analytical laboratories (e.g. tubing, containers)[1].

- Lead was reported at 871 mg/kg and 599 mg/kg in AP-1 and AP-2, respectively.

- PCB concentrations of 68.5 mg/kg and 37.7 mg/kg were reported in AP-1 and AP-2, respectively. The 68.5 mg/kg concentration exceeds the TSCA threshold of 50 mg/kg for this compound.

During the December 1999 event, a sheen formed on the surface of the water of the ash pit during the sampling procedure. NYSDEC was notified of this observation, and NYSDEC Spill #9910993/Con Edison E2MIS #129308 was assigned to the incident.

LMS performed a follow-up investigation in March and April 2000, consisting of the collection of a water sample from the pit, and eight deeper sludge samples from four sampling locations points within the pit, collected using a Vibracore sampling string. The LMS report indicates that, prior to the use of Vibracore sampling, recovery of sludge samples below the top of the sludge surface was attempted using a geoprobe drilling string; however the attempt was not successful.

[1] Montgomery, 2007 (see References in Attachment 10)

Samples from four locations were submitted for analysis of:

- TCL VOCs
- TCL SVOCs
- TAL Metals
- TCLP VOCs
- TCLP SVOCs
- RCRA Characteristics
- Oil Fingerprinting

Laboratory analysis of the deeper sludge samples reported the following results:

- One VOC, chlorobenzene, was reported above MDLs by the TCL analysis at 9.8 mg/kg in sample KAP-02, and by the TCLP analysis in the same sample at 0.051 mg/L. Carbon disulfide was reported in five samples at two locations at concentrations ranging from 0.0032 mg/kg to 0.234 mg/kg.

- The SVOC analysis reported the detection of several compounds above MDLs in all samples. Total SVOCs, according to the LMS tabulated summary, ranged from 0.7926 mg/kg to 85.036 mg/kg; however these total concentrations include several estimated concentrations below the quantitation limit. One SVOC, 1,4-dichlorobenzene was reported by the TCLP analysis at 0.41 mg/L.

- Concentrations of all metals were below the RCRA toxicity threshold values as reported by the TCLP analysis. Several metals were reported above MDLs by the TAL Metals analysis, including arsenic, lead, nickel, and vanadium.

- RCRA characteristic results did not report any hazardous characteristics.

- PCB concentrations ranged from non-detect to 31.4 mg/kg.

- Lubricating Oil, Total Hydrocarbons, and #2 Fuel Oil/Diesel were detected in each of the samples. Lubricating oil concentrations ranged from 92 mg/kg to 8,420 mg/kg. Total Hydrocarbon concentrations ranged from 130 mg/kg to 25,300 mg/kg. #2 Fuel Oil/Diesel concentrations ranged from non-detect to 1,410 mg/kg.

One sample of ash pit water was collected in April 2000. The sample was analyzed for the same analytes listed above in addition to pesticides. Pertinent analytical results for the water sample include:

- Five SVOCs were detected above MDLs; the highest concentration was reported for the compound 1,4-dichlorobenzene at 0.43 µg/L. VOCs were reported as non-detect.

- The TCLP analysis for organic compounds reported one SVOC, 1,4-dichlorobenzene at 0.0023 mg/L; VOCs were below MDLs.

- TCLP Metals were all below toxicity threshold values. Several metals were reported above MDLs by the TAL Metals analysis, including arsenic, lead, and vanadium.

- One PCB, Aroclor 1260 was reported at 30 µg/L.

Figure 4 illustrates the location of samples collected by LMS in December 1999 and April 2000.

3.2 November 2006 Underwater Investigation

In November 2006, an underwater investigation and condition survey of the property bulkhead on Wallabout Channel was performed by M.G. McLaren, P.C., an engineering consultant to Con Edison. A report was provided to Con Edison in December 2006 and reviewed by Shaw to evaluate information pertinent to the ash pit. The inspection included an assessment of the physical condition of the ash pit. The condition of the ash pit was rated "poor"; severe scaling of the interior walls was noted, and severe scaling and some minor cracking were noted on the outboard wall of the pit facing Wallabout Channel. The report recommended the investigation of permit requirements for the filling of the ash pit and utilizing the area as a means of egress for vehicles.

3.3 2007 Remedial Investigation

In 2007, Shaw performed a two-part remedial investigation in accordance with the NYSDEC-approved Ash Pit Remedial Investigation Work Plan, submitted in April 2007. The RI consisted of an investigation of the chemical quality of water and sediment/sludge in the ash pit, and an evaluation of the structural integrity of the ash pit walls above the water line. Results of the 2007 Remedial Investigation were summarized in the March 2008 Remedial Investigation Summary Report (see Section 4.1 which provides further details on this report and its findings).

3.3.1 Water and Sediment Investigation

In April 2007, ash pit water samples APW-01 and APW-02 were collected along the eastern wall of the ash pit. APW-01 was collected in the southern portion and APW-02 was collected in the northern portion.

Six sediment cores, APS-01 through APS-06, were collected from below the water line by a Vibracore apparatus mounted on jack-up barge moored in Wallabout Channel. At each location, a continuous sediment core was collected from the top of the sediment

layer to the point of refusal. At locations where the sediment thickness exceeded five feet, a set of samples was collected for each five feet of sediment.

Following the collection of each core, the recovered sediment was examined and noted for texture, color, general classification, and any visual or olfactory evidence of contamination. A PID was used to screen each sediment core for the presence of organic vapors. Samples for submission to the laboratory for volatile organic compound (VOC) analysis were collected directly from the core based on any visual or olfactory evidence of potential contamination or based on elevated PID readings. The sediment samples were also submitted for analysis of PCBs, TPH, TCLP VOCs, TCLP SVOCs, TCLP Metals, and reactivity, ignitability, and corrosivity. **Figure 5** summarizes the ash pit sediment sampling locations, penetration depths, recovered core lengths, field observations during sample collection, and PCB and TPH concentrations. Analytical results are discussed below.

Analytical Results of Ash Pit Water Samples-April 2007

The analytical results for the ash pit water characterization samples (**Table 1 and Table 2**) indicate that the ash pit water meets disposal criteria for non-hazardous wastes. The pH of both samples was 7.5. Reactive cyanides and sulfides were not detected in either sample, and both were negative for ignitability. TPH was detected in one sample, APW-02 located in the northeast corner of the ash pit, at a concentration of 166 µg/L. The only PCB compound detected was Aroclor 1260, and reported concentrations were 0.76 µg/L and 1.3 µg/L for samples APW-01 and APW-02, respectively. These concentrations indicate that the water phase would not be a PCB waste under EPA's PCB regulations, but exceeds typical NYSDEC criteria for discharging wastewater to surface waters. TCLP SVOCs were below detection limits. Since TCLP analysis of a liquid sample consists solely of analysis of the extract of a filtered sample (to remove solids), these TCLP results could be considered equivalent to analytical results for totals analyses of the same samples. Only one TCLP VOC was detected (0.098 mg/L of 2-butanone at APW-02), but this was well below the 200 mg/L hazardous waste threshold for 2-butanone. The only TCLP metals detected were barium (0.0582 and 0.0712 mg/L), lead (0.0287 and 0.0375 mg/L), selenium (0.0525 and 0.0387 mg/L), and silver (0.0074 mg/L). All were well below their hazardous waste thresholds.

Analytical Results of Ash Pit Sediment Samples-April 2007

Analytical results of the sediment samples (**Table 3 and Table 4**) showed that the pH ranged from 8.5 to 9.8, meeting corrosivity requirements for non-hazardous wastes. All sediment samples were negative for ignitability. Reactive cyanides and sulfides were not detected in any samples. The TPH concentrations in the upper portion of the cores ranged from 586 mg/kg to 2,700 mg/kg. The lone TPH result for the lower portion of the

cores (155 mg/kg at APS-03B/APS-00) shows much lower TPH concentrations with depth. Although the TPH concentration of sample APS-06A, located in the northeastern portion of the ash pit, was originally reported as 629,000 mg/kg, this was the result of an incorrect analytical result on the part of the laboratory. The corrected analytical result was 2,700 mg/kg, and this corrected value was reported by Shaw and Con Edison to NYSDEC. Previous sediment analytical data (LMS, 2000) reported the highest TPH concentration of 25,300 mg/kg, also in the northeast corner of the ash pit.

Analyses for PCB concentrations reported detectable levels of Aroclor-1260 in most samples. In the upper portion of the cores, PCB concentrations did not exceed 12 mg/kg, with the exception of sample APS-04A (0-3.5 ft.), which had a concentration of 120 mg/kg. This concentration exceeds the concentration of PCBs reported in shallow sludge sample AP-1 collected in February 2000 by LMS. It should be noted that the estimated value of the undiluted sample APS-04A was 28 mg/kg. However, since this was outside the calibration range, the sample was diluted and resulted in the 120 mg/kg reported concentration. This was the only sediment sample result for PCBs above EPA's TSCA threshold of 50 mg/kg. PCB concentrations in the lower portions of the cores were less than 1 mg/kg (non-detect to 0.79 mg/kg), with the exception of a concentration of 15 mg/kg at APS-02B. TCLP VOCs were below detection limits. The only TCLP SVOC detected in the sediment samples was 4.0 ug/L of 1,4-dichlorobenzene in APS-02A. This is well below the hazardous waste threshold of 7,500 ug/L for 1,4-dichlorobenzene. TCLP metals detected in sediment samples at the following ranges were arsenic (ND to 84.4 ug/L), barium (317 to 1600 ug/L), cadmium (ND to 9.9 ug/L), chromium (ND to 92.4 ug/L), lead (ND to 470 ug/L), selenium (27.5 to 93.7 ug/L), and silver (ND to 30.7 ug/L). All were well below their hazardous waste thresholds.

A copy of the laboratory data report for both water and sediment samples is provided as **Attachment 1**.

3.3.2 Concrete Inspection and Compressive Strength Testing

On September 26 and 28, 2007, personnel from Shaw and its subcontractor, Testwell Laboratories Inc., took part in a structural evaluation of the ash pit. The pit walls were accessed by the inspection team on September 26 and on September 28 using manlifts. The focus of evaluation was the structural condition of the interior of the ash pit.

At each testing location, a Windsor pin driver was inserted into a hole created by the apparatus, and a probe was propelled into the concrete. A collection of measurements of seven tests at each location was averaged with the intention of providing consistent and statistically reliable results. The reported compressive strength test results were

derived from this average. According to NDT James Instruments Inc., manufacturers of the Windsor Pin System, this testing technique delivers an accuracy generally within 15%.

The following observations were made during the structural investigation:

- The interior face of the west wall (approximately 28 to 30 inches thick at grade level) exhibited the worst deterioration among all of the walls in the structure, highlighted by two large areas (approximately 100 square ft. each) of large spalls with exposed and rusted reinforcement accompanied by severe scaling, at either end of the wall. In many places, the reinforcement has detached from the wall on at least one end. In addition, the majority of the remainder of this wall exhibited hollow-sounding concrete and incipient spalls of varying size.

- The north interior wall (12 inches thick at grade level) also exhibited a large area (50 square feet) of spalling with exposed and rusted reinforcement, at the west end. In addition, several wide vertical, horizontal and diagonal cracks were noted, with a total length of 22 feet.

- At the east interior wall, the area of most severe deterioration was at the south end near grade level. Here, a 20 square feet area of hollow-sounding concrete was noted, next to a 10 square foot area of concrete that projected approximately 4 inches beyond the front face of the wall. This projection was most likely constructed this way.

- The south interior wall (approximately 18 inches thick at grade level) exhibited a wide horizontal crack, 14 feet in length, approximately 2 feet below grade. Also, several large incipient spalls were noted throughout the top of the wall.

- No significant deterioration was noted at the southeast diagonal wall, connecting the south and east walls.

- The majority of the exposed surface area at the north, east, south and southeast walls exhibited generally sound concrete.

Windsor pin tests were performed at a total of 12 locations throughout the interior walls of the ash pit: five at the west wall, two at the north wall, three at the east wall, one at the south wall, and one at the southeast diagonal wall. Test results for each location are provided in **Attachment 2.** In summary, concrete compressive strength values ranged from 3,974 psi to 4,252 psi at the west wall; 4,504 psi to 4,768 psi at the north wall; 4,252 psi to 4,374 psi at the east wall; 4,052 psi at the south wall; and 4,410 psi at the southeast wall. **Figures 6 and 7** illustrate the testing locations and summarize field

observations.

These values suggest relatively sound concrete at all walls, performing and resisting applied loading in conformance with its originally intended design for the retention of sediment load, in keeping with industry standards for a design of that vintage. These results are in line with visual and hammer-sounding observations for all walls, with the exception of the west wall. For the Windsor pin apparatus to function properly, and to obtain accurate results, a section of flat, even-surfaced, unspalled concrete was required. At the west wall, areas of concrete that met this criterion for Windsor pin testing also exhibited compressive strengths that were in relatively close range of the results at other walls. However, if it would have been possible to measure the compressive strength using the Windsor pin method at unsound or spalled areas, it is very likely that the compressive strengths would have been lower than the values obtained at the other walls. Taking the Windsor pin and sounding hammer results together, it was concluded that the remaining areas of sound concrete throughout the west wall are performing as intended; but the three areas of unsound concrete with severe spalls/scaling and exposed/rusted reinforcement (see **Figure 6**), are not.

3.4 December 2008 Feasibility Study

On December 3, 2008, technicians from Shaw collected two water samples, APW-03 and APW-04, from within the Ash Pit at the locations shown on **Figure 8**. The two water samples were sent to TestAmerica in Shelton, Connecticut and analyzed for TCLP VOCs, TCLP SVOCs, diesel range organics, PCBs, TCLP metals (including mercury), total suspended solids, flashpoint, reactive cyanide, reactive sulfide, and pH. The results from these samples were consistent with results from previous water sampling performed in 2007 and described in Section 3.1.3.1. Analytical results from both sampling events reported TCLP VOCs, TCLP SVOCs, and TCLP Metals at non-detect concentrations or at estimated concentrations below the laboratory reporting limits, and PCB (Aroclor-1260) concentrations ranged from non-detect in December 2008 to 1.3 µg/L in April 2007. DRO ranged from 166 µg/L in April 2007 to non-detect in December 2008[2]. Analytical results of the December 2008 water samples are summarized in **Tables 5 and 6**.

[2] TPH was initially analyzed in April 2007 using EPA Method 8100 with a reporting limit of 86 µg/L. In December 2008, it was analyzed using EPA Method 8015B with a reporting limit of approximately 550 µg/L. The initial analysis for TPH in December 2008 was accompanied by a surrogate that was determined to be outside of acceptable limits. The December 2008 samples were reanalyzed; however, the reanalysis was performed 1 day outside of the specified 7 day holding time. Since the holding time was not grossly exceeded, the values should be considered estimates.

Also on December 3, 2008, technicians from Shaw collected seven 5-gallon sludge samples within the Ash Pit from the locations shown on **Figure 8**. The depth of the collected samples ranged from approximately just below the surface of the sludge, to approximately three feet below the sludge surface. An eighth composite sample of sludge was also prepared by compositing and homogenizing sub samples collected at each of the seven locations. Samples were collected using a hand-operated Eckman dredge sampler; however sample collection was inhibited by a significant amount of trash and debris encountered in the pit. Although Shaw's September 2008 scope of work for bench-scale effluent polishing tests of Geotube® filtrate called for the collection of a sufficient volume of sludge to yield 60 gallons of water, the amount of debris present, in addition to a restricted duration of available sample collection time due to the ongoing demolition of the adjacent generating station building, resulted in the collection of 40 gallons of sludge. For purposes of materials handling under the existing field conditions, and to expedite transportation of the samples for Geotube® dewatering testing, the eight 5-gallon sludge samples and a 5-gallon free water sample were containerized in 5-gallon plastic buckets with sealed covers. The samples were delivered to Mineral Processing Services, LLC (MPS) in South Portland, Maine for subsequent Geotube® dewatering testing.

A portion of the homogenized sludge sample was also sent to TestAmerica in Shelton, Connecticut and analyzed for total solids, Total Suspended Solids (TSS), specific gravity, and bulk density. Analytical results of this sludge sample are summarized in **Table 7**.

3.4.1 Rapid Dewatering Test (RDT)

The sludge and water samples that were delivered to MPS were used to assess the use of Geotube® as a remedial technique. The eight sludge samples delivered to MPS were combined into one 40-gallon sample. The composited sample was characterized as 42.8% dry solids with a specific gravity of 1.82 and a wet bulk density of 10.2 pounds per gallon.

The 5-gallon bucket of water collected from the ash pit was used for the make-down of the polymer/flocculent chemicals. This make-down water[3] was then added to the sediment slurry as it was pumped into the Geotube®.

A bench-scale RDT was performed using the sludge and water sample to select the polymer and determine the optimum polymer dosage for sludge dewatering. Four polymers were selected for testing based on past performance and compliance with

[3] Water that has a pH of 5-9 and no salinity-water out of this range has a detrimental effect on the polymer solution prior to addition to the slurry being pumped from the holding basin during the dewatering test.

USEPA aquatic toxicity requirements. MPS determined that using (Water)Solve 9222, a water soluble polymer, at a volumetric dosage of 233 ppm would provide optimum dewatering characteristics. A Material Safety Data Sheet (MSDS) for the polymer is provided as **Attachment 3**.

3.4.2 Pressure Geotube® Dewatering Test (P-GDT)

After determining the optimum polymer and volumetric dosage, MPS performed a P-GDT to evaluate the polymer performance under full scale application pressure, confirm that the polymer dosage is representative of full scale application, create samples of filtrate and sludge cake, and to confirm the Geotube® filtration area required for full scale application. The P-GDT consisted of taking the sludge sample and diluting it with the water sample to simulate the expected characteristics of sludge during dredging/removal operations. In this test, the sludge was diluted to an average of 5% dry solids. The sludge was then injected into a 1 cubic foot capacity MiniTube™ at a pressure of 3 pounds per square inch (the full scale application pressure for a Geotube® with a 45 foot circumference).

The P-GDT confirmed that the selected polymer dosage will perform under full scale application at the specified dosage. Samples of filtrate and filter cake were collected and sent to Shaw's research center in Lawrenceville, New Jersey for testing of chemical characteristics. Analytical results are provided in **Table 8**. A report on Geotube® Dewatering Technology Testing was prepared by MPS (**Attachment 4**).

3.4.3 Filter Cake and Filtrate Sampling

Laboratory testing to evaluate the use of an organoclay for treatment of filtrate was performed at Shaw's research center in Lawrenceville, New Jersey. Testing was planned in two phases: an initial batch screening test, and a secondary column test. The methodology and results of the Phase I batch testing were presented in the FSSR. Based on the results of the Phase I testing, it was concluded that Phase II column testing was not needed and, therefore, it was not performed.

3.5 Tidal Exchange

In order to determine the potential effect of tidal water exchange between Wallabout Channel and the ash pit, water levels in the pit and in the channel were gauged. On May 1, 2009, depth to water at both locations was gauged at the time of the predicted high tide and low tides for that date. **Table 9** summarizes the data collected. As can be observed from the data, there was little, if any, difference in the water level within the ash pit when comparing the levels at the time of the two tidal extremes. However, this observed condition is unlikely to affect remediation of the ash pit, which is discussed in

Section 5.0 of this RAWP. Also on May 1, 2009, the dimensions of the ash pit were again measured. **Figure 9** illustrates the ash pit dimensions and resulting volume of sludge and water, based on the April 2007 sampling logs and the May 2009 measurements.

4.0 Summary Reports and NYSDEC Correspondence

4.1 Remedial Investigation Summary Report (RISR)

The March 2008 RISR concluded the following:

- Water samples APS-01 and APS-02 did not display evidence of contamination in the field. Laboratory analysis of the water samples by TCLP reported low-level concentrations of some metals and one VOC, all below USEPA and NYSDEC hazardous waste threshold values, as well as low concentrations of PCBs and TPH. However, the PCB results for the water samples exceeded typical NYSDEC criteria for discharging wastewater to surface waters, indicating that treatment would likely be required before surface water discharge.

- Several sediment cores displayed visual evidence of contamination as evidenced by the presence of a white-colored material with a greasy consistency, as well as an oily sheen. A petroleum-like odor was detected in at least one core. Laboratory analysis of the sediment samples by TCLP did not report any toxicity characteristics or concentrations exceeding hazardous waste thresholds; however, a PCB concentration of 120 mg/kg was reported for one sample, exceeding the TSCA threshold value of 50 ppm for PCB-contaminated media. TPH was detected in most of the samples at concentrations ranging from 155 mg/kg to 2,700 mg/kg.

The volume of stationary sediment within the ash pit was estimated by this investigation at between 480 to 660 cubic yards. (*Note: A May 2009 inspection of the ash pit has resulted in an estimate of 758 cubic yards of sediment). The 2008 RISR estimate is consistent with the previous estimate of between 550 and 700 cubic yards from an investigation of the ash pit performed by LMS in 2000[4].

- The integrity and compressive strength of concrete in the ash pit walls was determined by the performance of Windsor Pin tests and sounding by a hand-held hammer at 12 locations on the interior surfaces of the walls. Although portions of the

[4] Based on measurements taken during the investigation phase,(approximately 68 ft. by 24 ft.), the area of the ash pit equals approximately 1,632 square feet. The thickness of sludge penetrated during the April 2007 sampling event performed by Shaw was generally in the range of 8 to 9 feet, although sludge thickness was measured at 11 feet at one location. Using 9 feet as an estimated average thickness, the volume of sludge in the ash pit equals 14,688 cubic feet, or 544 cubic yards. This is very close to the estimate of 542 cubic yards developed by LMS and reported in their Site Investigation Report: Phase II Environmental Site Assessment, February 6, 2000, and is also within the range of the 480 to 660 cubic yards provided in Shaw's Ash Pit Investigation Summary Report of March 2008. Since sludge thickness was verified at 11 feet in at least one location, it would be beneficial to employ "conservative" estimation, and that total sludge volume is likely to be greater than 544 cubic yards. In May 2009, measurements taken resulted in the revised dimensions of approximately 68 ft. by 30 ft., resulting in a revised estimate of 758 cubic yards of sediment. Figure 9 provides details.

walls exhibit severe scaling and varying degrees of spalling, results of the Windsor Pin Tests suggest relatively sound concrete at all walls (with the possible exception of the west wall), performing and resisting applied loading in conformance with its originally intended design for the retention of sediment load. These values support the visual results and hammer-sounding evaluations, although areas of even-surfaced and unspalled concrete on the west wall are limited. It is concluded that with the exception of much of the west wall surface, the concrete is resisting applied loading in conformance with its originally intended design. Based on the concrete integrity and compressive strength testing results, Shaw considers the north, east, southeast and south walls of the ash pit to be in good condition. The removal of sediment and debris from the ash pit should not adversely affect the lateral load-carrying capacities of these walls.

The RISR offered the following recommendations:

1. The use of GeoTubes as a remedial technique should be evaluated by performing a treatability study. A small-scale field pilot test or a bench-scale should be performed using a small amount of ash pit sludge to determine polymer selection and dosage.
2. A mean bulk density test and percent solids of representative sludge samples should be performed, to determine the homogeneity of the waste stream for dewatering, and also to aid in the selection of a polymer for use in the GeoTubes.
3. Two – 3 to 5-gallon pails of "over-water" should be collected. The water would be needed for the make-down of the polymer/flocculent chemicals that would be fed into the sediment slurry as it is pumped into the GeoTube. A portion of the water should be analyzed for TCLP RCRA organics, hazardous waste characteristics, TCLP RCRA metals, and PCBs, and would serve as the final two water samples to be collected from the ash pit, as per the Ash Pit Remedial Investigation Work Plan.
4. The dewatered treatability sludge effluent should be sampled for turbidity, total suspended solids, pH, oil and grease, and dissolved chemicals of concern (see 3, above), in support of the acquisition of a SPDES permit for discharge.
5. Evaluate the potential for effluent polishing treatment (i.e. granular activated carbon) as this technology may be required. Effluent from the GeoTubes would be treated with GAC or organoclay, and the resulting post-polishing treatment effluent analyzed and compared to unpolished treatment.
6. Procedures and protocols for Tasks 1-5 should be detailed in a Feasibility Study (FS) Work Plan. Findings would be documented in an FS Report.

7. Perform a cost benefit analysis of the use of GeoTubes versus conventional transportation and disposal methods, i.e. barge mounted crane dredges. The analysis would be included in the FS Report.

8. Potential Con Edison approved waste disposal facilities for the acceptance of dewatered sludge should be identified. Facilities should be requested to review the analytical data collected to date and provide professional opinions on whether analytical data gaps exist. If additional sampling is required, this can be performed at the time sludge is collected for the GeoTube pilot test.

9. A Remedial Action Work Plan (RAWP) should be developed to detail recommended techniques for remediation prior to closure of the ash pit, as well as the basis for the recommended techniques. A process flow diagram detailing equipment, generic specifications, and treatment train details would be included in the RAWP. Following RAWP approval, bid specifications for the performance of the remediation field scope of work should be developed.

10. The remediation of the ash pit will likely involve dewatering of the pit. This task may result in a disturbance of the balance of hydrostatic pressure currently exerted on the wall by Wallabout Channel on the west side, and the ash pit water on the east side. Therefore, a preliminary recommendation is hereby made for the installation of temporary shoring or bracing on the west wall in order to provide additional rigidity and strength before the removal of sediment or water from the pit.

DEC Response to RI Summary Report

In a letter of April 14, 2008, NYSDEC concurred with the RISR recommendation to develop a FSWP and a RAWP. The letter also indicated that:

- the concentration of 120 mg/kg Aroclor 1260 reported for sludge sample APS-04A exceeded the hazardous waste threshold of 50 mg/kg, and that for disposal purposes this sediment would be subject to TSCA regulations;
- a copy of the gas chromatogram for sample APS-06A, for which TPH was reported at a concentration of 629,000 mg/kg (*based on a corrected analytical value, this is no longer an issue; see previous Section 3.1.3.1 of this RAWP); and
- details were requested on the function of the pipes depicted in photographs of the ash pit walls (Con Edison provided additional information on May 12, 2008).

4.2 March 2009 Feasibility Study Summary Report (FSSR)

The FSSR concluded the following:

- The small-scale pilot dewatering test demonstrated that Geotube® technology is a viable option for dewatering the sludge from the Ash Pit. Based upon the results obtained from the P-GDT, MPS estimated that two 100-foot long, 60-foot

circumference Geotube® units would be required to dewater the estimated 600 cubic yards of sludge in the Ash Pit. The resultant mass of dewatered sludge is estimated to be 460 tons Based on the May 2009 revised estimate of approximately 750 cubic yards of sludge in the Ash Pit, a third Geotube® unit would be required.

- The testing of the filtrate and filter cake also support the conclusion that Geotube® technology is a viable option for dewatering. The concentrations of all of the analytes of interest in the filtrate were below the respective reporting limits; therefore, the effectiveness of the organoclay as a treatment polishing step was not evaluated.

- Based upon the results of this dewatering test, Geotube® technology should be retained for consideration in the evaluation of remedial alternatives for the Ash Pit in the Remedial Action Work Plan to be prepared for the site. Cost effectiveness of Geotube® versus conventional technologies will also be presented in the Remedial Action Work Plan.

As of this writing, NYSDEC approval of the FSSR is pending.

5.0 Analysis of Remedial Action Alternatives and Development of Proposed Remedy

This section contains an evaluation of potentially applicable remedial alternatives/technologies that might be selected for implementation at the site, either as stand-alone technologies, or applied in conjunction with other technologies. For those alternatives/technologies which are retained, representative process options are identified and grouped into a proposed remedial action.

5.1 Technology Alternatives Evaluation

This section identifies and describes potentially applicable alternative technologies and presents the preliminary screening of each technology and process option. During this preliminary screening, certain process options and technologies are eliminated from further consideration on the basis of technical effectiveness (short- and long-term) or implementability. Three factors are specified in the USEPA guidance for conducting Remedial Investigations/Feasibility Studies (RI/FS) (USEPA, 1988) to evaluate and screen out technologies or process options. These three factors are:

- Nature of the contaminants;

- Specific media of concern at the site; and
- Physical characteristics of the site, including geology and hydrogeology.

In addition to these three factors, the following information was also considered when reviewing technologies and their specific applications to conditions at the site:

- Availability of technology;
- Current development of technology (e.g., bench/pilot/full scale demonstration of effectiveness);
- Space constraints for full scale implementation; and
- Impact to property owners and surrounding community.

The NYSDEC document Draft DER-10 Technical Guidance for Site Investigation and Remediation states that the selection of a remedy shall satisfy the following criteria:

1. Overall protection of public health and the environment
2. Compliance with Standards, Criteria, and Guidance
3. Long term effectiveness and permanence
4. Reduction of toxicity, mobility, or volume with treatment
5. Short-term effectiveness
6. Implementability
7. Cost
8. Community Acceptance

As of this writing, Con Edison is considering marketing the property for sale. If the property is sold, it is assumed that the site would be redeveloped for residential and/or commercial use. The impact of the technology application on the potential future land use will be considered as a primary screening factor for this evaluation.

Figure 10 provides plan and sectional views that can be referenced for the following sections of this RAWP, which discuss remedial alternatives.

5.1.1 Containment

Containment is an engineering control method that creates a physical barrier or passive mechanism to contain or stabilize contamination and/or eliminate potential exposure pathways from contaminated medium. Containment of the ash pit can be accomplished through the use of a covering/capping system consisting of a reinforced concrete slab. The sludge remaining in the ash pit would remain, and the ash pit would be filled with a

coarse aggregate. A reinforced concrete slab would then be placed over the top of the ash pit. Considering the potential future use of the site and that the bulkhead on Wallabout Channel will likely require reconstruction, containment of the sludge in the ash pit is not considered a viable option for remediation; therefore, containment will not be considered further.

5.1.2 In-Situ Treatment

In-situ treatment encompasses a variety of technologies that could be utilized to treat the sludge in the ash pit in place (i.e., without removal). The in-situ treatment technology that is most applicable to the ash pit is solidification/stabilization. Solidification/stabilization is a mobility-reducing technology. Its objective is to immobilize the contaminants through either encapsulation within a stabilized mass and/or addition of chemical binders. *In-situ* solidification/stabilization could reduce the mobility of contaminants in the sludge; however, in consideration of potential future use of the site and that the bulkhead will likely be reconstructed, this technology is not considered a viable option for remediation. *In-situ* treatment will not be considered further.

5.1.3 Removal/Dredging

Under this process, contaminated sludge would be removed by dredging from the ash pit for treatment and/or disposal and the ash pit would be backfilled with either a clean aggregate fill, or a lightweight concrete will be poured and the solidified concrete would act as a fill. Lightweight, coarse-grained aggregate fill would provide good drainage of the closed structure; however the use of aggregate would require the installation of shoring to provide structural stability during backfilling. The use of a lightweight concrete would form an impermeable fill thus eliminating any drainage concerns, and would also provide permanent reinforcement of the structure, thus eliminating the need for shoring. On-site treatment (see Section 5.1.4) of the sludge prior to transport may be necessary to control moisture content. Removal/dredging operations are considered to be proven and readily available; however, precautions might be needed to protect human health and the environment during removal/dredging operations including the installation of shoring. Two methods of dredging are applicable to this project: mechanical dredging and vacuum dredging.

Mechanical dredging can be performed using a crane equipped with a clamshell bucket. The crane would have to be stationed close to the ash pit. The ground adjacent to the ash pit on the east has been rated as a ”restricted loading” zone according to the November 2006 Underwater Investigation. Other areas slightly further away from the ash pit will likely support the weight of a large crane; however with increasing distance from the ash pit, the length of the crane boom will increase, and the angle of articulation

of the excavator setup during dredging will likely steepen. A steepened angle of articulation will reduce the effectiveness of the machine-powered dredging, because the excavating equipment will be unable to dredge sediment in the portion of the ash pit closest to the excavator. In addition, the permitting process for tall cranes has of late been complicated in New York City, due to a rash of recent accidents involving tall cranes. This is likely to result in delays as well as extra costs incurred by the project. Coarse debris can be removed by scalping of the excavated coarse fraction using a vibratory roller, or by manual removal by divers; however excavation will not completely remove all debris, thereby requiring manual cleanup of the remnant debris by divers.

For these reasons, mechanical dredging is not the preferred option for sediment removal from the ash pit.

Another option is vacuum dredging. This would be performed by pumping the sediment out of the ash pit, either by using a submersible pump, or using diver-operated hand-held vacuum dredging units. Coarse debris will require manual removal by divers.

This method of dredging is likely to be more efficient than mechanical dredging due to the presence of considerable amounts of coarse debris within the sludge, as well as the site-specific limitations on the efficiency of mechanical dredging described above in this section.

The sludge would ultimately be disposed of at a permitted facility, thereby eliminating the issues of on-site contaminant volume and toxicity of sludge in the ash pit.

Due to the observed poor structural condition of the Wallabout Channel bulkhead (west) wall, there is significant concern that any attempt to dewater the ash pit would remove the hydrostatic support provided by the water contained within the ash pit. Therefore, during removal/dredging operations, the water level within the ash pit must be maintained relative to the water level in the adjacent Wallabout Channel.

Following removal of the sludge from the ash pit, the pit walls and bottom would be inspected by divers. The pipes entering the pit would be sealed and the pit would be backfilled with clean fill material. If it is confirmed that a competent concrete bottom exists within the ash pit, concrete cores will be collected from the bottom and chipped and analyzed in a NYSDOH-certified lab for PCB content to confirm removal of the sludge, then backfilling of the pit by pumping of a lightweight, concrete fill into the pit would commence. Concrete pumping would proceed in such a manner as to prevent mixing of the water in the ash pit with the concrete fill. The ash pit water would be displaced during the backfilling process and would be collected for disposal.

If a concrete bottom does not exist or is in poor condition, sediment samples would be collected from the pit bottom to confirm acceptable chemical quality of the sediment at the bottom of the pit, Water would be allowed to remain within the ash pit during backfilling operations. The water would continue to provide hydrostatic pressure in equilibrium with the Wallabout Channel. It is anticipated that as backfill material is placed within the ash pit, water will be displaced. This displaced water will be collected and treated (as necessary) and discharged to a nearby sanitary sewer or to Wallabout Channel under applicable NYCDEP or NYSDEC approvals.

Removal/dredging of the sludge from within the ash pit will be retained for further consideration.

5.1.4 Ex-Situ Treatment

Ex-situ treatment encompasses a variety of technologies that can be utilized to treat sludge and water after it has been removed. Although ex-situ treatment has been utilized at sites to treat contaminated materials prior to reuse at the site, it is not expected that there will be any scenario for reuse of this material onsite. Therefore *ex-situ* treatment is being evaluated in this site-specific context of preparing the sludge for subsequent off-site transportation and disposal and for treatment of the water prior to discharge to a nearby sanitary sewer or to Wallabout Channel.

Ex-situ treatment technologies that have been considered to treat the sludge from the ash pit include separation of bulk solids (greater than 2 inches) and dewatering of material less than 2 inches.

The dredged sludge may be removed from the site in a semi-liquid state. A stabilization agent would have to be added to the sludge prior to disposal of the waste, resulting in a greater volume of waste compared to the dredged volume, and an increased cost of disposal per unit volume. It is estimated that stabilization additives would add at least 30% more volume to the waste sludge undergoing disposal. Unstabilized sludge will also require a greater degree of handling and containment than dewatered sludge. Unstabilized sludge will likely result in the presence of odors onsite until the time it is removed. For the above reasons, ex-situ treatment of the sludge dredged from the ash pit will not be considered further.

Dewatering operations can be accomplished actively using 30 cubic yard sludge dewatering bins or passively using geotextile filter tubes. Water separated by the dewatering bins would be collected and then discharged to a sanitary sewer or to Wallabout Channel. The water to be discharged would be required to meet applicable standards for chemical quality, for Total Suspended Solids and for Total Solids. Thus,

the water may have to be filtered in one stage or in several stages, in order to meet discharge criteria. In Shaw's experience, sediments or sludge dewatered in this manner generally requires the addition of bulking agents such as cement or kiln dust to increase the solid to liquid ratio of the waste. The addition of bulking agents will result in a greater volume of waste requiring disposal, and it will add cost due to the procurement and handling of the bulking agent, as well as the additional cost to dispose of the increased volume of waste.

In addition, the water in the collection bins may also generate odors. For this reason, and for the potential additional treatment of the sludge phase to enable transportation and disposal, and for the potential additional treatment of the water phase to meet discharge standards, the use of dewatering bins is not the preferred option.

The use of Geotube®s for dewatering and sludge containment is the second dewatering option evaluated in this section. A feasibility study was performed by Shaw in late 2008 to assess the efficacy of the dewatering of sludge in the ash pit using Geotube® and Smartfeed™ technology. The findings of the small-scale pilot dewatering test of ash pit sludge using Geotube® and Smartfeed™ technology are documented in the March 2009 FSSR. Each Geotube® contains polymer that will react with the dewatered sludge, agglomerating fine sludge particles and forming a flocculent by means of ionic charge. The tubes would be positioned on a ground enclosure with containment on the bottom and all sides of the enclosure. Sludge from the ash pit would be pumped directly into the opening of each Geotube®. The sludge will dewater by leaching of the water through the semi-permeable textile fabric of each Geotube® into a containment basin (see Figure 12, "recycled concrete aggregate berm").

Analysis of the filtrate of the 2008 bench-scale pilot test indicated that the filtrate will meet NYCDEP discharge standards without requiring secondary treatment. It should be noted however, that although the pilot test results indicated that the filtrate need not be treated, this finding from the bench-scale test may not necessarily be true for a field scale application of dewatering by Geotube®. If needed during remediation, treatment of filtrate by media such as organoclay or activated carbon can be employed to meet discharge standards. At the time of this writing, it appears that obtaining a permit to discharge to the sewer would be more expeditious than obtaining a SPDES discharge permit. The procedure for obtaining a permit from the NYCDEP for obtaining a (sewer) discharge permit is provided as **Attachment 5**.

Filter cake that was generated from the bench-scale pilot test and submitted by Shaw to TestAmerica on January 8, 2009 was analyzed for percent moisture, percent solids, and bulk density on January 13, 2009. Results reported by the laboratory were 68.9%, 31.1%, and 0.53 g/cm^3, respectively. The paint filter test showed a positive result (i.e.,

the sample failed the paint filter test). However, dewatering of sludge inside Geotube®s will continue with time, i.e. the longer the residence time of the filter cake, the ratio of percent solids to percent moisture of the filter cake will increase, thus reducing the potential for failing the paint filter test. MPS, in its report to Shaw summarizing its dewatering test, estimated that after 14 days of full scale operation, the percent dry solids in the Geotube® would be 58.3%, or the percent moisture will be 41.7%. Bulking (drying) agents can be added to the filter cake, if needed, however, MPS estimated that 20 days of onsite dewatering using Geotube®s would be appropriate to condition the filter cake for offsite disposal.

Ex-situ treatment of the sludge using Geotube® and Smartfeed™ technology and of the water using the appropriate technology required to meet the discharge requirements will be retained for further consideration.

5.1.5 Off-Site Disposal

Off-site shipment for treatment and disposal of non-dewatered sludge is not considered practicable due to excessive costs compared to other options. Therefore, this process option only addresses management of dewatered sludge and treated wastewater and includes the following:

1. The off-site disposal of the dewatered sludge as non-hazardous waste in a non-hazardous waste landfill.
2. The off-site disposal of the dewatered sludge as TSCA PCB waste and/or NYSDEC hazardous waste in a hazardous waste or PCB waste landfill.
3. The discharge of the water removed from the sludge and ash pit to a sanitary sewer or Wallabout Channel.

Off-site disposal of dewatered sludge and treated wastewater is considered to be technically and institutionally feasible and will, therefore, be retained for further consideration.

5.2 Development of Proposed Remedial Action

The selected remedial methods for this RAWP are:

- Removal of sludge and water from the ash pit by vacuum dredging;
- Onsite dewatering of the sludge using Geotube® technology;
- Disposal of filter cake at an offsite permitted facility;
- Disposal of filtrate to the municipal sanitary sewer or to Wallabout Channel; and

- Backfilling of the ash pit with lightweight concrete.

The proposed remedial action will consist of the removal and off-site disposal of the sludge contained within the ash pit, the removal of debris contained within the former pump house area and the subsequent backfilling of the ash pit and pump house area with lightweight concrete fill. The estimated total volume of sludge that will be removed and disposed off-site is approximately 750 cubic yards. In addition to the estimated volume of sludge, less than 100 cubic yards of mostly dry debris and sediment in the former pump house pit will also be disposed off-site. The wet portion of this material can be dewatered using Geotube®s.

Table 10 provides comparative cost estimates for mechanical dredging and dewatering using bins, and for vacuum dredging and dewatering using Geotube®s. (Note: the mechanical dredging estimate uses an estimated 800 tons of dewatered waste for disposal, versus 575 tons of dewatered waste for vacuum dredging; this is based on the probable need for the addition of bulking agents, if mechanical dredging is performed. Although vacuum dredging and Geotube® dewatering is estimated to cost slightly less than mechanical dredging combined with dewatering by bins, the former of these two technology combinations has been chosen as the most appropriate remedial technology for the following additional reasons:

Effectiveness of dewatering: Geotube® technology has been demonstrated to effectively dewater sludge collected from the ash pit for testing purposes, and it has produced a filtrate with chemical quality and clarity suitable for discharge to the municipal sewer, which appears to be the most expedient point of discharge. Geotube® technology has been used at other Con Edison sites for sediment/silt dewatering with results meeting expectations.

Control of Odors: Although odors from excavated waste created by a mechanical excavation and dewatering setup can be controlled to an extent by covering the dewatering bins, it will still allow odors to escape the waste to a greater degree than a vacuum dredging/Geotube® setup. The latter setup will approach “closed loop” status with waste entering the system by pumping; the waste will be discharged from the pump through hoses and will reside inside the Geotube®s. There is the potential for minor odors when the Geotube®s are cut open for loading of the dewatered sludge for transportation to a disposal facility.

Simplicity of Use: A Geotube® treatment is much simpler in design and operation than a system using mechanical dredging and dewatering bins: there would be less machinery and equipment. This reduces the amount of noise produced by the operation, as well as

creating a safer environment for workers by reducing the exposure to operating machinery.

Figure 11 illustrates a proposed lay-down area for Geotube® operations during remediation. **Figures 12 and 13** illustrate the Geotube® drainage pad layout and drainage pad construction details, respectively.

Removal of the sludge can be accomplished using submersible pumps, or by diver-operated hand-held vacuum dredging units. In either case, manual removal of coarse debris by divers will be a component of this task, and will be performed as a permit-required confined space entry. During removal/dredging operations, the water level within the ash pit will be maintained relative to the water level in the adjacent Wallabout Channel due to concerns regarding the structural conditions of the bulkhead wall. The dredger will maintain the water level in the pit by use of a pump. To restore the water elevation, water will be pumped into the pit from Wallabout Channel. The pump will remain in operation throughout the pit excavation and backfill period.

Post-removal visual inspection will be used to determine if all the sludge is removed from the ash pit. If a concrete bottom is present, representative core samples and/or chip samples will be collected from the walls and bottom. The pit will then be backfilled to the top of the pit walls with a lightweight concrete. The new concrete will encapsulate any residual contamination of existing concrete surfaces within the pit, it will provide structural reinforcement for the pit in its closed state, and will prevent the future entry of water into the pit after closure. If a concrete bottom is not present, the underlying sediments will be visually inspected to determine if all sludge has been removed. Samples of the sediment will be collected to determine if the chemical quality of the sediments has been impacted by the former contents of the ash pit. The pit would then be backfilled to the top of the pit walls with lightweight concrete.

The sampling grid will be biased towards portions of the ash pit in which sludge sampling results have reported elevated concentrations of PCBs. The samples will be analyzed for PCB concentration. A cleanup goal of one (1) ppm PCBs will be used as a measure of the effectiveness of the removal of the sludge.

The sludge will be pumped from the bottom of the ash pit into passive geotextile filter tubes (Geotubes®) as described in the FSSR. On-site dewatering of the sludge will be required to comply with transportation and disposal requirement as solid material. As such, bulking agents may be added to the dewatered sludge in order for it to pass the Paint Filter Liquid Test prior to loading into conventional on-highway transport vehicles. Post dewatering analysis of the sludge will be used to determine if the material is to be disposed of as non-hazardous solid waste or TSCA PCB and/or hazardous waste. The

dewatered material will then be transported by truck to a landfill that is permitted to accept the waste in compliance with State and Federal disposal regulations.

Following sludge removal and successful inspection or bottom sampling results, the ash pit and former pump house area will be backfilled with concrete as described above in the two scenarios (concrete bottom/soft bottom). Water will be allowed to remain within the ash pit during backfilling operations. The water will continue to provide hydrostatic pressure in equilibrium with the Wallabout Channel. It is anticipated that as backfill material is placed within the ash pit, water will be displaced. This displaced water will be collected by pumping it into tanks, and treated as necessary and discharged.

Lightweight concrete fill will be placed to the approximate level of the ash pit walls and the top of the concrete surface will be sloped to promote surface drainage toward the backfilled slab within the footprint of the former generating station building.

The water removed from the sludge during dewatering operations and from the ash pit during backfilling operations will be discharged to a sanitary sewer or Wallabout Channel. Although laboratory analysis of the water during the 2008 Feasibility Study determined that post-filtration treatment is not needed, the contractor will be responsible for ensuring that the discharge meets all standards specified by the NYCDEP for effluent discharge to its sewers, or by the NYSDEC for discharge to surface water.

Overall protection of human health and the environment will be achieved by eliminating the risk of contact, either human or ecological, with the sludge and by filling the ash pit to grade with clean coarse aggregate fill. Because the sludge will be completely removed from the ash pit, and the ash pit capped with a reinforced concrete slab, future development of the site can take place.

The proposed remedy will comply with all chemical-, location-, and action-specific standards, criteria and guidelines (SCGs). These regulations potentially include, but are not limited to:

- Resource Conservation and Recovery Act (RCRA), 40 CFR Part 261-265 – Identification and Listing of Hazardous Wastes
- RCRA, 40 CFR Part 268 – Land Disposal Regulations
- Toxic Substances Control Act, 40 CFR Part 761-Polychlorinated Biphenyls, Manufacturing, Processing, Distribution In Commerce, and Use Prohibitions
- 6 NYCRR Part 360 – Solid Waste Management Facilities
- 6 NYCRR Part 364 – Permits for Waste Transporters
- 6 NYCRR Part 371 – Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372 - Hazardous Waste Manifest System

- 6 NYCRR Part 376 – Land Disposal Restrictions
- 6 NYCRR Part 608 – Use and Protection of Waters
- 6 NYCRR Part 750 – SPDES Permits
- 19 NYCRR Part 600 – Waterfront Revitalization and Coastal Resources
- NYSDOH Generic Community Air Monitoring Plan
- TAGM HWR 89-4031 – Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites
- New York City Department of Environmental Protection – Limitations for Effluent to Sanitary or Combined Sewers, DEP WQ-D-001/Wastewater Quality Control Application/Revised 8/11/06

The implementation of the proposed remedy will result in short-term impacts that can be mitigated/managed. The number of truck trips through the adjacent community will be minimized by dewatering the sludge at the site. A conservative estimate of the number of truck trips results in an estimate of 30 trips. Health and safety issues associated with implementation of the proposed remedy can be addressed by adhering to standard construction health and safety protocol and by shoring the ash pit.

The long-term risks associated with exposure to the sludge are eliminated by removal of the sludge from the site, allowing for future site development.

The reduction of toxicity, mobility and volume at the site is achieved through the removal of the sludge contained within the ash pit. Implementation of the proposed remedy will result in the removal of approximately 750 cubic yards of sludge.

The proposed remedy is considered to be technically implementable, as all the necessary equipment and labor needed to implement the remedy are readily available. With regard to administrative implementability, the appropriate approvals and permits will need to be obtained; however, these are considered to be obtainable.

The cost of the proposed remedial action is estimated to be approximately $1,200,000. **Table 10** provides details on how the estimate was calculated.

A Quality Assurance Project Plan (QAPP) will be implemented in the event that post remediation sediment or substrate samples are collected. The QAPP is provided as **Attachment 6**. A Community Air Monitoring Plan (CAMP) is provided as **Attachment 7**. The CAMP was prepared as a guidance document for the monitoring of air quality onsite and in the immediate surrounding area during remediation. The CAMP specifies the analytes to be monitored (dusts and vapors), the procedures for monitoring, monitoring station locations, and recordkeeping. A Health and Safety Plan for the oversight of

remediation operations is provided as **Attachment 8**. A separate HASP for the performance of tasks by the remediation contractor will be prepared by the contractor.

6.0 Project Schedule

A project schedule is provided as **Attachment 9**. The schedule projects a timetable for the major tasks that are the components of the remedial actions proposed by this RAWP, including:

- submission of the RAWP to the NYSDEC,
- approval by the Department,
- preparation of a bid specification,
- issuance of a contract to the chosen contractor,
- performance of remediation
- collection of post-remediation samples, and
- preparation of a summary report and a request for no further action (NFA) for the ash pit.

Con Edison and Shaw will make every reasonable effort to adhere to the timetable outlined in the project schedule.

TABLES

TABLE 1
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**APW-01A**		**APW-02A**		**Hazardous Waste Threshold***
Sample Depth (ft.):			**0.0'-3.0'**		**0.0'-3.0'**		
Sample Type:			**Grab**		**Grab**		
Sample Date:			**4/17/2007**		**4/17/2007**		
Analyte	**Analytical Method**	**Units**					
Ignitability	EPA 7.1	^{0}C	Not ignitable (1)		Not ignitable (1)		Flashpoint<140^{0}F
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0011	U	0.0011	U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.031	U	0.031	U	5.0
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.0582	J	0.0712	J	100.0
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.0090	U	0.0090	U	1.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.0060	U	0.0060	U	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.0287	J	0.0375	J	5.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.0525	J	0.0387	J	1.0
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.0074	J	0.0060	U	1.0
pH	EPA 9045C	standard units	7.5		7.5		2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/L	10	U	10	U	**
Releasable Sulfide	Reactive Sulfide	mg/L	40	U	40	U	**
Pyridine	EPA 8270 TCLP	mg/L	0.00098	U	0.00098	U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	7.5
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0015	U	0.0015	U	**
3+4-Methylphenols	EPA 8270 TCLP	mg/L	0.0013	U	0.0013	U	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	3.0
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0016	U	0.0016	U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0014	U	0.0014	U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0011	U	0.0011	U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	0.13
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0012	U	0.0012	U	0.13
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0016	U	0.0016	U	100.0
		mg/L					
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0016	U	0.0016	U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0021	U	0.0021	U	0.7
2-Butanone	EPA 8260 TCLP	mg/L	0.0057	U	0.098	J	200
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0057	U	0.0057	U	0.5
Chloroform	EPA 8260 TCLP	mg/L	0.0017	U	0.0017	U	6
Benzene	EPA 8260 TCLP	mg/L	0.0019	U	0.0019	U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0017	U	0.0017	U	0.5
Trichloroethene	EPA 8260 TCLP	mg/L	0.0023	U	0.0023	U	0.5
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0024	U	0.0024	U	0.7
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0023	U	0.0023	U	100

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140 ^{0}F during laboratory test

**No guidance value published in this reference

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 2
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APW-01		APW-02		TSCA* Threshold for PCBs	
Sample Depth (ft.):	0.0'-3.0'		0.0'-3.0'			
Sample Type:	Grab		Grab			
Sample Date:	4/17/2007		4/17/2007			
Concentration Unit:	µg/L		µg/L		µg/L	
PCBs						
by EPA Method 8082:						
AROCLOR 1016	0.146	U	0.146	U	50,000	(1)
AROCLOR 1221	0.172	U	0.172	U	50,000	(1)
AROCLOR 1232	0.110	U	0.110	U	50,000	(1)
AROCLOR 1242	0.084	U	0.084	U	50,000	(1)
AROCLOR 1248	0.042	U	0.042	U	50,000	(1)
AROCLOR 1254	0.037	U	0.037	U	50,000	(1)
AROCLOR 1260	0.76		1.3		50,000	(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	86	U	166		**	

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

U =The compound was not detected at the indicated concentration.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

TABLE 3
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			APS-01A	APS-01B	APS-02A	APS-02B	APS-03A	APS-03B	APS-00 (APS-03B)	Hazardous Waste Threshold*
Sample Depth *** (ft.):			0.0'-4.0'	4.0'-8.0'	0.0'-3.0'	3.0'-6.0'	0.0'-3.0'	3.0'-6.0'	3.0'-6.0'	
Sample Type:			Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:			4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Analyte	Analytical Method	Units								
Ignitability	EPA 7.1	^{0}C	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Flashpoint<140^{0}F
Mercury (TCLP)	EPA 7470A TCLP	ppm	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	ppm	0.0844 J	0.0676 J	0.031 U	0.0706 J	0.031 U	0.031 U	0.031 U	5.0
Barium (TCLP)	EPA 6010 TCLP	ppm	0.787	1.6	0.91	1.11	0.322 J	1.19	0.901	100.0
Cadmium (TCLP)	EPA 6010 TCLP	ppm	0.0090 U	0.0090 U	0.0092 J	0.0098 J	0.0090 U	0.0099 J	0.0090 U	1.0
Chromium (TCLP)	EPA 6010 TCLP	ppm	0.0060 U	0.0262 J	0.0924	0.0177 J	0.0060 U	0.0213 J	0.0069 J	5.0
Lead (TCLP)	EPA 6010 TCLP	ppm	0.0843	0.0662	0.4700	0.0612	0.0190 U	0.1190	0.0593 J	5.0
Selenium (TCLP)	EPA 6010 TCLP	ppm	0.0433 J	0.0527 J	0.0612 J	0.0468 J	0.0937 J	0.0275 J	0.0604 J	1.0
Silver (TCLP)	EPA 6010 TCLP	ppm	0.0060 U	0.0174 J	0.0118 J	0.0179 J	0.0060 U	0.0063 J	0.0060 U	1.0
pH	EPA 9045C	standard units	8.8	8.5	9.0	8.8	9.8	9.2	9.2	2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/Kg	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**
Releasable Sulfide	Reactive Sulfide	mg/Kg	40 U	40 U	40 U	40 U	40 U	40 U	40 U	**
Pyridine	EPA 8270 TCLP	ppm	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0040 J	0.0012 U	0.0012 U	0.0012 U	0.0012 U	7.5
2-Methylphenol	EPA 8270 TCLP	ppm	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	**
3+4-Methylphenols	EPA 8270 TCLP	ppm	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**
Hexachloroethane	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	3.0
Nitrobenzene	EPA 8270 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	ppm	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	ppm	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Hexachlorobenzene	EPA 8270 TCLP	ppm	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Pentachlorophenol	EPA 8270 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	100.0
Vinyl Chloride	EPA 8260 TCLP	ppm	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	ppm	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.7
2-Butanone	EPA 8260 TCLP	ppm	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	200
Carbon Tetrachloride	EPA 8260 TCLP	ppm	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.5
Chloroform	EPA 8260 TCLP	ppm	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	6
Benzene	EPA 8260 TCLP	ppm	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	ppm	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.5
Trichloroethene	EPA 8260 TCLP	ppm	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.5
Tetrachloroethene	EPA 8260 TCLP	ppm	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.7
Chlorobenzene	EPA 8260 TCLP	ppm	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	100

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140^{0}F during laboratory test

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 3 (CONTINUED)
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
WASTE CHARACTERIZATION SAMPLES
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			APS-04A	APS-04B	APS-05A	APS-05B	APS-06A	APS-06B	APS-06C	Hazardous Waste Threshold*
Sample Depth * (ft.):**			**0.0'-3.5'**	**3.5'-7.0'**	**0.0'-4.0'**	**4.0'-8.0'**	**0.0'-2.6'**	**2.6'-5.3'**	**5.3'-8.0'**	
Sample Type:			**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	**Grab**	
Sample Date:			**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	**4/17/2007**	
Analyte	**Analytical Method**	**Units**								
Ignitability	EPA 7.1	°C	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Not ignitable (1)	Flashpoint<140°F
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.2
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.031 U	0.078 J	0.031 U	0.0646 J	0.0358 J	0.071 J	0.0685 J	5.0
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.424 J	0.778	0.317 J	1.11	0.322 J	1.2	0.94	100.0
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	0.0090 U	1.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.0119 J	0.0168 J	0.0291 J	0.0095 J	0.0060 U	0.0163 J	0.0174 J	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.0190 J	0.0487 J	0.0254 J	0.0382 J	0.0417 J	0.0458 J	0.0532 J	5.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.0406 J	0.0311 J	0.061 J	0.0689 J	0.0676 J	0.0534 J	0.0326 J	1.0
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.0089 J	0.0102 J	0.0307 J	0.0060 U	0.0149 J	0.0094 J	0.0060 U	1.0
pH	EPA 9045C	standard units	9.7	8.5	9.7	8.5	9.8	8.9	9.4	2<su<12.5
Releasable Cyanide	Reactive Cyanide	mg/Kg	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**
Releasable Sulfide	Reactive Sulfide	mg/Kg	40 U	40 U	40 U	40 U	40 U	40 U	40 U	**
Pyridine	EPA 8270 TCLP	mg/L	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	0.00098 U	5.0
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	7.5
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	**
3+4-Methylphenols	EPA 8270 TCLP	mg/L	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	3.0
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	2.0
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.5
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	400.0
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	2.0
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.13
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	100.0
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.0016 U	0.2
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.0021 U	0.7
2-Butanone	EPA 8260 TCLP	mg/L	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	200
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.0057 U	0.5
Chloroform	EPA 8260 TCLP	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	6
Benzene	EPA 8260 TCLP	mg/L	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.5
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U	0.5
Trichloroethene	EPA 8260 TCLP	mg/L	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.5
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.7
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	100

Notes:

* Toxicity Regulatory Levels from EPA 40 CFR Subpart C

(1) Results indicate sample did not ignite at a temperature of 140°F during laboratory test

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

TABLE 4
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APS-01A	APS-01B	APS-02A	APS-02B	APS-03A	APS-03B	APS-00 (APS-03B)	TSCA* Threshold for PCBs
Sample Depth *** (ft.):	0.0'-4.0'	4.0'-8.0'	0.0'-3.0'	3.0'-6.0'	0.0'-3.0'	3.0'-6.0'	3.0'-6.0'	
Sample Type:	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Concentration Unit:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs by EPA Method 8082:								
AROCLOR 1016	0.0041 U	0.0036 U	0.0046 U	0.0039 U	0.0057 U	0.0043 U	0.0049 U	50(1)
AROCLOR 1221	0.0064 U	0.0056 U	0.0071 U	0.0061 U	0.0089 U	0.0067 U	0.0075 U	50(1)
AROCLOR 1232	0.0095 U	0.0084 U	0.011 U	0.0092 U	0.0130 U	0.010 U	0.011 U	50(1)
AROCLOR 1242	0.0085 U	0.0074 U	0.0095 U	0.0082 U	0.0120 U	0.009 U	0.010 U	50(1)
AROCLOR 1248	0.0041 U	0.0036 U	0.0046 U	0.040 U	0.0058 U	0.0044 U	0.0049 U	50(1)
AROCLOR 1254	0.0027 U	0.0024 U	0.0030 U	0.0026 U	0.0038 U	0.0028 U	0.0032 U	50(1)
AROCLOR 1260	2.1 D	0.033	12 D	15 D	4.7 D	0.045	0.073	50(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	1,950	NA	586	NA	1,290	NA	155	**

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

D= Sample result from diluted sample; result of undiluted sample exceeded calibration range.

TABLE 4 (CONTINUED)
SUMMARY OF SEDIMENT ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	APS-04A	APS-04B	APS-05A	APS-05B	APS-06A	APS-06B	APS-06C	TSCA* Threshold for PCBs
Sample Depth *** (ft.):	0.0'-3.5'	3.5'-7.0'	0.0'-4.0'	4.0'-8.0'	0.0'-2.6'	2.6'-5.3'	5.3'-8.0'	
Sample Type:	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Sample Date:	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	4/17/2007	
Concentration Unit:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PCBs by EPA Method 8082:								
AROCLOR 1016	0.0059 U	0.0043 U	0.0084 U	0.0044 U	0.016 U	0.0050 U	0.0044 U	50(1)
AROCLOR 1221	0.0092 U	0.0067 U	0.013 U	0.0069 U	0.024 U	0.0077 U	0.0068 U	50(1)
AROCLOR 1232	0.014 U	0.010 U	0.019 U	0.010 U	0.036 U	0.012 U	0.01 U	50(1)
AROCLOR 1242	0.012 U	0.0089 U	0.017 U	0.0091 U	0.032 U	0.010 U	0.0091 U	50(1)
AROCLOR 1248	0.0059 U	0.0044 U	0.0084 U	0.0044 U	0.016 U	0.005 U	0.0044 U	50(1)
AROCLOR 1254	0.0039 U	0.0028 U	0.0055 U	0.0029 U	0.010 U	0.0032 U	0.0029 U	50(1)
AROCLOR 1260	120 D	0.79 D	0.76	0.0073 U	0.36	0.043	0.0073 U	50(1)
Total Petroleum Hydrocarbons (TPH) by EPA Method 8100	2,430	NA	2,270	NA	2,700	NA	NA	**

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

(1)=Threshold value applies to sum of each Aroclor compound

**No guidance value published in this reference

*** Depth is based on extracted core length

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

D= Sample result from diluted sample; result of undiluted sample exceeded calibration range.

TABLE 5
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
ASH PIT FREE WATER SAMPLES COLLECTED DECEMBER 2008: WASTE CHARACTERIZATION
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**APW-03**		**APW-04**		**Hazardous Waste Threshold***	**NYCDEP Sewer Influent Level**
Sample Depth (ft.):			**0.0'-3.0'**		**0.0'-3.0'**			
Sample Type:			**Grab**		**Grab**			
Sample Date:			**12/3/2008**		**12/3/2008**			
Analyte	**Analytical Method**	**Units**						
Mercury (TCLP)	EPA 7470A TCLP	mg/L	0.0020	U	0.0020	U	0.2	0.05
Arsenic (TCLP)	EPA 6010 TCLP	mg/L	0.40	U	0.40	U	5.0	**
Barium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	100.0	**
Cadmium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	1.0	2.0
Chromium (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	5.0	5.0
Lead (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	5.0	2.0
Selenium (TCLP)	EPA 6010 TCLP	mg/L	0.60	U	0.60	U	1.0	**
Silver (TCLP)	EPA 6010 TCLP	mg/L	0.20	U	0.20	U	1.0	**
pH	EPA 9045C	standard units	7.56	HF	7.94	HF	2<su<12.5	5<pH<11
Reactive Cyanide	Reactive Cyanide	mg/Kg	0.50	U	0.50	U	**	**
Reactive Sulfide	Reactive Sulfide	mg/Kg	20.00	U	20.00	U	**	**
Total Suspended Solids	SM 2540D	mg/L	31.00		21.00			350
Flashpoint	1020A	Degrees F	>200		>200		Flashpoint<140^{0}F	>140° F
Pyridine	EPA 8270 TCLP	mg/L	0.0200	U	0.0200	U	5.0	**
1,4-Dichlorobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	7.5	**
2-Methylphenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	**	**
4-Methylphenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	**	**
Hexachloroethane	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	3.0	**
Nitrobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	2.0	**
Hexachlorobutadiene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.5	**
2,4,5-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0500	U	0.0500	U	400.0	**
2,4,6-Trichlorophenol	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	2.0	**
2-4 Dinitrotoluene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.13	**
Hexachlorobenzene	EPA 8270 TCLP	mg/L	0.0100	U	0.0100	U	0.13	**
Pentachlorophenol	EPA 8270 TCLP	mg/L	0.0500	U	0.0500	U	100.0	**
Vinyl Chloride	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.2	**
1,1-Dichloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.7	**
Methyl Ethyl Ketone	EPA 8260 TCLP	mg/L	0.0100	U	0.0100	U	200	**
Carbon Tetrachloride	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Chloroform	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	6	**
Benzene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	0.134
1,2-Dichloroethane	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Chlorobenzene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	100	**
Trichloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.5	**
Tetrachloroethene	EPA 8260 TCLP	mg/L	0.0050	U	0.0050	U	0.7	**

Notes:

* Regulatory Levels from 6 NYCRR Part 371

(1) Results indicate sample did not ignite at a temperature of 140^{0}F during laboratory test

**No guidance value published in this reference

**laboratory control sample (LCS)or laboratory control sample duplicate (LCSD) exceeds the control limits

U =Not detected.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

NA = Not analyzed

HF= Field parameter with a holding time of 15 minutes

TABLE 6
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
ASH PIT FREE WATER SAMPLES COLLECTED DECEMBER 2008: PCBs AND TPH
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:	**APW-03**		**APW-04**		**TSCA* Threshold for PCBs**	**NYCDEP Sewer Influent Level**
Sample Depth (ft.):	**0.0'-3.0'**		**0.0'-3.0'**			
Sample Type:	**Grab**		**Grab**			
Sample Date:	**12/3/2008**		**12/3/2008**			
Concentration Unit:	**µg/L**		**µg/L**		**µg/L**	**µg/L**
PCBs						
by EPA Method 8082:						
AROCLOR 1016	0.59	U	0.55	U	50,000	1
AROCLOR 1221	1.20	U	1.10	U	50,000	1
AROCLOR 1232	0.59	U	0.55	U	50,000	1
AROCLOR 1242	0.59	U	0.55	U	50,000	1
AROCLOR 1248	0.59	U	0.55	U	50,000	1
AROCLOR 1254	0.59	U	0.55	U	50,000	1
AROCLOR 1260	0.59	U	0.55	U	50,000	1
Diesel Range Organics as per Method 8015B ***	550/530[(1)]	U/H	560/530[(1)]	U/H		

Notes:

* Toxic Substance Control Act PCB Regulations 40 CFR 761

**No guidance value published in this reference

***Initial analysis had surrogate sample outside of acceptable limit; sample reanalyzed oustside holding time.

H = Sample was prepped or analyzed beyond the specified holding time

U =The compound was not detected at the indicated concentration.

J = Compound detected in sample at concentration less than the MDL (an estimated concentration).

(1)=A second sample run was performed after holding time limit due to an out of limit surrogate result in initial run

TABLE 7
SUMMARY OF ASH PIT SLUDGE SAMPLE ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID:			**SL-1**
Sample Date: **Analyte**	**Analytical Method**	**Units**	**12/3/2008**
Total Solids	SM 2540B	mg/L	144000
Total Suspended Solids	SM 2540D	mg/L	125000
Bulk Density	ASTM D2937	g/cm^3	0.15
Specific Gravity	SM 2710F	g/mL	1.06197
Percent Solids *	N/A	%	13.6

Notes:

* Percent Solids calculated using Total Solids and Specific Gravity

TABLE 8
SUMMARY OF ASH PIT FILTER CAKE SAMPLE ANALYTICAL RESULTS
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

Sample ID: **Sample Date:** **Analyte**	**Analytical Method**	**Units**	**FILTER CAKE 1/8/2009**
Paint Filter Liquid	EPA 9095A	N/A	Present
Percent Moisture	Percent Moisture	%	68.9
Percent Solids	Percent Moisture	%	31.1
Bulk Density	ASTM D2937	g/cm^3	0.53

TABLE 9
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
WATER LEVELS IN ASH PIT AND WALLABOUT CHANNEL

Date of Gauging: May 1, 2009				
	15 mins. before 0847 hrs.	**Low Tide 0902 hrs.**	**15 mins. after 0917 hrs.**	
Ash Pit - DTW	9.52	9.51	9.57	
Channel - DTW	11.85	11.85	11.76	
	15 mins. before 1459 hrs.	**High Tide 1514 hrs.**	**15 mins. after 1529 hrs.**	**1 hr. after 1614 hrs.**
Ash Pit - DTW	9.55	9.53	9.52	9.52
Channel - DTW	8.10	8.02	8.08	8.32

Notes:

All measurements are in feet below grade

Note: Grade level at the ash pit gauging station is approximately one foot higher than the channel gauging station

Low tide of 0902 hours and high tide of 1514 hours for 5/1/09 was per tide predictions for Wallabout Bay, Brooklyn Navy Yard.

mins. = minutes

hrs. = hours

DTW = depth to water

TABLE 10A
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE
REMEDIATION ALTERNATIVES - VACUUM DREDGING VS CLAMSHELL
COST COMPARISON SUMMARY

	TOTAL COST
REMEDIATION ESTIMATE: ALT. 1 - VACUUM DREDGING AND LTWT CONC FILL	**1,290,000**
REMEDIATION ESTIMATE: ALT. 2 - VACUUM DREDGING AND LTWT GRAVEL FILL	**1,230,000**
REMEDIATION ESTIMATE: ALT. 3 - CLAMSHELL DREDGING AND LTWT GRAVEL FILL	**1,310,000**

EXCLUSIONS:

OWNER PROJECT MANAGEMENT
COST OF MONEY

TABLE 10B
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 1 - VACUUM DREDGING AND LTWT CONC FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
GEOTUBES				
MOBILIZATION AND SUBMITTALS	1	LS	58,000	58,000
PROCESSING PAD, LINER AND SUMP	1	LS	41,200	41,200
TEMPORARY WATER AND 75 KVA POWER	1	LS	11,500	11,500
CRANE, OPERATORS AND OILER	13	DAYS	2,700	35,100
GEOTUBES, POLYMER, SMARTFEED AND TECHNICIAN	25	DAYS	3,100	77,500
DREDGE ASH PIT SEDIMENTS	25	DAYS	4,200	105,000
DE-WATERED FILTER CAKE - TRANSPORT AND DISPOSE	575	TON	110	63,250
SUBTOTAL				**$ 391,550**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
FILL PITS WITH PUMPED LIGHTWEIGHT CONCRETE FILL	1,600	CY	190	304,000
SUBTOTAL				**$ 342,800**
TOTAL DIRECTS				**$ 734,350**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	58,748	58,748
INSURANCES AND BONDS @ 5%	1	LS	36,718	36,718
OVERHEAD AND PROFIT @ 15%	1	LS	124,472	124,472
SUBTOTAL				**$ 219,938**
				$ 954,288
CONTINGENCY @ 10%	1	LS	95,429	95,429
TOTAL CONSTRUCTION (ROUNDED)				**$ 1,050,000**
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,290,000**

EXCLUSIONS

SEE SUMMARY SHEET

TABLE 10C
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 2 - VACUUM DREDGING AND LTWT GRAVEL FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
GEOTUBES				
MOBILIZATION AND SUBMITTALS	1	LS	58,000	58,000
PROCESSING PAD, LINER AND SUMP	1	LS	41,200	41,200
TEMPORARY WATER AND 75 KVA POWER	1	LS	11,500	11,500
CRANE, OPERATORS AND OILER	13	DAYS	2,700	35,100
GEOTUBES, POLYMER, SMARTFEED AND TECHNICIAN	25	DAYS	3,100	77,500
DREDGE ASH PIT SEDIMENTS	25	DAYS	4,200	105,000
DE-WATERED FILTER CAKE - TRANSPORT AND DISPOSE	575	TON	110	63,250
SUBTOTAL				**$ 391,550**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
W14X132 BRACING LONGITUDINAL MEMBERS	130	FT	390	50,700
BRACING LATERAL STRUTS	6	EA	5,400	32,400
STRUCTURAL SLAB	1,755	SF	35	61,425
FILL PITS WITH GRAVEL	1,600	CY	65	104,000
SCAFFOLDS AND TEMPORARY STRUCTURES	1	LS	13,800	13,800
SUBTOTAL				**$ 301,125**
TOTAL DIRECTS				**$ 692,675**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	55,414	55,414
INSURANCES AND BONDS @ 5%	1	LS	34,634	34,634
OVERHEAD AND PROFIT @ 15%	1	LS	117,408	117,408
SUBTOTAL				**$ 207,456**
				$ 900,131
CONTINGENCY @ 10%	1	LS	90,013	90,013
TOTAL CONSTRUCTION (ROUNDED)				**$ 990,000**
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,230,000**

EXCLUSIONS

SEE SUMMARY SHEET

TABLE 10D
FORMER KENT AVENUE GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK
REMEDIAL ACTION ALTERNATIVE COST ESTIMATE

REMEDIATION ESTIMATE: ALT. 3 - CLAMSHELL DREDGING AND LTWT GRAVEL FILL

BASED ON 750 CU YDS OF EXCAVATED SEDIMENTS

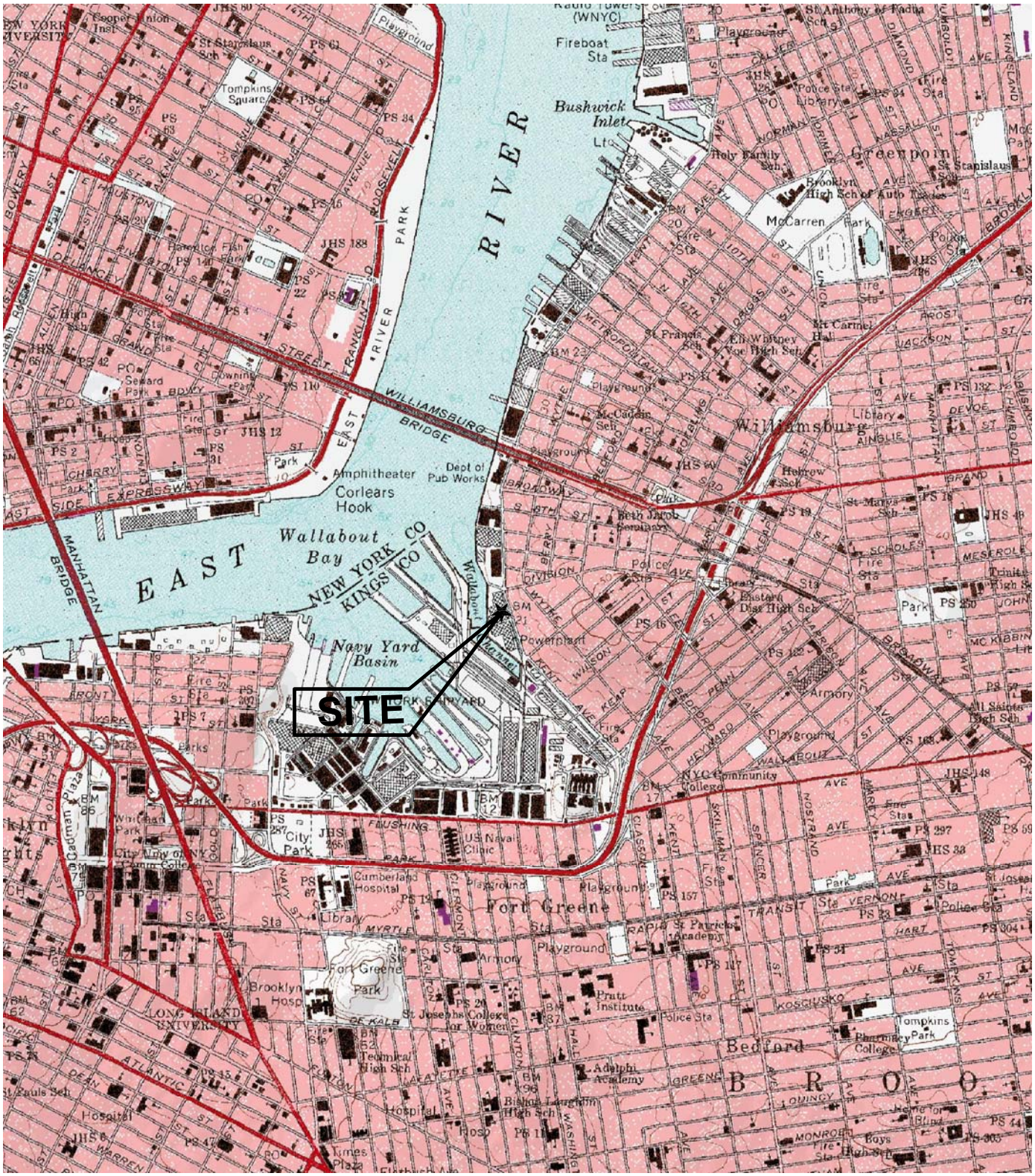
ITEM DESCRIPTION	QTY	UM	UNIT TOTAL	TOTAL COST
CONSTRUCTION				
CLAMSHELL DREDGING				
EQUIPMENT AND CONSUMMABLES FOR TREATMENT OPERATION	1	LS	152,000	152,000
FIELD SETUP	3	DAYS	31,200	93,600
CLAMSHELL EXCAVATION, DEWATERING, WATER TREATMENT	10	DAYS	7,800	78,000
HAND TOOL EXCAVATION BY DIVERS	6	DAYS	6,700	40,200
HAZMAT TRANSPORTATION AND DISPOSAL	800	TON	110	88,000
SUBTOTAL				**$ 451,800**
CIVIL WORK				
MOBILIZATION	1	LS	30,000	30,000
EXCAVATE PUMP HOUSE PIT ABOVE WATER	80	CY	110	8,800
W14X132 BRACING LONGITUDINAL MEMBERS	130	FT	390	50,700
BRACING LATERAL STRUTS	6	EA	5,400	32,400
STRUCTURAL SLAB	1,755	SF	35	61,425
FILL PITS WITH GRAVEL	1,600	CY	65	104,000
SCAFFOLDS AND TEMPORARY STRUCTURES	1	LS	13,800	13,800
SUBTOTAL				**$ 301,125**
TOTAL DIRECTS				**$ 752,925**
CONSTRUCTION INDIRECTS				
GENERAL CONDITIONS	1	LS	60,234	60,234
INSURANCES AND BONDS @ 5%	1	LS	37,646	37,646
OVERHEAD AND PROFIT @ 15%	1	LS	127,621	127,621
SUBTOTAL				**$ 225,501**
				$ 978,426
CONTINGENCY @ 10%	1	LS	97,843	97,843
TOTAL CONSTRUCTION (ROUNDED)				**$ 1,076,000**
ENGINEERING AND CM				
PREPARE ENGINEERING REMEDIAL COST ESTIMATE	1	LS	8,000	8,000
PRE-BID MEETING SUPPORT	1	LS	10,100	10,100
PREPARE RAWP & BID SPECIFICATION	1	LS	31,000	31,000
PERFORM REVIEW OF CONTRACTOR DELIVERABLES	1	LS	9,900	9,900
FIELD OVERSIGHT AND PROJECT CLOSEOUT	1	LS	158,600	158,600
PERMITS	1	LS	20,000	20,000
ENGINEERING AND CM (ROUNDED)				**$ 237,600**
GRAND TOTAL (ROUNDED)				**$ 1,310,000**

EXCLUSIONS

SEE SUMMARY SHEET

FIGURES

OFFICE	DRAWING NUMBER
Holbrook, NY	KENT–FIG1



APPROXIMATE SCALE

0 2000 4000 6000 FEET

N

REFERENCE:
7.5 MINUTE SERIES TOPOGRAPHIC MAP OF BROOKLYN, NY
USGS GEOLOGICAL SURVEY, 1966, 1927 NORTH AMERICAN DATUM

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

SITE LOCATION MAP

CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	S. Ash	4/25/06	CHECKED BY	S. Ash	4/25/06
DRAWN BY	R. Tagoff	4/25/06	APPROVED BY	S. Ash	4/25/06

SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	KENT-FIG1	-	FIGURE 1	--

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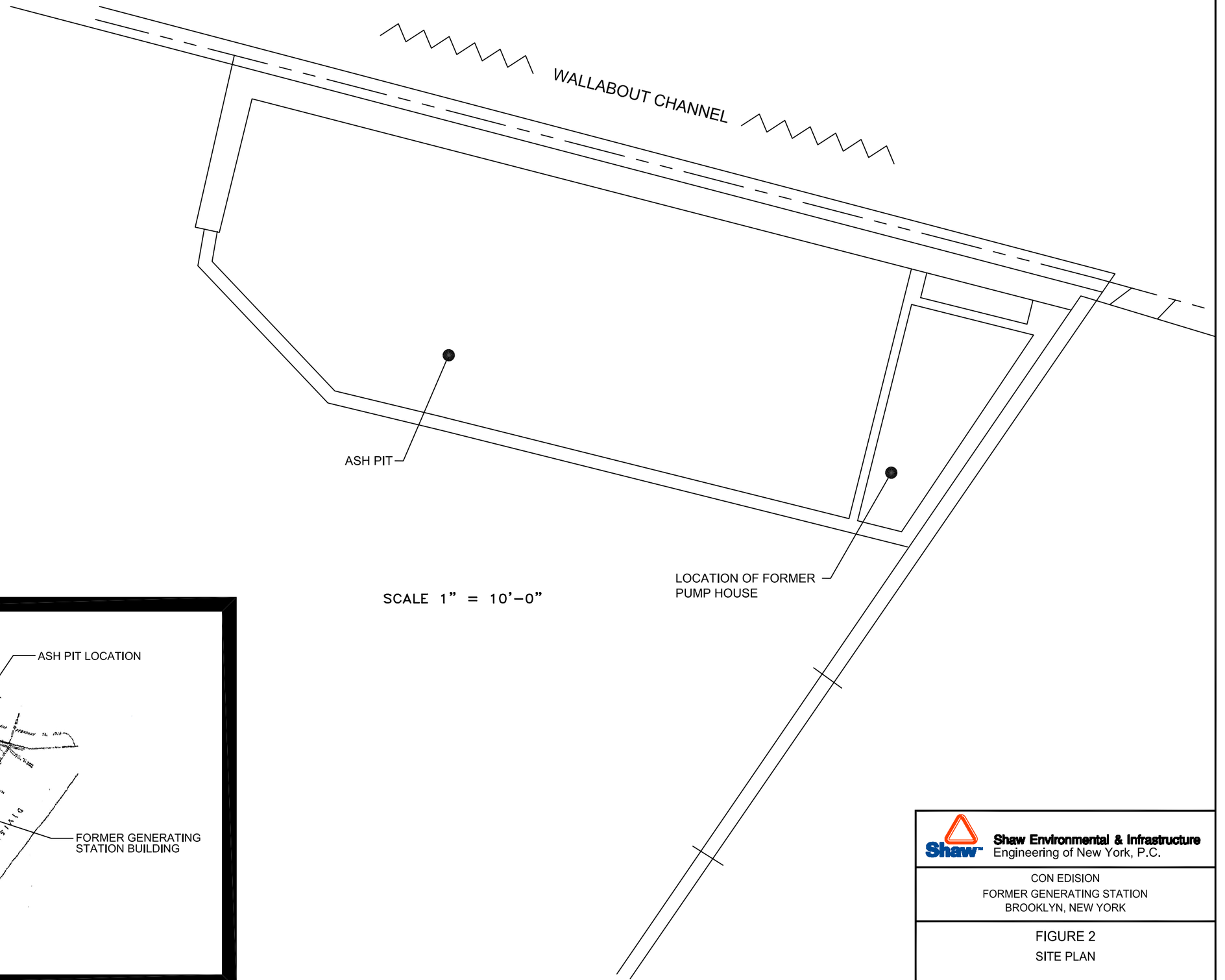
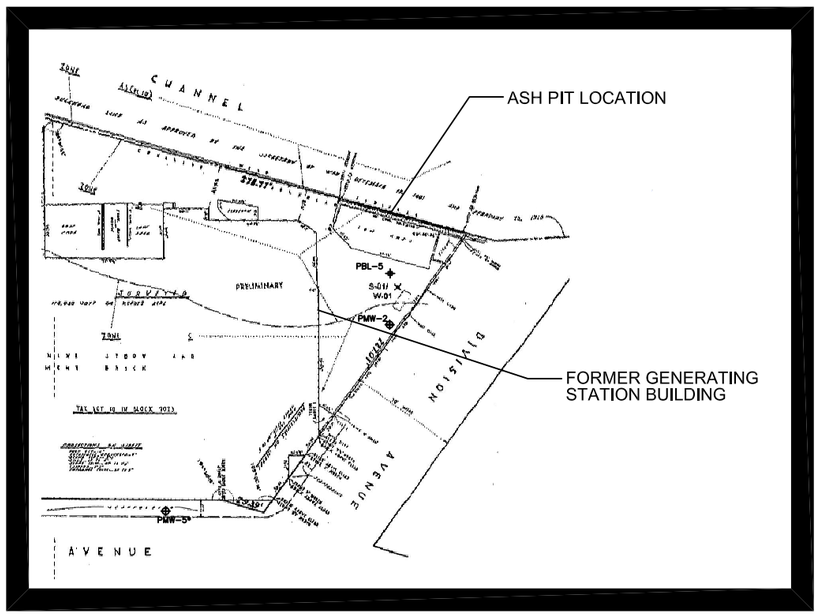
Plot Date/Time: Apr 25, 2006 - 5:06pm
Plotted By: randy.tagoff



SCALE 1" = 10'-0"



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/17/2009	SASH 6/17/2009	SASH 6/17/2009	FIGURE 2

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

CON EDISION
FORMER GENERATING STATION
BROOKLYN, NEW YORK

FIGURE 2
SITE PLAN

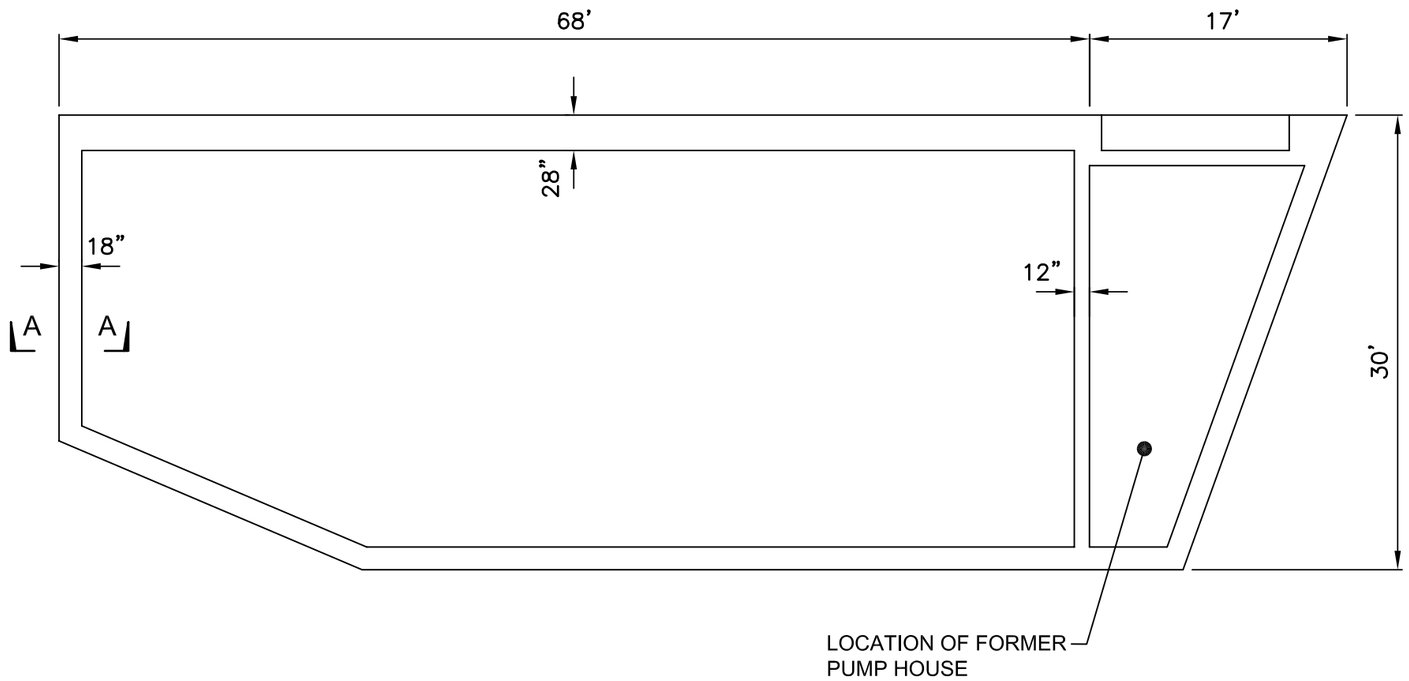
FORMER KENT AVENUE GENERATING STATION
BROOKLYN, NEW YORK

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-25-09\Revised Drawings\FIGURE 2.dwg
XREF Files: IMAGE Files: ASH PIT SAMPLING LOCATIONS LMS.bmp
Plot Date/Time: Jun 25, 2009 - 5:27pm
Plotted By: svetlana.tumaian

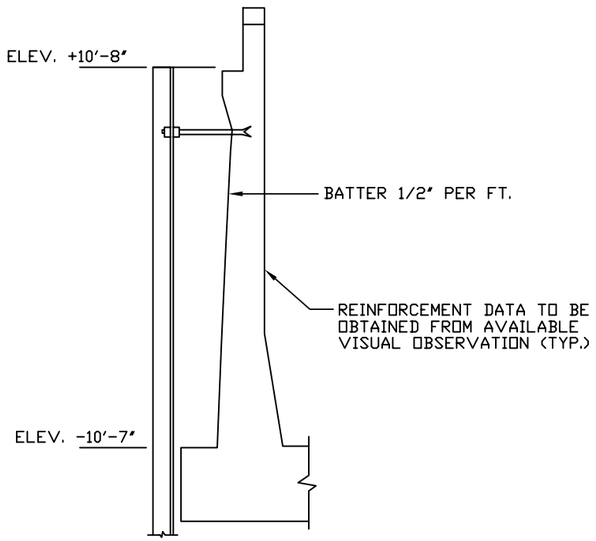
OFFICE Holbrook, NY | DRAWING NUMBER 121153-FIG3

(APPROX.)

WALLABOUT CHANNEL



SCALE 1” = 10’–0”



SECTION A–A
SCALE 1/8” = 1’–0”

SOURCE OF CROSS-SECTION:
NEW YORK CITY TRANSIT AUTHORITY
NEW YORK CITY TRANSIT SYSTEM
SHEET PILING PLAN
DRAWING # KAW - 103

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

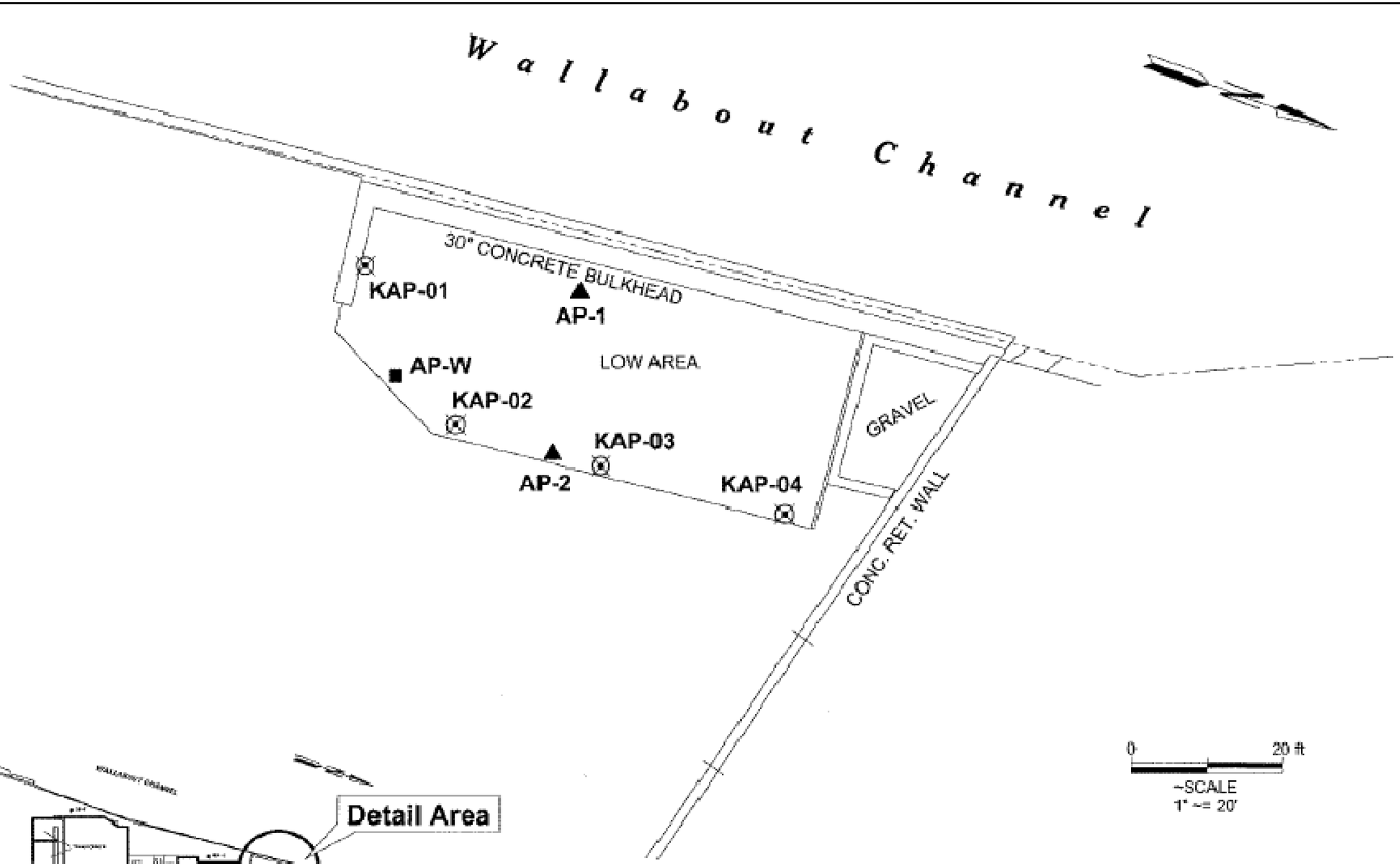
PLAN AND SECTION OF ASH PIT

CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	S. Ash	4/23/09	CHECKED BY	S. Ash	4/23/09
DRAWN BY	S. Tumaian	4/23/09	APPROVED BY	S. Ash	4/23/09

SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	121153-FIG3	121153	FIGURE 3	1

P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\FIGURE 3.dwg, 6/25/2009 2:57:16 PM, svetlana.tumaian



LEGEND

- ⊗ Ash pit sludge sampling location (April 2000)
- ▲ Ash pit sludge sampling location (December 1999)
- ■ Ash pit water sample (March 2000)

REFERENCE:

FIGURE 1 FROM THE LAWLER MATUSKY AND SKELLY ENGINEERS LLP REPORT DATED JUNE 1, 2000 FOR THE ASH PIT INVESTIGATION FORMER KENT AVENUE GENERATING STATION

Shaw Environmental & Infrastructure
Engineering of New York, P.C.

CON EDISION
FORMER GENERATING STATION
BROOKLYN, NEW YORK

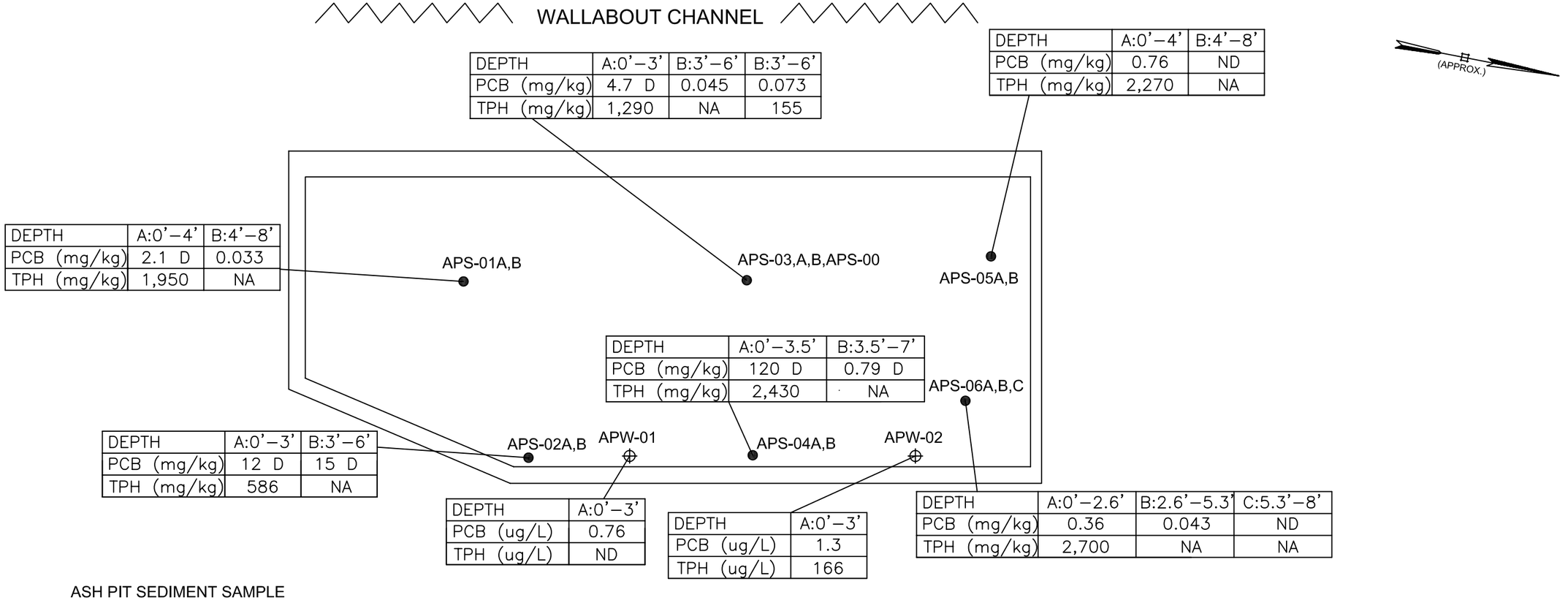
FIGURE 4
ASH PIT SAMPLING LOCATIONS, LMS, 1999-2000

FORMER KENT AVENUE GENERATING STATION
BROOKLYN, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/17/2009	SASH 6/17/2009	SASH 6/17/2009	706556-FIGURE 4

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\FIGURE 2.dwg
XREF Files: IMAGE Files: ASH PIT SAMPLING LOCATIONS LMS.bmp
Plot Date/Time: Jun 19, 2009 - 9:00am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-F-FIG5



DEPTH	A:0'–3'	B:3'–6'	B:3'–6'
PCB (mg/kg)	4.7 D	0.045	0.073
TPH (mg/kg)	1,290	NA	155

DEPTH	A:0'–4'	B:4'–8'
PCB (mg/kg)	0.76	ND
TPH (mg/kg)	2,270	NA

DEPTH	A:0'–4'	B:4'–8'
PCB (mg/kg)	2.1 D	0.033
TPH (mg/kg)	1,950	NA

DEPTH	A:0'–3.5'	B:3.5'–7'
PCB (mg/kg)	120 D	0.79 D
TPH (mg/kg)	2,430	NA

DEPTH	A:0'–3'	B:3'–6'
PCB (mg/kg)	12 D	15 D
TPH (mg/kg)	586	NA

DEPTH	A:0'–3'
PCB (ug/L)	0.76
TPH (ug/L)	ND

DEPTH	A:0'–3'
PCB (ug/L)	1.3
TPH (ug/L)	166

DEPTH	A:0'–2.6'	B:2.6'–5.3'	C:5.3'–8'
PCB (mg/kg)	0.36	0.043	ND
TPH (mg/kg)	2,700	NA	NA

LEGEND

APS-04 ●	ASH PIT SEDIMENT SAMPLE
APW-02 ⊕	SAMPLE ASH PIT WATER SAMPLE
PCB	POLY CHLORINATED BIPHENYLS
TPH	TOTAL PETROLEUM HYDROCARBONS
D	SAMPLE RESULT FROM DILUTED SAMPLE - RESULT OF UNDILUTED SAMPLE EXCEEDED CALIBRATION RANGE
NA	NOT ANALYZED
ND	NOT DETECTED
ug/L	MICROGRAMS PER LITER
mg/kg	MILLIGRAMS PER KILOGRAM

NOTE:

SAMPLE LOCATIONS SHOWN ARE APPROXIMATE AND WILL BE FINALIZED BY LAND SURVEY FOR USE IN FUTURE DOCUMENTS.

SLUDGE SAMPLES: PHYSICAL CHARACTERISTICS

Sample ID	Peneteration Depth (feet)	Length of Recovery (feet)	Observations
APS-01	8	8	Black sand, dark brown silt and garvel, dark brown and sand
			PID responses < 1 ppm
APS-02	8	6	Black silt. Slight oily sheen. PID responses < 1 ppm
APS-03	8	6	Top 1/2:Dark black silt, sheen visible and white greasy material.
			Slight petroleum odor
			Bottom 1/2: Dark brown sand. Oily sheen observed.
			PID responses < 1 ppm
APS-04	9	7	Top 1/2: Dark black silt; slight oily sheen. White greasy
			material present.
			Bottom 1/2: Brown silt, some sand. Oily sheen observed.
			PID responses < 1 ppm
APS-05	8	8	Top 1/2: Dark black silt; slight sheen noticeable.
			Bottom 1/2: Dark brown silt; slight sheen noticeable.
			PID responses < 1 ppm
APS-06	11	8	Silt. White greasy material present. Slight sheen at 6 ft.
			PID responses < 1 ppm

SCALE : 1" = 10'–0"

SCALE

0 10 20 30 FEET

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Engineering of New York, P.C.

PCB AND TPH CONCENTRATIONS IN ASH PIT WATER AND SEDIMENT SAMPLES

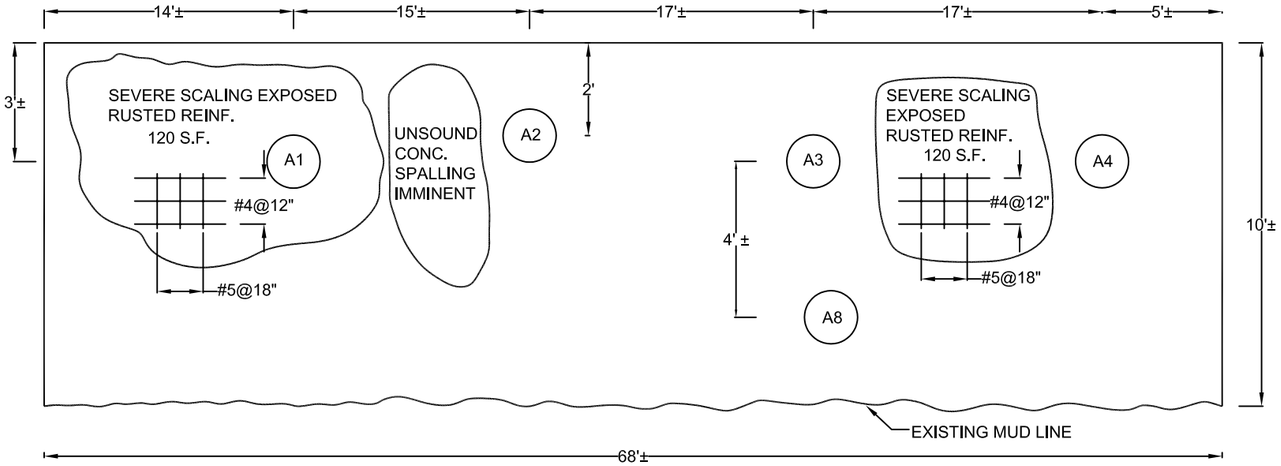
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	S. Ash	4/23/09	CHECKED BY	S. Ash	4/23/09
DRAWN BY	S. Tumaian	4/23/09	APPROVED BY	S. Ash	4/23/09

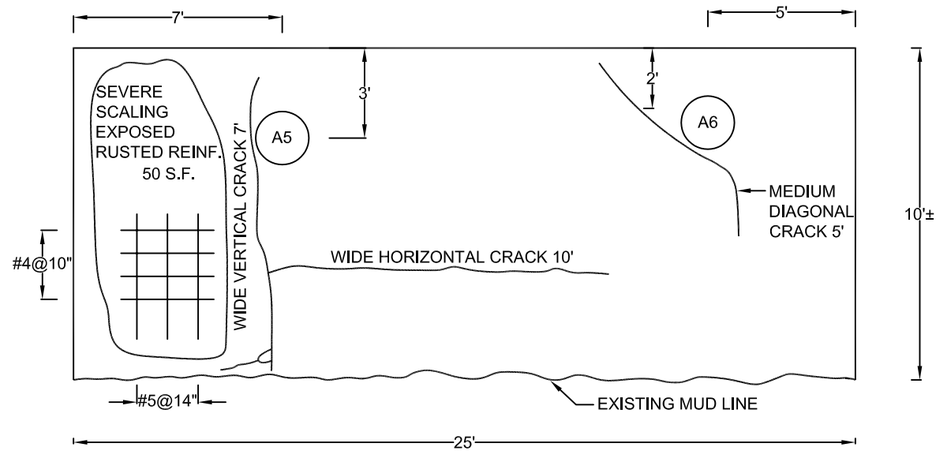
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	126649-F-FIG4	126649	FIGURE 5	1

P:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-25-09\Revised Drawings\FIGURES 5.dwg, 6/25/2009 4:30:47 PM, svetlana.tumaian

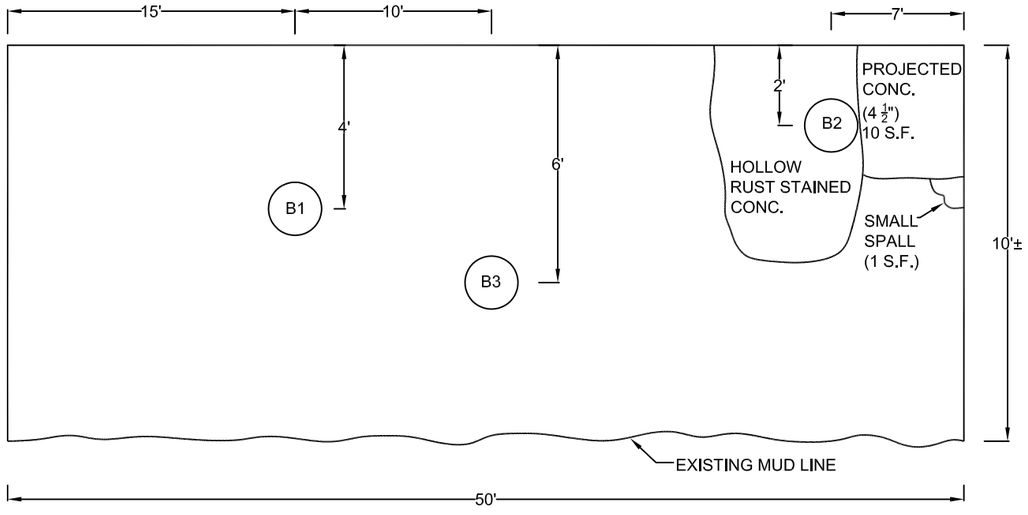
OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG6



WEST WALL



NORTH WALL



EAST WALL

WINDSOR PIN DESIGNATIONS (TYP.)

A_:TAKEN ON 9/26/07
B_:TAKEN ON 9/28/07

SCALE : N.T.S.

Shaw™ **Shaw Environmental & Infrastructure**
Engineering of New York, P.C.

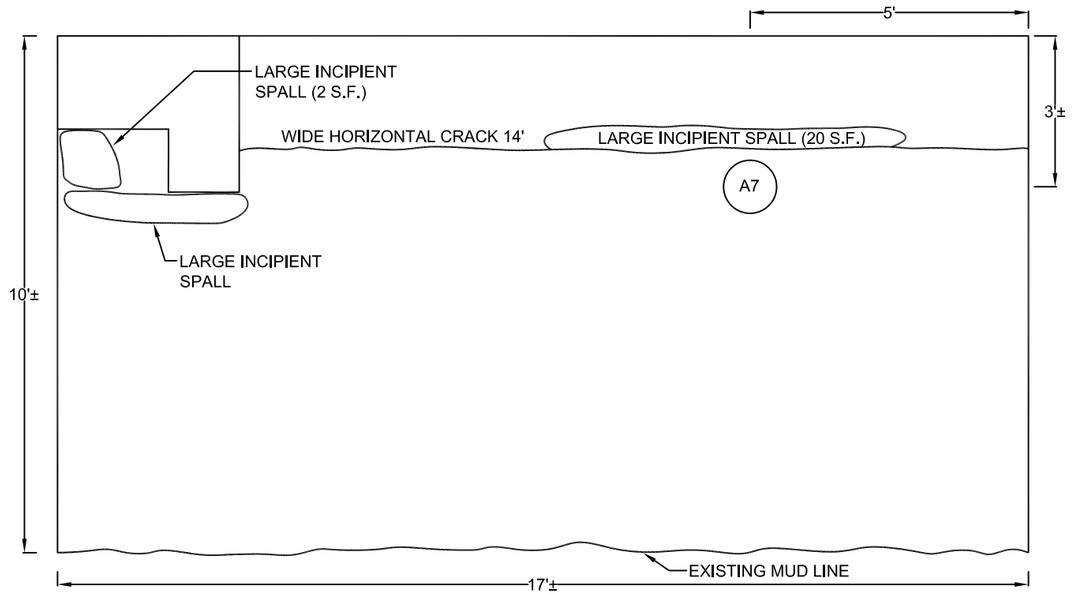
CONDITION OF ASH PIT WALLS AND
LOCATIONS OF WINDSOR PIN TESTS
NORTH, WEST, AND EAST WALLS
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	A. Chuliver	10/19/07	CHECKED BY	A. Chuliver	10/19/07
DRAWN BY	R. Tagoff	10/19/07	APPROVED BY	S. Ash	10/19/07

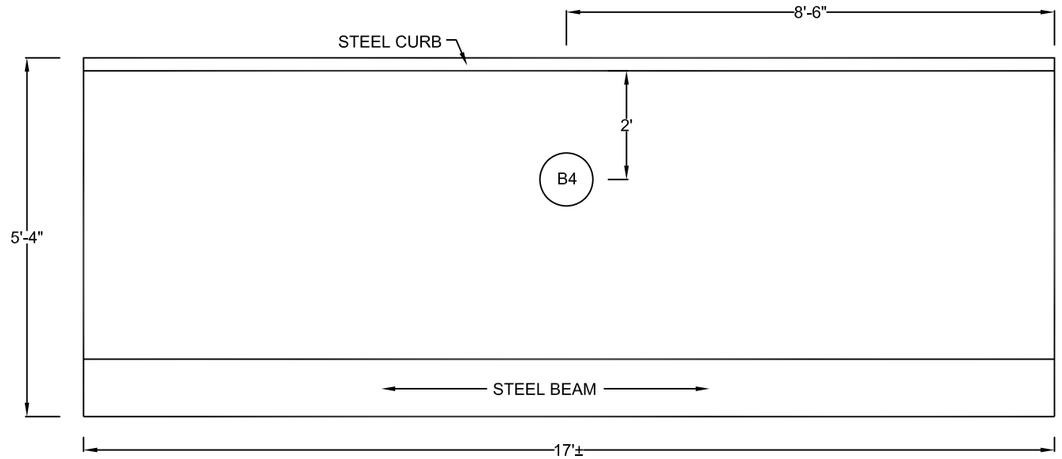
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
N.T.S.	126649-FIG5	126649	FIGURE 6	1

File: P:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-15-09\Revised Drawings\FIGURES 6.dwg
Plot Date/Time: Jun 19, 2009 - 10:02am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG7



SOUTH WALL



SOUTHEAST WALL

WINDSOR PIN DESIGNATIONS (TYP.)

A_:TAKEN ON 9/26/07
B_:TAKEN ON 9/28/07

# X BAR @ Y"
X = REINFORCEMENT DIAMETER IN EIGHTHS OF AN INCH
Y = CENTER-TO-CENTER SPACING OF REBAR

SCALE : N.T.S.

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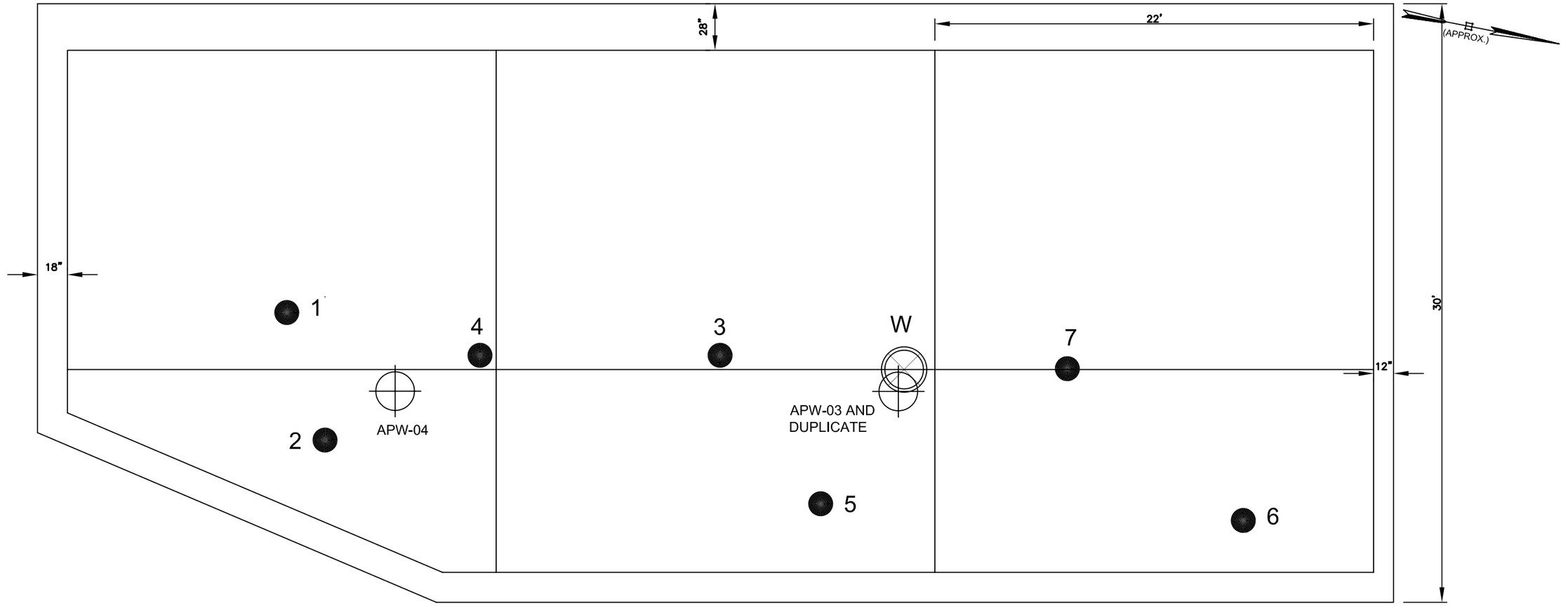
CONDITION OF ASH PIT WALLS AND
LOCATIONS OF WINDSOR PIN TESTS
SOUTH AND SOUTHEAST WALLS
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	A. Chuliver	10/19/07	CHECKED BY	A. Chuliver	10/19/07
DRAWN BY	R. Tagoff	10/19/07	APPROVED BY	S. Ash	10/19/07

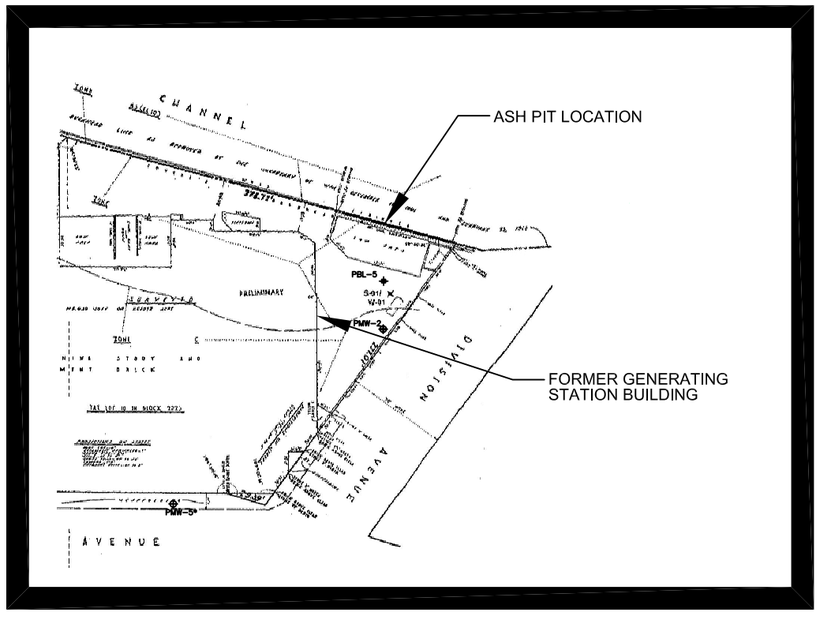
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
N.T.S.	126649-FIG7	126649	FIGURE 7	— —

File: N:\Projects\Con Ed\Kent Ave\from Svetlana\6-19-09\FIGURES 7-Location of Ash Pit S and SE Walls.dwg
Plot Date/Time: Jun 22, 2009 - 9:51am
Plotted By: svetlana.tumaian

OFFICE Holbrook, NY | DRAWING NUMBER 126649-FIG8



SCALE 3/16" = 1'-0"



LEGENDS:

1 — SLUDGE SAMPLE LOCATION

W — 5 GALLON "OVERWATER" SAMPLE LOCATION

APW-03 — WATER FIELD SAMPLE LOCATION

SYSTEMATIC COMPOSITE SAMPLING:

EACH FIELD SAMPLE COLLECTED AT THE LOCATIONS WAS POOLED AND MIXED INTO ONE COMPOSITE SAMPLE. THE RELATIVE LOCATION OF EACH INDIVIDUAL SAMPLE WAS THE SAME WITHIN EACH BLOCK.

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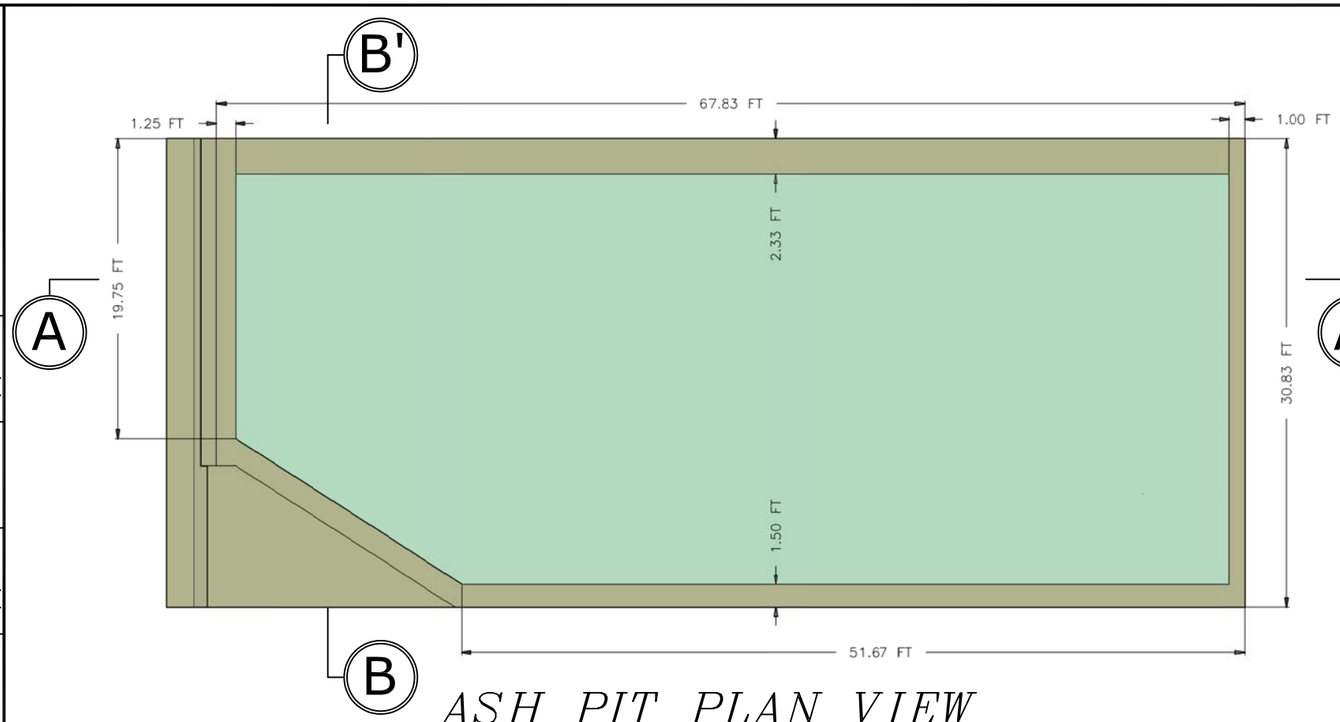
LOCATION OF ASH PIT
FEASIBILITY STUDY SEDIMENT AND WATER SAMPLES
CON EDISON
FORMER GENERATING STATION
500 KENT AVENUE, BROOKLYN, NEW YORK

DESIGNED BY	Y. Kunukcu	6/10/08	CHECKED BY	Y. Kunukcu	6/16/08
DRAWN BY	S. Tumaian	6/10/09	APPROVED BY	S. Ash	6/16/08

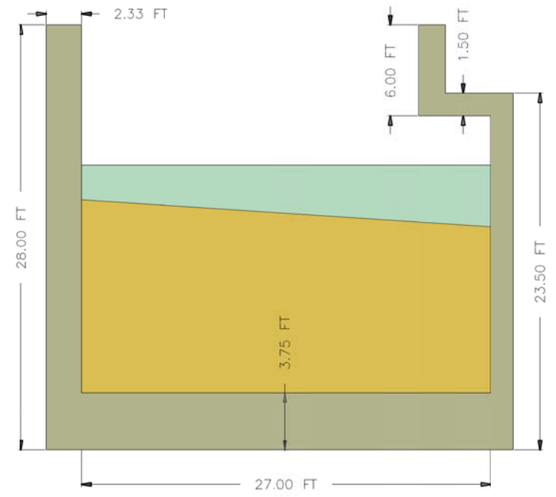
SCALE:	DRAWING NO.	PROJECT NO.	SHEET NO.	REVISION NO.
AS SHOWN	126649-FIG7	126649	FIGURE 8	1

P:\Con Ed\Kent Avenue\Ash pit\RAWP\Drawings\126649-FIG7.dwg, 6/18/2009 1:47:38 PM, svetlana.tumaian



ASH PIT PLAN VIEW

SCALE 1 in = 10 ft



CROSS SECTION B–B'

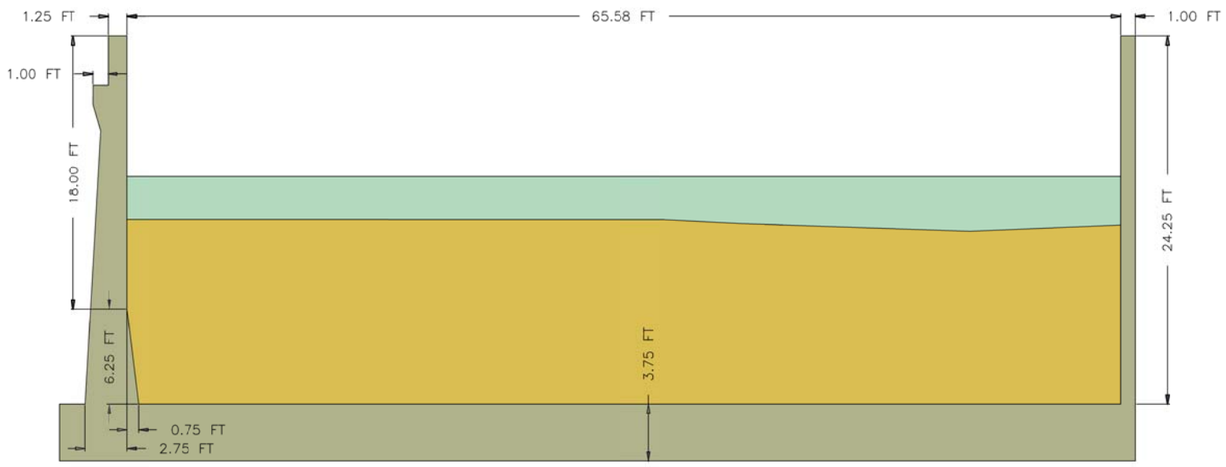
SCALE 1 in = 10 ft

LEGEND

SURFACE WATER

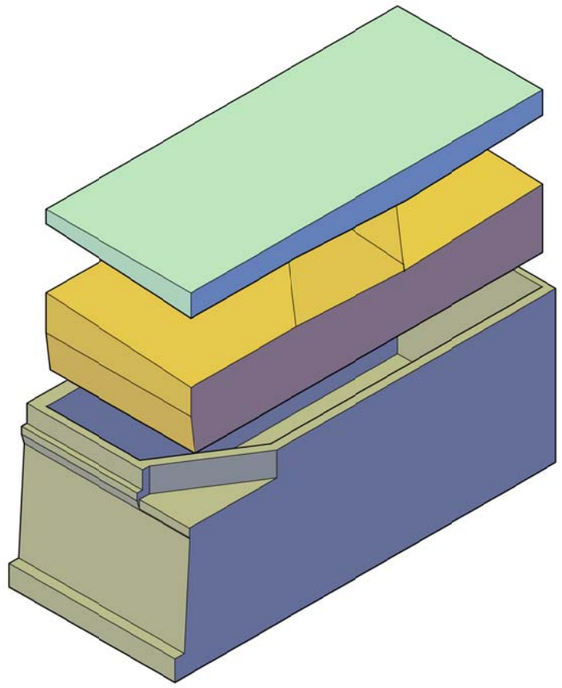
SLUDGE IN PLACE

Description	Volume (yds3)
Sludge In Place	758
Surface Water	224
Void	591
Ash Pit	1573



CROSS SECTION A–A'

SCALE 1 in = 10 ft



EXPLODED VIEW

SCALE 1 in = 20 ft

NOTES

1. ASH PIT DIMENSIONS WERE TAKEN FROM A CROSS–SECTIONAL DRAWING BY THE NEW YORK CITY TRANSIT AUTHORITY, NEW YORK CITY TRANSIT SYSTEM TITLED "1955 BOILER HOUSE EXTENSION & TOWER "C" PILING, SHEET PILING, & FOUNDATIONS PLAN & SECTIONS", DRAWING No. KAW–103. AREAL DIMENSIONS ARE TAKEN FROM FIELD MEASUREMENTS

2. MEASUREMENTS OF SLUDGE THICKNESS AND HEIGHT OF STANDING WATER WERE MADE DURING A 4.5 HOUR SAMPLING EVENT. A NORMAL TIDAL CYCLE DURATION IS SIX HOURS. WATER HEIGHT SHOWN IS THEREFORE APPROXIMATE. SLUDGE THICKNESS WAS MEASURED AT SIX LOCATIONS AND DIMENSIONS AND SURFACE CONTOUR ARE APPROXIMATE.

Shaw Environmental, Inc.

CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 9
ASH PIT SEDIMENT AND WATER DEPICTION

DRAWING NUMBER	FIGURE 9		
APPROVED BY	S.ASH	5/5/2009	
CHECKED BY	S.ASH	5/5/2009	
DRAWN BY	G.PASSARELLI	5/5/2009	
OFFICE	HOLBROOK, NY		

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XREF Files: IMAGE Files:
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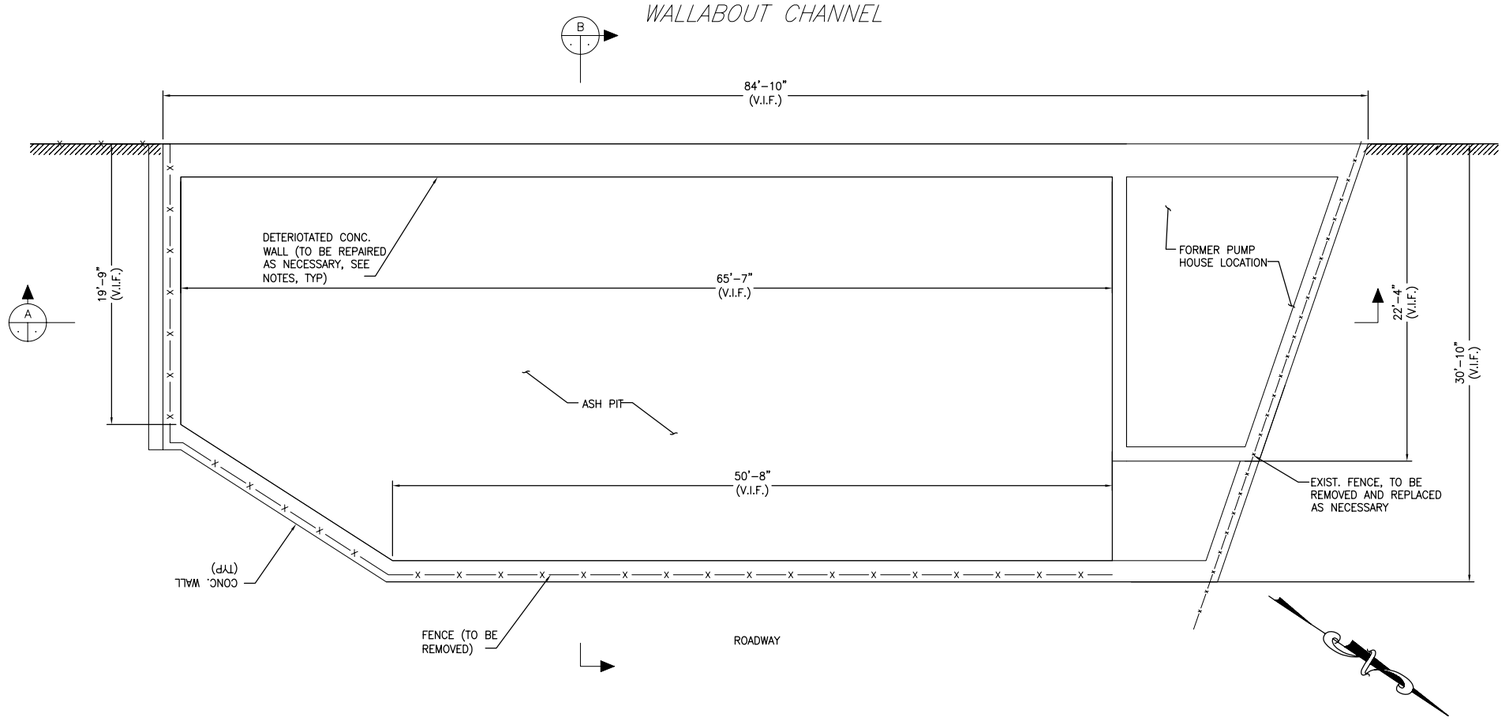
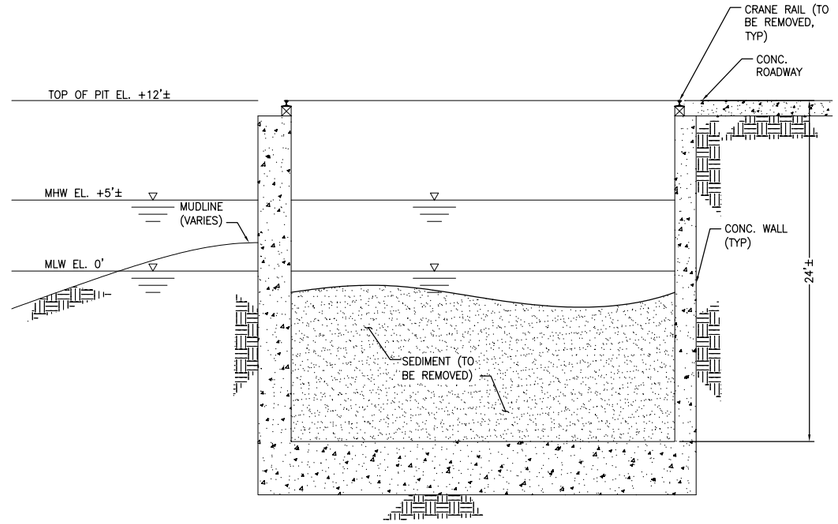
Plotted By: svetlana.tumaian

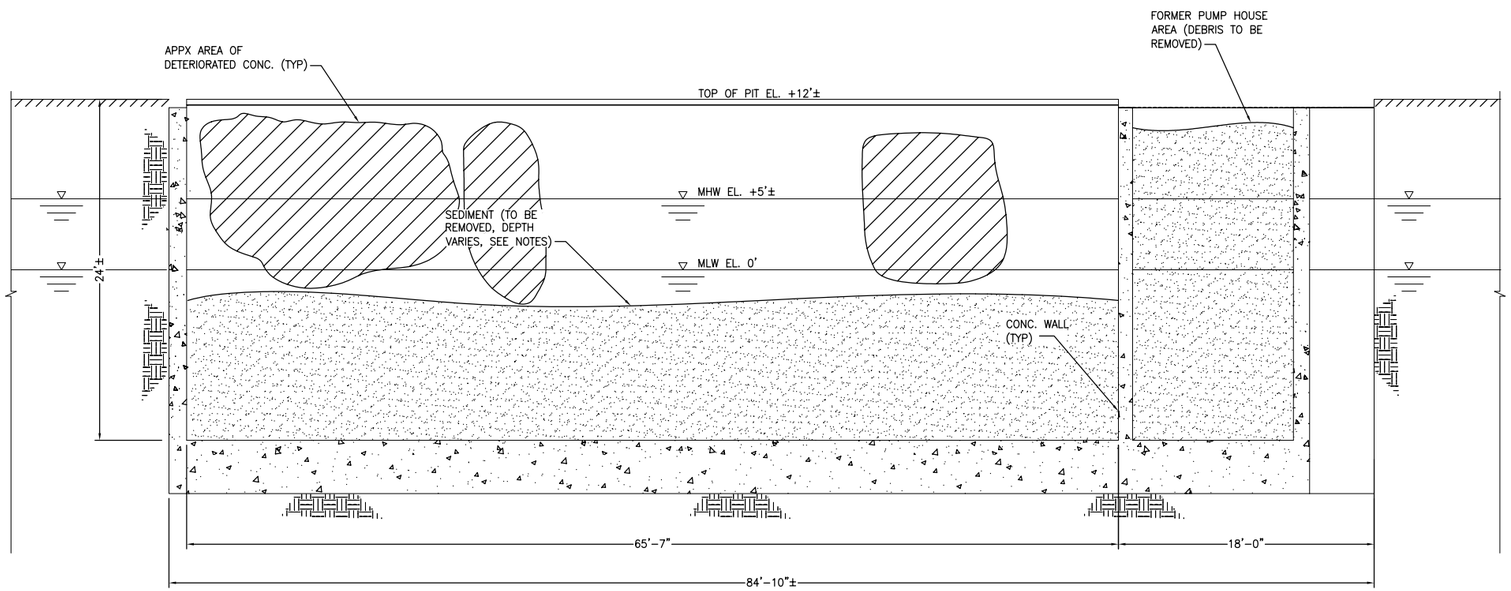


EXISTING PLAN
SCALE: 3/16"=1'-0"

5' 0 5' 10'
SCALE: 3/16" = 1'-0"



SECTION
SCALE: 3/16"=1'-0"



SECTION
SCALE: 3/16"=1'-0"

LEGEND
V.I.F. VERIFY IN FIELD
MHW MEAN HIGH WATER
MLW MEAN LOW WATER

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CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 10
ASH PIT REMEDIATION:
EXISTING PLAN AND SECTIONS

DRAWING NUMBER FIGURE 10
APPROVED BY S.ASH
CHECKED BY J. FRANCESCON 8/19/2009
DRAWN BY S. SHATZ 8/19/2009
OFFICE NEW YORK, NY

File: V:\Projects\Con Ed\Kent Ave\CAD\Structural\Sheet Files\2009 08 19- concrete fill.dwg
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Plotted: Sep 17, 2009 - 11:45am
Plotted By: (33.1) s shatz
Last Saved By: (33.1) s shatz

DRAWING NUMBER	APPROVED BY		CHECKED BY		DRAWN BY		OFFICE
FIGURE 11	SASH	6/8/2009	SASH	6/8/2009	G.PASSARELLI	6/8/2009	HOLBROOK, NY

30' X 50' SMARTFEED TRAILER

ASH PIT

GEOTUBE DRAINAGE AREA

LEGEND

SMARTFEED TRAILER

FOOTPRINT OF DEMOLISHED BUILDING

Shaw Environmental, Inc.

CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 11
GEOTUBE DRAINAGE PAD AND SMARTFEED TRAILER LOCATION
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

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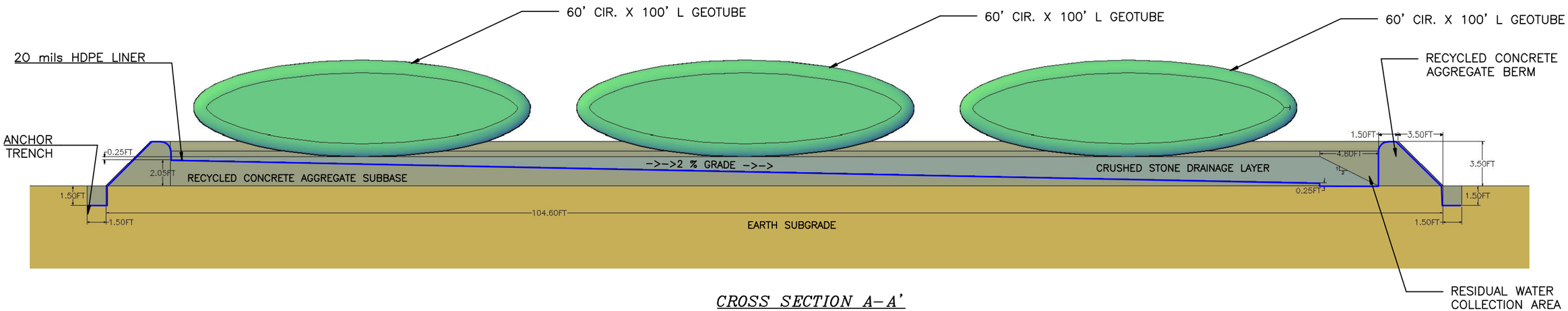
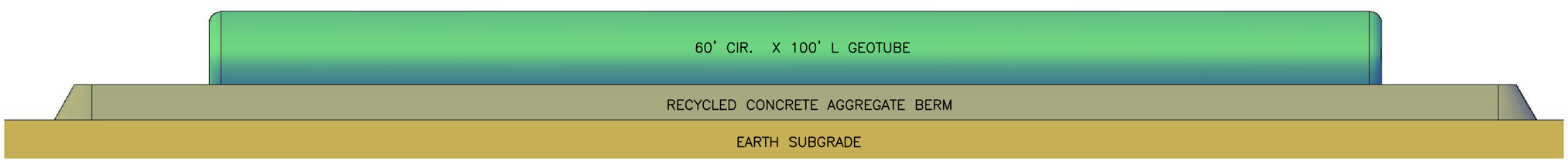
Plotted By: garrett.passarelli



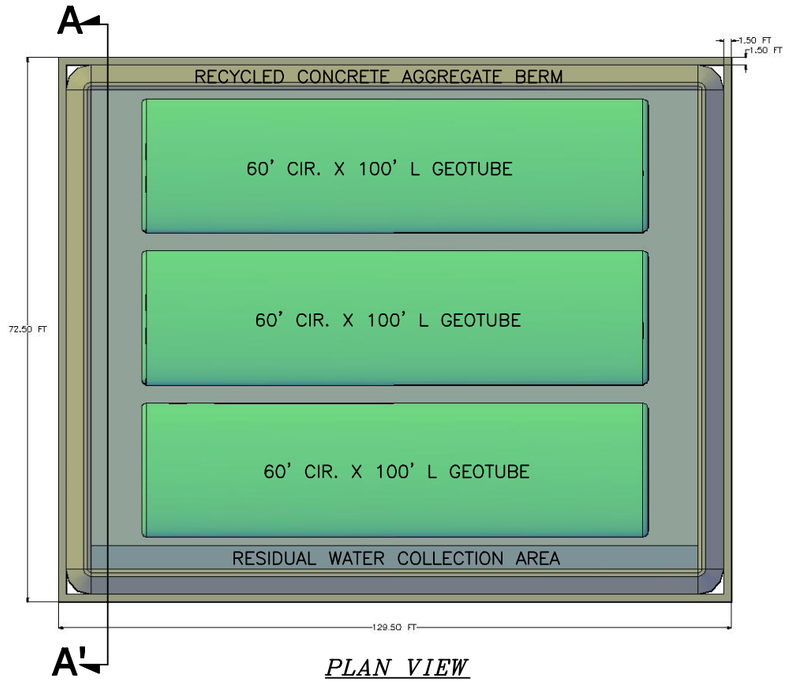
CROSS SECTION A–A'

SCALE: 1" = 8'



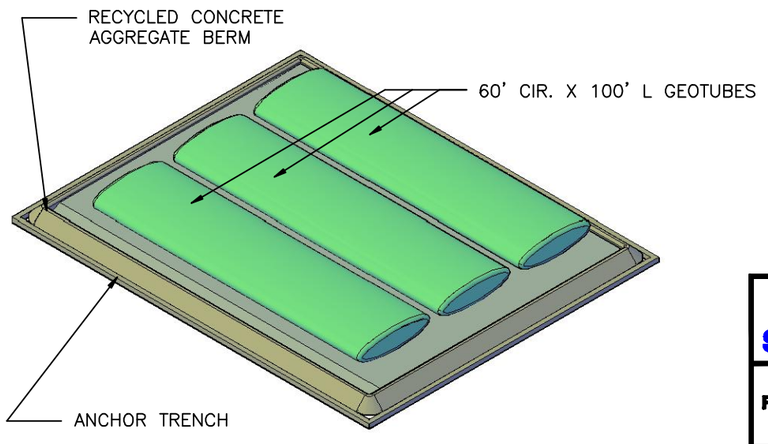
PROFILE

SCALE: 1" = 10'



PLAN VIEW

SCALE: 1" = 20'



ISOMETRIC VIEW

SCALE = 1" = 40'

SOIL LEGEND

- RECYCLED CONCRETE AGGREGATE
- CRUSHED STONE
- EARTH

Shaw Environmental, Inc.

CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 12
GEOTUBE DRAINAGE PAD LAYOUT

FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/8/2009	S.ASH 6/8/2009	S.ASH 6/8/2009	FIGURE 12

File: N:\Con Ed\Kent Avenue\Ash pit\RAWP\Draft to CE 5-5-09\From CE 5-20-09\To CE 6-15-09\Revised Drawings\FIGURES 10-12.dwg
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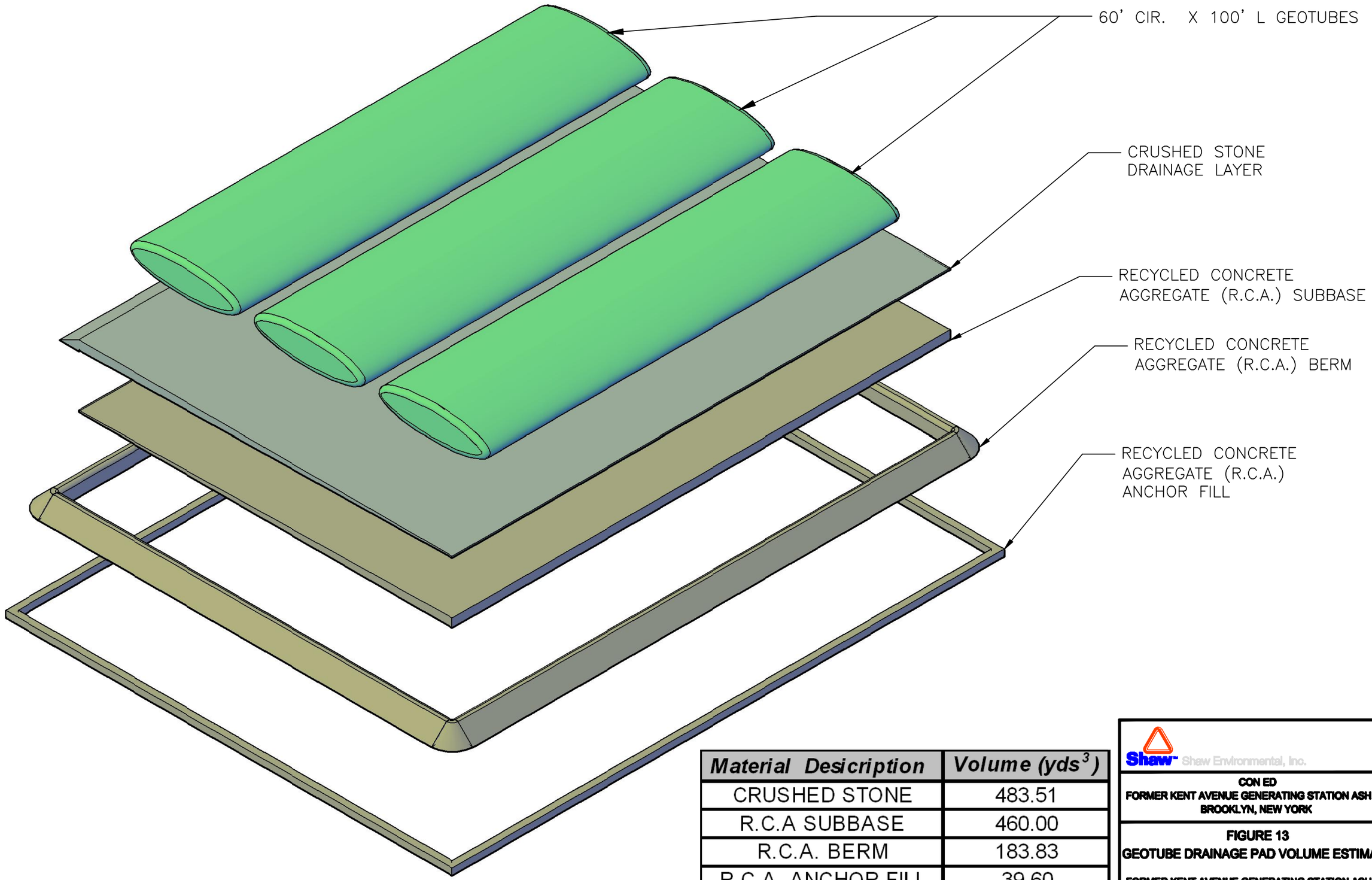

Material Desicription	Volume (yds^3)
CRUSHED STONE	483.51
R.C.A SUBBASE	460.00
R.C.A. BERM	183.83
R.C.A. ANCHOR FILL	39.60

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CON ED
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 13
GEOTUBE DRAINAGE PAD VOLUME ESTIMATE

FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
HOLBROOK, NY	G.PASSARELLI 6/8/2009	S.ASH 6/8/2009	S.ASH 6/8/2009	FIGURE 13

File: N:\Con Ed\Kent Avenue\Ash pit\KAWP\Draft to CE 5-5-09\from CE 5-20-09\to CE 6-15-09\Revised Drawings\FIGURES 10-12.dwg
XREF Files: IMAGE Files: KENT-FIG2.jpg
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Plotted By: garrett.passarelli

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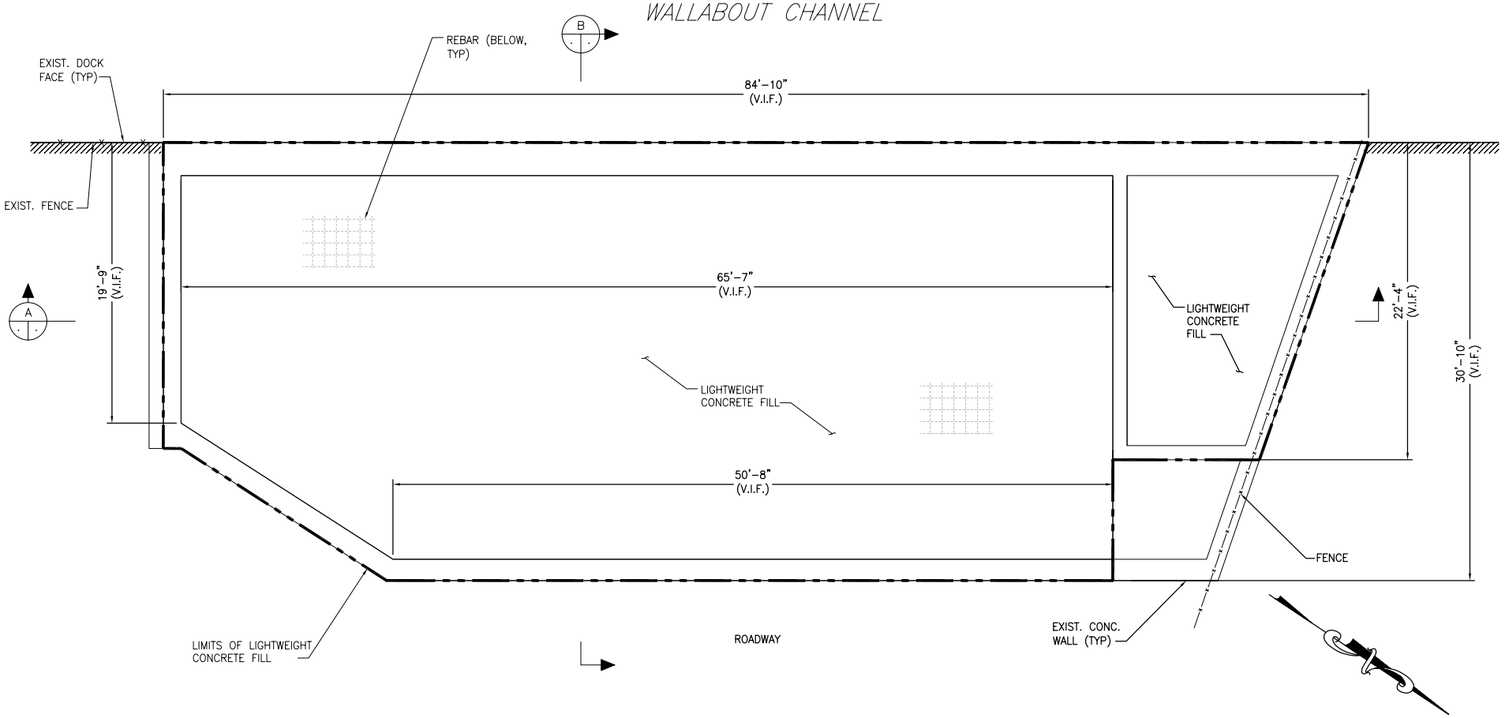
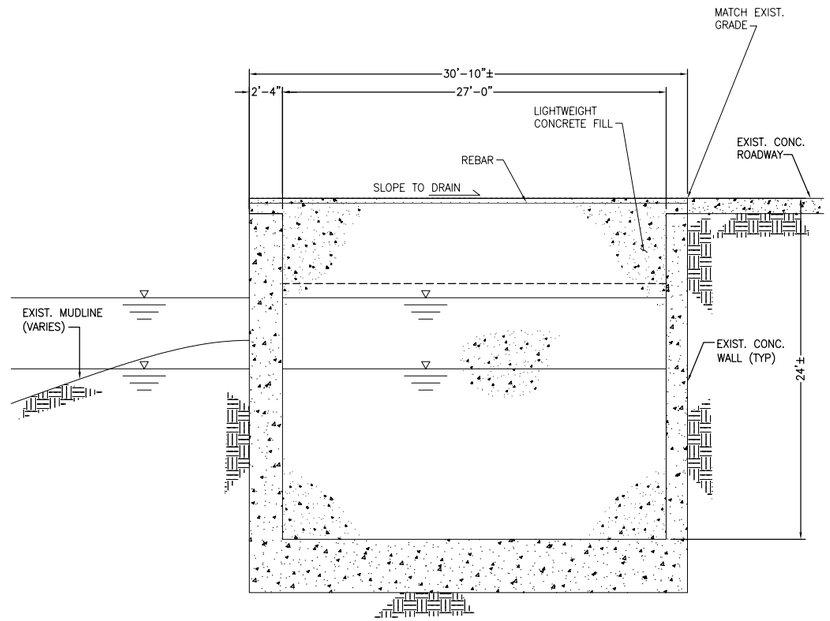
Plotted By: (33.1) shatz

WALLABOUT CHANNEL

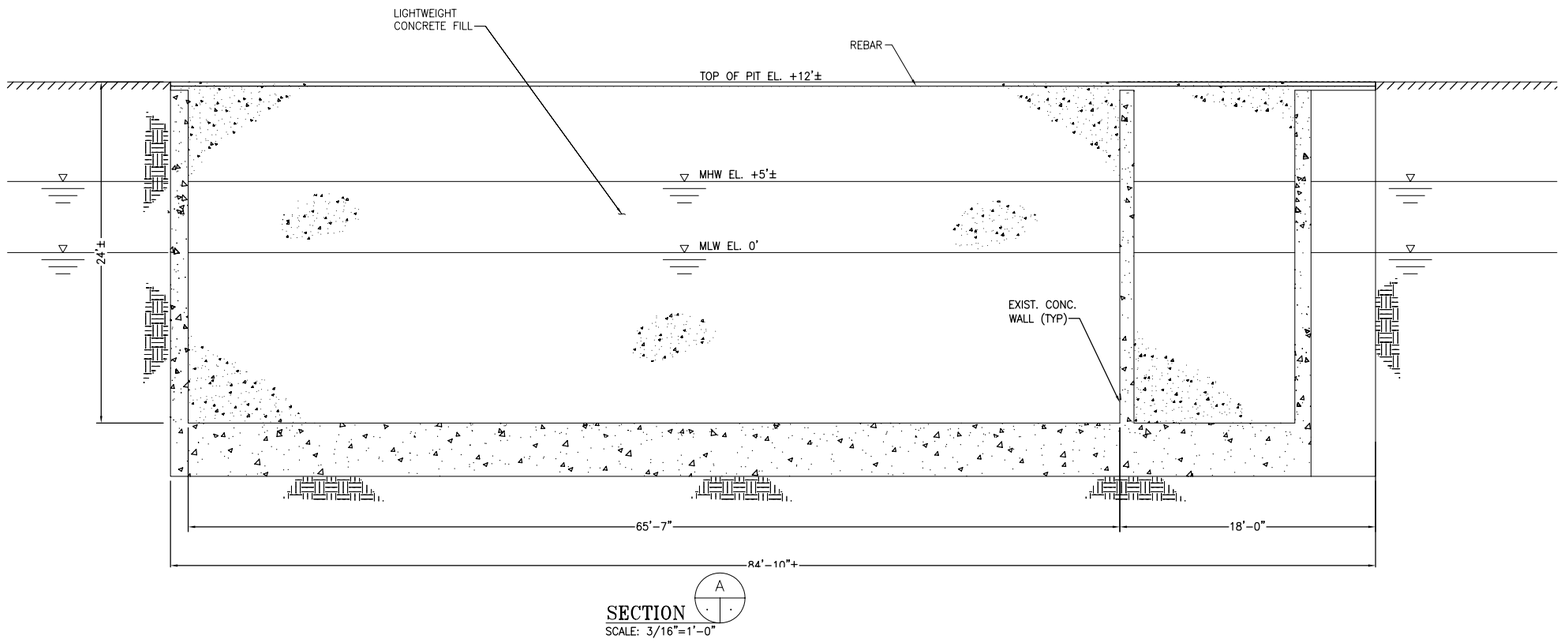




SECTION B
SCALE: 3/16"=1'-0"

PLAN
SCALE: 3/16"=1'-0"

5' 0 5' 10'
SCALE: 3/16" = 1'-0"



SECTION A
SCALE: 3/16"=1'-0"

LEGEND
V.I.F. VERIFY IN FIELD
MHW MEAN HIGH WATER
MLW MEAN LOW WATER

Shaw™ Shaw Environmental, Inc.

CON EDISON
FORMER KENT AVENUE GENERATING STATION ASH PIT
BROOKLYN, NEW YORK

FIGURE 14
ASH PIT REMEDIATION:
PLAN AND SECTIONS

In conjunction with

Dear Interested Citizen:

This fact sheet provides a status update for the former Kent Avenue Generating Station.

If you have questions or would like more information, please contact:

Antonia Yuille
Con Edison
30 Flatbush
Brooklyn, NY 11217
Tel: (718) 802-5666
E: yuillea@coned.com

For site-related environmental questions, please contact:

Douglas MacNeal
Project Manager
NYSDEC
625 Broadway
Albany, NY 12233
Tel: (518) 402-9564

For site-related health questions, please contact:

Albert DeMarco
NYSDOH
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower, Rm 1787
Albany, NY 12237
Tel: (518) 402-7860
Email: beei@health.state.ny.us
For additional information visit:
www.dec.ny.gov/chemical/24904.html

Fact Sheet

August 2013

Former Kent Avenue Generating Station
Brooklyn, New York **www.coned.com/mgp**

Remedial Action Comment Period Announced

Public Meeting – Sept. 12th at 6:00pm, Brooklyn Navy Yard, Bldg 92

Introduction

Consolidated Edison Company of New York, Inc. (Con Edison), together with the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH), is providing this update on project activities involving the former Kent Avenue Generating Station ("Site"). This Site is located at 500 Kent Avenue, Brooklyn, NY 11211.

NYSDEC is now releasing the Proposed Decision Document and Alternative Analysis Report (AAR) for public review and comment. These documents can be found at www.coned.com/mgp (Kent Avenue tab). **A public meeting will be held on September 12, 2013 at 6:00PM at the Brooklyn Navy Yard, Building 92 (63 Flushing Avenue, intersection of Carlton and Flushing Avenues) to present the proposed remedy and take comments.**

Project Status and Schedule

The Kent Avenue investigation entailed environmental assessments and remedial investigations to determine whether power plant-related contaminants are present in the soil and groundwater and, if they are present, the extent of the contamination. A remedial investigation to characterize the residual contents of the former power plant ash pit was conducted in 2007. Based on the findings, Con Edison implemented an interim remedial measure to remove sediment from the ash pit and fill it with concrete.

In response to the findings from the various investigation activities, Con Edison, in cooperation with the NYSDEC and NYSDOH, has recommended a method to address the residual contamination found at the Site. The evaluation of the remedial alternatives and a proposed remedial action are summarized in Con Edison's AAR and in DEC's Proposed Decision Document. The proposed remedy entails site excavation to a Restricted Residential Soil Cleanup Objective (SCO). The soil excavation would include all impacted fill and possible Underground Storage Tank impacted soils down to the bottom of the original powerhouse basement slab or to the water table. The excavation depth would range from 7-10 feet with the removal of approximately 10,850 cubic yards of impacted fill material, which will be replaced with clean fill. The work would take approximately 12 months. Pre-mobilization activities will take place in August to characterize the soil for disposal purposes.

The AAR also proposes the development of a Site Management Plan (SMP) to manage soils exceeding unrestricted use SCOs that are left in

Documents related to this project are available at: **Brooklyn Community Board 2**, 350 Jay Street, 8th floor, Brooklyn, NY 11201, 718-596-5410, Hours M-F 9-4pm; **Williamsburgh Public Library** 240 Division Ave, Brooklyn, NY 11211 Phone: 718-302-3485, Hours: M/W/Th/F – 10am-6pm, Tuesday – 1-8pm, Closed Sat/Sun and www.coned.com/mgp (Kent Avenue tab)

place; the imposition of a deed restriction which will require compliance with the SMP and notification to the NYSDEC if any intrusive work is conducted. Lastly, the AAR contains a provision for an annual certification to the NYSDEC on the long-term controls that are implemented at the Site annually for the first 5 years and once every 5 years thereafter for a total of 30 years.

Potential Exposure

The primary goal of the remedy is to protect human health and the environment. With the removal of fill/soil down to the basement slab or water table, the remedy will prevent direct contact with contaminants from the Site.

During the remedy, extensive efforts will be made to protect the community from potential hazards. These will include working within a fenced-in site, wetting all materials, covering all inactive dirt piles and air monitoring. There will be two real-time air monitoring programs implemented to address potential organic vapors, dust and asbestos fibers. The NYSDOH-based Community Air Monitoring Plan (CAMP) will be implemented to detect organic vapors and dust at the Site perimeter to mitigate potential short-term exposures to workers and local residents. In addition, there will be an Asbestos Air Monitoring Program that will monitor potential levels of airborne asbestos. Both air monitoring programs will have controls that will be implemented, including, but not limited to, adjusting work methods and applying additional dust and/or odor suppressants, or suspending work, if necessary to address conditions. All air monitoring data will be made available to the NYSDEC, NYSDOH and the public via the website. All work will be done in accordance with the NYC DEP regulations and requirements.

Public Involvement

The comment period commences on August 12, 2013, the release date of the Proposed Decision Document and will end on September 27, 2013. The AAR and the Proposed Decision Document are available for review at the document repositories listed on the first page of this fact sheet, as well as online at www.coned.com/mgp (Kent Avenue tab). In addition, Con Edison, NYSDEC and NYSDOH will be holding a public meeting on September 12, 2013 at 6:00PM at the Brooklyn Navy Yard, Building 92 (63 Flushing Avenue, intersection of Carlton and Flushing Avenues), to answer questions and take comments. Comments may also be submitted to Doug MacNeal, NYSDEC, 625 Broadway, 11th floor, Albany, NY 12233. Phone: 518-402-9684. Fax: 518-402-9022. Or via email: dkmacnea@gw.dec.state.ny.us. After consideration of all comments received, NYSDEC will approve a final remedy.

Site Background

The former Con Edison Kent Avenue Generating Station is located at 500 Kent Avenue, Brooklyn, New York. The Site is approximately 4 acres. Approximately 2.6 acres was the location of an electrical power generating station housed in a seven to nine story building that was demolished in 2009. The lot is vacant, but the foundation and basements of the former generating station and original powerhouse remain below street level. Clean backfill was placed within the 2.6-acre former station footprint during the 2009 demolition project and thus is not included within the scope of the proposed remedial action.



DECISION DOCUMENT

Kent Avenue Station Site
Voluntary Cleanup Program
Brooklyn, Kings County
Site No. V00732
October 2013



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Kent Avenue Station Site
Voluntary Cleanup Program
Brooklyn, Kings County
Site No. V00732
October 2013

Statement of Purpose and Basis

This document presents the remedy for the Kent Avenue Station Site site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Kent Avenue Station Site site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

All on-site soils above the water table, with the exception of the building footprint, which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 10,850 cubic yards of soil will be removed from the site and disposed off-site, in accordance with applicable regulations, including the identification and proper disposal of asbestos containing material. Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to replace the excavated soil and establish the designed grades at the site. Appropriate dust suppression techniques will be employed to prevent the release of asbestos and other particulates into surrounding areas.

3. Underground Storage Tank Removal

In the northern section of the site, an old underground storage tank, used to store fuel oil, will be registered and removed. The surrounding soils will be excavated, as noted in item 2.

4. Site Cover

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

5. Manufactured Gas Plant Tar Investigation

To properly determine the requirements of the Site Management Plan, an investigation will be conducted to delineate the extent of the MGP tar contamination emanating from National Grid's Nassau Gas Works. The Nassau Gas Works was a manufactured gas plant located directly south of the site.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without

necessary water quality treatment as determined by the NYSDOH or County DOH and;
- requires compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: the deed restriction listed above.

Engineering Controls: long term groundwater monitoring, site-wide inspections to ensure that use restrictions and the soil cover remain in place, and an excavation plan.

This plan includes, but may not be limited to:
- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department and;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

October 18, 2013
Date

George Heitzman, Director
Remedial Bureau C

DECISION DOCUMENT

Kent Avenue Station Site
Brooklyn, Kings County
Site No. V00732
October 2013

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Community Board 2
350 Jay Street, 8th Floor
Brooklyn, NY 11201
Phone: 718-596-5410

Williamsburg Public Library
240 Division Avenue
Brooklyn, NY 11211
Phone: 718-302-3485

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going

paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is located in a mixed-use area along the Brooklyn waterfront. It is bounded by Kent Avenue to the east, Wallabout Channel to the west, Division Avenue to the north, and the Brooklyn Navy Yard to the south.

Site Features: The site is a currently vacant with no above grade structures. In the subsurface, a large concrete-lined pit is present in the northwest corner of the site and along the edge of the Wallabout Channel. A large concrete slab which is part of a former power plant foundation occupies the center of the site. The slab has been covered with clean fill.

Current zoning/use. The site is zoned for industrial use, but is currently vacant. It is surrounded by commercial buildings and multiple occupancy residences.

Past Use of the Site: The site was previously an electrical generating station and substation from 1906 until the late 1990s. The site was razed from 2007 to 2009. The main sources of contamination were the concrete-lined ash pit storage area and by-products of the electrical generating process which are scattered across the site.

Site Geology and Hydrogeology: The site is underlain by a 5 to 10 foot layer of fill material. Under the fill are intermingled layers of silt and sand down to roughly 100 feet below grade. Beneath the silt and sand is a clay confining unit.

The water table lies roughly 8 feet below the ground surface. Based on the site's proximity to the Wallabout channel, groundwater levels are probably tidally influenced. The far western edge of the site is built out on piles over the bank of the Wallabout Channel.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, at a minimum, alternatives that restrict the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in DER-10, Technical Guidance for Site Investigation and Remediation were evaluated.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards,

criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the Alternative Analysis Report.

SECTION 5: ENFORCEMENT STATUS

The Department and Consolidated Edison of New York entered into a Voluntary Cleanup Agreement on August 15, 2002. The Agreement obligates the responsible party to implement a full remedial program at a number of sites located throughout New York City and Westchester County. The responsible party is subject to legal actions by the state for recovery of all response costs the state has incurred. This site was added to the list of sites covered by that agreement in 2010.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. . The RI data was reported in several reports ("Site Investigation Summary Report" (2007), "Pre-Design Investigation Report" (2010), and "Pre-IRM Investigation Summary Report" (2012)) which are available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the Alternative Analysis Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)
- Total Polycyclic Aromatic Hydrocarbons (PAHs), Total
- Asbestos
- Polychlorinated Biphenyls (PCB)

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Ash Pit Remediation

From September 2011 to January 2012, roughly 1,100 cubic yards of PCB-contaminated ash and some construction debris was removed from the concrete holding pit in the northwest corner of the property and was sent for off-site disposal as part of an IRM. The ash pit was then backfilled to grade with low-density concrete while stabilizing the bulkhead.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of contamination: The site is impacted by volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, and PCBs, all by-products of the electrical generation and distribution that occurred on site. The contaminants are distributed across the site with the exception of the center section of the site where the footprint of the old building is located, and exceed the soil cleanup objectives (SCOs) for restricted residential use. That section was filled with clean fill material from the basement level to the current existing grade in 2009, when the building was demolished. There is also evidence of asbestos in the shallow subsurface.

The Kent Ave Station site is also immediately adjacent to the former Nassau Manufactured Gas Plant and is likely impacted by that site as well. Investigation at the Nassau site suggests that coal tar and its constituent contaminants, VOCs and SVOCs, have migrated through subsurface soils beyond the limits of the Nassau site and onto this site. This migration has not yet been fully delineated, but appears to be taking place at significant depths, roughly 20 to 40 feet below the ground surface. Groundwater beneath the site is also contaminated with VOCs, SVOCs, and metals. The groundwater contamination at the site seems to be steadily decreasing with no VOCs detected since 2008. Fluoranthene is the SVOC with the highest concentration at 0.34 parts per billion. This contamination is only found in one well, in the southwest corner of the site.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is completely fenced, which restricts public access. Persons who dig below the ground surface may come into contact with contaminants in the subsurface soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in any future on-site building development and occupancy.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the

contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.
- Prevent inhalation of or exposure to airborne particulates from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The selected remedy is referred to as the Excavation of Soils Exceeding Restricted Residential Standards remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program.

Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

All on-site soils above the water table, with the exception of the building footprint, which exceed restricted-residential SCOs, as defined by 6 NYCRR Part 375-6.8, will be excavated and transported off-site for disposal. Approximately 10,850 cubic yards of soil will be removed from the site and disposed off-site, in accordance with applicable regulations, including the identification and proper disposal of asbestos containing material. Clean fill meeting the requirements of DER-10, Appendix 5 will be brought in to replace the excavated soil and establish the designed grades at the site. Appropriate dust suppression techniques will be employed to prevent the release of asbestos and other particulates into surrounding areas.

3. Underground Storage Tank Removal

In the northern section of the site, an old underground storage tank, used to store fuel oil, will be registered and removed. The surrounding soils will be excavated, as noted in item 2.

4. Site Cover

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

5. Manufactured Gas Plant Tar Investigation

To properly determine the requirements of the Site Management Plan, an investigation will be conducted to delineate the extent of the MGP tar contamination emanating from National Grid's Nassau Gas Works. The Nassau Gas Works was a manufactured gas plant located directly south of the site.

6. Institutional Control

Imposition of an institutional control in the form of a deed restriction for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH and;
- requires compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: the deed restriction listed above.

Engineering Controls: long term groundwater monitoring, site-wide inspections to ensure that use restrictions and the soil cover remain in place, and an excavation plan.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department and;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above

DECLARATION OF COVENANTS AND RESTRICTIONS

23rd **THIS DECLARATION OF COVENANTS AND RESTRICTIONS** is made this day of December, 2014, by **CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.** ("**Con Edison**"), a corporation organized and existing under the laws of the State of New York with an office for the transaction of business at 4 Irving Place, New York, New York:

WHEREAS, the Former Kent Avenue Generating Station Site (Site #V00732-2) is the subject of Voluntary Cleanup Agreement Index # D2-0003-02-08 (the "**VCA**"), executed by Con Edison as part of the Voluntary Cleanup Program of the New York State Department of Environmental Conservation (the "**Department**" having an address at 625 Broadway, Albany, New York 12233), namely that parcel of real property located at the address of 500 Kent Avenue in the County of Kings, City and State of New York, being the same as (or part of) that property conveyed to Con Edison by the City of New York by deed(s) dated August 1, 1962, and recorded on August 2, 1962, in the Office of the City Register, Kings County, in Liber 9038 of Conveyances, Pages 265 through 272, and being more particularly described in Schedule "A" attached to this Declaration of Covenants and Restrictions and made a part hereof, and hereinafter referred to as the "**Property**"; and

WHEREAS, the Department approved a remedy (the "**Remedy**") that eliminates or mitigates all significant threats to the environment presented by the contamination disposed of at the Property and such Remedy requires that the Property be subject to restrictive covenants.

NOW, THEREFORE, Con Edison, for itself and its successors and/or assigns, covenants that:

FIRST: The Property subject to this Declaration of Covenants and Restrictions is as shown on the map annexed to this Declaration of Covenants and Restrictions as Schedule "B" and made a part hereof.

SECOND: Unless prior written approval by the Department or, if the Department shall no longer exist, by any New York State agency or agencies subsequently created to protect the environment of the State of New York and the health of the State's citizens, hereinafter referred to as "**the Relevant Agency**," is first obtained, where contamination remains on the Property subject to the provisions of the Site Management Plan approved by the Department for the Property (the "**SMP**"), there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property which threatens the integrity of the engineering controls required for the Remedy or which results in unacceptable human exposure to contaminated soils. The

SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, New York 12233.

THIRD: The owner of the Property shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of the engineering controls required for the Remedy, which are described in the SMP, unless in each instance the owner of the Property obtains a written waiver of such prohibition from the Department or Relevant Agency.

FOURTH: The owner of the Property shall prohibit the Property from ever being used for purposes other than "Commercial" use, "Industrial" use, or "Restricted Residential" use, as such terms are defined in 6 NYCRR Part 375-1.8(g), without the express written waiver of such prohibition by the Department or Relevant Agency.

FIFTH: The use of the groundwater underlying the Property is prohibited without necessary water quality treatment as determined by the New York State Department of Health or the New York City Department of Health to render such groundwater safe for use as drinking water or for industrial purposes, and the user of such groundwater must first notify and obtain written approval to do so from the Department or Relevant Agency.

SIXTH: The owner of the Property shall provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired.

SEVENTH: The owner of the Property shall continue in full force and effect any institutional and engineering controls required for the Remedy and maintain such controls, unless the owner of the Property first obtains permission to discontinue such controls from the Department or Relevant Agency, in compliance with the approved SMP, which SMP is incorporated and made enforceable hereto, subject to such modifications thereto as may be approved by the Department or Relevant Agency.

EIGHTH: This Declaration of Covenants and Restrictions is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner of the Property and its successors and assigns consent to enforcement by the Department or Relevant Agency of the prohibitions and restrictions that the VCA requires to be recorded, and hereby covenant not to contest the authority of the Department or Relevant Agency to seek enforcement of such prohibitions and restrictions.

NINTH: Any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Relevant Agency has consented to the termination of such

covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the day written below.

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

By: _____

Title: VP and Treasurer

Date: 12/23/2014

GRANTOR'S ACKNOWLEDGEMENT

STATE OF NEW YORK)
) ss.:
COUNTY OF NEW YORK)

On the 23rd day of December in the year 2014, before me, the undersigned, personally appeared Scott Sanders, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

SYLVEN GLYNN
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 01GL5065881
Qualified in Kings County
Commission Expires September 16, 2018

SCHEDULE A

METES AND BOUNDS DESCRIPTION OF THE PROPERTY

The "**Property**" subject to this Declaration of Covenants and Restrictions consists of all that certain plot, parcel, or tract of land being, lying, and situated in the County of Kings, City and State of New York, bounded and described as follows:

BEGINNING at a point on the westerly side of Kent Avenue distant 103.52 feet northerly from the southerly side of Rush Street extended to the said westerly side of Kent Avenue;

RUNNING THENCE, northerly along the said westerly side of Kent Avenue 342.17 feet to an angle in said westerly side of Kent Avenue;

THENCE, continuing northerly along said westerly side of Kent Avenue 29.39 feet to the corner formed by the intersection of said westerly side of Kent Avenue with the southerly side of Division Avenue;

THENCE, westerly along said southerly side of Division Avenue 227 feet to the Pierhead and Bulkhead Line approved by the Secretary of War on December 19, 1901;

THENCE, southerly along said Pierhead and Bulkhead Line 278.67 feet to an angle in said Pierhead and Bulkhead Line;

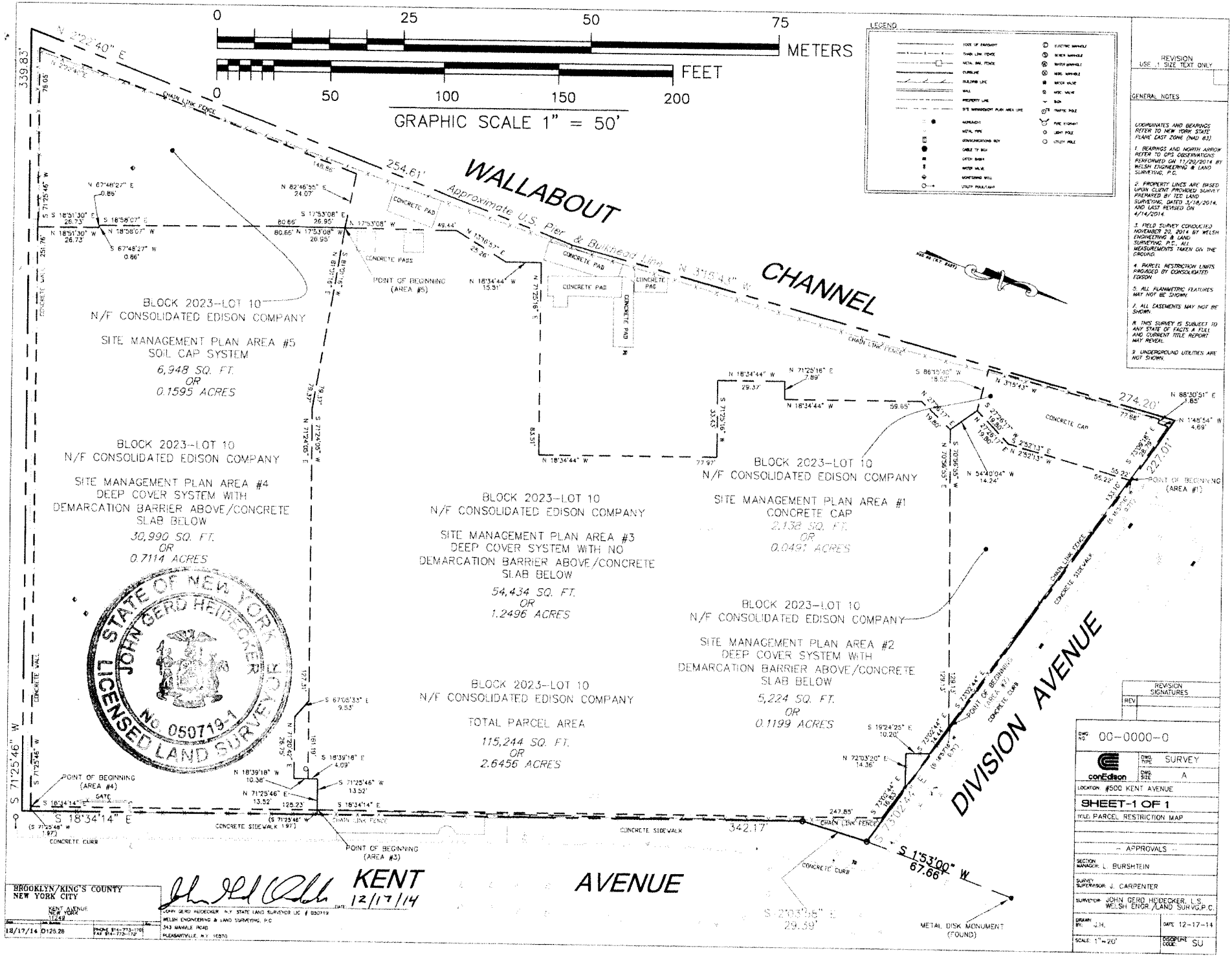
THENCE, continuing southerly along said Pierhead and Bulkhead Line 248.96 feet to the property formerly of the United States Government and now owned by the City of New York;

THENCE, easterly along a line which forms an angle of 89 degrees 47 minutes and no (00) seconds on its northerly side with the said westerly side of Kent Avenue, and along said land formerly of the United States Government and now owned by the City of New York 339.83 feet to said westerly side of Kent Avenue at the point or place of the **BEGINNING**.

Being the same plot, piece, or parcel of land conveyed to Consolidated Edison Company of New York, Inc. by the City of New York by deed dated August 1, 1962, and recorded in the Office of the City Register, Kings County on August 2, 1960, in Liber 9038 of Conveyances, Pages 265 to 272.

SCHEDULE B

MAP OF PROPERTY
WITH SITE MANAGEMENT PLAN AREAS


0 25 50 75 METERS
0 50 100 150 200 FEET
GRAPHIC SCALE 1" = 50'
LEGEND
GENERAL NOTES
COORDINATES AND BEARINGS REFER TO NEW YORK STATE PLANE EAST ZONE (NAD 83)
1. BEARINGS AND NORTH ARROW REFER TO GPS OBSERVATIONS PERFORMED ON 11/20/2014 BY WELSH ENGINEERING & LAND SURVEYING, P.C.
2. PROPERTY LINES ARE BASED UPON CLIENT PROVIDED SURVEY PREPARED BY TEE LAND SURVEYING, DATED 3/18/2014, AND LAST REVISED ON 4/14/2014.
3. FIELD SURVEY CONDUCTED NOVEMBER 20, 2014 BY WELSH ENGINEERING & LAND SURVEYING, P.C., ALL MEASUREMENTS TAKEN ON THE GROUND.
4. PARCEL RESTRICTION LIMITS ENGAGED BY CONSOLIDATED EDISON.
5. ALL PLANIMETRIC FEATURES MAY NOT BE SHOWN.
7. ALL EASEMENTS MAY NOT BE SHOWN.
8. THIS SURVEY IS SUBJECT TO ANY STATE OF FACTS A FULL AND CURRENT TITLE REPORT MAY REVEAL.
9. UNDERGROUND UTILITIES ARE NOT SHOWN.
WALLABOUT CHANNEL
DIVISION AVENUE
KENT AVENUE
Approximate U.S. Pier & Bulkhead Line
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
SITE MANAGEMENT PLAN AREA #5
SOIL CAP SYSTEM
6,948 SQ. FT.
OR
0.1595 ACRES
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
SITE MANAGEMENT PLAN AREA #4
DEEP COVER SYSTEM WITH
DEMARCATION BARRIER ABOVE/CONCRETE
SLAB BELOW
30,990 SQ. FT.
OR
0.7114 ACRES
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
SITE MANAGEMENT PLAN AREA #3
DEEP COVER SYSTEM WITH NO
DEMARCATION BARRIER ABOVE/CONCRETE
SLAB BELOW
54,434 SQ. FT.
OR
1.2496 ACRES
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
SITE MANAGEMENT PLAN AREA #1
CONCRETE CAP
2,138 SQ. FT.
OR
0.0491 ACRES
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
SITE MANAGEMENT PLAN AREA #2
DEEP COVER SYSTEM WITH
DEMARCATION BARRIER ABOVE/CONCRETE
SLAB BELOW
5,224 SQ. FT.
OR
0.1199 ACRES
BLOCK 2023–LOT 10
N/F CONSOLIDATED EDISON COMPANY
TOTAL PARCEL AREA
115,244 SQ. FT.
OR
2.6456 ACRES
STATE OF NEW YORK
JOHN GERD HEIDECKER
LICENSED LAND SURVEYOR
No. 050719
POINT OF BEGINNING (AREA #1)
POINT OF BEGINNING (AREA #2)
POINT OF BEGINNING (AREA #3)
POINT OF BEGINNING (AREA #4)
POINT OF BEGINNING (AREA #5)
METAL DISK MONUMENT (FOUND)
REVISION
USE 1/2 SIZE TEXT ONLY
REVISION SIGNATURES
DWG NO. 00-0000-0
DWG TYPE SURVEY
DWG SIZE A
conEdison
LOCATION #500 KENT AVENUE
SHEET-1 OF 1
TITLE: PARCEL RESTRICTION MAP
– APPROVALS –
SECTION MANAGER: L. BURSHTEIN
SURVEY SUPERVISOR: J. CARPENTER
SURVEYOR: JOHN GERD HEIDECKER, L.S. WELSH ENGR./LAND SURVG.P.C.
DRAWN BY: J.H.
DATE: 12-17-14
SCALE: 1"=20'
DISCIPLINE CODE: SU
BROOKLYN/KING'S COUNTY
NEW YORK CITY
KENT AVENUE
NEW YORK
11249
12/17/14 0125.28
JOHN GERD HEIDECKER N.Y. STATE LAND SURVEYOR LIC # 050719
WELSH ENGINEERING & LAND SURVEYING, P.C.
343 MANVILLE ROAD
PLEASANTVILLE, N.Y. 10570
PHONE 914-773-1700
FAX 914-773-1710
12/17/14
DATE

SITE MANAGEMENT PLAN AREA #1

COMMENCING AT A METAL DISK MONUMENT FOUND AT THE NORTHWEST CORNER OF THE INTERSECTION OF THE NORTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE 67.66 FEET SOUTH ON A BEARING OF SOUTH 1 DEGREE 53 MINUTES 00 SECONDS WEST TO THE CORNER FORMED BY THE SOUTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE; THENCE NORTHWESTERLY ALONG THE SOUTHERLY SIDE OF DIVISION AVENUE NORTH 73 DEGREES 02 MINUTES 44 SECONDS WEST 194.37 FEET;

THENCE THROUGH LOT 10, BLOCK 2023, SOUTH 16 DEGREES 57 MINUTES 16 SECONDS WEST, 0.71 FEET TO THE POINT OF BEGINNING;

THENCE FROM SAID POINT OF BEGINNING THROUGH LOT 10, BLOCK 2023 AS SHOWN ON THE CURRENT TAX MAP OF THE CITY OF NEW YORK, THE FOLLOWING SEVEN (7) BEARINGS AND DISTANCES:

1. SOUTH 2 DEGREES 52 MINUTES 13 SECONDS EAST, 55.22 FEET;
2. SOUTH 27 DEGREES 26 MINUTES 17 SECONDS WEST, 19.80 FEET;
3. SOUTH 86 DEGREES 15 MINUTES 40 SECONDS WEST, 18.52 FEET;
4. NORTH 31 DEGREES 05 MINUTES 43 SECONDS WEST, 77.66 FEET;
5. NORTH 88 DEGREES 30 MINUTES 51 SECONDS EAST, 1.85 FEET;
6. NORTH 1 DEGREES 48 MINUTES 54 SECONDS WEST, 4.69 FEET;
7. SOUTH 73 DEGREES 09 MINUTES 18 SECONDS EAST, 28.79 FEET TO THE POINT OF BEGINNING.

CONTAINING 2,138 SQUARE FEET OR 0.0491 ACRES MORE OR LESS.

SITE MANAGEMENT PLAN AREA #2

ALL THAT CERTAIN PARCEL OF LAND SITUATE IN THE CITY OF NEW YORK, KINGS COUNTY, AND STATE OF NEW YORK, BEING BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT A METAL DISK MONUMENT FOUND AT THE NORTHWEST CORNER OF THE INTERSECTION OF THE NORTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE 67.66 FEET SOUTH ON A BEARING OF SOUTH 1 DEGREE 53 MINUTES 00 SECONDS WEST TO THE CORNER FORMED BY THE SOUTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE; THENCE NORTHWESTERLY ALONG THE SOUTHERLY SIDE OF DIVISION AVENUE NORTH 73 DEGREES 02 MINUTES 44 SECONDS WEST 61.27 FEET;

THENCE THROUGH LOT 10, BLOCK 2023, SOUTH 16 DEGREES 57 MINUTES 16 SECONDS WEST, 0.71 FEET TO THE POINT OF BEGINNING;

THENCE FROM SAID POINT OF BEGINNING THROUGH LOT 10, BLOCK 2023 AS SHOWN ON THE CURRENT TAX MAP OF THE CITY OF NEW YORK, ALONG THE FOLLOWING FIVE (5) BEARINGS AND DISTANCES:

1. SOUTH 70 DEGREES 56 MINUTES 55 SECONDS WEST, 129.13 FEET;
2. NORTH 54 DEGREES 40 MINUTES 04 SECONDS WEST, 14.24 FEET;
3. NORTH 27 DEGREES 26 MINUTES 17 SECONDS EAST, 19.80 FEET;
4. NORTH 2 DEGREES 52 MINUTES 13 SECONDS WEST, 55.22 FEET;
5. SOUTH 73 DEGREES 02 MINUTES 44 SECONDS EAST, 133.10 FEET TO THE POINT OF BEGINNING.

CONTAINING 5,224 SQUARE FEET OR 0.1199 ACRES MORE OR LESS.

SITE MANAGEMENT PLAN AREA #3

ALL THAT CERTAIN PARCEL OF LAND SITUATE IN THE CITY OF NEW YORK, KINGS COUNTY, AND STATE OF NEW YORK, BEING BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT A METAL DISK MONUMENT FOUND AT THE NORTHWEST CORNER OF THE INTERSECTION OF THE NORTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE 67.66 FEET SOUTH ON A BEARING OF SOUTH 1 DEGREE 53 MINUTES 0 SECONDS WEST TO THE CORNER FORMED BY THE SOUTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE SOUTHERLY ALONG SAID WESTERLY SIDE OF KENT AVENUE THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. SOUTH 2 DEGREES 03 MINUTES 58 SECONDS EAST, 29.39 FEET;
2. SOUTH 18 DEGREES 34 MINUTES 14 SECONDS EAST, 213.49 FEET;

THENCE THROUGH LOT 10, BLOCK 2023, SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 1.97 FEET TO THE POINT OF BEGINNING;

THENCE FROM SAID POINT OF BEGINNING, THROUGH LOT 10, BLOCK 2023 AS SHOWN ON THE CURRENT TAX MAP OF THE CITY OF NEW YORK, ALONG THE FOLLOWING TWENTY (20) BEARINGS AND DISTANCES:

8. SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 13.52 FEET;
9. SOUTH 18 DEGREES 39 MINUTES 18 SECONDS EAST, 4.09 FEET;
10. SOUTH 71 DEGREES 24 MINUTES 05 SECONDS WEST, 161.19 FEET;
11. SOUTH 81 DEGREES 01 MINUTES 16 SECONDS WEST, 79.37 FEET;
12. NORTH 17 DEGREES 53 MINUTES 08 SECONDS WEST, 49.44 FEET;
13. NORTH 13 DEGREES 16 MINUTES 57 SECONDS EAST, 25.26 FEET;
14. NORTH 18 DEGREES 34 MINUTES 44 SECONDS WEST, 15.51 FEET;
15. NORTH 71 DEGREES 25 MINUTES 16 SECONDS EAST, 83.51 FEET;
16. NORTH 18 DEGREES 34 MINUTES 44 SECONDS WEST, 77.97 FEET;
17. SOUTH 71 DEGREES 25 MINUTES 16 SECONDS WEST, 33.43 FEET;
18. NO RTH 18 DEGREES 34 MINUTES 44 SECONDS WEST, 29.37 FEET;
19. NORTH 71 DEGREES 25 MINUTES 16 SECONDS EAST, 7.89 FEET;
20. NORTH 18 DEGREES 34 MINUTES 44 SECONDS WEST, 59.65 FEET;
21. NORTH 27 DEGREES 26 MINUTES 17 SECONDS EAST, 19.80 FEET;
22. NORTH 70 DEGREES 56 MINUTES 55 SECONDS EAST, 129.13 FEET;
23. SOUTH 73 DEGREES 02 MINUTES 44 SECONDS EAST, 14.44 FEET;
24. SOUTH 19 DEGREES 24 MINUTES 25 SECONDS EAST, 10.20 FEET;
25. NORTH 72 DEGREES 03 MINUTES 20 SECONDS EAST, 14.36 FEET;
26. SOUTH 73 DEGREES 02 MINUTES 44 SECONDS EAST, 16.83 FEET;
27. SOUTH 18 DEGREES 34 MINUTES 14 SECONDS EAST, 247.85 FEET TO THE POINT OF BEGINNING.

CONTAINING 54,434 SQUARE FEET OR 1.2496 ACRES MORE OR LESS.

SITE MANAGEMENT PLAN AREA #4

ALL THAT CERTAIN PARCEL OF LAND SITUATE IN THE CITY OF NEW YORK, KINGS COUNTY, AND STATE OF NEW YORK, BEING BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT A METAL DISK MONUMENT FOUND AT THE NORTHWEST CORNER OF THE INTERSECTION OF THE NORTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE 67.66 FEET SOUTH ON A BEARING OF SOUTH 1 DEGREE 53 MINUTES 00 SECONDS WEST TO THE CORNER FORMED BY THE SOUTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE SOUTH ALONG SAID WESTERLY SIDE OF KENT AVENUE THE FOLLOWING TWO (2) COURSES AND DISTANCES:

3. SOUTH 2 DEGREES 03 MINUTES 58 SECONDS EAST 29.39 FEET;
4. SOUTH 18 DEGREES 34 MINUTES 14 SECONDS EAST 338.61 FEET;

THENCE THROUGH LOT 10, BLOCK 2023, SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 1.97 FEET TO THE POINT OF BEGINNING;

THENCE FROM SAID POINT OF BEGINNING, AND CONTINUING THROUGH LOT 10, BLOCK 2023, PARALLEL TO THE SOUTHERLY LIMIT OF LOT 10 AND GENERALLY ALONG AN EXISTING CONCRETE WALL, SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST 251.76 FEET; THENCE STILL THROUGH LOT 10, BLOCK 2023 THE FOLLOWING ELEVEN (11) BEARINGS AND DISTANCES:

28. NORTH 18 DEGREES 51 MINUTES 30 SECONDS WEST, 26.73 FEET;
29. SOUTH 67 DEGREES 48 MINUTES 27 SECONDS WEST, 0.86 FEET;
30. NORTH 18 DEGREES 58 MINUTES 07 SECONDS WEST, 80.66 FEET;
31. NORTH 17 DEGREES 53 MINUTES 08 SECONDS WEST, 26.95 FEET;
32. NORTH 81 DEGREES 01 MINUTES 16 SECONDS EAST, 79.37 FEET;
33. NORTH 71 DEGREES 24 MINUTES 05 SECONDS EAST, 127.31 FEET;
34. SOUTH 67 DEGREES 05 MINUTES 33 SECONDS EAST, 9.53 FEET;
35. NORTH 71 DEGREES 20 MINUTES 42 SECONDS EAST, 26.75 FEET;
36. NORTH 18 DEGREES 39 MINUTES 18 SECONDS WEST, 10.38 FEET
37. NORTH 71 DEGREES 25 MINUTES 46 SECONDS EAST, 13.52 FEET;
38. SOUTH 18 DEGREES 34 MINUTES 49 SECONDS EAST, 125.23 FEET TO THE POINT OF BEGINNING.

CONTAINING 30,990 SQUARE FEET OR 0.7114 ACRES MORE OR LESS.

SITE MANAGEMENT PLAN AREA #5

ALL THAT CERTAIN PARCEL OF LAND SITUATE IN THE CITY OF NEW YORK, KINGS COUNTY, AND STATE OF NEW YORK, BEING BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT A METAL DISK MONUMENT FOUND AT THE NORTHWEST CORNER OF THE INTERSECTION OF THE NORTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE 67.66 FEET SOUTH ON A BEARING OF SOUTH 1 DEGREE 53 MINUTES 00 SECONDS WEST TO THE CORNER FORMED BY THE SOUTHERLY SIDE OF DIVISION AVENUE AND THE WESTERLY SIDE OF KENT AVENUE, THENCE SOUTH ALONG SAID WESTERLY SIDE OF KENT AVENUE THE FOLLOWING TWO (2) COURSES AND DISTANCES:

5. SOUTH 2 DEGREES 03 MINUTES 58 SECONDS EAST 29.39 FEET;
6. SOUTH 18 DEGREES 34 MINUTES 14 SECONDS EAST 213.49 FEET;

THENCE THROUGH LOT 10, BLOCK 2023 THE FOLLOWING FIVE (5) COURSES AND DSITANCES:

1. SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 1.97 FEET;
2. SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 13.52 FEET;
3. SOUTH 18 DEGREES 39 MINUTES 18 SECONDS EAST, 4.09 FEET;
4. SOUTH 71 DEGREES 24 MINUTES 05 SECONDS WEST, 161.19 FEET;
5. SOUTH 81 DEGREES 01 MINUTES 16 SECONDS WEST, 79.37 FEET TO THE POINT OF BEGINNING;

THENCE FROM SAID POINT OF BEGINNING, STILL THROUGH LOT 10, BLOCK 2023 AS SHOWN ON THE CURRENT TAX MAP OF THE CITY OF NEW YORK, THE FOLLOWING BEARINGS AND DISTANCES:

1. SOUTH 17 DEGREES 53 MINUTES 08 SECONDS EAST, 26.95 FEET;
2. SOUTH 18 DEGREES 58 MINUTES 07 SECONDS WEST, 80.66 FEET;
3. NORTH 67 DEGREES 48 MINUTES 27 SECONDS EAST, 0.86 FEET;
4. SOUTH 18 DEGREES 51 MINUTES 30 SECONDS EAST, 26.73 FEET;
5. SOUTH 71 DEGREES 25 MINUTES 46 SECONDS WEST, 78.05 FEET;
6. NORTH 02 DEGREES 22 MINUTES 40 SECONDS EAST, 148.86 FEET;
7. NORTH 82 DEGREES 46 MINUTES 55 SECONDS EAST, 24.07 FEET TO THE POINT OF BEGINNING.

CONTAINING 6,948 SQUARE FEET OR 0.1595 ACRES MORE OR LESS.

Former Kent Avenue Generating Station

KINGS COUNTY, NEW YORK

Final Engineering Report

NYSDEC Site Number: V00732-2

Prepared for:

Consolidated Edison Company of New York, Inc.

31-01 20th Avenue

Long Island City, New York

Prepared by:

Shaw Environmental & Infrastructure Engineering of New York, P.C.

1633 Broadway, 30th Floor

New York, NY 10019

(212) 290-6000

FEBRUARY 2015

CERTIFICATIONS

I, Daniel David Chen, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in a Declaration of Covenants and Restrictions (DCR) created and recorded pursuant to ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such DCR has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper maintenance and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Daniel Chen, of Shaw Environmental & Infrastructure Engineering of NY, P.C., am certifying as Owner's Designated Site Representative and I have been authorized and designated by the site owner to sign this certification for the site.

Daniel Chen — Feb 24, 2015 — Signature

NYS Professional Engineer #065271 — Date

STATE OF NEW YORK
DANIEL DAVID CHEN
No. 065271
LICENSED PROFESSIONAL ENGINEER

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P Table of Imported Materials by Truckload

Q Declaration of Covenants and Restrictions and Proof of Filing

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LIST OF ACRONYMS

Airtek	Airtek Environmental Corporation
ACM	Asbestos Containing Material
AOC	Area of Concern
ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CFR	Code of Federal Regulations
Clean Water	Clean Water of New York
CLP	USEPA Contract Laboratory Program
Con Edison	Consolidated Edison Company of New York, Inc.
CPP	Citizen Participation Plan
CQA/QC	Contractor Quality Assurance/Quality Control
CQAP	Construction Quality Assurance Plan
Cr+6	Hexavalent Chromium
DCR	Declaration of Covenants and Restrictions
DGA	Structural Fill
DUSR	Data Usability Summary Report
EC/IC	Engineering Control/Institutional Control
ELAP	Environmental Laboratory Approval Program
EMMP	Excavated Materials Management Plan
FER	Final Engineering Report
ft	feet
GROWS	GROWS North Landfill
HASP	Health and Safety Plan
IRM	Interim Remedial Measure

LDCCF	Low Density Cellular Concrete Fill
Maxymillian	Maxymillian Technologies
mg/kg	milligram per kilogram
MGP	Manufactured Gas Plant
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NYCDEP	New York City Department of Environmental Protection
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCB	Polychlorinated biphenyl
PCM	Phase Contrast Microscopy
PID	Photoionization Detector
PLM	Polarized Light Microscope
ppm	parts per million
QAPP	Quality Assurance Project Plan
QC	Quality Control
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
SCO	Site Cleanup Objective
SDG	Sample Delivery Group
Shaw	Shaw Environmental & Infrastructure Engineering of New York, P.C.
SMP	Site Management Plan
SOP	Site Operation Plan
SVOC	Semivolatile organic compound
SWPPP	Storm Water Pollution Prevention Plan
TestAmerica	TestAmerica Laboratories, Inc.

TEM	Transmission Electron Microscopy
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
$\mu g/m^3$	microgram per cubic meter
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VOC	Volatile Organic Compound

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

Consolidated Edison Company of New York, Inc. (Con Edison) entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) in July 2002. The VCA was amended (Amendment #2) in July 2010 (VCA #D2-0003-02-08, Amendment #2), to investigate and remediate a 2.6-acre property located in Brooklyn, Kings County, New York. The property was remediated to restricted residential use as defined by 6 New York Codes, Rules and Regulations (NYCRR) Part 375-1.8(g), although land use is subject to local zoning laws, provided that the long-term Engineering and Institutional Controls included in the Site Management Plan (SMP) are employed.

The site is located in the County of Kings, New York (see **Figure 1**) and is identified as Block 2023 and Lot 10 on the Tax Map of the Borough of Brooklyn/Kings County. The site is situated on an approximately 2.6-acre area bounded by Division Avenue to the north, the former Brooklyn Navy Yard property to the south (the portion adjacent to Con Edison's Kent Avenue site was the Nassau Gas Works, a former Manufactured Gas Plant (MGP) site that is being addressed by National Grid), Kent Avenue to the east, and Wallabout Channel to the west (see **Figure 2**). The boundaries of the site are fully described in **Appendix A**: Survey Map, Metes and Bounds.

An electronic copy of this Final Engineering Report (FER) with all supporting documentation is included as **Appendix B**.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Site Investigation, Pre-Design Investigation and Pre-Interim Remedial Measure (IRM) Investigation, the following Remedial Action Objectives (RAOs) were identified for this site.

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.1.2 Soil RAOs

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.
- Prevent inhalation of or exposure to airborne particulates from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.1.3 Soil Vapor RAOs

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by the NYSDEC in the Decision Document dated October 2013.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the elements of the selected remedy:

1. Remedial Design

A remedial design program was implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques were implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components were as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Excavation

All on-site soils above the water table, with the exception of the building footprint, which exceeded restricted-residential soil cleanup objectives (SCOs), as defined by 6 NYCRR Part 375-6.8, were excavated and transported off-site for disposal.

Approximately 13,700 tons of soil and debris were removed from the site and disposed off-site, in accordance with applicable regulations, including the identification and proper disposal of asbestos containing material (ACM). Clean fill materials meeting the requirements of DER-10, Appendix 5, were brought in to replace the excavated soil and debris and establish the designed grades at the site. Appropriate dust suppression techniques were employed to prevent the release of asbestos and other particulates into the surrounding areas.

3. Underground Storage Tank Removal

In the northern section of the site, an old underground storage tank, used to store fuel oil, was registered and removed. The surrounding soils were excavated, as noted in item 2.

4. Site Cover

A site cover is required to allow for restricted residential use of the site. The cover will consist of the structures such as buildings, pavement, sidewalks comprising future site development, and a soil cap constructed in the southwest area of the site where the upper two feet of exposed surface soil potentially exceeded the applicable SCOs. The soil cap, which was placed over a demarcation layer, consists of two feet of soil, topped off with a layer of 3/4-inch stone. All fill material brought to the site met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

5. National Grid Investigation of Nassau Gas Works Manufactured Gas Plant

In 2014 National Grid, in compliance with a Consent Order (W2-1090-06-06) with the NYSDEC, conducted an investigation within the southern portion of the Site to determine whether MGP contamination has migrated from the former Nassau Gas Works MGP located immediately south of the Site. The investigation was performed based on the NYSDEC-approved *Revised Supplemental Remedial Investigation Work Plan, Former Kent Avenue Generating Station [Off-Site Area], Nassau Gas Works Manufactured Gas Plant (MGP) Site*, dated March 6, 2009. Beginning May 8, 2014, a total of six soil borings were advanced up to 105 ft bgs. In addition, two monitoring well pairs comprising a deep and a shallow well were installed at two of the six boring locations. The drilling and well development activities were completed on May 30, 2014.

On June 18 and 19, 2014, the monitoring wells were surveyed and sampled. Summary tables of all soil and groundwater laboratory analyses and a figure showing the

soil boring and monitoring well locations are provided in **Appendix C** of the **Site Management Plan**.

6. Institutional Controls –Declaration of Covenants and Restrictions

Execution and recording of a Declaration of Covenants and Restrictions to control land use and prevent future exposure to any contamination remaining at the site. Imposition of an institutional control in the form of a DCR for the controlled property:

- allows the use and development of the controlled property for restricted residential, commercial and industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or New York City Department of Environmental Protection (NYCDEP);
- requires compliance with the Department-approved Site Management Plan, and
- requires periodic certification and reporting in accordance with Part 375-1.8(h) (3).

7. Site Management Plan

Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the DCR, which includes the following:

a) An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and are effective:

Institutional Controls: the DCR listed above.

Engineering Controls: possible long term groundwater monitoring, site-wide inspections to ensure that use restrictions and the soil cover remain in place, and an excavation work plan.

The Institutional and Engineering Control Plan includes, but may not be limited to:

- An Excavation Work Plan which details the provisions for management of future excavation in areas of remaining contamination;
- Descriptions of the provisions of the DCR including any land use, and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Maintaining site access controls and Department notification; and
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b) A Monitoring Plan to assess the performance and effectiveness of the remedy. The Plan includes, but may not be limited to:

- Possible groundwater monitoring;
- Monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above; and;
- A schedule of monitoring and frequency of submittals to the Department.

3.0 INTERIM REMEDIAL MEASURES

The information and certifications made in the June 2013 Former Kent Avenue Generating Station Ash Pit Construction Completion Report (CCR) were relied upon to prepare this report and certify that the remediation requirements for the site have been met. The CCR, prepared by Shaw Environmental & Infrastructure Engineering of NY, P.C. (Shaw), was approved by the NYSDEC on June 7, 2013. NYSDEC approval documentation is presented in **Appendix C**.

The ash pit was located in the northwestern portion of the Site as shown on **Figure 2**. The ash pit, built in the late 1920s or 1930s, was constructed of poured concrete walls underlain by iron reinforcing bars. The dimensions of the pit were approximately 68 feet (ft). by 27 ft by 24 ft deep. Ash from the power station boilers was mixed with water and discharged to the pit through one or more sluice gates.

A 2000 investigation of the sediment and water within the ash pit found that the sediment was contaminated with volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. The water within the ash pit contained SVOCs, PCBs, and metals. A 2006 survey of the property bulkhead along Wallabout Channel found the condition of the ash pit to be "poor"; severe scaling of the interior walls was noted, and severe scaling and some minor cracking were noted on the outboard wall of the pit facing Wallabout Channel. In 2007, Shaw conducted a two-phase investigation of the ash pit. The first phase found 1) PCB concentrations in the water exceeded NYSDEC criteria for discharging wastewater to surface waters and 2.) the toxicity characteristic concentrations in the sediment did not exceed hazardous waste thresholds; however, one PCB concentration (120 milligram per kilogram [mg/kg]) exceeded the Toxic Substances Control Act (TSCA) threshold value of 50 parts per million (ppm). The second phase of the investigation found that, with the exception of much of the west wall surface, the concrete has resisted applied loading in conformance with its originally intended design. In 2009, Shaw submitted a Feasibility Study Summary Report which concluded that GeoTube® technology was a viable option for dewatering the ash pit sediment/sludge.

The ash pit remediation was initiated with a pre-construction meeting with NYSDEC and all contractors on August 26, 2011. Mobilization for the ash pit remediation commenced on September 19, 2011. Air monitoring was initiated on September 23, 2011, in accordance with the NYSDEC-approved Community Air

Monitoring Plan (CAMP) and continued through January 31, 2012. There were no exceedances recorded during any of the remedial activities.

The removal of sludge from the ash pit was initiated on October 10, 2011. Testing of the dewatered sludge showed that most of the material had to be disposed as TSCA PCB waste and/or NYSDEC hazardous waste due to elevated PCB concentrations. The Contractor disposed of the TSCA PCB/NYS hazardous waste at the CWM Model City, New York facility, a NYSDEC licensed hazardous waste treatment, storage and disposal facility. Transportation of the TSCA PCB/NYS hazardous waste began on December 27, 2011, and continued periodically through January 19, 2012. A total of 22 truckloads (718.72 tons) were removed from the Site during this period.

The Contractor disposed of the non-hazardous dewatered sludge material at the High Acres Landfill, owned and operated by Waste Management, in Fairport, New York. Transportation of the non-hazardous dewatered sludge material began on December 12, 2011 and continued periodically through January 3, 2012. A total of eight truckloads and two roll-off containers (275.02 tons) were removed from the Site during this period.

After dredging the bottom of the ash pit for three days, a total of 12 confirmatory samples were collected on November 11, 2011 from the bottom of the pit. Ten of the 12 samples contained PCBs with concentrations ranging from 1.32 to 678.0 mg/kg. After one additional month of dredging the bottom of the pit, a total of eight confirmatory samples were collected on December 13, 2011. Six of the eight samples contained PCBs with concentrations ranging from 2.89 to 49.1 mg/kg. Con Edison and Shaw discussed the results with the NYSDEC Project Manager regarding the cost effectiveness of continued dredging and requested that the sludge removal activities be terminated and the Ash Pit backfilled as detailed in the Remedial Action Work Plan (RAWP). On December 16, 2011, NYSDEC approved the commencement of the ash pit concrete encapsulation.

Between January 5 and January 11, 2012, the ash pit was backfilled with a total of 88 truckloads of low density cellular concrete fill (LDCCF) (1,782 tons [2,200 cubic yards]). On January 31, 2012, a total of seven truckloads of structural concrete were used to place a 13-inch thick structural cap on top of the LDCCF.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved RAWP for the Former Kent Avenue Generating Station site (September 2012) and the October 13, 2013 Area of Concern (AOC) Letter (approved by the NYSDEC on October 21, 2013). Documentation of the NYSDEC approvals is provided in **Appendix C**. All deviations from the RAWP and the AOC Letter are noted below.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal Occupational Safety and Health Administration.

The Health and Safety Plan (HASP), developed by the Contractor and considered acceptable by Con Edison and the NYSDEC (NYSDEC approval documentation is in **Appendix C**), was complied with for all remedial and invasive work performed at the Site.

4.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Attachment 2 of the Pre-IRM Investigation Work Plan approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives.

4.1.3 Construction Quality Assurance Plan (CQAP)

Information regarding construction quality assurance measures was included in the remedial action construction specifications. The contractor, Maxymillian Technologies (Maxymillian), was required to submit a Contractor Quality Assurance/Quality Control Plan (CQA/QC Plan). The CQA/QC Plan was reviewed by the Remedial Engineer (Shaw), Con Edison and the NYSDEC. The NYSDEC approved the plan on October 24, 2013 (Appendix C). The CQA/QC Plan provided details of how to monitor the construction activities and ensure that the work was performed in

accordance with the specifications. The CQA/QC Plan named Glenn Houle as the Maxymillian Construction Manager, James Smith as the Site Supervisor, and Douglas Mason as the Contractor Quality Control Engineer. The Plan provided a number of checklists used by the Construction Quality Control Engineer to monitor quality throughout the remedial program. The contractor was required to submit daily reports the following work day which included any quality issues. The contractor was required to attend a weekly meeting with Con Edison that usually would include the NYSDEC, Remedial Engineer and subcontractors. The Plan required the contractor to archive the QA/QC documentation after completion of the remedial program.

4.1.4 Excavation and Materials Management Plan (EMMP)

The contractor was required to submit for approval by the Remedial Engineer, Con Edison and the NYSDEC (approval documentation in **Appendix C**), an Excavation and Materials Management Plan which detailed, among several remedial activities, the removal, testing, storage, handling and transportation of asbestos-containing waste from the Site. The EMMP included:

1. A description of the anticipated sequence of work, including the means and methods;
2. A description of the anticipated waste streams;
3. A description of the anticipated sequence of activities (15 separate steps) requiring material handling for the completion of the remedial program including:
    - A description of the waste storage areas and how they will be constructed;
    - A description of how the sediment and erosion control measures will be handled;
    - A description of the asbestos abatement critical barrier and delineation of the required work zones;
    - A description of the removal of the Underground Storage Tank (UST);
    - A description of the removal of buried structures and equipment;
    - A description of the installation of the demarcation barrier;
    - A description of the sidewalk vault closure (if necessary) and the repair of any buried exterior walls; and

- A description of the types of backfill materials to be used and the sequence of backfilling;

4. A description of the types of backfill materials to be used and the sequence of backfilling:

5. A description of sample collection methods and a listing of the analytical methods for different types of samples; and

6. A description of the transportation of wastes including coordination of trucks on site, local truck routes and disposal facilities for the various types of waste.

The EMMP was supported by the following documents:

1. The Waste Characterization Sampling Plan, which was approved by Con Edison and initiated prior to finalizing the EMMP;

2. The Erosion and Sediment Control Plan, which was approved by Con Edison and the NYSDEC (approval documentation in **Appendix C**);

3. The Transportation and Traffic Safety Plan, which was approved by Con Edison and the NYSDEC (approval documentation in **Appendix C**); and

4. The Tank Disposal Plan, which was approved by Con Edison.

4.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

Since the area to be disturbed by the remedial action was less than one acre (0.84 acres), no SWPPP was required. The NYSDEC did review and approve the Contractor's Erosion and Sediment Control Plan (approval documentation in **Appendix C**).

4.1.6 Community Air Monitoring Plan

The Community Air Monitoring Plan provided a measure of protection for the downwind community (*i.e.*, off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of the remedial work activities. This CAMP was reviewed and approved by the NYSDEC (approval documentation in **Appendix C**) and addressed particulates (dust) and potential subsurface organic vapors that may have been released to the air during implementation of the remedial action activities. The CAMP was prepared in accordance with NYSDOH requirements presented in Appendix 1A of the NYSDEC DER-10 Technical Guidance for Site

Investigation and Remediation (2010). The CAMP required real-time monitoring for dust and organic vapors at the downwind perimeter of each designated work area for the benefit of downwind adjoining properties that contain sensitive receptors (*e.g.*, Division Avenue, Kent Avenue, the public park east of Kent Avenue, and the nearby residential buildings on Kent Avenue). The measures included in the CAMP provided a level of protection for the occupants of the neighborhood schools and residences, as well as the downwind community, from potential airborne releases.

Air monitoring stations for measuring dust less than 10 micrometers in size (PM-10) were established at four stationary locations (two along Kent Avenue, one along Division Avenue and one along the western property line bordering Wallabout Channel). Depending on the wind direction, one location was established as the upwind Site perimeter monitoring location and the other three were downwind Site perimeter monitoring locations. In addition, a roving air monitor using a hand-held instrument for measuring VOCs walked the northern and eastern perimeters of the Site, and also collected organic vapor data at the four stationary dust monitor locations. The upwind monitoring station was located in the predominantly upwind direction of the Site and its location varied depending on daily conditions (see **Photo 1** in **Appendix E**). A windsock was used to determine and monitor wind direction throughout the work day.

These air-monitoring activities included real-time monitoring for particulates and VOCs based on the New York State CAMP requirements. The action levels specified below required increased monitoring, corrective actions to abate emissions, and/or work shutdown.

VOC Direct-Reading Monitoring

Organic vapor monitoring equipment consisted of a real-time photoionization detector (PID) capable of detecting total VOCs that could potentially be released from Site remedial activities. In addition to instantaneous readings, the instrument was capable of calculating 15-minute running average VOC concentrations, which were compared to the prescribed total organic vapor action levels. The instrument was calibrated in accordance with the manufacturer's operating instructions on a daily basis and documented in a dedicated field logbook.

Upwind 15-minute average background VOC levels were subtracted from the downwind 15-minute average VOC levels to establish ambient organic vapor concentrations reflective of work activities at a particular point in time. Therefore, the "background" level was the most recent upwind 15-minute average reading.

The 15-minute running average PID concentrations were compared to the following:

- If the ambient air concentration of total organic vapors at the downwind perimeter of the Site or work area exceeded 5 ppm above background for the 15-minute average, work activities were temporarily halted and monitoring continued. If the total organic vapor level readily decreased (per instantaneous readings) below 5 ppm over background, work activities resumed with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the Site or work area persisted at levels in excess of 5 ppm over background but less than 25 ppm, work activities were halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities resumed provided that the total organic vapor level 200 feet downwind of the Site or half the distance to the nearest potential receptor or residential structure, whichever was less (but in no case less than 20 feet), was below 5 ppm over background for the 15-minute average.

- If the organic vapor level was above 25 ppm at the downwind perimeter of the Site or work area, activities were shut down and the engineering controls and site work plan re-evaluated.

As an extra precautionary measure, when the downwind perimeter of the Site was within 20 feet of the nearest potential receptor (Division Avenue), then the perimeter organic vapor level could not exceed VOC background concentrations. This guideline avoided vapor migration into nearby residential buildings. If VOC background concentrations were exceeded at any time at any perimeter location within 20 feet of the nearest receptor, then activities were shut down and the engineering controls and site work plan re-evaluated.

Particulate (Dust) Direct-Reading Monitoring

Particulate (dust) monitoring equipment set up at the four stationary monitoring locations consisted of real-time aerosol/particulate dust monitors capable of measuring PM-10 particulate matter that could be released from Site remedial activities. The instruments were capable of providing instantaneous readings as well as integrating measurements over a period of 15 minutes (or less) for comparison to the prescribed airborne particulate action levels. The equipment was calibrated in accordance with the

manufacturer's operating instructions and documented in a dedicated logbook.

Dust concentrations were monitored continuously at the four stationary monitoring locations. In addition, fugitive dust migration was visually assessed during all work activities. As with VOC levels, upwind 15-minute average background particulate levels were subtracted from the downwind 15-minute average particulate levels to establish dust concentrations reflective of work activities at a particular point in time. The "background" particulate level, therefore, was the most recent upwind 15-minute average reading.

The 15-minute running average particulate readings were compared to the following:

- If the downwind PM-10 particulate level was 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust was observed leaving the work area, then dust control/suppression measures were implemented. Work continued with dust suppression techniques provided that the downwind PM-10 particulate levels did not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust was migrating from the work area.

- If, after implementation of dust suppression techniques, the downwind PM-10 particulate levels were greater than 150 $\mu g/m^3$ above the upwind level or dust was observed leaving the Site, work was stopped and the remedial activities were re-evaluated. Work resumed provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 particulate concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

The CAMP daily records were posted the following work day on a bulletin board located along the sidewalk on Kent Avenue (see **Photo 2** in **Appendix E**), as well as posted on a website that Con Edison maintained to provide information related to the remedial program to the general public.

4.1.7 Asbestos Variance and Air Monitoring

As mentioned in Section 2.2 above, the excavated fill contained ACM. Con Edison, through one of the subcontractors, Delta Environmental, Inc., applied to the NYCDEP for a variance for the handling of the ACM. The variance, prepared by a New York State Asbestos Project Designer, requested relief from use of an enclosure and

traditional clearance monitoring. The variance was approved on August 2, 2013 (approval documentation is **Appendix C**).

In compliance with the NYSDOL's 12 NYCRR Part 56 and NYCDEP's Title 15, Chapter 1, Rules of the City of New York, an asbestos air monitoring program was conducted throughout the handling of any excavation soil/debris. The asbestos air monitoring program consisted of 16 monitoring points (11 Transmission Electron Microscopy (TEM); 5 Phase Contrast Microscopy (PCM)) at the Site. Samples were collected throughout the working hours, and then submitted for laboratory analyses of asbestos. The results were received before the beginning the next working day. Like the CAMP daily records, the asbestos air monitoring results were posted the following work day on the bulletin board located along Kent Avenue, as well as posted on the Con Edison website.

4.1.8 Contractors Site Operations Plans (SOPs)

The Remedial Engineer and Con Edison reviewed all plans and submittals for this remedial project (i.e. those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RAWP, the AOC Letter and the bid documents, including all specifications and drawings. All remedial documents were submitted to the appropriate New York State and City regulatory agencies in a timely manner and prior to the start of work.

4.1.9 Community Participation Plan

A Citizen Participation Plan (CPP) was developed to provide the community with the history of the site, investigation work performed to date, stakeholder concerns and a Site Contact List for on-going communication. The CPP also described citizen participation activities conducted during site investigation and remediation activities. These activities were designed to achieve the following objectives:

- Help the interested and affected public to understand the contamination existing at this Site, and the nature and progress of Con Edison's program to investigate and clean up the Site;
- Ensure open communication between the public and project staff throughout the remedial process; and
- Create opportunities for the public to contribute information, opinions and perspectives that had potential to influence decisions about the Site's investigation and cleanup.

Con Edison used many tools to communicate with the public: a toll-free hotline where concerned citizens could leave a voice mail message, fact sheets to update the community on the remedial plan, local document repositories and a Kent Avenue webpage where all historical and remedial documents were posted as well as photographs.

In addition, the Site Contact List also served as a list serve so the community could receive via mail and email fact sheets and updates on the remediation progress. As part of the public review process NYSDEC held a public meeting and extended the public review time from 45 days to 60 days. Con Edison and NYSDEC also hosted a local Availability Session so citizens could see and ask questions on the remedial design, Con Edison and NYSDEC also met with the Community Boards and local elected officials to explain the remedy being proposed.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

Technical specifications and a bid package for the remedial program were prepared by Shaw on behalf of Con Edison. The Engineer of Record responsible for the technical specifications and the oversight of the remedial program was Daniel Chen, P.E. (NYS Professional Engineer #065271). Con Edison performed construction management for the remedial program. The Con Edison Project Manager was David Rubin; The Con Edison Construction Manager was Michael Lombardi; the Con Edison Chief Construction Inspector was Joseph Baratta. Shaw's Resident Engineer was Joseph DeMauro.

Maxymillian was selected as the General Contractor to implement the remedial program. Maxymillian's subcontractors and their associated tasks were as follows:

1. Delta Environmental, Inc., Brooklyn, NY – Asbestos abatement contractor;
2. Triangle Health and Safety Solutions, Hamilton, NJ – Site safety;
3. TEC Land Surveying, PC, Beacon, NY – Surveying; and
4. Ral-Bar Electric, Long Island City, NY – Electrical.

Third-party asbestos air monitoring was performed by Airtek Environmental Corporation (Airtek) of Long Island City, NY (contracted by Con Edison).

4.2.2 Site Preparation

On August 12 and 13, 2013, Maxymillian collected 22 waste characterization (soil) samples from the Site. The laboratory analytical results, presented in **Appendix D**, indicated that none of the material was hazardous. Therefore, all excavated material could be transported off site and disposed of as ACM. Maxymillian began mobilization to the Site on October 28, 2013 with the delivery of trailers, the start of the installation of the plywood sheeting along the Division Avenue and Kent Avenue perimeter fences for the asbestos abatement critical barrier, installation of a new gate along Division Avenue and relocating the Kent Avenue gate to be flush with the sidewalk. On October 31, 2013, an oil boom was installed in Wallabout Channel to ensure there would be no uncontrolled releases to the surface waters (see **Photo 3** in **Appendix E**). A pre-construction meeting was held with NYSDEC and all contractors on November 4, 2013. On November 5, 2013, a 20,000 gallon frac tank was placed in the western central portion of the Site to contain all construction water generated during the remedial program (see **Photo 4** in **Appendix E**).All applications, permits, and approvals required for the project were filed by Maxymillian through the appropriate agencies (see **Appendices C and F**). Also, Maxymillian made all required arrangements for water and sanitary services. Con Edison supplied a source for electrical power and Maxymillian made all of the electric connections.

A NYSDEC-approved project sign was erected at the project entrance and remained in place during all phases of the Remedial Action (see **Photo 5 and 6** in **Appendix E**).

4.2.3 General Site Controls

General Site controls used during the remedial program were documented in the specifications and consisted of the following:

- Daily decontamination of equipment used on-site;
- Use of fences and barricades around the work area to maintain Site security;
- Daily maintenance of soil erosion and sediment controls;
- Daily logging of contractor activities and personnel onsite;
- Daily air quality monitoring (CAMP and asbestos) with next day posting of the results; and

- Vibration monitoring of the structural wall along the southern property line during use of the hi-ram equipment to breakup concrete and brick structures within the south excavation.

The contractor provided security at the Site during non-working hours throughout the duration of the remedial program. Daily records were maintained by the contractor that detailed construction activities, progress, problems encountered, and resolution.

4.2.4 Nuisance controls

Nuisance controls used during the remedial program activities consisted of the following:

- Dust suppression measures including hydrant-connected hoses during excavation work and in traffic areas;
- Placement of coarse gravel roadways in areas of on-site truck routes to minimize the generation of dust from the Site;
- Construction of a truck wash pad for removal of all soil and other material from the wheels, tire treads, and undercarriage of every truck leaving the Site; and
- Control of odor, as necessary, was through the use of poly sheeting over any stockpiled material.

Truck traffic control and routing were important for the safety of the project site (due to limited access on the Site) and the surrounding area (residential community with a school in close proximity of the Site). As mentioned in Section 4.1.4, a Transportation and Traffic Safety Plan, approved by Con Edison and the NYSDEC, was used to safely control truck traffic on the job site as well as in the local community.

During the remediation, Con Edison received two complaints via voice messages from its toll-free hotline. One complaint concerned trucks sounding their horns in the early morning. Although Con Edison spoke to its contractor about the matter, it was believed that the noise was likely related to non-project trucks lining up to re-load salt from the New York City Department of Sanitation facility located immediately south of the Site. Con Edison's Public Affairs Department contacted the constituent to provide information about Con Edison's discussions about the matter with the contractor and to invite the constituent to call with any further issues.

The second complaint was about the handling of dust on a windy day. Con Edison Public Affairs reached out to the constituent and explained the CAMP to the concerned citizens; the constituent was satisfied and no further complaints on the subject were received.

4.2.5 CAMP and Asbestos Air Monitoring Results

CAMP monitoring was initiated on November 12, 2013. The CAMP was operated every day of Site activity through the completion of the remedial activities on February 24, 2014. Copies of all field data sheets relating to the CAMP are provided in electronic format in **Appendix G**.

There were no exceedances of either the particulate or VOC 15-minute time weighted average (TWA) action levels.

On December 5, 2013 and January 13 through January 15, 2014, the particulates readings were unusually high due to very high humidity (i.e., fog). The particulate monitoring equipment monitors aerosols, and the fog is actually detected by the equipment. However, this impacted both the upwind as well as the downwind monitoring stations with very little difference, if any, between the two. The CAMP monitoring requirements were based on the difference between the upwind and downwind locations, and very little difference, if any, was measured on these days.

Asbestos air monitoring was initiated on November 12, 2013. The asbestos air monitoring was operated every day of Site activity through the completion of the excavation activities on February 10, 2014. Copies of all field data sheets relating to the asbestos air monitoring are provided in electronic format in **Appendix G**.

Asbestos was not detected in any air samples collected during the entire remedial program.

4.2.6 Reporting

As mentioned in Section 4.1.3, the contractor was required to provide daily reports to Con Edison the morning of the following workday. The daily reports were maintained in the contractor's on-site trailer during the remedial program. The daily reports included photographs of the day's activities with written descriptions. The Contractor's daily reports are included in electronic format in **Appendix H**. In addition, Shaw's daily reports documenting work activities are included in electronic format in **Appendix I**.

4.3 CONTAMINATED MATERIALS REMOVAL

The Kent Avenue remedial program involved the removal and off-site disposal of non-hazardous ACM and decontamination fluids/construction water. The remedial program also included the removal of a UST and its contents.

The SCOs for the contaminants of concern for this project are the restricted residential criteria as defined by NYCRR Part 375-1.8(g). As detailed in the RAWP, the remedial excavation extended vertically to either the top of the former generating station basement floor slab or to the watertable (whichever was encountered first). Post-excavation soil samples were collected (where applicable) to document the quality of the material that remained below the demarcation barrier placed at the bottom of the excavation.

The areas where excavations were performed are shown in **Figure 3**.

4.3.1 Non-Hazardous Asbestos-Containing Material

All solid material excavated and removed from the Site was transported and disposed of as non-hazardous ACM. The material consisted of cinder, ash, soil, concrete, brick, timber, and metal (pipes as well as structural steel). The non-hazardous ACM was initially excavated from the North Excavation Area, and once all of that material was removed and replaced with clean backfill, the excavation activities moved to the South Excavation Area (see **Figure 3**). As-built drawings showing the final elevations of the excavation bottom (**FOUNDATION REMAINS FOUND AT 500 KENT AVENUE**) and showing the final grade contours (**FINAL ASBUILT**) are presented in **Appendix J**.

4.3.1.1 Disposal Details

The non-hazardous ACM was transported to the GROWS North Landfill (GROWS) in Morrisville, Pennsylvania for disposal. The laboratory reports for the waste classification samples collected on August 12 and 13, 2013 for the remediation are presented in **Appendix D**. The waste classification analyses identified that the material was not hazardous.

The letter from Maxymillian to the disposal facility owners and the acceptance letter from the disposal facility owners are attached in **Appendix K**.

Transportation of the non-hazardous ACM to GROWS began on November 13, 2013 and continued through February 10, 2014. A total of 599 truckloads of non-hazardous ACM were removed from the Site during this time. Manifests for each truck

are included in **Appendix L**. A total of 13,702.95 tons of non-hazardous ACM (including an estimated 12 tons of sand removed from the interior of the UST) were removed from the Site. The Contractor's manifest summary table which presents both the manifest number and weight of non-hazardous ACM that each truck transported from the Site is also presented in **Appendix L**.

None of the excavated material was reused at the Site.

4.3.2 UST Contents

Previous environmental site investigations identified a suspect 1,500-gallon UST within the North Excavation Area. The suspect UST was located and the top was exposed on November 12, 2013 (see **Photo 7** in **Appendix E**). At this time the UST was opened at the top and it was determined that the UST was filled with sand, and that the UST had a 2,500 gallon capacity. On November 20, 2013, the UST was pulled from the ground (see **Photo 8** in **Appendix E**) and the soil beneath the UST was sampled (see **Photo 9** in **Appendix E**). Details of the UST closure including the laboratory analyses and supporting closure documentation were submitted to the NYSDEC in a UST Closure Report, dated January 29, 2014 (an electronic copy of the report is in **Appendix M**). On March 5, 2014, Con Edison submitted a Petroleum Bulk Storage (PBS) registration form for the UST to the NYSDEC (**Appendix M**). The Facility Information Report in the NYSDEC PBS database, as of May 27, 2014, shows that the UST was closed and removed from the Site (**Appendix M**).

4.3.2.1 Disposal Details

The 12 tons of sand removed from the interior of the UST were included with the material transported off of the Site under manifest number 111143 (a duplicate of this manifest, including the Contractor's estimate of the UST material is provided in Attachment B of the UST Closure Report in **Appendix M**) on December 20, 2013.

4.3.3 Decontamination Fluids/Construction Water

All construction water, decontamination fluids, and dewatering fluids were containerized within one 20,000-gallon frac tank for subsequent treatment and disposal at Clean Water of New York (Clean Water) in Staten Island, New York. On February 4, 2014, a sample of the construction water was collected for analysis. The laboratory analytical results of the construction water sample are presented in **Appendix D**. The letter from Maxymillian to the disposal facility and the acceptance letter from the disposal facility are attached in **Appendix K**.

4.3.3.1 Disposal Details

The construction water was transported to Clean Water on February 19, 2014. One tanker truck was used to transport the water from the Site. The manifest for the truck is included in **Appendix L**. A total of 3,697 gallons of water were removed from the Site.

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

The remedial performance/documentation sampling was completed in accordance with the RAWP. In the North Excavation Area, as well as any excavation that had a portion without either a basement wall or slab floor, or shoring, samples were collected at a minimum of one for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area. It was anticipated that the excavation in the South Excavation Area would be confined within the basement walls and slab floors of the former power plant building. Existence of the walls and slab were confirmed, so no documentation samples were collected. In any areas of noticeable staining on the buried walls or slab floors, particularly in the area of boring PBL-7 (South Excavation Area) where a soil sample contained a concentration of 3.5 mg/kg of PCBs (Shaw Environmental, Inc. Site Investigation Summary Report, April 2007), wipe samples were to be collected and analyzed for PCBs.

Each soil/fill documentation sample was analyzed for the SVOCs and metals listed in 6NYCRR Part 375-6.8, as well as for asbestos. The analytical results of SVOCs and metals in the soil/fill material were compared with Restricted Residential SCOs. The PCB wipe samples were to be compared to the low contact, outdoor nonimpervious surface cleanup criteria established in Title 40 of the Code of Federal Regulations Part 761.125 (40 CFR Part 761.125). The asbestos results were compared to the one percent (1%) asbestos content threshold for ACM as established in Title 15, Chapter 1 of the Rules of the City of New York (Title 15, Chapter 1). The samples were analyzed by TestAmerica Laboratories, Inc. (TestAmerica), a USEPA Environmental Laboratory Approval Program (ELAP) and Pennsylvania-certified laboratory. Sample collection and laboratory analyses conformed to the NYSDEC Analytical Services Protocol (ASP) Category B data deliverables per NYSDEC DER-10 Appendix 2B: *Guidance for Data Deliverables and the Development of Data Usability Summary Reports (DUSR)*. The asbestos samples were analyzed by polarized light microscope (PLM) in accordance with American Society for Testing and Materials (ASTM) Method D7521-13.

As indicated above, all of the excavation in the South Excavation Area was contained within the basement walls and slab floor (see **Photos 10** through **13** in **Appendix E**). Therefore, no soil/fill documentation samples were collected from the South Excavation Area. No noticeable staining was observed on either the basement walls or slab floor in either the North or South Excavation Areas, therefore no PCB wipe samples were collected. There was a concrete slab at the base of the North Excavation Area (see **Photo 14** in **Appendix E**), however in some areas there were no basement walls. Con Edison directed Maxymillian/Delta to collect a total of 17 soil/fill samples from immediately above the slab floor and at the base (within on foot of the bottom) of the side wall. A table and figure summarizing all documentation sampling is included in **Table 1** and **Figure 4**, respectively, and all exceedances of SCOs are highlighted.

Several SVOCs were detected above the Restricted Residential SCOs in most of the documentation samples. In all but two of the samples (SW-SW8 and EP8), the exceedances were slight. In samples SW-SW8 and EP8, located adjacent to the Ash Pit, the exceedances were generally an order of magnitude greater that the Restricted Residential SCOs. The same SVOCs were detected throughout the Site at similar concentrations in the previous environmental site investigations suggesting that these contaminants, at these concentrations, are ubiquitous at the Site. Arsenic, lead and mercury were the only metals detected above the corresponding Restricted Residential SCOs. Exceedances of at least one of these three metals was found in nine of the 17 samples collected and analyzed. As with the SVOCs, metals and in particular, arsenic, were also detected throughout the Site at similar concentrations in previous environmental site investigations. Exceedances of the asbestos 1 percent ACM criteria were detected in five of the 17 samples. The asbestos exceedances ranged between 1.3 and 1.8 percent.

A DUSR was prepared for the SVOC and metals data generated in this remedial documentation program. This DUSR is included in **Appendix N**, and the associated laboratory reports are provided electronically in **Appendix O.**

The DUSR states that the accuracy and precision of the semi-volatile organic compound results were acceptable for the samples in all sample delivery groups (SDGs), with the exception of the two soil samples (SW-S-2 and EP-2) in SDG 490-40738-1 due to various matrix spike (MS) or matrix spike duplicate (MSD) recoveries that were outside Quality Control (QC) limits of the respective compounds.

Most of the QC criteria for the metals analyses were met, except for the matrix spike recoveries outside QC limits for one to four analytes in eight of the nine SDGs and mercury in four of these SDGs, as identified in Table 4 and Table 5 of the DUSR. The associated sample results were qualified as estimated values and flagged with either "NJ+" or "NJ-" depending on the potential bias suggested by the batch QC sample, either a potential positive or potential low bias. Since the laboratory did not flag sample results associated with matrix spike recoveries outside QC limits, the "N" flag was applied during the data review in order to assist the data user in recognizing the reason a sample result was qualified, a convention routinely used to report data in the USEPA Contract Laboratory Program (CLP). Similarly, the laboratory qualifiers "*"and "E" flags were applied following the data review for precision and serial dilution issues. These qualified sample metals results are presented in Table 6 of the DUSR.

Following the review of the general chemistry data, twelve cyanide results, eleven hexavalent chromium (Cr+6) results and two trivalent chromium results were qualified following the data usability review. Seven cyanide and nine Cr+6 results were qualified as estimated values (NJ-) due to low matrix spike recoveries in the associated QC sample, thereby suggesting a potential low bias in the reported result. The two cyanide results in SDG 490-41855-1 (SW-SW-8 and EP-8) were qualified as estimated values due to a potential low bias in addition to experiencing potential variability in the analytical precision as suggested by the duplicate analysis. These two results are flagged with "*NJ-". Since the two samples in SDG 490-43051-1 (SW-S-9 and EP-9) were received at the laboratory with a sample cooler temperature above 6°C (cooler lost in transit), the trivalent and Cr+6 results are qualified as estimated values and flagged with "J-". The cyanide results are also subject to qualification in these samples, but are already flagged with "NJ-". Three non-detect cyanide results were rejected and flagged with "NR" due to the MS recoveries below 30% in the associated batch QC sample, in accordance with data validation guidelines (USEPA, ***National Functional Guidelines for Inorganic Superfund Data Review***, Publication OSWER 9240.1-51, EPA540-R-10-011, January 2010.).

The results of the two soil samples (SW-S-9 and EP-9) that were associated with the sample cooler that was lost in transit were qualified as estimated values in accordance with various data validation guidelines, because the 12.3°C temperature at sample receipt was above the 6°C specified temperature for sample handling and preservation and above 10°C for the SVOC requirement (USEPA, ***Standard Operating Procedure for Validating Semi-Volatile Organic Compounds by Gas***

Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP No. HW-22, Revision 3, October, 2006.). Non-detect results were qualified and not rejected based on professional judgement for specific reasons presented in the DUSR. The results that were qualified due to temperature issues for samples SW-S-9 and EP-9 are presented in Tables 2, 6, and 8 of the DUSR for the SVOC, metals and mercury, and general chemistry analytes.

The data validation process identified a laboratory error that impacted the reported concentrations for all compounds, excluding asbestos, for sample EP-4. The laboratory switched the percent solids and percent moisture values. The corrected laboratory report, included in **Appendix O**, shows that the concentrations are lower than what was originally presented. This resulted in the arsenic concentration dropping from 23.1 mg/kg (an exceedance of the Restricted Residential SCO [16 mg/kg]) to 4.14 mg/kg. All other SVOC and metal concentrations were reduced, but none of the compounds had exceeded the corresponding Restricted Residential SCO. The correct data are presented in **Tables 1** and **2**.

The DUSR concludes that the reported sample results for the Kent Avenue Site are usable and of acceptable accuracy and precision, with perhaps the exceptions of the rejected sample results identified in the text above. Qualified sample results are usable within the context of the qualifications identified.

4.5 IMPORTED BACKFILL

There were four types of backfill imported to the Site for the remedial program:

1. Rip Rap – used for erosion control at the southeast corner of the Ash Pit where the North Excavation Area was directly exposed to Wallabout Channel;
2. 2-Inch Stone – used for erosion control during extreme weather conditions along the western edge of the soil cap (adjacent to Wallabout Channel);
3. 0.75-Inch Clean Stone (aka washed stone) – used as final cover (approximately four inches) over the structural fill; and
4. Structural Fill (DGA) – a well-graded virgin material that was used to backfill the North and South Excavation Areas and forms the predominant material of the soil cap in the southwest portion of the Site.

The volumes of imported material, as provided to Con Edison from Maxymillian, included 72.93 tons of rip rap, 25.44 tons of 2-inch stone, 939.4 tons of 0.75-inch clean stone and 17,013.78 tons of structural fill. A table with quantities (daily by individual truck) for each type of material is shown in **Appendix P**. All of the material was imported from the Stavola Construction Materials, Bound Brook, New Jersey Quarry 10-3R. NYSDEC approved the use of the materials (approval documentation in **Appendix C**) because the material met the gradation requirements and was virgin material.

4.6 CONTAMINATION REMAINING AT THE SITE

The Site Investigation Summary Report, dated April 2007, for the Former Kent Avenue Generating Station discusses the history of the Site, including how the Site was landfilled sometime between 1844 and 1900. Much of the landfill material at that time consisted of coal ash, cinders, slag, brick, wood and cement. The 2007 report acknowledged finding similar materials at the Site. It is these older landfill materials, often referred to as "historic urban fill", that have elevated levels of SVOCs and metals that exceed regulatory cleanup objectives. **Table 2** and **Figure 4** summarize the results of soil samples collected at the Site after completion of the remedial program that exceed the Restricted Residential SCOs.

Because the Site is underlain below remaining basement/structural slabs by historic urban fill, there is soil contamination remaining beneath the Site. **Figure 5** indicates how the top of the soil contamination is identified. In the North and South Excavation Areas, a demarcation barrier (plastic orange fencing, see **Photo 15** in **Appendix E**) was placed at the base of the excavation. Any material below the demarcation barrier should be considered contaminated. In 2009 when the former generating station located in the center of the Site was demolished and removed, the basement walls and foundation slab remained in place. The interior portion of the generating station basement was backfilled with environmentally clean backfill; no demarcation barrier was installed when the basement was backfilled. Within the former generating station footprint, any material below the foundation slab should be considered contaminated material. In the southwest portion of the site, as shown on **Figure 6**, contaminated material was left in place and covered with a demarcation barrier and capped with two feet of clean structural fill. In this area, any material below the demarcation barrier should be considered to be contaminated.

In the northeast corner of the South Excavation Area, there is a 35 ft. by 6.5 ft. strip of soil with contaminated soil (below 4 ft) that has been left in place above the

concrete slab floor and adjacent to the basement wall (**Figure 5**). The top four feet of the strip of soil is clean fill that was placed during the 2009 generating station demolition and from restoration of the onsite waste dewatering area for the 2011 Ash Pit remediation. There is no demarcation barrier between the clean and contaminated soil. It should be assumed that any soil within this strip that is deeper than four feet is contaminated.

NYSDEC is overseeing an environmental investigation of MGP-related contamination being performed by National Grid at the former Nassau Gas Works site located immediately to the south of the Site. As part of the remedy for the Site, National Grid commenced the collection and analysis of environmental samples from the former Kent Avenue Generation Station Site in May 2014. The results of the investigation show MGP-related contamination beneath the Site. Additionally, the MGP contamination is impacting the groundwater quality beneath the Site. Since contaminated soil remains beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls (ECs/ICs) are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the SMP approved by the NYSDEC.

4.7 SOIL COVER SYSTEM

Exposure to remaining contamination in soil/fill at the Site is prevented by a soil cover system placed over the Site. This cover system in the North and South Excavation Areas is comprised of between 4.5 and 11 feet of structural fill with approximately 4 inches of ¾-inch stone on top. The footprint of the former generation station has up to 12 feet of environmentally clean fill topped off with ¾-inch stone. The southwest portion of the Site has a minimum of 24 inches of clean structural fill and ¾-inch stone. **Figure 6** shows the as-built cross section for the soil cap in the southwest portion of the Site An Excavation Work Plan, which outlines the procedures required in the event the cover system and/or underlying residual contamination are disturbed, is provided in **Appendix E** of the SMP.

4.8 OTHER ENGINEERING CONTROLS

The remedy for the Site did not require the construction of any active engineering control systems.

Procedures for monitoring and maintaining the cover system are provided in the Monitoring Plan in Section 3 of the SMP. The Monitoring Plan also addresses inspection

procedures that must occur annually and after any severe weather condition has taken place that may affect the cover system.

4.9 INSTITUTIONAL CONTROLS

The site remedy requires that a DCR be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to restricted residential, commercial or industrial uses only as defined by 6 NYCRR Part 375-1.8(g).

The DCR for the site was executed by the Department on December 23, 2014, and filed with the Kings County Clerk on January 8, 2015. The County Recording Identifier number for this filing is 2015010500429001. A copy of the DCR and proof of filing is provided in **Appendix Q**.

4.10 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

There were a total of five deviations from the RAWP, AOC Letter and Construction Documents:

1. The RAWP and Construction Documents called for the containment of stockpiled materials by placing material on plastic and covering the material with plastic. All excavated materials that were not immediately transported off site for disposal were stockpiled within the excavation area, i.e., were piled on top of other material that was also to be excavated and removed (**Photo 16** in **Appendix E**). The purpose of containing the excavated material was to ensure that it did not contaminate underlying clean materials. Since the stockpiled materials were on top of other contaminated material, it was not necessary to segregate the stockpiled materials. The stockpiled materials were covered with plastic at the end of each workday and over weekends/holidays to ensure there were no health exposures to the surrounding neighborhood (**Photo 17** in **Appendix E**).
2. The Construction Documents called for compaction testing of all backfilled material. While all backfilled material was compacted, Con Edison agreed to not perform compaction testing on backfill materials placed deeper than four feet below grade.

3. The Construction Documents (drawings) called for the rip rap placed at the narrow breach between the former generating station basement wall and the Ash Pit to be placed with a 1:2 slope on the west side (facing Wallabout Channel). Because it was not feasible to control the placement of the rip rap on the west side, chain link fence (**Photo 18** in **Appendix E**) was placed to hold the rip rap securely in place (**Photo 19** in **Appendix E**).

4. Site documentation showed that there was a vault beneath the Kent Avenue sidewalk that could be open to the South Excavation Area. The Contract Documents called for sealing the opening (if it was open) with a concrete wall poured in place. Upon opening the east side of the South Excavation Area, it was determined that the vault area was filled with debris, but open to the South Excavation Area (**Photo 20** in **Appendix E**). It was not practicable to pour a concrete wall to cover the openings into the vault area, so Con Edison permitted the Contractor to seal off the openings with a cinder block wall (**Photo 21** in **Appendix E**).

5. On January 27, 2014, Con Edison petitioned the NYSDEC to leave in place a utility pole, conex box and associated soil, located in the northeast corner of the South Excavation Area (**Figure 5**). The petition, presented in **Appendix R**, indicated that the areas adjacent to the pole had been excavated, but the material in question was left in place to avoid undermining the utility pole and electrical panel housed in the adjacent conex box. The petition contained photo documentation that the top four feet of the soil to be left in place was clean. The NYSDEC approved the petition on January 29, 2014 (approval documentation in **Appendix R**).

Former Kent Avenue Generating Station

KINGS COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: V00732-2

Prepared for:
Consolidated Edison Company of New York, Inc.
31-01 20th Avenue
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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

FEBRUARY 2015

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LIST OF ACRONYMS

AAR	Alternatives Analysis Report
ACM	Asbestos-containing material
amsl	Above mean sea level
AOC	Area of Concern
bgs	Below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
COC	Contaminants of concern
Con Edison	Consolidated Edison Company of New York, Inc.
DUSR	Data Usability Summary Report
DCR	Declaration of Covenants and Restrictions
EC	Engineering Controls
ECL	Environmental Conservation Law
EWP	Excavation Work Plan
ft	Feet
HASP	Health and Safety Plan
IC	Institutional Controls
IRM	Interim Remedial Measure
MGP	Manufactured Gas Plant
NAVD	North American Vertical Datum of 1988
NGVD	National Geodetic Vertical Datum of 1929
NYCDOH	New York City Department of Health
NYCRR	New York Code, Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation

NYSDOH	New York State Department of Health
PCBs	Polychlorinated biphenyls
PAHs	Polycyclic Aromatic Hydrocarbons
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RAWP	Remedial Action Work Plan
SCO	Soil Cleanup Objective
sf	Square feet
Shaw	Shaw Environmental & Infrastructure Engineering of New York, P.C.
SMP	Site Management Plan
SVI	Soil vapor intrusion
SVOC	Semivolatile Organic Compound
TOGS	NYSDEC Technical & Operation Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance
USEPA	U. S. Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at the Former Kent Avenue Generating Station (hereinafter referred to as the "Site") under the New York State (NYS) Voluntary Cleanup Program (VCP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with Voluntary Cleanup Agreement (VCA) #D2-0003-02-08, Amendment #2, Site No. V-00732-2, which was executed on July 26, 2002 and last amended on July 16, 2010.

1.1.1 General

Consolidated Edison Company of New York, Inc. (Con Edison) entered into a VCA with the NYSDEC to remediate a 2.6 acre property located in Brooklyn, Kings County, New York (**Figure 1**). This VCA required the Remedial Party, Con Edison, to investigate and remediate contaminated media at the Site. A figure showing the site location and boundaries of this 2.6-acre site is provided in **Figure 2**. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Declaration of Covenants and Restrictions (DCR) presented in **Appendix A**.

After completion of the remedial work described in the Remedial Action Work Plan (RAWP) and the Alternatives Analysis Report (AAR), some contamination was left in the subsurface at this site, which is hereafter referred to as "remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the Site until the DCR is extinguished in accordance with Environmental Conservation Law (ECL) Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Shaw Environmental & Infrastructure Engineering of New York, P.C. (Shaw), on behalf of Con Edison, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 3, 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the DCR for the Site.

1.1.2 Purpose

The Site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment. A DCR recorded with the Kings County Clerk will require compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on site use, and mandate maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the DCR for contamination that remains at the Site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the DCR and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; and (2) a Monitoring Plan for implementation of Site Monitoring.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the DCR. Failure to properly implement the SMP is a violation of the

DCR , which is grounds for revocation of the Release and Covenant Not to Sue (RCNS);

- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6 New York Code, Rules and Regulations (NYCRR) Part 375 and the VCA (Index #D2-003-02-08; Site No. V00732-2) for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the DCR for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The Site is located in Brooklyn, Kings County, New York and is identified as Block 2023 and Lot 10 on the Tax Map of the Borough of Brooklyn/Kings County. The site is an approximately 2.6-acre area bounded by Division Avenue to the north, a former manufactured gas plant (MGP) site that is being addressed by National Grid to the south, Kent Avenue to the east, and Wallabout Channel to the west (see **Figure 2**). The boundaries of the Site are more fully described in **Appendix B** – Metes and Bounds.

1.2.2 Site History

According to maps found in the technical literature[1], the Site location appears to be one that was landfilled sometime between 1844 and 1900. Landfills in New York City during this time period were typically composed of sediments consisting of coal ash, cinders, slag, brick, wood, and cement. An 1887 Sanborn fire insurance map in the Phase I Environmental Site Investigation Report of the Site[2] showed that the Site was occupied by the following:

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[1] Landfills in New York City: 1844-1994, Walsh, D.C., and LaFleur, R.G., GROUND WATER, v. 33, No. 4, 1995.

[2] Holzmacher, McLendon & Murrell, P.C., *Phase I Environmental Site Assessment, Kent Avenue Power Plant, 500 Kent Avenue, Brooklyn*, New York, September 9, 1999.

- Moller, Sierek & Company (a sugar refinery located in the northern 1/3 of the Site);
- Knickerbocker Ice Company (located in the center 1/3 of the Site);
- C.I. Totten's Coal Yard (located in the southwest and central portions of the southern 1/3 third of the Site); and
- Wallabout Oil Works (a petroleum oil, naphtha, machinery oil, and gasoline refinery located in the southeast portion of the southern 1/3 of the Site, as well as on the all of the property immediately south of the Site).

The 1904 Sanborn fire insurance map shows that the Brooklyn Rapid Transit Company and Brooklyn City Railroad Power Company occupied the northern ½ of the Site and the southern ½ was vacant, but noted for future use by Brooklyn Rapid Transit Company. The property to the south was owned by Brooklyn Union Gas, Nassau Branch which operated a manufactured gas plant, including a gas oil tank immediately southwest of the Site and a purifying house immediately south and southeast of the Site.

By 1906, Brooklyn Rapid Transit Corporation had constructed a boiler house building on the southern portion of the Site for a power plant. In 1936 the original boiler house building was demolished, and the plant footprint was expanded northward within the Site. Based on later site investigations and remedial activity, it appears that the original boiler house building was demolished into the basement of the structure, approximately eight to ten feet (ft) below ground surface (bgs). Con Edison had acquired the property by 1959. Prior to 2009, Con Edison had ceased power generating operations at the Site, and in 2009 demolished the remaining power plant structures. After the demolition of the buildings, the basement was backfilled with stone and the Site was left generally flat.

1.2.3 Geologic Conditions

The Site is located in Kings County on the northwestern shore of Long Island. The Site is generally flat and lies at an elevation of approximately 10 feet (ft) above mean sea level (amsl). The geology of Long Island consists of varying thicknesses of Pleistocene-age glacial till, outwash sediments (consisting of fine to coarse grained sand with interstitial lenses of gravel and silt), and marine deposits, overlying a sloping bedrock surface.

Bedrock elevation in the Site vicinity is approximately -100 ft NGVD (National Geodetic Vertical Datum of 1929).[3] During 2004-2005 drilling activities conducted by others associated with the former Nassau Gas Works MGP at locations west and southwest of the southern boundary of the Site, bedrock was encountered between 103 and 108 ft below ground surface (bgs) (-94.04 and -97.34 ft NAVD (North American Vertical Datum of 1988)).[4]

The site-specific stratigraphy consists of 18 to 23 feet of fill material. Some of the fill material is from the demolition of former on-site buildings (i.e., brick, concrete, steel, piping, timber, etc). Most of the fill, as mentioned in Section 1.2.2, consists of coal ash, cinders, slag, brick, wood, and cement that were used to "make" the land on which the Site is located. Below the fill are alluvial deposits of gray to brown silty sands to medium sand to a depth of at least 50 ft bgs (deepest soil boring was 50 ft bgs).

Depth to groundwater is approximately 8 ft bgs and is likely influenced by the tides in Wallabout Channel. Based on the topography of the area (higher elevations to the east of the Site), groundwater is inferred to flow to the west (towards Wallabout Channel).

1.3 SUMMARY OF SITE INVESTIGATIONS FINDINGS

1.3.1 Site Investigations

Con Edison has completed three Site investigations to characterize the site environmental conditions. The last two Site investigations were approved by the NYSDEC pursuant to the VCA. The following reports and work plans were submitted to the NYSDEC in connection with the Site investigations:

- *Site Investigation Summary Report: Consolidated Edison Former Kent Avenue Generating Station*, Shaw, April 2007;
- *Pre-Design Investigation Work Plan: Former Kent Avenue Generating Station*, Shaw, April, 2009;

[3] Buxton, H. T., J. Soren, A. Posner, and P. K. Shernoff, 1981. *Reconnaissance of the Ground-Water Resources of Kings and Queens Counties, New York*. United States Geological Survey Open-File Report 81-1186.
[4] GEI Consultants, *Final Remedial Investigation Report, Nassau Gas Works, Kent Avenue and Clymer Street, Brooklyn, New York*. October 2007, p. 36.

- *Pre-Design Investigation Report: Former Kent Avenue Generating Station*, Shaw, June, 2010;
- *Pre-Interim Remedial Measure (IRM) Investigation Work Plan: Former Kent Avenue Generating Station*, Shaw, April, 2012; and
- *Pre- IRM Investigation Summary Report: Former Kent Avenue Generating Station*, Shaw, August, 2012.

Additionally, groundwater from the single remaining monitoring well was monitored quarterly and reported to the NYSDEC.

The three Site investigations reports provided documentation and a description of the procedures and findings of the Site investigation activities. The Site investigations, in general, consisted of sampling and analyses of soil and groundwater within the Site.

The compounds detected in the soil and groundwater at the Site includes volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals with asbestos-containing material (ACM) detected in the soil. Many of the metals and SVOCs detected in the on-Site soil and groundwater typically occur in urban fill, which forms the uppermost soil layer of the Site. The VOCs were associated with petroleum hot spots that were remediated (i.e., soil removal and disposal off of the Site) during the 2006 Site investigation. The chemical and physical data presented in the remedial investigation reports are summarized below according to media.

Urban Fill – The uppermost soils of the Site (from the ground surface to approximately 11 ft bgs) consisted of urban fill materials that were impacted by the demolition of former buildings on the Site. SVOCs and metals were detected in soil samples at concentrations that exceed the 6 NYCRR Part 375-6.8(b) Restricted Residential Soil Cleanup Objectives (SCOs). ACM was detected in soil samples in excess of the one percent (1%) asbestos content threshold for ACM as established in Title 15, Chapter 1 of the Rules of the City of New York (Title 15, Chapter 1).

Subsurface Soil – Four SVOCs and one metal were detected in two deeper (30 to 35 ft bgs) soil samples at concentrations that exceed the NYSDEC Restricted Residential SCOs. The sample in which all four SVOCs were detected was collected from the southwest portion of the Site. The four SVOCs are Polycyclic Aromatic Hydrocarbons (PAHs), which occur in oil, coal, and tar deposits, and are produced as byproducts of fuel burning.

Groundwater – Initial groundwater sample results from the on-Site wells showed exceedances of the NYSDEC Technical & Operation Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance (TOGS) for VOCs, SVOCs and metals. The only VOC and SVOC exceedances were the sample from MW-2 in the southwest portion of the Site. Long-term monitoring of VOCs in MW-2 groundwater samples showed several VOCs were detected at the beginning of the monitoring program. However, the detected concentrations decreased over time, and no VOCs were detected by the end of the monitoring program. Long-term monitoring of SVOCs showed multiple detections in each sample during the monitoring program. Nine of 16 SVOCs reported during the quarterly program had at least two exceedances of the corresponding TOGS criteria. Unlike the VOCs, the concentrations had some variance, but did not decrease with time.

Underground Storage Tank - A geophysical investigation of the Site during Shaw's 2006 investigation delineated an elongated anomaly that coincided with a buried 1,500 gallon fuel oil tank located along the northern portion of the property near Division Avenue. The underground storage tank (UST) had been identified on a 1961 Insurance Map for the Kent Avenue Generating Station. The location of the 1,500-gallon UST was confirmed as part of a geophysical survey during Shaw's 2010 Pre-Design Investigation.

1.3.2 National Grid Investigation of Nassau Gas Works Manufactured Gas Plant

In 2014 National Grid, in compliance with a Consent Order (W2-1090-06-06) with the NYSDEC, conducted an investigation within the southern portion of the Site to determine whether MGP contamination has migrated from the former Nassau Gas Works MGP located immediately south of the Site. The investigation was performed based on the NYSDEC-approved *Revised Supplemental Remedial Investigation Work Plan, Former Kent Avenue Generating Station [Off-Site Area], Nassau Gas Works Manufactured Gas Plant (MGP) Site*, dated March 6, 2009. Beginning May 8, 2014, a total of six soil borings were advanced up to 105 ft bgs. In addition, two monitoring well pairs comprising a deep and a shallow well were installed at two of the six boring locations. The drilling and well development activities were completed on May 30, 2014.

On June 18 and 19, 2014, the monitoring wells were surveyed and sampled. Summary tables of all soil and groundwater laboratory analyses, and a figure showing the soil boring and monitoring well locations, and monitoring well construction logs are provided in **Appendix C**.

1.3.3 Conceptual Site Model

For review purposes, the Site consists of three areas, northern, central, and southern. The northern portion of the Site, immediately east of the Ash Pit (**Figure 2**), is shaped like a triangle and covers approximately 5,250 square feet (sf) (0.12 acres). Several soil samples previously collected from within the northern portion of the Site had exceedances of several metals and SVOCs. The central portion of the Site, approximately 1.64 acres in area, was covered by the former power plant which was demolished in 2009. The demolition included removing all of the building and contents, except the basement walls and floor. The basement floor, at elevation 8 feet amsl, had numerous holes drilled to penetrate through the concrete slab to enable rainfall to percolate to prevent ponding/flooding of the Site. The entire basement was then backfilled with environmentally clean backfill. The southern portion of the Site is somewhat rectangular and covers approximately 36,500 square feet (sf) (0.84 acres); most of the southern area lies within the footprint of the original boiler house building. Numerous soil and groundwater samples previously collected from within the southern portion of the Site had exceedances of several metals, SVOCs and VOCs. Based on field observations during the Site Investigation completed by Shaw in 2006, the on-site materials consist of considerable amounts of building debris down to a depth ranging between 8 to 10 ft bgs. The material below the building slab is presumed to be historic urban fill that was placed between 1844 and 1900 to build up the Site for the construction of the original power plant. This historic urban fill contains elevated concentrations of metals.

1.4 SUMMARY OF REMEDIAL ACTIONS

The Site was remediated in accordance with the NYSDEC-approved Remedial Action Work Plan, dated September 2012, and the October 13, 2013 Area of Concern (AOC) Letter (approved by the NYSDEC on October 21, 2013).

The following is a summary of the Remedial Actions performed at the site:

1. Excavation of soil/fill exceeding the Part 375-6.8(b) restricted residential SVOC and Metals SCOs, as well as soil/fill containing more than one percent asbestos, to the water table or to the concrete slab floor in the North and South Excavation Areas (**Figure 3**);
2. Backfill of the North and South Excavations Areas with compacted virgin quarry structural fill topped with ¾-inch stone;

3. Construction and maintenance of a soil cover system consisting of 20 inches of compacted virgin structural fill, topped with four inches of ¾-inch stone to prevent human exposure to contaminated soil/fill remaining at the Site;

4. Execution and recording of a DCR to restrict land use and prevent future exposure to any contamination remaining at the Site; and

5. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the DCR , which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) maintenance and (4) reporting;

Remedial activities were completed at the site in February 2014.

1.4.1 Removal of Contaminated Materials from the Site

The Kent Avenue remedial program involved the removal and off-site disposal of non-hazardous ACM and decontamination fluids/construction water. The remedial program also included the removal of a UST and its contents.

The SCOs for the primary contaminants of concern (COC) for this site are the restricted residential criteria as defined by 6 NYCRR Part 375-1.8(g). The areas where excavation and capping were performed, as well as the location of the UST that was removed, are shown in **Figure 3**.

All solid material excavated and removed from the Site was transported and disposed of as non-hazardous ACM. The material consisted of cinder, ash, soil, concrete, brick, timber, and metal (pipes as well as structural steel). The non-hazardous ACM was initially excavated from the North Excavation Area, and once all of that material was removed, the excavation activities moved to the South Excavation Area (see **Figure 3**). As-built drawings showing the final elevations of the excavation bottom (**FOUNDATION REMAINS FOUND AT 500 KENT AVENUE**) and showing the final grade contours (**FINAL ASBUILT**) are presented in **Appendix D**. A total of 13,702.95 tons of non-hazardous ACM (including an estimated 12 tons of sand removed from the interior of the UST) was removed from the Site. None of the excavated material was reused on the Site.

1.4.2 Site-Related Treatment Systems

No long-term treatment systems were installed as part of the site remedy.

1.4.3 Remaining Contamination

The Site Investigation Summary Report, dated April 2007, for the Former Kent Avenue Generating Station discusses the history of the Site, including how the Site was landfilled sometime between 1844 and 1900. Much of the landfill material at that time consisted of coal ash, cinders, slag, brick, wood and cement. The 2007 report acknowledged finding similar materials at the Site. It is these older landfill materials, often referred to as "historic urban fill", that have elevated levels of SVOCs and metals that may exceed regulatory cleanup objectives. **Table 1** and **Figure 4** summarize the results of samples of soil remaining in the North Excavation Area at the Site after completion of the remedial program that exceed the restricted residential SCOs.

The Site is underlain by historic urban fill and soil impacted by historic industrial operations at depths beyond the remedial excavation limits. **Figure 5** delineates the areas of the Site with residual contamination. In the North and South Excavation Areas, a demarcation layer (orange plastic fencing) was placed at the base of the excavation. Any material below the demarcation layer should be considered contaminated. When the former generating station located in the center of the Site was demolished in 2007-2009, the basement walls and slab floor remained in place. The interior portion of the basement was backfilled with environmentally clean backfill. No demarcation layer was installed before the basement was backfilled. Within the former generating station footprint, any material below the concrete slab floor should be considered contaminated material. In the southwest portion of the Site, contaminated material was left in place, covered with a demarcation layer and capped with two feet of clean soil and stone. It should be assumed that any soil within this southwest area is contaminated.

In the northeast corner of the South Excavation Area, there is a 35 ft by 6.5 ft section with contaminated soil (below 4 ft) that has been left in place above the concrete slab floor and adjacent to the basement wall (**Figure 5**). The top four feet of the strip of soil is clean fill that was placed during the 2009 generating station demolition and from the 2011 Ash Pit IRM. There is no demarcation layer between the clean and contaminated soil. It should be assumed that any soil within this strip that is deeper than four feet is contaminated.

NYSDEC is overseeing a supplemental remedial investigation being conducted by National Grid of the Nassau Gas Works (a former MGP site located immediately to the south of the Site). National Grid collected soil and groundwater samples from the Former Kent Avenue Generation Station Site in May and June 2014. The results of the

investigation show additional contamination beneath the Site. Additionally, the MGP waste is impacting the groundwater quality beneath the Site.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil and groundwater exists beneath the site, Engineering Controls and Institutional Controls are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the DCR;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Soil Cover and Cap

Exposure to remaining contamination in soil/fill at the Site is prevented by a soil cover system placed over the Site. This cover system is comprised of a minimum of 24 inches of clean soil. The Excavation Work Plan that appears in **Appendix E** outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the Decision Document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Cover System

The cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.2.2.2 Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface

contamination; and (3) limit the use and development of the Site to restricted residential, commercial or industrial uses only. Adherence to these Institutional Controls on the Site is required by the DCR and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the DCR and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the DCR may not be discontinued without an amendment to or extinguishment of the DCR. Adherence to these Institutional Controls is required by the DCR. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted residential, commercial or industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws, provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted or residential use without additional remediation and amendment of the DCR, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property for the use of potable or process water without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or New York City Department of Health (NYCDOH) is prohibited;
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, and any potential impacts that are identified must be monitored or mitigated;

- Vegetable gardens and farming on the property are prohibited;
- The site owner or remedial party will complete and submit a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(g) to NYSDEC.

2.3.1 Excavation Work Plan

The site has been remediated for restricted residential, commercial or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as **Appendix E** to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A sample HASP is attached as **Appendix F** to this SMP that is in current compliance with DER-10, and 29 Code of Federal Regulations (CFR) 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP, presented in **Appendix G**, will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures, a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. Validated SVI data will be transmitted to the property owner within 30 days of validation. SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the DCR;
- Achievement of remedial performance criteria;

- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the Voluntary Cleanup Agreement, 6 NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or engineering control that reduces or has the potential to reduce the effectiveness of an Engineering Control and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the VCA, and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to Con Edison EH&S. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 2: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 3: Contact Numbers

Con Edison EH&S - David Rubin	(718) 204-4219

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 500 Kent Avenue, Brooklyn, NY

Nearest Hospital Name: Woodhull Medical Center

Hospital Location: 760 Broadway, Brooklyn, NY

Hospital Telephone: (718) 963-8000

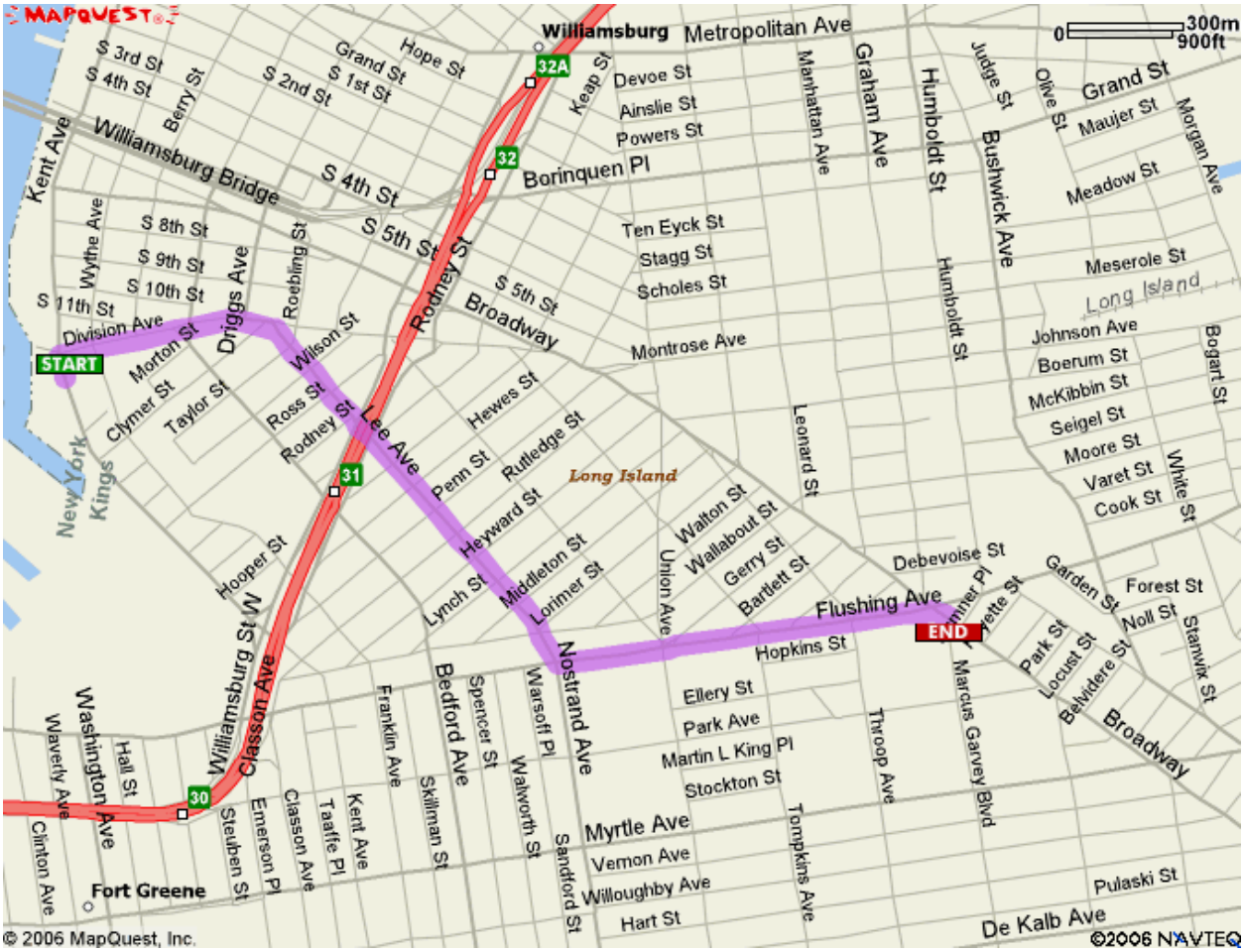
Directions to the Hospital:

1. Depart Kent Ave toward Division Ave;
2. Turn right onto Division Ave;
3. Turn right onto Lee Ave;
4. Turn left onto Flushing Ave;
5. Turn right onto Broadway; and
6. Arrive at 760 Broadway, Brooklyn, NY 11206

Total Distance: 1.73 miles

Total Estimated Time: 6 minutes

Map Showing Route from the site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (**Table 2**). The list will also be posted prominently at the Site and made readily available to all personnel at all times.

The Site is currently vacant with no structures and no proposed site activities. In this situation, no emergency response is anticipated. Should the Site be developed at a later date, this subsection should be revised based on any designed structures, new engineering controls, and/or anticipated site activities.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected site media identified below. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of groundwater and soil vapor;
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards;
- Assessing achievement of the remedial performance criteria;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Reporting requirements;
- Inspection and maintenance requirements for soil cover system and groundwater monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site will be conducted for the first five (5) years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in groundwater in the affected areas will be evaluated to determine if the remedy continues to be

effective in achieving remedial goals. Monitoring programs are summarized in **Table 4** and outlined in detail in Sections 3.2 and 3.3 below.

Table 4: Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Cover System	Annual	Soil	Observation and Reporting
Groundwater	TBD	Groundwater	TBD

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

TBD – To Be Determined. See Section 3.3.

3.2 COVER SYSTEM MONITORING

Exposure to subsurface soils will be prevented by a cover system that has been constructed on the Site. The cover system, as shown on **Figure 6**, consists of four different configurations:

- A deep cover system that consists of a total thickness of between 4.5 to 11 feet, consisting of compacted structural fill covered with a minimum of 4 inches of ¾-inch stone. This deep cover system, located within the North and South Excavation Areas, has a demarcation layer (orange plastic fencing) placed directly on top of the concrete slab floor at the base of the remedial program excavation;
- A deep cover system that consists of a total thickness of between 8 to 12 feet, consisting of clean fill covered with a minimum of 4 inches of ¾-inch stone. This deep cover system, located within the Former Generating Station Building Foundation, does not have a demarcation layer placed directly on top of the concrete slab floor within the building foundation;
- A soil cap located within the southwest portion of the Site that consists of 20 inches of compacted structural fill covered with a minimum of 4 inches of ¾-inch stone. This cap has a demarcation layer (orange plastic fencing) at its base, directly overlying contaminated soil/fill; and

- A 4 foot thick cover system consisting of clean fill, overlain by structural fill, overlain by a minimum of 4 inches of ¾-inch stone. This clean fill directly overlies contaminated soil/fill that was not removed during the remedial program, and there is no demarcation layer separating the clean fill from the contaminated soil/fill.

As-built drawings showing the final elevations of the excavation bottom (**FOUNDATION REMAINS FOUND AT 500 KENT AVENUE**) and the final grade contours (**FINAL ASBUILT**) within the North and South Excavation Areas are presented in **Appendix D**. The drawing with the excavation bottom elevations shows that there are a number of concrete structures that penetrate up from the overall concrete slab floor. An as-built cross section of the soil cap in the southwest portion of the Site is presented in **Figure 7**. The clean fill within the Former Generating Station Building Foundation was placed at the completion of the 2009 demolition of the Former Generation Station Building, and there are no as-built drawings available for this area.

Monitoring of the cover systems will be performed by an annual inspection of the cover materials as detailed in Section 3.4 below.

3.3 MEDIA MONITORING PROGRAM

With the exception of the historic urban fill underlying the entire Site, all sources of contamination have been removed from the Site and very little known soil/fill contamination remains at the Site above the water table. Based on the current use of the property, no soil monitoring is anticipated.

There is known groundwater contamination at the Site that is related to the former MGP that was located immediately to the south of the Site. The full impact of the MGP-related contamination on the Site was determined by the 2014 subsurface investigation that was conducted by National Grid at the Site. It is anticipated that some groundwater monitoring will be required at the Site.

Previous site investigations did not collect any soil vapor data, and because of historic operations at the Site and the adjacent MGP, the potential for soil vapor intrusion exists. However, since there are no structures remaining on the property, the current site use does not warrant any discussion about soil vapor monitoring, and Section 2.3.2 states that a soil vapor intrusion evaluation will be required prior to the construction of any enclosed structures. This evaluation will be utilized by NYSDEC to determine whether any soil vapor monitoring will be required in the future.

3.3.1 Groundwater Monitoring

Once National Grid has completed and reported on its MGP-related subsurface investigation at the Former Kent Avenue Generating Station Site, NYSDEC can identify the requirements of a groundwater monitoring program for the Site. Con Edison will negotiate an access agreement with National Grid to ensure that National Grid performs any DEC-required MGP-related groundwater monitoring at the Site. It is anticipated that National Grid will submit a Groundwater Monitoring Program Plan that will provide details for the following;

- A groundwater monitoring well location plan (particularly if new wells are added);
- Construction details of all monitoring wells used in the program;
- The analytes for which the samples will be analyzed;
- The frequency of the groundwater monitoring;
- The monitoring well sampling protocol;
- How monitoring wells would be repaired or replaced if necessary;
- How monitoring wells will be decommissioned once the groundwater monitoring program can be terminated;
- The quality assurance/quality control for the sampling protocols as well as the laboratory analyses; and
- The reporting requirements of the groundwater monitoring results.

The reporting requirements will include submission of all final reports to Con Edison for incorporation into the Periodic Review Report discussed in detail in Section 5.3.

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy implemented by National Grid for the Former Nassau Gas Works MGP immediately south of the Site.

The network of monitoring wells has been installed to monitor groundwater conditions at the site. The network of on-site wells has been designed to complement the groundwater monitoring system on the property immediately south of the Site.

Monitoring well construction logs are included in **Appendix C.**

The sampling frequency may be modified with the approval of NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

Deliverables for the groundwater monitoring program are specified below.

3.3.1.1 Monitoring Well Repairs, Replacement and Decommissioning

Con Edison will provide the necessary access to repair, replace or decommission wells as directed by the NYSDEC.

3.4 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (**Appendix H)**. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that site records are up to date.

3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the Groundwater Monitoring Program Plan. Main Components of the QAPP will include:

- Quality Assurance/Quality Control (QA/QC) Objectives for Data Measurement;
- Sampling Program:

- Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
- Sample holding times will be in accordance with the NYSDEC Analytical Services Protocol requirements.
- Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.

- Sample Tracking and Custody;
- Calibration Procedures:
  - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
  - The laboratory will follow all calibration procedures and schedules as specified in U.S. Environmental Protection Agency (USEPA) SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.6 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file with the property owner and on site if facilities are

constructed on site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan (Section 5.0 below) of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. A letter report will also be prepared subsequent to each sampling event. The report (or letter) will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables will be summarized in the Groundwater Monitoring Program Plan.

4.0 OPERATION AND MAINTENANCE PLAN

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections will be recorded on the appropriate forms for their respective system which are contained in **Appendix H**. Additionally, a general site-wide inspection form will be completed during the site-wide inspection. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data, generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and Final Engineering Report.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site is compliant with the DCR;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices;
- The information presented in this report is accurate and complete; and
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Consolidated Edison Company of New York, Inc.'s Designated Site Representative for the Site.

The signed certification will be included in the Periodic Review Report described below.

5.3 PERIODIC REVIEW REPORT

A Periodic Review Report will be submitted to the Department every year, beginning fifteen months after the Release and Covenant Not to Sue is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in **Appendix B** (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific Decision Document;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;

- Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
- The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and Regional Office in which the Site is located, and in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 CORRECTIVE MEASURES PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

TABLES

TABLE 1
SUMMARY OF SEMIVOLATILE ORGANIC COMPOUNDS, METALS AND ASBESTOS EXCEEDANCES
2013 SITE REMEDIATION
500 KENT AVENUE
BROOKLYN, NEW YORK

Excavation Area		North Excavation Area						
Sample Name		SW-S	EP-1	SW-S-2	EP-2	EP-3	SW-N-5	EP-5
Sample Date		11/14/2013	11/14/2013	11/15/2013	11/15/2013	11/19/2013	11/22/2013	11/22/2013
Depth (ft. bgs)		13	13	11	11	13	5	5
SVOCs (mg/Kg)	**Restricted Residential (mg/Kg)**							
Acenaphthene	100	0.131	0.0768	0.154	0.0874 J	0.143	0.264	0.00909 U
Acenaphthylene	100	0.0568 J	0.0580 J	0.0837	0.0179 U	0.0653 J	0.0406 J	0.00818 U
Anthracene	100	0.587	0.238	0.428	0.192	0.417	0.730	0.263
Benzo(a)anthracene	1	**1.76**	0.827	**1.36**	0.597	**1.10**	**2.44**	**1.15**
Benzo(a)pyrene	1	**1.69**	0.722	**1.26**	0.580	0.998	**2.50**	**1.17**
Benzo(b)fluoranthene	1	**2.15**	0.923	**1.75**	0.705	**1.24**	**3.06**	**1.64**
Benzo(g,h,i)perylene	100	1.12	0.465	0.706	0.313	0.541	2.89	0.733
Benzo(k)fluoranthene	3.9	0.845	0.345	0.627	0.326	0.516	1.03	0.556
Chrysene	3.9	1.66	0.802	1.31	0.587	1.09	2.33	1.13
Dibenz(a,h)anthracene	0.33	0.273	0.132	0.190	0.0140 U	0.161	**0.847**	0.166
Fluoranthene	100	3.27	1.46	2.63	1.22	2.43	5.57	2.18
Fluorene	100	0.113	0.0642 J	0.14	0.0239 U	0.135	0.219	0.0592 J
Indeno(1,2,3-cd)pyrene	0.5	**1.01**	0.389	**0.62**	0.240	0.498	**1.63**	**0.637**
2-Methylphenol	100	0.0926 U	0.0916 U	0.0911 U	0.185 U	0.105 U	0.0892 U	0.0846 U
3-Methylphenol	100	0.0199 U	0.0197 U	0.0196 U	0.0399 U	0.0225 U	0.0192 U	0.0182 U
4-Methylphenol	100	0.0199 U	0.0197 U	0.0196 U	0.0399 U	0.0225 U	0.0192 U	0.0182 U
Naphthalene	100	0.0641 J	0.00887 U	0.0479 J	0.0179 U	0.0101 U	0.146	0.0400 J
Pentachlorophenol	6.7	0.124 U	0.123 U	0.122 U	0.249 U	0.141 U	0.120 U	0.114 U
Phenanthrene	100	2.11	0.934	1.72	0.768	1.68	2.90	1.06
Phenol	100	0.0139 U	0.0138 U	0.0479 J	0.0279 U	0.0158 U	0.0351 J	0.0313 J
Pyrene	100	3.18	1.55	2.57	1.09	2.12	4.89	1.89
Metals (mg/Kg)	**Restricted Residential (mg/Kg)**							
Arsenic	16	14.8	9.98	2.78	**22.2**	7.52	**35.4** NJ-	**28.6** NJ-
Barium	400	189	99.4	28.10 EJ	104 EJ	71.9 NJ+	156 NJ+	234 NJ+
Beryllium	72	0.380 J	0.390 J	0.189 J	0.424 J	0.307 J	0.356 J	0.379 J
Cadmium	4.3	0.119 U	0.115 U	0.118 U	0.141 J	0.118 U	0.111 U	0.118 U
Chromium, Hexavalent	110	0.232 U	0.233 U	0.232 UNJ-	0.232 UNJ-	0.237 UNJ-	0.225 UNJ-	0.232 UNJ
Chromium, trivalent	180	28.8	15.5	7.68	11.5	15.6	28.0	21.5
Copper	270	82.7	103	27.2	73.1	113	268 NJ-	230 NJ-
Total Cyanide	27	0.720 UNJ-	0.717 UNJ-	6.47 NJ-	1.54 NJ-	0.716 UNR	0.700 U	0.703 U
Lead	400	396	**890**	70.4	**859**	310	**830**	**986**
Manganese	2,000	248 NJ+	236 NJ+	160	144	221	401	339
Total Mercury	0.81	0.688 NJ+	0.423 NJ+	0.151 NJ+	0.392 NJ+	**1.70**	**1.55**	**2.09**
Nickel	310	19.4	20.2	9.29	18.6	18.0	36.4	40.5
Selenium	180	1.78 U	1.81 J	1.77 U	1.77 U	1.77 U	4.09	3.34
Silver	180	0.356 U	0.344 U	0.354 U	0.353 U	0.354 U	0.490 J	0.355 U
Zinc	10,000	290 B	248 B	58.0	152	110	617 NJ+	493 NJ+
Asbestos (%)	**Site Soil Cleanup Goal (%)**							
Asbestos	1.0	NAD	NAD	NAD	NAD	NAD	0.71	0.86

Notes:
mg/Kg = milligrams per kilogram (parts per million).
ft bgs = feet below ground surface.
U = Not Detected.
J = Indicates an estimated value.
(J) = Data validation qualificaiton superseded by previous qualification.
J+ = The result is an estimated value, but the result may be biased high.
J- = The result is an estimated value, but the result may be biased low.
N = The matrix spike sample recovery in the associated QC sample is not within QC limits.
* = Duplicate not within controls limits; indeterminate bias direction.
E = The reported value is estimated because of the presence of interference; indeterminate bias direction.
B = This compound was detected in the laboratory method blank as well as the sample.
R = The sample result is rejected.
NAD = No Asbestos Detected. A percent of asbestos in soil value could not be made because no asbestos was detected.
1.76 Bolded and shaded values represent exceedances of the corresponding cleanup objectives.

TABLE 1
SUMMARY OF SEMIVOLATILE ORGANIC COMPOUNDS, METALS AND ASBESTOS EXCEEDANCES
2013 SITE REMEDIATION
500 KENT AVENUE
BROOKLYN, NEW YORK

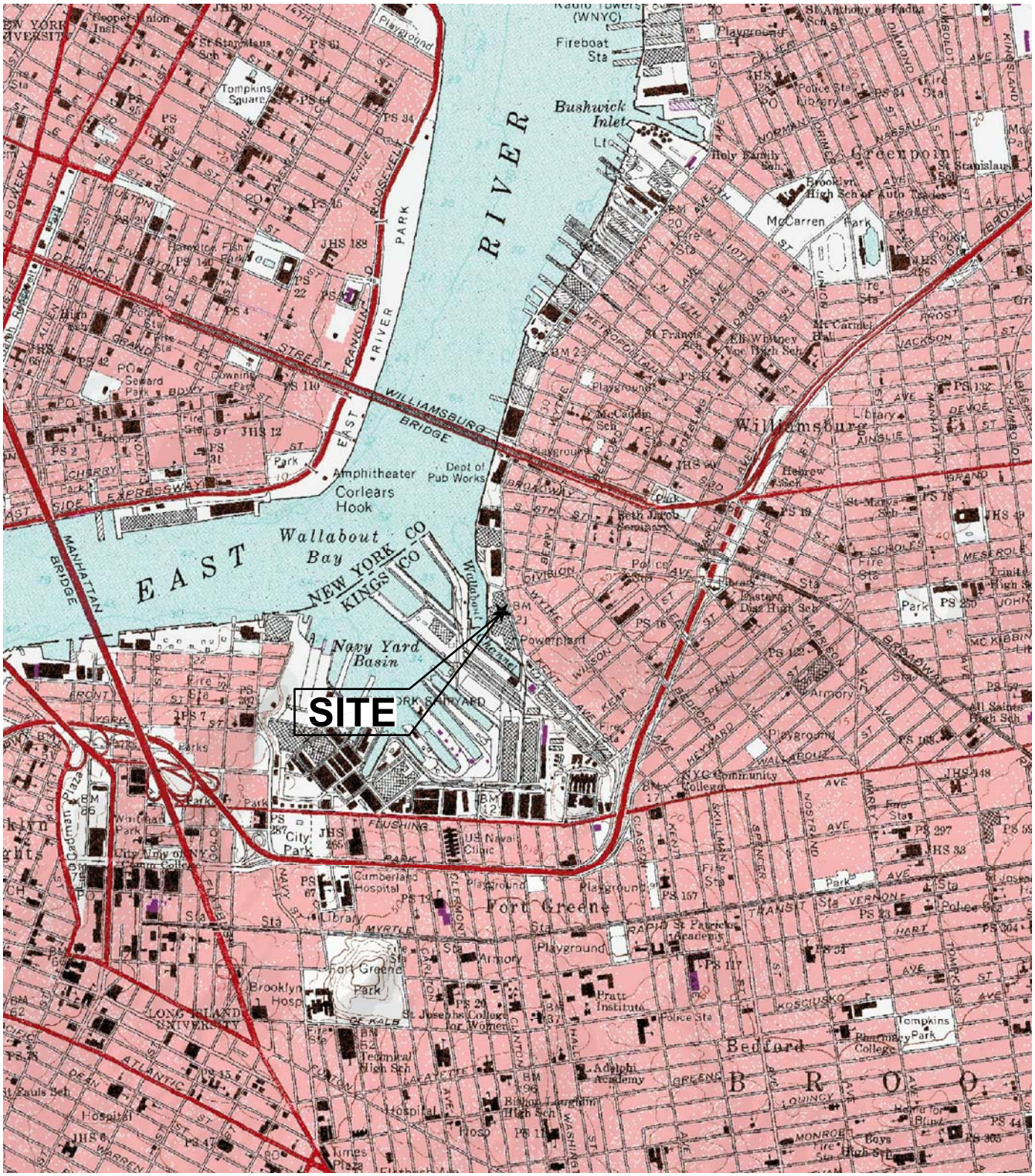
Excavation Area		North Excavation Area						
Sample Name		SW-W-6	EP-6	EP-7	SW-SW-8	EP-8	SW-W-9	EP-9
Sample Date		11/26/2013	11/26/2013	11/25/2013	12/4/2013	12/4/2013	12/6/2013	12/6/2013
Depth (ft. bgs)		11	11	10	11	11	11	11
SVOCs (mg/Kg)	**Restricted Residential (mg/Kg)**							
Acenaphthene	100	0.0113 U	0.0116 U	0.28	9.94	5.66	0.00974 UJ	0.320 J
Acenaphthylene	100	0.0102 U	0.0104 U	0.06 J	0.521	0.0503 U	0.00876 UJ	0.00893 UJ
Anthracene	100	0.0232 J	0.0256 J	1.04	17.1	8.81	0.0424 (J)	0.711 J
Benzo(a)anthracene	1	0.0873	0.116	**2.22**	**34.1**	**15.8**	0.142 J	**1.23** J
Benzo(a)pyrene	1	0.0825	0.0626 J	**1.95**	**27.1**	**12.2**	0.111 J	**1.03** J
Benzo(b)fluoranthene	1	0.124	0.142	**2.78**	**35.4**	**16.1**	0.151 J	**1.32** J
Benzo(g,h,i)perylene	100	0.0594 J	0.0563 J	1.13	15.1	6.37	0.0635 (J)	0.554 J
Benzo(k)fluoranthene	3.9	0.0429 J	0.0491 J	0.86	**14.3**	**7.32**	0.0794 J	0.664 J
Chrysene	3.9	0.0863	0.104	2.12	**33.9**	**14.6**	0.153 J	1.12 J
Dibenz(a,h)anthracene	0.33	0.00792 U	0.00810 U	**0.341**	**5.55**	**2.15**	0.00682 UJ	0.117 J
Fluoranthene	100	0.170	0.214	6.20	80.0	44.3	0.341 J	2.58 J
Fluorene	100	0.0136 U	0.0139 U	0.305	9.62	5.46	0.0117 UJ	0.291 J
Indeno(1,2,3-cd)pyrene	0.5	0.0466 J	0.0496 J	**1.06**	**13.1**	**5.93**	0.0511 (J)	**0.511** J
2-Methylphenol	100	0.105 U	0.108 U	0.0925 U	0.211 U	0.520 U	0.0906 UJ	0.0922 UJ
3-Methylphenol	100	0.0226 U	0.0231 U	0.0199 U	0.159 J	0.112 U	0.0195 UJ	0.0198 UJ
4-Methylphenol	100	0.0226 U	0.0231 U	0.0199 U	0.159 J	0.112 U	0.0195 UJ	0.0198 UJ
Naphthalene	100	0.0102 U	0.0104 U	0.00895 U	10.2	5.48	0.00876 UJ	0.0619 (J)
Pentachlorophenol	6.7	0.141 U	0.145 U	0.124 U	0.284 U	0.698 U	0.122 UJ	0.124 UJ
Phenanthrene	100	0.106	0.0983	4.38	72.9	43.0	0.189 J	2.04 J
Phenol	100	0.0158 U	0.0162 U	0.0139 U	0.0903 J	0.0782 U	0.0136 UJ	0.0139 UJ
Pyrene	100	0.135	0.167	4.32	58.9	32.1	0.269 J	1.89 J
Metals (mg/Kg)	**Restricted Residential (mg/Kg)**							
Arsenic	16	3.51	3.73	7.30	4.34 NJ+	5.73 NJ+	2.87 J-	1.67 (J)
Barium	400	93.5	135	59.3	105	161	22.7 J-	39.7 J-
Beryllium	72	0.248 J	0.318 J	0.350 J	0.369 J	0.347 J	0.387 (J)	0.212 (J)
Cadmium	4.3	0.113 U	0.114 U	0.117 U	0.115 U	0.116 U	0.114 UJ-	0.118 UJ-
Chromium, Hexavalent	110	0.227	0.233 U	0.240 UNJ-	0.225 U	0.232 U	0.0114 UJ-	0.0121 UJ-
Chromium, trivalent	180	5.66	8.03	13.0	12.5	16.8	9.96 J-	16.3 J-
Copper	270	16.9	54.3	92.8	18.9 *NJ	62.9 *NJ	10.8 J-	27.2 J-
Total Cyanide	27	0.681 U	0.699 U	0.730 U	0.688 U*NJ-	0.707 U*NJ-	0.685 UNJ-	0.724 UNJ-
Lead	400	**499**	**589**	148	**816**	292	72.1 J-	102 J-
Manganese	2,000	256	315	256 BNJ-	391 *NJ	239 *NJ	122 NJ-	251 NJ-
Total Mercury	0.81	0.321 NJ+	0.303 NJ+	**1.38**	0.298	0.455	0.0355 NJ-	0.137 NJ-
Nickel	310	13.4	20.5	18.8	30.0	25.3	14.7 J-	15.4 J-
Selenium	180	1.69 U	1.71 U	1.75 U	1.73 U	1.73 U	1.71 UJ-	1.77 UJ-
Silver	180	0.338 U	0.341 U	0.350 U	0.346 U	0.347 U	0.342 UJ-	0.353 UJ-
Zinc	10,000	130 NJ+	208 NJ+	580	179 B*NJ	164 B*NJ	29.6 J-	63.6 J-
Asbestos (%)	**Site Soil Cleanup Goal (%)**							
Asbestos	1.0	**1.8**	<0.19	**1.8**	<0.17	**1.3**	**1.8**	**1.7**

Notes:
mg/Kg = milligrams per kilogram (parts per million).
ft bgs = feet below ground surface.
U = Not Detected.
J = Indicates an estimated value.
(J) = Data validation qualificaiton superseded by previous qualification.
J+ = The result is an estimated value, but the result may be biased high.
J- = The result is an estimated value, but the result may be biased low.
N = The matrix spike sample recovery in the associated QC sample is not within QC limits.
* = Duplicate not within controls limits; indeterminate bias direction.
E = The reported value is estimated because of the presence of interference; indeterminate bias direction.
B = This compound was detected in the laboratory method blank as well as the sample.
R = The sample result is rejected.
NAD = No Asbestos Detected. A percent of asbestos in soil value could not be made because no asbestos was detected.
1.76 Bolded and shaded values represent exceedances of the corresponding cleanup objectives.

FIGURES

OFFICE
NEW YORK, NY

DRAWING NUMBER
FIGURE 1



VERIFY SCALE
0 1"

APPROXIMATE SCALE
0 2000 4000 6000 FEET

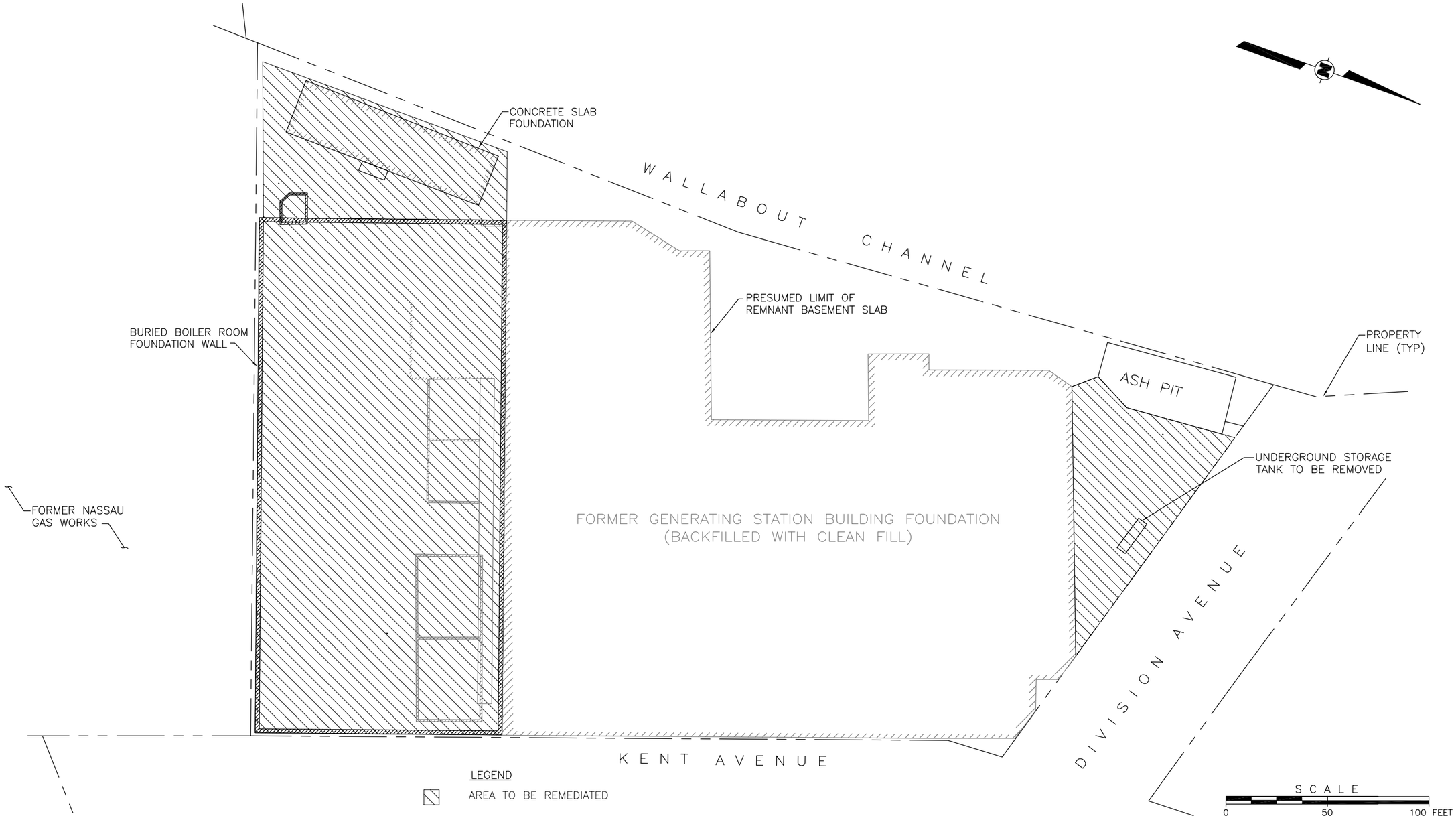
REFERENCE:
7.5 MINUTE SERIES TOPOGRAPHIC MAP OF BROOKLYN, NY
USGS GEOLOGICAL SURVEY, 1966, 1927 NORTH AMERICAN DATUM

Shaw Environmental & Infrastructure
Engineering of NY, PC

DESIGNED BY: S. SHATZ	CON EDISON LONG ISLAND CITY, NEW YORK			
DRAWN BY: S. SHATZ	SITE LOCATION MAP FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK			
CHECKED BY: C. KRAEMER				
APPROVED BY: D. CHEN	DATE: 04/25/14	SCALE: AS SHOWN	DRAWING NO. FIGURE 1	REV NO. -

File: V:\— CLIENT\Con Edison\146740 Kent Ave\Working\IRM\CADD\IRM\FER & SMP\Figure 1.dwg
Plot Date/Time: May 06, 2014 — 10:13am
Plotted By: sara.shatz

OFFICE NEW YORK, NY | DRAWING NUMBER | FIGURE 2



SOURCE: "PHASE II INVESTIGATION REPORT:KENT AVENUE SITE", LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK
CHECKED BY: C. KRAEMER	SITE PLAN
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	REV NO.
D. CHEN	04/25/14	AS SHOWN	FIGURE 2	-

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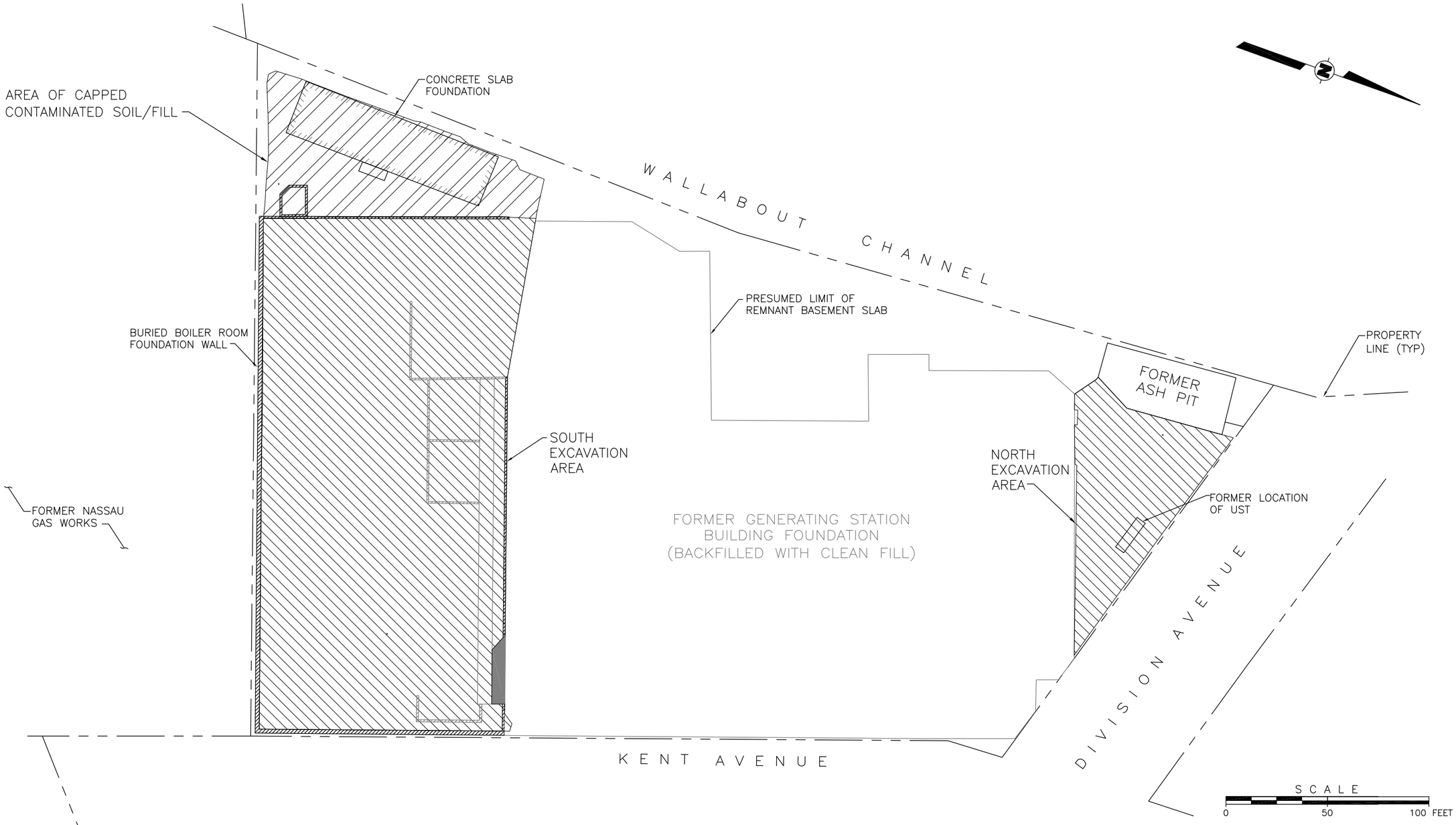
Plot Date/Time: May 06, 2014 - 10:14am
Plotted By: sara.shatz

FIGURE 3

DRAWING NUMBER

OFFICE NEW YORK, NY



LEGEND

- AREA WITH EXCAVATION OF CONTAMINATED SOIL/FILL
- AREA OF CAPPED CONTAMINATED SOIL/FILL
- AREA NOT REMEDIATED BELOW FOUR FEET

SOURCE: "PHASE II INVESTIGATION REPORT:KENT AVENUE SITE", LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON			
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK			
CHECKED BY: C. KRAEMER	AREAS OF REMEDIATION			
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK			
APPROVED BY: D. CHEN	DATE: 6/24/14	SCALE: AS SHOWN	DRAWING NO. FIGURE 3	REV NO. -

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Plot Date/Time: Jun 24, 2014 - 9:48am
Plotted By: sara.shatz

FIGURE 4

DRAWING NUMBER

OFFICE NEW YORK, NY

SW–SW–8		
12/4/2013		
11’		
BENZO(a)ANTHRACENE	1	34.1
BENZO(a)PYRENE	1	27.1
BENZO(b)FLUORANTHENE	1	35.4
BENZO(k)FLUORANTHENE	3.9	14.3
CHRYSENE	3.9	33.9
DIBENZ(a,h)ANTHRACENE	0.33	5.55
INDENO(1,2,3–cd)PYRENE	0.5	13.1
LEAD	400	816

EP–8		
12/4/2013		
11’		
BENZO(a)ANTHRACENE	1	15.8
BENZO(a)PYRENE	1	12.2
BENZO(b)FLUORANTHENE	1	16.1
BENZO(k)FLUORANTHENE	3.9	7.32
CHRYSENE	3.9	14.6
DIBENZ(a,h)ANTHRACENE	0.33	2.15
INDENO(1,2,3–cd)PYRENE	0.5	5.93
ASBESTOS	1%	1.3%

LEGEND

EP–7 SAMPLE LOCATION AND IDENTIFIER

EP–6			
11/26/2013			← DATE SAMPLING WAS PERFORMED
11’			← DEPTH OF COLLECTION
LEAD	400	589	
↑ COMPOUND	↑ RRSCO (ppm)	↑ ANALYTICAL RESULT (ppm)	← SAMPLE IDENTIFIER

EP–9		
12/6/2013		
11’		
BENZO(a)ANTHRACENE	1	1.23J
BENZO(a)PYRENE	1	1.03J
BENZO(b)FLUORANTHENE	1	1.32J
INDENO(1,2,3–cd)PYRENE	0.5	0.511J
ASBESTOS	1%	1.7%

SW–S–9		
12/6/2013		
11’		
ASBESTOS	1%	1.8%

EP–3		
11/19/2013		
13’		
BENZO(a)ANTHRACENE	1	1.10
BENZO(b)FLUORANTHENE	1	1.24
TOTAL MERCURY	0.81	1.70

SW–S–2		
11/15/2013		
11’		
BENZO(a)ANTHRACENE	1	1.36
BENZO(a)PYRENE	1	1.26
BENZO(b)FLUORANTHENE	1	1.75
INDENO(1,2,3–cd)PYRENE	0.5	0.62

EP–2		
11/15/2013		
11’		
ARSENIC	16	22.2
LEAD	400	859

SW–S		
11/14/2013		
13’		
BENZO(a)ANTHRACENE	1	1.76
BENZO(a)PYRENE	1	1.69
BENZO(b)FLUORANTHENE	1	2.15
INDENO(1,2,3–cd)PYRENE	0.5	1.01

EP–1		
11/14/2013		
13’		
LEAD	400	890

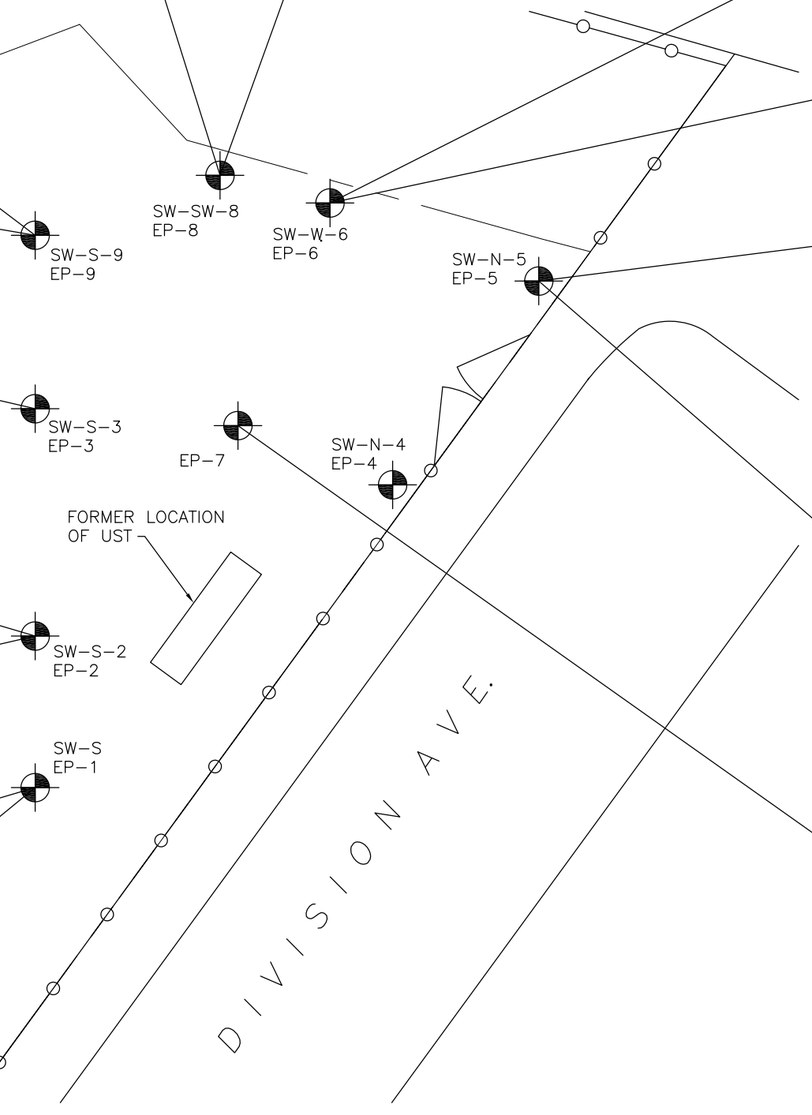
SW–W–6		
11/26/2013		
11’		
LEAD	400	499
ASBESTOS	1%	1.8%

EP–6		
11/26/2013		
11’		
LEAD	400	589

SW–N–5		
11/22/2013		
5’		
BENZO(a)ANTHRACENE	1	2.44
BENZO(a)PYRENE	1	2.50
BENZO(b)FLUORANTHENE	1	3.06
DIBENZ(a,h)ANTHRACENE	0.33	0.847
INDENO(1,2,3–cd)PYRENE	0.5	1.63
ARSENIC	16	35.4NJ–
LEAD	400	830
TOTAL MERCURY	0.81	1.55

EP–5		
11/22/2013		
5’		
BENZO(a)ANTHRACENE	1	1.15
BENZO(a)PYRENE	1	1.17
BENZO(b)FLUORANTHENE	1	1.64
INDENO(1,2,3–cd)PYRENE	0.5	0.637
ARSENIC	16	28.6NJ–
LEAD	400	986
TOTAL MERCURY	0.81	2.09

EP–7		
11/25/2013		
10’		
BENZO(a)ANTHRACENE	1	2.22
BENZO(a)PYRENE	1	1.95
BENZO(b)FLUORANTHENE	1	2.78
DIBENZ(a,h)ANTHRACENE	0.33	0.341
INDENO(1,2,3–cd)PYRENE	0.5	1.06
TOTAL MERCURY	0.81	1.38
ASBESTOS	1%	1.8%



NOTES:

1. ”EP” DESIGNATION REFERS TO FILL SAMPLES COLLECTED AT THE WATER TABLE.
2. ”SW” DESIGNATION REFERS TO FILL SAMPLES COLLECTED FROM THE SIDE WALL OF THE EXCAVATION, APPROXIMATELY ONE FOOT ABOVE THE WATER TABLE.
3. ”J” INDICATES AN ESTIMATED CONCENTRATION.
4. ”N” INDICATES THAT THE MATRIX SPIKE SAMPLE RECOVERY IN THE ASSOCIATED QC SAMPLE IS NOT WITHIN QC LIMITS.
5. ”J–” INDICATES THAT THE RESULT IS AN ESTIMATED VALUE, BUT THE RESULT MAY BE BIASED LOW.

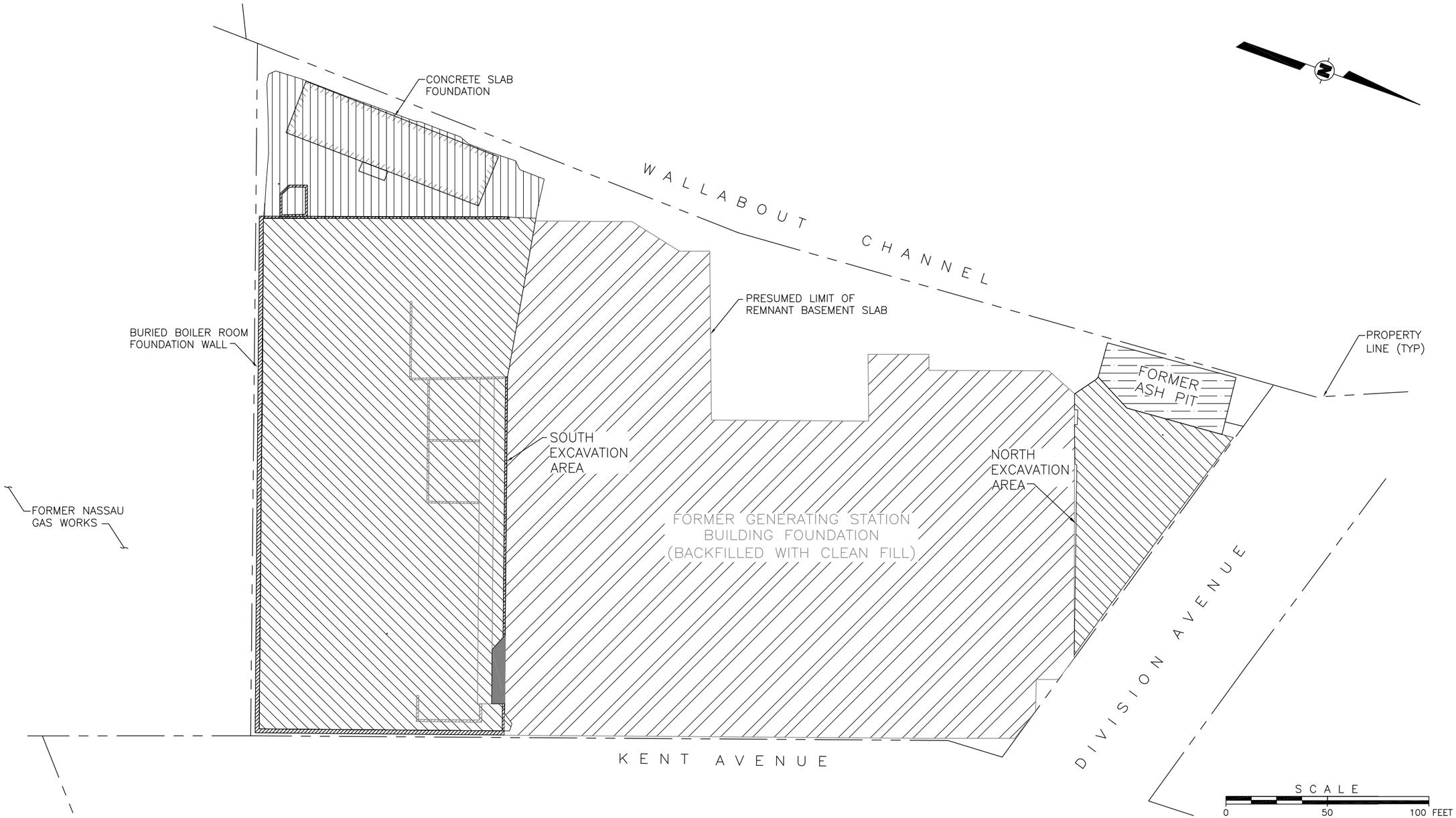
Shaw Environmental & Infrastructure
Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK
CHECKED BY: C. KRAEMER	POST-EXCAVATION DOCUMENTATION SAMPLE PLAN FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	REV NO.
D. CHEN	06/10/14	AS SHOWN	FIGURE 4	-

File: V:\– CLIENT\Con Edison\146740 Kent Ave\Working\RIM\CADD\RIM\FER & SMP\Figure 4.dwg
Plot Date/Time: Jun 24, 2014 – 9:29am
Plotted By: sara.shatz

OFFICE NEW YORK, NY | DRAWING NUMBER FIGURE 5



LEGEND

- AREA WITH CONTAMINATED SOIL BELOW DEMARCATION BARRIER
- AREA BACKFILLED WITH CLEAN FILL AND CONTAMINATED SOIL BELOW CONCRETE FLOOR SLAB
- AREA WITH NO EXCAVATION OF CONTAMINATED SOIL AND CAPPED WITH A DEMARCATION BARRIER AND 2 FEET OF STRUCTURAL FILL AND ¾" STONE
- AREA NOT REMEDIATED BELOW 4 FEET
- PREVIOUSLY REMEDIATED AREA

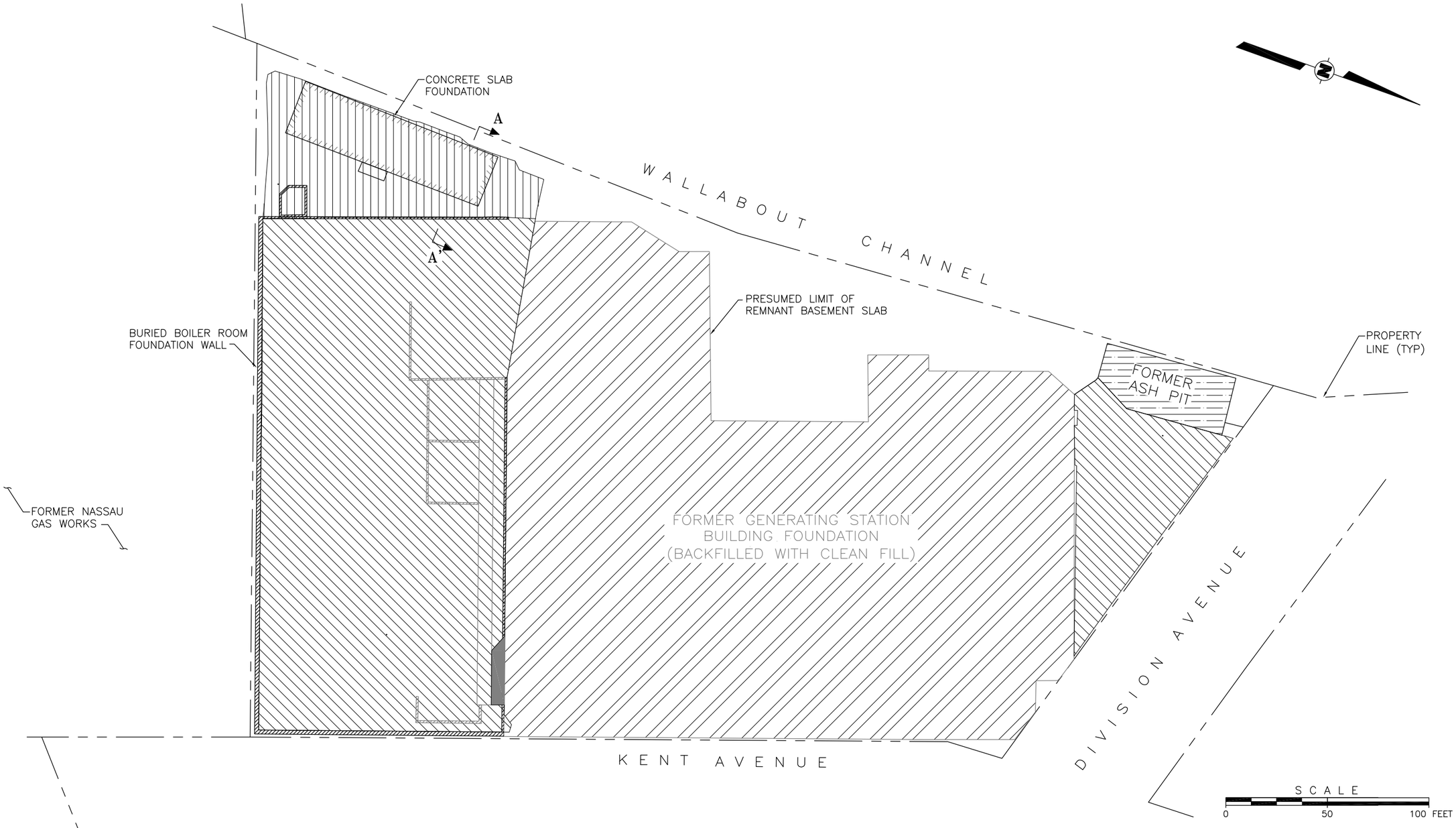
SOURCE: "PHASE II INVESTIGATION REPORT:KENT AVENUE SITE", LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON			
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK			
CHECKED BY: C. KRAEMER	CONTAMINATION REMAINING ON SITE			
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK			
APPROVED BY: D. CHEN	DATE: 6/24/14	SCALE: AS SHOWN	DRAWING NO. FIGURE 5	REV NO. -

File: V:\ - CLIENT\Con Edison\146740 Kent Ave\Working\IRM\CADD\IRM\FER & SMP\SMP Figure 5.dwg
Plot Date/Time: Jun 24, 2014 - 9:49am
Plotted By: sara.shatz

OFFICE NEW YORK, NY | DRAWING NUMBER FIGURE 6



LEGEND

- DEEP COVER SYSTEM WITH DEMARCATION BARRIER ABOVE CONCRETE SLAB BOTTOM
- DEEP COVER SYSTEM WITH NO DEMARCATION BARRIER ABOVE CONCRETE SLAB BOTTOM
- SOIL CAP (2 FOOT THICK) SYSTEM
- FOUR FOOT THICK COVER SYSTEM WITH NO DEMARCATION BARRIER
- A — CROSS SECTION MARK (SECTION SHOWN ON FIGURE 7)
- CONCRETE CAP

SOURCE: "PHASE II INVESTIGATION REPORT:KENT AVENUE SITE", LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure Engineering of NY, PC

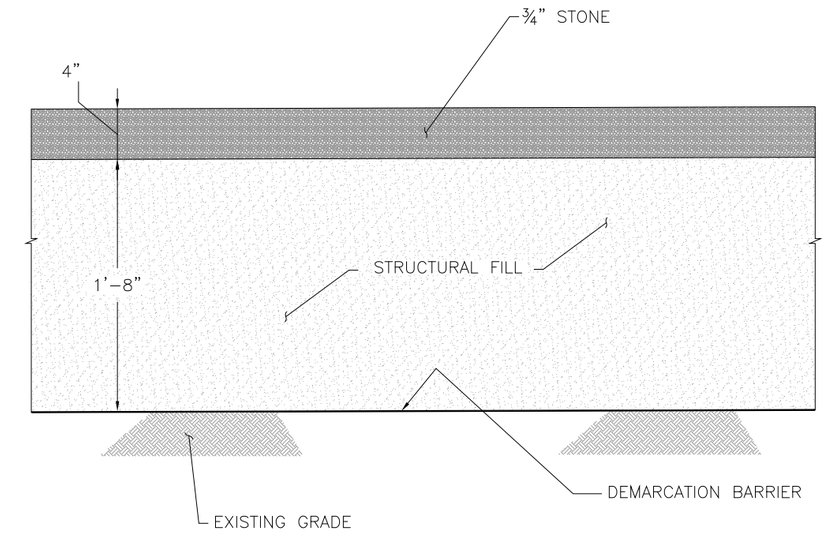
DESIGNED BY: C. KRAEMER	CON EDISON			
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK			
CHECKED BY: C. KRAEMER	SITE COVER SYSTEMS			
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK			
APPROVED BY: D. CHEN	DATE: 6/24/14	SCALE: AS SHOWN	DRAWING NO. FIGURE 6	REV NO. -

File: V:\ - CLIENT\Con Edison\146740 Kent Ave\Working\IRM\CADD\IRM\FER & SMP\SMP Figure 6.dwg
Plot Date/Time: Jun 24, 2014 - 9:53am
Plotted By: sara.shatz

FIGURE 7

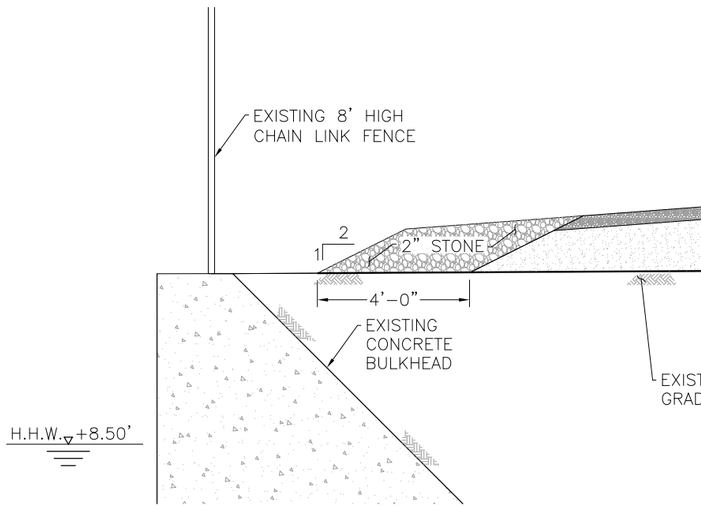
DRAWING NUMBER

OFFICE NEW YORK, NY



TYPICAL SOIL CAP DETAIL

SCALE: 1"=1'



SECTION A–A'

SCALE: ¼"=1'



SCALE: ¼" = 1'–0"

Shaw Environmental & Infrastructure Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK
CHECKED BY: C. KRAEMER	AS-BUILT CROSS SECTION OF CAPPED AREA
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK

APPROVED BY:	DATE:	SCALE:	DRAWING NO.	REV NO.
D. CHEN	6/24/14	AS SHOWN	FIGURE 7	-

File: V:\- CLIENT\Con Edison\146740 Kent Ave\Working\IRM\CADD\IRM\FER & SMP\SMP Figure 7.dwg
Plot Date/Time: Jun 24, 2014 - 9:55am
Plotted By: sara.shatz

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

State of New York Department of Health

In conjunction with

conEdison

Fact Sheet

April 2015

500 Kent Avenue
Brooklyn, New York **www.coned.com/mgp**

NYSDEC Certifies Remediation Requirements Achieved

Dear Interested Citizen:

This fact sheet provides a status update for the former Kent Avenue Generating Station.

If you have questions or would like more information, please contact:

Antonia Yuille
Con Edison
30 Flatbush Avenue
Brooklyn, NY 11217
Tel: (718) 802-5666
yuillea@coned.com

For site-related environmental questions, please contact:

Douglas MacNeal
Project Manager
NYSDEC
625 Broadway
Albany, NY 12233
Tel: 518 402-9662
douglas.macneal@dec.ny.gov

For site-related health questions, please contact:

Albert DeMarco
NYSDOH
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower, Rm 1787
Albany, NY 12237
Tel: (518) 402-7860
beei@health.ny.gov

For additional information visit:
www.dec.ny.gov/chemical/24904.html

Introduction

The New York State Department of Environmental Conservation (NYSDEC) has determined that Con Edison has achieved remediation requirements to address contamination related to the former Kent Avenue Generating Station ("Site"), located at 500 Kent Avenue, Brooklyn, NY (NYSDEC Site Code V00732). NYSDEC has issued a Release and Covenant Not to Sue to Con Edison regarding the Site.

Release and Covenant Not to Sue

The Release and Covenant Not to Sue issued by NYSDEC marks the official closure of Con Edison's remedial action at the Site, and permits the Site to be redeveloped and returned to productive use in the community. It indicates that Con Edison has performed all the necessary work on the property and no further activity is required provided that the Site Management Plan (SMP) is followed, the Declaration of Covenants and Restrictions (deed restriction) remains in place, and no evidence of additional contamination is found.

Highlights of the Final Engineering Report

The remediation at the Site included the removal and disposal of approximately 13,700 tons of soil and debris down to the water table or confining concrete slab (approximately 5 – 13 feet below grade) in accordance with NYSDEC Restricted Residential Soil Cleanup Objectives (SCOs). Clean fill materials were brought in to replace the excavated soil and debris and establish the designed grades at the Site.

In the northern section of the Site, an old underground storage tank, used to store fuel oil, was registered and removed. The surrounding soils were also excavated.

The remedy also included a two-foot soil cover in the southwest corner of the Site (an area that is not conducive to excavation) to allow for restricted residential use of the Site. The soil cap was topped off with a layer of 3/4-inch stone.

During remediation, extensive efforts were made to protect the community from potential hazards. Appropriate dust suppression techniques were employed to prevent the release of asbestos and other particulates into the surrounding areas. The NYSDOH-based Community Air Monitoring Plan (CAMP) was implemented to mitigate potential short-term exposures to workers and local residents. In addition, there was an Asbestos Air Monitoring Program. All air monitoring data was made available to the NYSDEC, NYSDOH and the public via the website, www.coned.com/mgp.

Remediation at the Site also included an Interim Remedial Measure (IRM), performed in late 2011 – early 2012. The IRM comprised of removal of sediment from a former ash pit, which was built in the late 1920s or 1930s and is located in the northwestern portion of the Site. The ash pit was then backfilled with low density cellular concrete fill and covered with structural concrete.

Documents related to this project are available at: **Brooklyn Community Board 2**, 350 Jay Street, 8th floor, Brooklyn, NY 11201, 718-596-5410, Hours M-F 9-4pm; **Williamsburg Public Library** 240 Division Ave, Brooklyn, NY 11211 Phone: 718-302-3485, Hours: M/W/Th/F – 10am-6pm, Tuesday – 1-8pm, Closed Sat/Sun and www.coned.com/mgp (Kent Avenue tab)

NYSDEC is also overseeing an environmental investigation of Manufactured Gas Plant (MGP)-related contamination being performed by National Grid at the former Nassau Gas Works Site located immediately to the south of Con Edison's Site. As part of the remedy for Con Edison's Site, National Grid collected environmental samples at such Site in May 2014. The results of the investigation show MGP-related contamination underneath the Site.

Since contaminated soil remains beneath the Site, Institutional and Engineering Controls are required to protect human health and the environment. These Engineering and Institutional Controls are part of the Site Management Plan (SMP) for the Site and include maintaining the two-foot soil cover in the southwest corner of the Site to allow for restricted residential use of the Site and the imposition of a Declaration of Covenants and Restrictions, which requires compliance with the SMP. The SMP also includes notification to the NYSDEC if any intrusive work is conducted at the Site, and a Monitoring Plan to assess the performance and effectiveness of the remedy.

Next Steps

NYSDEC issued the Release and Covenant Not to Sue (on April 7, 2015) based on review and approval of the Final Engineering Report (FER) and SMP submitted by Con Edison. The FER described the remedial activities completed, certified that remediation requirements have been achieved for the Site, and included the SMP.

With the receipt of the Release and Covenant Not to Sue, NYSDEC states that Con Edison has successfully remediated the Site and that the Site can now be used for purposes up to and including restricted residential.

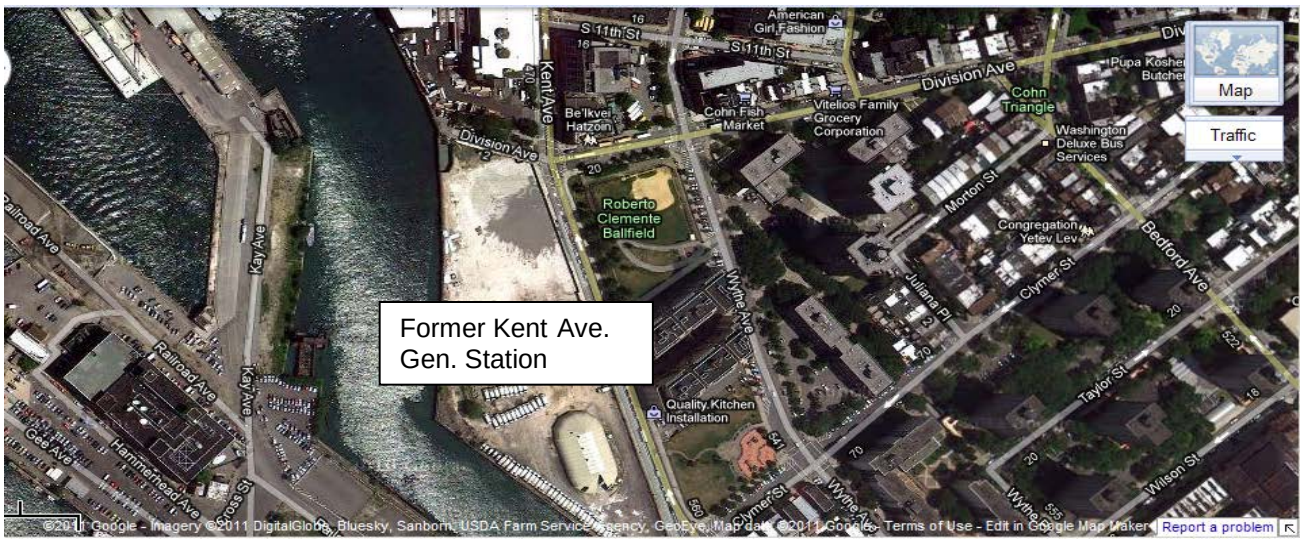
Public Involvement

A Citizen Participation Plan (CPP) was developed to provide the community with the history of the Site, investigation work performed to date, stakeholder concerns and a Site Contact List for on-going communication. The CPP also described citizen participation activities conducted during Site investigation and remediation.

All Site documents can be found at the Document Repositories listed on the bottom of the front page of this fact sheet or on-line at www.coned.com/mgp (Kent Avenue tab). Community members who have a question or concern can contact Con Edison, NYSDEC and NYSDOH; contact information is available on the first page of this fact sheet left hand side.

Site Background

The former Con Edison Kent Avenue Generating Station is located at 500 Kent Avenue, Brooklyn, New York. The Site is approximately 4 acres. Approximately 2.6 acres was the location of an electrical power generating station housed in a seven to nine story building that was demolished in 2009 (and clean backfill was placed within the footprint of the former station). The lot is vacant, but the foundation and basements of the former generating station and original powerhouse remain below street level.



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of the General Counsel
625 Broadway, 14th Floor, Albany, New York 12233-1500
P: (518) 402-9185 | F: (518) 402-9018
www.dec.ny.gov

April 7, 2015

Carolyn W. Jaffe, Esq.
Consolidated Edison Corporation
4 Irving Place
New York, New York 10003

Kenneth Kaiser, Director, Remediation
Consolidated Edison Corporation
31-01 20th Avenue, Bldg.138
Astoria, New York 11105

Assignable Release and Covenant Not to Sue

Under the terms of the Voluntary Cleanup Agreement entered into between the New York State Department of Environmental Conservation (the "Department") and Consolidated Edison Company of New York, Inc. ("Volunteer"), Index No. D2-0003-02-08 (the "Agreement"), Amended July 16, 2010.

The Department is pleased to report that the Department is satisfied that the Agreement's Technical requirements relative to the Site, located at the Kent Avenue Station site, 500 Kent Avenue in the Borough of the Brooklyn, New York Block 2023, Lot 10), and as is more particularly described in the Agreement, have been successfully implemented

The Department, therefore, hereby releases, covenants not to sue, and shall forbear from bringing any action, proceeding, or suit pursuant to the Environmental Conservation Law, the Navigation Law or the State Finance Law, and from referring to the Attorney General any claim for recovery of costs incurred by the Department, against Volunteer and Volunteer's lessees and sublessees, grantees, successors and assigns, and their respective secured creditors, for the further investigation and remediation of the Site, based upon the release or threatened release of Covered Contamination, provided that (a) timely payments of the amounts specified in Paragraph VI of the Agreement continue to be and/or have been.made to the Department, (b) appropriate use restrictions remain recorded in accordance with Paragraph X of the Agreement, and (c) Volunteer and/or its lessees, sublessees, successors, or assigns promptly commence and diligently pursue to completion the Work Plan providing for OM&M, if any. Nonetheless, the Department hereby reserves all of its respective rights concerning, and such release, covenant not to sue, and forbearance shall not extend to, natural resource damages or to any further investigation or remedial action the Department deems necessary:

- due to migration off-Site of contaminants resulting in impacts to environmental resources, to human health, or to other biota that are not inconsequential and to off-Site migration of petroleum;

- due to environmental conditions or information related to the Site which were unknown at the time this Release and Covenant not to Sue was issued and which indicate that the Contemplated Use cannot be implemented with sufficient protection of human health and the environment;
- due to Volunteer's failure to implement the Agreement to the Department's satisfaction; or
- due to fraud committed by Volunteer in entering into or implementing this Agreement.

Additionally, the Department hereby reserves all of its respective rights concerning, and any such release, covenant not to sue, and forbearance shall extend neither to Volunteer nor to any of Volunteer's lessees, sublessees, successors, or assigns that cause or allow a release or threat of release at the Site of any hazardous substance (as that term is defined at 42 USC 9601 [14]) or petroleum (as that term is defined in Navigation Law§ 172 [15]), other than Covered Contamination, or cause or allow the use of the Site to change from the Contemplated Use to one requiring a lower level of residual contamination before that use can be implemented with sufficient protection of human health and the environment, nor to any of Volunteer's lessees, sub lessees, successors, or assigns who is otherwise a party responsible under law for the remediation of the Existing Contamination independent of any obligation that party may have respecting same resulting solely from the Agreement's execution or such lessee's, sublessee's, successor's, or assign's present ownership or operation of the Site.

Notwithstanding the above, however, with respect to any claim or cause of action asserted by the Department, the one seeking the benefit of this release, covenant not to sue, and forbearance shall bear the burden of proving that the claim or cause of action, or any part thereof, is attributable solely to Covered Contamination.

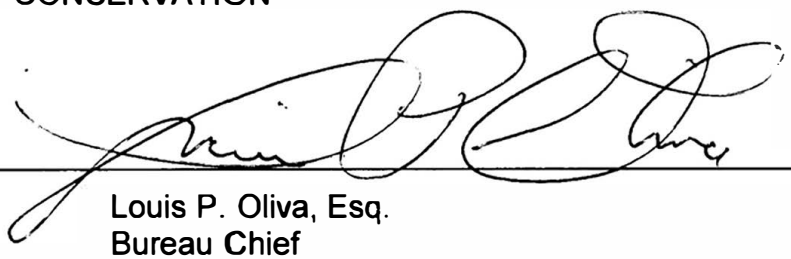
Notwithstanding any other provision in this release, covenant not to sue, and forbearance:

- if with respect to the Site there exists or may exist a claim of any kind or nature on the part of the New York State Environmental Protection and Spill Compensation Fund against any party, nothing in this letter shall be construed or deemed to preclude the State of New York from recovering such claim;
- except as provided in this letter and in Agreement, nothing contained in the Agreement or in this letter shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights (including, but not limited to, the right to recover natural resources damages) with respect to any party, including Volunteer;
- nothing contained in this letter shall prejudice any rights of the Department to take any investigatory or remedial action it deems necessary if Volunteer fails to comply with the Agreement or if contamination other than Existing Contamination is encountered at the Site;
- nothing contained in this letter shall be construed to prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers;
- nothing contained in this letter shall be construed to affect the Department's right to terminate the Agreement under the terms of the Agreement at any time during its

implementation if Volunteer fails to comply substantially with the Agreement's terms and conditions.

In conclusion, the Department is pleased to be part of this effort to return the Site to productive use of benefit to the entire community.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

By: 

Louis P. Oliva, Esq.
Bureau Chief
OGC Remediation Bureau

ec: R. Schick
G. Heitzman
G. Cross
D. MacNeal

conEdison
a conEdison, Inc. company

Carolyn W. Jaffe
Assistant General Counsel
Law Department

April 30, 2015

By Electronic Mail
Hon. Kathleen H. Burgess
Secretary to the Commission
New York State Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

Re: Case 11-M-0034 - Proceeding on Motion of the Commission to Commence a Review and Evaluation of the Treatment of the State's Regulated Utilities' Site Investigation and Remediation ("SIR") Costs

Dear Secretary Burgess:

On behalf of Consolidated Edison Company of New York, Inc. ("Con Edison"), as required by the November 28, 2012 Order Concerning Costs for Site Investigation and Remediation in the above-referenced proceeding, I submit Con Edison's Annual Report of SIR Costs for the 2014 reporting period.

Respectfully submitted,

Carolyn W. Jaffe

Attachment

cc: Jane Cicerani, Esq. (via email)

Consolidated Edison Company of New York, Inc.
4 Irving Place – Room 1850–S New York NY 10003 212 460 2178 212-677-5849 fax jaffec@coned.com

NEW YORK STATE
PUBLIC SERVICE COMMISSION

Case 11-M-0034 – Proceeding on Motion of the Commission to Commence a Review and Evaluation of the Treatment of the State's Regulated Utilities' Site Investigation and Remediation (SIR) Costs

ANNUAL REPORT CONCERNING THE STATUS OF SITE INVESTIGATION AND REMEDIATION COSTS, SCHEDULES AND REGULATORY COMPLIANCE (REPORTING PERIOD: JANUARY 1 – DECEMBER 31, 2014)

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

Prepared By:

Horace H. Davis
Barry Cohen
Kenneth J. Kaiser, PE, BCEE

Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Dated: April 30, 2015

EXECUTIVE SUMMARY

This Annual Report for the period January 1, 2014, through December 31, 2014 (the "reporting period"), is submitted by Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Company") pursuant to the New York State Public Service Commission's (the "Commission") Order, dated November 28, 2012 (the "Order"), in Case 11-M-0034 - Proceeding on Motion of the Commission to Commence a Review and Evaluation of the Treatment of the State's Regulated Utilities' Site Investigation and Remediation (SIR) Costs. As required by the Order, this Annual Report summarizes the status and associated costs of Con Edison's efforts to comply with its obligations under applicable federal and state laws and regulations for the investigation and remediation of contamination caused by releases of hazardous substances, hazardous wastes, and/or petroleum from Con Edison's and its predecessor companies' facilities and operations (the "SIR Program"). In preparing this Annual Report, the Company has followed the template that was prepared by the Staff of the Department of Public Service and filed with the Commission on February 20, 2013.

1. Overview of SIR Program

As discussed in this Annual Report, the sites that Con Edison is presently obligated to investigate and, if necessary, remediate under federal and state laws and regulations and the consent decrees, consent orders and cleanup agreements issued pursuant to them encompass the following types of sites, each of which is discussed fully in this Annual Report: (1) Manufactured Gas Plant and Manufactured Gas Storage Holder facilities (collectively "MGP Sites") subject to the investigation and cleanup requirements of the Company's agreements with the New York State Department of Environmental Conservation ("DEC"); (2) Superfund Sites; (3) Oil and dielectric fluid spill sites subject to the investigation and cleanup requirements of Appendix B of a Consent Order with the DEC ("Appendix B Sites"); (4) Areas of the Company's Astoria Site that are subject to the Resource Conservation and Recovery Act ("RCRA") corrective action requirements imposed under the DEC's hazardous waste management facility operating permit for the Company's PCB/Hazardous Waste Storage Facility at that site; (5) Underground Storage Tank ("UST") Sites; and (6) other SIR sites with known or potential contamination that do not fall under the aforementioned five programs.

Con Edison has made significant progress investigating and implementing remediation programs for these sites. As of December 31, 2014, the following site investigation/remediation activities have been completed for them:

- MGP Sites: Con Edison's 51 former MGP Sites (including the MGP component of the Astoria Site) are located throughout Manhattan, the Bronx, Westchester County and western Queens, New York. Many of these sites are now owned by parties other than Con Edison and have been subdivided or otherwise redeveloped by their new owners for other uses, including: schools, hospitals, residential and commercial developments, and public parks. As a result, Con Edison's 51 former MGP Sites currently comprise more than 150 different properties. The DEC has issued No Further Action ("NFA") determinations for 21 of these sites based on the results of DEC-approved investigations that have been completed for them or DEC-approved remediation programs that have been implemented for them. For two sites, all investigation has been completed, remediation has been implemented, and documents have been submitted to the DEC to

support NFA determinations. For two additional sites, all final documentation in support of an NFA determination is expected to be submitted to the DEC during the upcoming reporting period. The investigation of the remaining 26 former MGP Sites (which encompass 101 separate properties) will take several more years to complete. Through the end of the reporting period, a site characterization study ("SCS") or remedial investigation ("RI") work plan, covering all or portions of these remaining 26 MGP Sites has been submitted to the DEC for approval. Remediation work that is deemed necessary by the DEC and the New York State Department of Health ("DOH") based on results of investigations will take longer to complete, and at some sites may not be completed until after the buildings and structures present on the sites are demolished. The status of the required SIR activities for the 101 properties encompassing the remaining 26 MGP Sites is as follows: (1) remediation is currently required at 12 properties; (2) additional investigations are ongoing at 72 properties; and (3) investigations are pending negotiation of access agreements with current property owners at 17 of these properties.

- Superfund Sites: Of the five Superfund Sites where Con Edison is not part of a group of potentially responsible parties ("PRPs"), the DEC has issued an NFA determination for one site, remediation has been completed and an NFA is expected for one site, the DEC has issued a Decision Document for one site, and remediation has been completed and post-remediation operation, maintenance and monitoring ("OM&M") activities are being implemented for the two other such sites. With respect to Superfund Sites where Con Edison was or presently is part of a group of PRPs, fifteen have been closed out and are inactive with no additional costs anticipated, and eight remain active. During the reporting period, Con Edison was dismissed as a defendant in a lawsuit relating to one of these PRP sites.

- Appendix B Sites: As of the date of this report, the DEC has issued NFA determinations for 38 of Con Edison's 85 Appendix B Sites (not including the Astoria Site which is addressed separately), and for six additional Appendix B Sites that were transferred to other parties. This includes NFA determinations issued by the DEC in 2014 for Site 67, and in March 2015 for Site 20. There are a total of 42 active Appendix B Sites (including Sites 20, 38 and 67) identified in this report. Four of these active sites (Sites 1, 4, 26, and 79) are included in the listing for Combined Site 79, because SIR costs for them are tracked as part of the Combined Site 79. Initial investigation has been started (3 sites) or completed (16 sites) at 19 of these 42 active sites. For the remaining 23 sites, investigation work plans have been submitted to the DEC and are either awaiting review by the DEC or are awaiting revisions by Con Edison.

- Astoria Site: Investigation of the Astoria Site has been performed in phases. A supplemental MGP investigation was undertaken for the site in 2013. The DEC issued one NFA determination during the reporting period (for a total of eight) with respect to the 49 identified solid waste management units ("SWMUs") and areas of concern ("AOCs") at the Astoria Site, including the site's former MGP holders. In addition, as of the end of the reporting period, an NFA determination was pending for one additional AOC, remediation was completed for one site SWMU (during the reporting period), and remedial planning was underway at another site SWMU.

- UST Sites: As of the date of this report, the DEC has issued NFA determinations for 39 of Con Edison's 44 UST Sites, including an NFA determination for three sites during the reporting period and one received in April 2015. One new site has been added as of the date of this report. Of the remaining five UST Sites, groundwater monitoring is the only remaining required SIR activity at one site and additional investigation and, if required by the DEC, remediation is required at three sites. The investigation and, if required by the DEC, remediation for the fifth site is being managed under the MGP VCA for that site. In addition to these five UST Sites, the report lists five sites that have received NFA determinations because SIR costs were incurred for them during the reporting period and/or are anticipated during the upcoming reporting period.

- Other SIR Program Sites: There are sixteen active other SIR Program sites listed in this report. Ten sites were added to the report this year, including nine former electric distribution substation sites and one Public Utility Regulating Station ("PURS") site. An environmental site assessment and initial investigation has been completed at each of these ten sites. Further site investigations are planned for five of these sites, remedial planning and remediation decisions are under consideration at four sites, and no further action is currently anticipated at one site. For the other six sites: an NFA determination was received from the DEC at one site during a previous reporting period and at a second site in April 2015, and an NFA determination is pending at two other sites. Only OM&M remains for one site, and additional investigation is planned for the sixth site.

2. Summary of SIR Program Costs

i. Past SIR Costs

As of December 31, 2014, Con Edison has incurred SIR costs as follows:

MGP Sites	$389,471,682
Superfund Sites	$57,372,411
Appendix B Sites	$18,894,332
Astoria Site	$61,120,863
UST Sites	$19,995,086
Other Sites	$13,587,524
Total	$560,441,898

ii. SIR Costs During the Reporting Period

For the reporting period, the Company incurred total SIR Program costs as follows:

MGP Sites	$9,282,529
Superfund Sites	$1,800,638
Appendix B Sites	$1,409,094
Astoria Site	$802,815
UST Sites	$736,498
Other Sites	$4,146,016
Total	$18,177,590

Con Edison currently has a total of 108 active non-PRP sites. Nineteen of these sites incurred SIR costs during the reporting period that varied from the projected SIR costs for that period by more than $100,000 or 10%, whichever is greater. Of these 19 sites, fifteen had variations below the projections and four had variations above the projections. As required, Con Edison has provided explanations for these variations in Section 5.5. The reasons for these variations fall into the following general categories:

- Delays due to coordination with property owners, including access issues (9 sites)
- Work scope changes due to unanticipated field conditions or changes in agency or design requirements (2 sites)
- Delays due to the timing of regulatory agency approvals (4 sites)
- Issues related to the timing of payment or receipt of invoices or reimbursements or accrual corrections (3 sites)
- Litigation more extensive than anticipated (1 site)

iii. Projected SIR Costs for the Upcoming Year

As explained in the report, the Company's projected SIR costs are based on forecasted activities and spending levels for its SIR Program. These projections are reviewed on a quarterly basis so that they reflect current information as to the then anticipated timing, scope, and associated costs of the required investigation and remediation activities for these sites. These projected SIR costs are subject to change based on, among other things, changes in the extent of known contamination, changes in remedial design and construction-related contingencies, changes in regulatory requirements and regulatory approval schedules, changes in planned activities, local government permitting requirements, gaining access to site properties or cooperation from property owners and other third-parties, unanticipated field conditions, and/or force majeure events.

Based upon current projections, the Company estimates that it will incur costs of approximately $22,019,500 in connection with its SIR Program during the upcoming reporting period. The breakdown of these projected costs is provided below.

MGP Sites	$13,207,500
Superfund Sites	$2,514,000
Appendix B Sites	$2,483,000
Astoria Site	$2,668,000
UST Sites	$560,000
Other Sites	$587,000
Total	$22,019,500

iv. Impacts on Ratepayers

SIR costs currently included in rates for Con Edison are:

Electric:	$43,075,000
Gas:	$8,149,000
Steam:	$2,295,000

Projected bill impacts by service based on SIR costs allowed in Con Edison's approved electric, gas and steam rate plans (Cases 13-E-0030, 13-G-0031, and 13-S-0032) for the Rate Year ending December 31, 2015 are as follows:

Electric:	0.40%
Gas:	0.38%
Steam:	0.30%

Con Edison follows the management/mitigation practices set forth in the Inventory of Best Practices for Utility SIR Programs adopted by the State's electric and gas utilities pursuant to the Commission's Order issued November 28, 2012 in Case 11-M-0034. A copy of the Inventory of Best Practices for Utility SIR Programs dated March 28, 2013, is provided in Exhibit A to this report.

3. Adherence to Established Remediation Schedules

Con Edison adheres to all formal schedule requirements imposed by the DEC and other regulatory agencies for the Company's SIR sites to the fullest extent possible. When site conditions or other factors necessitate a change in schedule, that information is shared promptly with the Company's regulators. During the reporting period, changes in schedule became necessary for seven sites. Sites with schedule changes are identified in Table 2 of this report. The reasons for these changes are provided in Section 5.3 of this report, as part of the site-specific

information presented for each active Con Edison SIR Program site. Additional information concerning the projected work schedules Con Edison has submitted to the DEC for approval is presented in Section 3.1 of this report.

4. Compliance with Regulatory Orders and Agreements

During the reporting period, Con Edison was in compliance with all consent decrees, consent orders and cleanup agreements that it has entered into with the United States Environmental Protection Agency ("EPA"), the DEC and other government agencies for its SIR Program sites.

5. Site Specific Reports

Site specific reports have been prepared for all sites in Con Edison's SIR Program for which recovery of costs in rates is sought for the reporting period or projected for the upcoming year. Information on past costs for sites where no further action is required and no future costs are currently anticipated is provided in Table 1 for MGP Sites and Superfund Sites by site, and for UST Sites, Appendix B Sites and Other Sites by program.

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Attachments:

Table 1

Table 2

Exhibit A

SITE INVESTIGATION AND REMEDIATION (SIR) PROGRAM OVERVIEW

1.1. Historical Background

- Provide a general discussion of the SIR program and requirements.

Response to 1.1:

SIR Program Overview

Con Edison has a comprehensive on-going program for managing its site investigation and remediation ("SIR") sites and verifying that the required remedial response measures (investigations followed by any required necessary remedial action) are properly performed for sites that have been contaminated by releases of petroleum products, hazardous substances or hazardous wastes from the Company's and/or its predecessor companies' facilities or operations. This program encompasses the following types of sites:

- MGP Sites. Pursuant to the federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA" or "Superfund law") and to comparable provisions of the New York Environmental Conservation Law ("ECL"), Con Edison is responsible for the investigation and remediation of environmental contamination at its former MGP Sites. The DEC has required New York State's investor-owned utilities to investigate and, when necessary to protect human health and the environment, to undertake remedial response actions for contamination stemming from operations at the sites of their former MGPs. Con Edison and its predecessor companies formerly operated manufactured gas plants and maintained storage holders for manufactured gas at 51 MGP Sites (including the MGP component of the Astoria Site) located throughout Manhattan, the Bronx, Westchester County and western Queens, New York. Many of these sites are now owned by parties other than Con Edison and have been subdivided or otherwise redeveloped by their new owners for other uses, including schools, hospitals, residential and commercial developments, and public parks. As a result, these 51 former MGP Sites currently comprise more than 150 different properties.

  On August 15, 2002, Con Edison entered into Voluntary Cleanup Agreement Index #D2-0003-02-08 (the "MGP Agreement") with the DEC to conduct investigations and, if necessary, remediation, at 45 of its 51 MGP Sites. Of the six remaining Company MGP Sites, five are covered by either individual cleanup agreements with the DEC (the Tarrytown and White Plains Gas Works Sites), DEC administrative consent orders (the East 14th Street Gas Works and Farrington Street Holder Station Sites), or the RCRA corrective action requirements of DEC's hazardous waste management facility operating permit for the Company's PCB/Hazardous Waste Storage Facility at the Astoria Site. The sixth site, the Hastings-on-Hudson Gas Works Site, was identified by the Company after it had entered into the 2002 MGP Agreement. The Company and DEC modified the MGP Agreement in September 2007 to add this site to the initial list of 45 MGP Sites that Con Edison is obligated to investigate and, if deemed necessary by the DEC and/or the DOH, to remediate under the MGP Agreement.

Of Con Edison's 51 former MGP Sites, the DEC has issued NFA determinations for 21 of the sites and for two sites (Pelham Works and Saw Mill River Station), documents have been submitted to the DEC to support NFA determinations. For additional two sites (Central Avenue Works and Mount Vernon Works), all final documentation in support of an NFA determination is expected to be submitted to the DEC during the upcoming reporting period. The investigation of the remaining 26 former MGP Sites (which encompass 101 separate properties) will take several years to complete. Through the end of the reporting period, a site characterization study ("SCS") or remedial investigation ("RI") work plan, covering all or portions of these remaining MGP Sites has been submitted to the DEC. Remediation work that is deemed necessary by the DEC and the DOH based on results of investigations will take longer to complete, and at some sites may not be completed until after the buildings and structures present on the sites are demolished. The status of the required SIR activities for the 101 properties encompassing the remaining 26 MGP Sites is as follows: (1) remediation is currently required at 12 properties; (2) additional investigations are ongoing at 72 properties; and (3) investigations are pending negotiation of access agreements with current property owners at 17 of these properties.

- Superfund Sites. Con Edison is responsible for the investigation and remediation of environmental conditions at its Superfund Sites. Superfund sites include:

  - Third party-owned sites to which Con Edison shipped hazardous substances or waste for treatment, storage or disposal and has been designated a potentially responsible party ("PRP") for the investigation and remediation of site contamination by EPA, the DEC or another government environmental agency pursuant to CERCLA or to comparable state statutes, including statutes imposing liability for the costs of investigating and cleaning up oil spills;

  - Sites formerly owned by Con Edison and for which the current site owners assert claims against Con Edison for investigation and remediation costs pursuant to CERCLA or comparable state statutes; and

  - Sites (whether or not owned by Con Edison) at which Con Edison is required to conduct cleanup work because of releases of oil, dielectric fluid, PCBs, or other hazardous substances or wastes from its or its predecessor companies' equipment, facilities or operations.

- Of the five Superfund Sites for which Con Edison is not part of a PRP Group, the DEC has issued an NFA determination for one site (Arthur Kill Station); remediation has been completed and an NFA is expected for one site (Echo Avenue); the DEC has issued a Decision Document for one site (Flushing Creek); and required long-term OM&M activities are being implemented for the two remaining sites (Curcio Scrap Metal and Maspeth Substation). With respect to Superfund Sites for which Con Edison was or is a member of a PRP group, fifteen have been closed out and are inactive with no additional SIR costs anticipated, and eight remain active. During the reporting period, Con Edison was dismissed as a defendant in a lawsuit relating to one of these PRP sites (World Trade Center) and this site will be moved to the inactive list in the next SIR Report.

- Appendix B Sites. These are petroleum product (*e.g.*, fuel oil, transformer oil, cable oil) spill sites identified in Appendix B of the November 1994 Consent Order between Con Edison and the DEC, as modified by the December 2006 Consolidated Consent Order between Con Edison and DEC. Con Edison is responsible for the cleanup of these sites under Article 12 of the New York Navigation Law and Article 17 of the ECL.

  As of the date of this report, the DEC has issued NFA determinations for 38 of Con Edison's 85 Appendix B Sites (not including the Astoria Site which is addressed separately), and for six additional Appendix B Sites that were transferred to other parties. This includes NFA determinations issued by the DEC in 2014 for Site 67 and in March 2015 for Site 20. Except for Sites 67 and 20, the sites for which NFAs have been issued are not listed separately in this report. Sites 67 and 20 are included separately in this report because costs were incurred for these sites during the reporting period. In addition, Con Edison has requested that the DEC transfer Site 38 to another party. The 42 active Appendix B Sites (including Sites 20, 38 and 67) are identified in this report. Four of these active sites (Sites 1, 4, 26, and 79) are included in the listing for Combined Site 79, because SIR costs for them are tracked as part of the Combined Site 79. Initial investigation has been started (3 sites) or completed (16 sites) at 19 of these 42 active sites. For the remaining 23 sites, investigation work plans have been submitted to the DEC and are either awaiting review by the DEC or are awaiting revisions by Con Edison.

- The Astoria Site. This is a RCRA corrective action site for which Con Edison must investigate and, if deemed necessary by the DEC, remediate several solid waste management units (SWMUs") and areas of concern ("AOCs") in accordance with the requirements of the hazardous waste management facility operating permit that was initially issued by the DEC in May 1994 and subsequently renewed by the DEC in March 2001 and July 2008 for the Company's PCB/Hazardous Waste Storage Facility located at the site. Although the Astoria Site was also the location of a former MGP and is an Appendix B Site as well, it is categorized separately because the RCRA hazardous waste permit is the controlling document under which the necessary SIR activities for the entire Astoria Site are being addressed.

  Investigation of the Astoria Site has been performed in phases, including a supplemental MGP investigation that was performed in 2013. As of December 31, 2014, the DEC has issued NFA determinations for eight of the total of 49 SWMUs and AOCs that have been identified at the Astoria Site, including the site's former manufactured gas storage holders. Of the eight NFA determinations issued by the DEC, one was received during the reporting period. In addition, as of the end of the reporting period, an NFA determination was pending at one additional AOC, remediation was completed at one SWMU, and remedial planning was underway at another SWMU.

- UST Sites. Con Edison's USTs are regulated under both EPA and DEC regulations. EPA's regulations at 40 CFR 280 ["Technical Standards and Corrective Action Requirements For Owners and Operators of Underground Storage Tanks (UST)"] require UST owners and operators to investigate known or suspected releases from their UST systems and, if necessary, to remediate the contamination caused by those releases under the direction of the implementing state agency (DEC in New York). New York State

regulations also require UST owners and operators to report known or suspected releases from their UST systems and to address them to the DEC's satisfaction.

As of the date of this report, the DEC has issued NFA determinations for 39 of Con Edison's 44 UST Sites, including NFA determinations for three sites during the reporting period (Amoco Fuel Oil Terminal, College Point Service Center, and Van Nest Complex Service Center) and one site in April 2015 (West 28th Street Service Center). One new site has been added as of the date of this report (357 Tuckahoe Road, Yonkers). Of the remaining five UST Sites, groundwater monitoring is the only remaining required SIR activity at one site and additional investigation and, if required by the DEC, remediation is required at three sites. The investigation and, if required by the DEC, remediation for the fifth site is being managed under the MGP VCA for that site. In addition to these five UST Sites, the report lists five sites that have received NFA determinations because SIR costs were incurred for them during the reporting period and/or anticipated for them during the upcoming reporting period.

- Other SIR Sites. These are sites with known or suspected historical contamination and non-Appendix B Sites at which dielectric fluid spills require long-term oil recovery, groundwater monitoring and reporting. In this context, dielectric fluid refers to oils used for cooling in Con Edison's underground pipe-type electric transmission feeders.

  There are sixteen active other SIR sites listed in this report. Of these sixteen sites, ten were added in this current report. Nine of the ten are former electric distribution substations. Past costs and any costs incurred during the reporting period for these nine sites are shown in Table 1. One new site involving a Public Utility Regulating Station ("PURS"), which cools the dielectric fluid used in the Company's pipe-type electric transmission feeder cables, has also been added. An environmental site assessment and initial investigation have been performed at each of these ten sites. Further site investigations are planned for five of these sites, remedial planning and remediation decisions are under consideration at four sites, and no further action is currently anticipated at one site.

  For the other six sites: an NFA determination was received from the DEC at one site during a previous reporting period (74th Street Station Kerosene Spill) and at a second site in April 2015 (Kent Avenue), and an NFA determination is pending at two other sites (59th Street Station Fuel Oil Spill and Van Nest Parking Lot). Only OM&M remains for one site (Dielectric Spill Sites), and additional investigation is planned for the sixth site (Richmond Terrace).

1.2. Responsibilities of the Company

- Briefly describe the company's understanding of its role and responsibilities in planning and implementing the SIR program required by New York State Department of Environmental Conservation (NYSDEC).

Response to 1.2:

Focusing primarily on Con Edison's MGP program, and more generally on its other SIR programs, the following is an overview of the Company's SIR program process, from the start of investigation to the implementation of remedies approved by the appropriate regulatory agencies. Also discussed are the regulatory roles played by the DEC and the DOH, and others in the SIR process, and by the Company, its consultants and contractors, local community members and other interested parties.

i. Investigation of MGP Sites

The process to investigate the Company's MGP Sites and the other sites covered by its SIR Program is governed by the various cleanup agreements or consent orders that Con Edison has entered into with the DEC or EPA, as applicable, as well as by the laws, regulations and DEC or EPA guidance documents governing the process. Depending on the conditions encountered at a site, the process may include multiple rounds of investigation. Each step of the process is subject to the review and approval of the DEC and DOH, or EPA, as applicable. In addition, Con Edison has prepared a DEC-approved Citizen Participation Plan ("CPP") for its MGP program. This plan sets out the procedures and protocols that Con Edison must follow to communicate to interested citizens and elected officials the investigation and remediation activities that the Company is required to undertake for its MGP Sites under its agreements and consent orders with the DEC. Recently, the DEC has required the Company to prepare site-specific CPPs for some of its MGP Sites instead of following its generic CPP.

The first step of the investigation process under the 2002 MGP Agreement is to conduct a DEC-approved Site Characterization Study ("SCS"), which is a subsurface investigation to evaluate whether there is evidence of historical MGP-related contamination in the soil, soil vapor, or groundwater at a site. As required by the DEC and DOH, a draft SCS work plan must include site background information, including the known/suspected locations of former gas production and storage structures, prior investigation findings, if any, and the proposed work scope (*e.g.*, soil boring and test pit locations, soil vapor sampling, groundwater monitoring well installation, air monitoring, and laboratory analytical requirements). Based upon the historical information that the Company has compiled for the manufactured gas production and/or storage operations formerly conducted at an MGP Site and the input and guidance provided by the Company's Environment, Health and Safety Department ("EH&S") site project manager, Con Edison's environmental consultant prepares a draft SCS work plan for the Company's review. The Company's EH&S site project managers actively communicate with the DEC and DOH site project managers and the Company's consultants during the preparation of draft SCS work plans to comply with the DEC's and the DOH's requirements and the Company's expectations. After any revisions based on the Company's EH&S site project manager's review are made, the draft SCS work plan is submitted to the DEC and DOH for their review and approval.

For sites no longer owned by Con Edison, the Company must obtain the property owner's consent in the form of an access agreement before the SCS fieldwork can begin. Many of the Company's MGP Sites are now owned by parties other than Con Edison and have been redeveloped by their new owners for other uses, including schools, residential and commercial developments, public parks, and hospitals. Of the Company's 51 MGP Sites, only 16 are still owned in whole or in part by the Company. In addition, most of the sites have been subdivided into separate properties, with different owners. As a result there are now more than 150 different properties located within the 51 sites. This adds to the complexity of the remediation process as access to conduct investigations and remediation at a site involves coordination of the work and negotiation of agreements with several different property owners at some of the sites. In addition, some properties within the same site may become separate projects, with their own separate remedies due to the owners' individual plans to redevelop their properties. The negotiation of access agreements can be a challenging and time-consuming process. Access agreements typically include provisions specifically developed to minimize SCS field work interference with on-going site operations.

Only after the draft work plan has been approved by the DEC and DOH, and access to the site has been obtained, may the SCS field work begin. A fact sheet is typically prepared for distribution to appropriate stakeholders prior to the start of SCS fieldwork.

Upon the completion of SCS fieldwork, a report is submitted to the DEC and DOH for regulatory review and approval. Depending on the findings of the SCS, these agencies will determine which of the following three steps is the most appropriate for a site:

- No further action is required because there is no evidence of MGP-related impacts warranting further investigation or remediation;
- Additional investigation is required to better characterize and delineate the nature and extent of the MGP-related impacts present on and around the site; or
- Remediation is necessary to address the MGP-related impacts that have been sufficiently characterized and delineated, and the Company must proceed with the development/evaluation of remedial alternatives.

In the event that additional investigation is required, a Remedial Investigation ("RI") is undertaken. More than one round of on-site investigation and, in some cases, off-site investigation may be necessary to define the contamination with a sufficient degree of certainty to support the assessment of potential remedial alternatives and the development of an Alternatives Analysis Report ("AAR") for review and approval by DEC and DOH. The RI process is similar to that for the SCS, with community outreach and, when the work is done at a third party-owned property, access agreement negotiations. RI work plans must be approved by the DEC and DOH. After the RI fieldwork and sample analyses are completed, a draft RI report is submitted to the DEC and DOH for their review and approval. Based on the results of the RI, these agencies will make one of the three determinations specified above in the discussion of the SCS process.

ii. Remediation of MGP Sites

a. DEC and DOH Make Remedial Determinations

The DEC and DOH require remediation when they determine that the contamination present at a site presents a current or potential future significant threat of harm to human health and/or the environment or is necessary to meet statutory or regulatory goals and objectives. This determination is made on the basis of the results of the SCS and/or RI for a site. With regard to potential human health impacts, the DOH will consider whether potential complete exposure pathways have been identified at the site during the investigation work. While the DEC and DOH do not consider economic impacts as one of the two threshold criteria in determining whether and to what extent remediation is required, the DEC's regulations and guidance documents permit consideration of costs in evaluating equally protective remedial alternatives. Under those regulations and guidance documents, "cost effectiveness" is a secondary permissible criterion for such evaluations and can be considered by the DEC when it evaluates and determines whether to select one of two or more remedial alternatives that are protective of public health and the environment and that are consistent with applicable and relevant laws, rules, regulations, and guidance. For example, under DEC regulations and guidance documents, a goal of remediation is to restore sites to their pre-contamination condition to the extent technically feasible. If this goal cannot be met, the remediation selected must, at a minimum, adequately protect human health and the environment, and include technically feasible remediation measures for "source materials" such as free coal tar, coal tar-contaminated soil, and purifier waste. If two or more competing remedial alternatives are capable of meeting these goals, but one alternative is projected to cost less to implement, the DEC can select the least costly alternative.

b. Remedial Planning Process

Under the 2002 MGP Agreement and other MGP agreements, once the DEC and DOH determine that remediation is required, Con Edison is required to identify and evaluate potential applicable remedial alternatives for approval by the DEC and DOH. In the case of federal Superfund Sites, Con Edison must identify and evaluate potential applicable remedial alternatives for EPA's approval. While we will describe the process Con Edison follows in its development of proposed remedial alternatives for MGP Sites, the process is similar for other types of SIR program sites.

First, Con Edison prepares an AAR for DEC and DOH consideration and approval. In that report, Con Edison identifies potential remedial alternatives, screens them to determine which alternatives appear technically feasible to implement, and then assesses the feasible alternatives using the evaluation criteria discussed below. The Company then meets with the DEC and DOH to discuss their views on the general parameters of what they believe would comprise an approvable remediation program for a site, given the site's use and the extent of the contamination present. For sites no longer owned by Con Edison, meetings are also scheduled with the site owners to identify any changes in site use being considered by them. These meetings are essential to understanding the perspective of the regulatory agencies and property owners, so that the Company does not waste time and resources pursuing "dead ends."

Pursuant to the DEC's requirements, the AAR must identify potential remedial alternatives and evaluate them against the following criteria to determine which alternative is the most appropriate based on all the relevant factors:

Threshold Criteria

- Overall protectiveness of public health and the environment; and
- Compliance with standards and criteria, and consideration of guidance.

Primary Balancing Criteria

- Long-term effectiveness and performance;
- Reduction in toxicity, mobility, or volume of contamination;
- Short-term impacts and effectiveness;
- Implementability; and
- Cost-effectiveness.

Modifying Criteria

- State acceptance; and
- Community acceptance.

If the DEC and DOH do not find the Company's AAR to be approvable, these agencies will inform the Company of their reasons for disapproval and specify the revisions that the Company must incorporate into the draft AAR. For example, the DEC or DOH may prefer a different alternative over the one recommended by the Company. Once the DEC and DOH deem the AAR to be approvable, a notice will be published in the State's Environmental Notice Bulletin for a 30-day public comment period (45 days for sites in the Brownfield Cleanup Program). A public meeting is held at which the DEC, DOH and Con Edison present the recommended remedial alternative and receive comments from the public. Con Edison will distribute a Fact Sheet to stakeholders announcing the availability of the AAR and the public meeting.

While Con Edison may suggest remedial alternatives, Con Edison does not make the final decision regarding which remedial alternative must actually be implemented. That decision is made by the DEC (or EPA for federal Superfund sites). After the close of the public comment period, the DEC will formally approve the AAR. Depending on the public comments received, the AAR may have to be revised to reflect public input.

The selected remedial alternative is sometimes implemented by third party property owners instead of the Company. For properties undergoing redevelopment, the Company and the property owner/developer may enter into a cooperation agreement to coordinate remediation and site redevelopment and to share costs. By cooperating and implementing required remediation work in conjunction with a property owner's construction project, Con Edison can achieve cost savings by sharing with the property owner the cost of activities common to both remediation and construction work. This includes big ticket items such as sheeting and shoring, soil excavation, dewatering, soil transportation and disposal, and back-filling. In the case of federal Superfund sites for which the Company is a member of a PRP Group, the PRP Group may implement the selected remedy.

The decision documents that the DEC or EPA issue when they select and approve a remedial alternative for a site generally contain only summary information about the required remedial alternative. Depending on the complexity of the remedy and the site, the DEC will require Con Edison to prepare either a Remedial Action Work Plan ("RAWP") or detailed remedial design for DEC and DOH approval. For more complex remedies/sites, the DEC generally requires a remedial design package containing detailed drawings, plans, and specifications to implement the selected remedial alternative. In some cases, additional studies may be required. For example, if the DEC requires groundwater treatment to meet a specified cleanup level, Con Edison must design the treatment system needed to meet that objective. The detailed drawings, plans, and specifications for construction of the selected remedial alternative are subject to DEC and DOH review and approval.

c. Remedial Construction Process

The Construction Management Department ("CM") within Con Edison's Construction organization is responsible for supporting EH&S's efforts to manage the remedial construction phase of remediation projects. Remedial design plans and specifications and engineer's cost estimates are prepared by the Company's environmental engineering consultants working jointly with the EH&S project manager and CM. Depending on the estimated cost of remediation, one of three lists of pre-qualified remediation contractors will be used to solicit technical proposals and bids for the performance of the remedial construction work. For small or non-complex projects, a technical proposal and associated technical evaluation may not be required.

After the award of a purchase order to the selected remediation contractor through competitive procurement, CM will manage the contractor's performance of the work with the EH&S project manager participating as a key member of the team. The DEC generally has a full-time inspector assigned to sites for which significant remedial construction work is required to see that the Company complies with the requirements of the approved remedy and design specifications and to participate in project team meetings. For projects entailing less significant remedial activities, the DEC inspector will visit the sites periodically. In addition, Con Edison's environmental engineering consultant that prepared the approved design and bid specifications will be present to see that the agency-approved remedy and design and bid specifications are implemented properly, to obtain information needed to prepare the remediation report (sometimes referred to as the final engineering report) and, in some cases, to perform air monitoring and/or post-excavation soil sampling.

When remediation is to be performed at third party sites, the Company must enter into an access agreement with the property owner. In addition to providing access, the agreements contain commitments by the property owner not to violate post-remediation institutional controls required as part of the DEC-approved remedy and not to interfere with the operation of any DEC-required engineering controls.

iii. Post-Remediation Requirements

The Company's obligations with respect to a site often do not cease upon completion of the remedy. Because many of the sites in the Company's SIR program are located in well-

developed areas covered with existing buildings, or present other logistical challenges, it is frequently not feasible to remediate a site to meet "unrestricted use" standards pursuant to DEC regulations and guidance. At other sites, it may not be cost-effective to meet "unrestricted use" standards due to the background levels or depths of contaminants present at the site. In such cases, Con Edison may propose, and DEC and DOH may allow, remediation to alternative standards that protect public health and the environment for certain specified uses of the site. If Con Edison does not remediate a site to "unrestricted use" standards, the Company must comply with one or more institutional and/or engineering controls at the site to address the remaining contamination after completing remedial construction. Examples of institutional controls include restrictions on the use and redevelopment of a remediated property that must be made enforceable by the DEC through environmental easements or deed restrictions. Engineering controls could include a containment barrier, sub-slab ventilation system, or product (*e.g.*, coal tar, gasoline, or fuel oil) recovery system. These controls are required in perpetuity or until the DEC, with DOH concurrence, determines that they are no longer necessary.

In order to comply with these various controls, the Company is required to prepare a Site Management Plan ("SMP") for the DEC's approval. A typical SMP includes procedures to:

- operate and maintain engineering controls and/or treatment systems;
- maintain compliance with institutional controls, where applicable;
- inspect and evaluate site information periodically to determine whether the remedy continues to be effective; and
- monitor and report the performance and effectiveness of the remedy, including periodic sampling.

iv. Investigation and Remediation of Other SIR Program Sites

The Company also performs investigation and remediation projects for other types of SIR sites. For federal Superfund sites, the laws, rules, regulations and guidance documents that the Company must follow are specified in the administrative consent orders ("ACOs") and consent decrees that the Company has entered into with the EPA. For New York State Superfund Sites and Appendix B sites, the required process and protocol are governed by Con Edison's ACOs with the DEC. For the Astoria site, the procedures and protocols are governed by the DEC operating permit and the DEC regulations implementing RCRA as well as by EPA PCB regulations. For UST sites, the required procedures and protocols are specified in EPA and DEC regulations and guidance. For other SIR sites with government oversight, the required procedures and protocols are specified in a DEC voluntary cleanup agreement for the Kent Avenue Site and DEC regulations and guidance for the Van Nest Parking Lot site and non-Appendix B oil spill sites. While there are some differences in the specific investigation and remediation processes for each of these types of sites, the goal of the process applicable to each such site is the same—to see that the scope of the investigation characterizes and delineates the nature and extent of a site's contamination with sufficient specificity to support a determination by the DEC, DOH, and/or EPA as to whether remediation is necessary to protect human health and/or the environment from the risks posed by the contamination and, if remediation is needed, to assess

and determine the scope of the required remediation activities. For sites with no government involvement or only partial government involvement (i.e., many of the sites included in the Other Sites category), decisions concerning site investigation and remediation are made in compliance with the inventory of best practices for SIR programs. The Company pursues cost-effective remedies based on the current use and contemplated use or re-use of the sites and their zoning, taking into account applicable regulations, guidance, and potential health and environmental impacts.

v. The Role of Company Personnel, Consultants and Contractors in the SIR Program

The following is an overview of the role of Company personnel, consultants and contractors in the Company's overall SIR Program.

a. Role of Company Personnel

The Company currently has 32 employees directly involved in its SIR Program on a full-time or regular basis. This includes 14 employees in the EH&S Department, 15 employees in the CM Department, and three employees in the Law Department. The number of CM Department employees involved in the SIR Program may vary depending on SIR Program activity and construction project activity.

The Remediation Department of EH&S has overall responsibility within the Company for managing the Company's SIR Program. This department currently consists of a Director, two Section Managers (one for the MGP program and one for other remediation programs), and a total of 11 Project Managers (five for the MGP program and six for the other remediation programs). Remediation staff serves as Project Managers and Project Engineers for their assigned sites under the SIR Program. Their responsibilities include:

- Directing the consultants on the development of work plans (investigation, remediation, remedial design) and reports (investigation, AAR, remediation, site management plan) for DEC and DOH approval and review of remediation contractor engineering submittals;
- Coordinating with Regulatory Services, Public Affairs, and property owners to complete access agreements;
- Coordinating with CM to implement the investigation and remediation work plans;
- Providing input to CM concerning proposed remediation contractor change order requests;
- Reviewing and approving the consultants' budgets and invoices;
- Participating in public meetings and other meetings with stakeholders in connection with investigation findings, proposed remedies, and other project-related issues;

- Coordinating and negotiating with the DEC, DOH, EPA, consultants, and property owners on the development of proposed remedies;
- Participating in the procurement process to select a remediation contractor for each of their remediation projects;
- Participating in negotiations with property owners regarding cooperation agreements with respect to remediation responsibilities and cost sharing;
- Preparing quarterly projections of expenditures and estimates of future liability; and
- Providing periodic reports on the status of their projects to Company management.

CM employees support EH&S in the implementation of the SIR Program investigation and remediation work. As discussed at length below, their work on the SIR Program includes support of investigation and remediation fieldwork, review of bid specifications, and management of remediation contracts and contractors.

The Law Department provides environmental legal support, including: (1) the negotiation and preparation of access and other agreements with the present owners, lessees, and/or developers of the Company's and its corporate predecessors' former MGP and other sites; (2) the negotiation and preparation of consent orders, consent decrees, PRP Group participation agreements, and other agreements for Superfund sites owned by third parties, and (3) when appropriate, litigating to protect the Company's interests when negotiations are unsuccessful in resolving important issues (*e.g.*, claims against insurance carriers and third parties).

Other Company employees who support the SIR Program on an intermittent basis include, but are not limited to, employees in Public Affairs, Occupational Health, Real Estate, other groups within EH&S, Central Field Services and other organizations as necessary.

b. Role of Consultants and Contractors in the SIR Program

The Company uses a team of qualified and competitively priced environmental consultants to prepare investigation work plans, perform investigations and prepare reports of investigation findings, evaluate remedial alternatives, prepare remedial action plans and design specifications, perform treatability and pilot tests, as well as remediation oversight, prepare remediation reports, and prepare SMPs. In addition, the Company hires remediation contractors to implement agency-approved remedial action work plans and bid specifications.

The Company looks to its environmental consultants for overall management of the investigations, including oversight and coordination of the subcontractors (about half a dozen in most cases). The Company's environmental consultants typically use drilling subcontractors to perform test pits and to install soil borings and monitoring wells, laboratory subcontractors to perform sample analyses required by agency-approved work plans, and surveyor subcontractors to document the precise coordinates of test pit, boring and well locations. There is not sufficient

regularly scheduled work to justify the purchase of drilling equipment and hiring of full-time operators. Although the Company has a state-approved environmental laboratory, Con Edison's ACOs and consent decrees with the EPA explicitly require the use of independent contractors acceptable to EPA for such work.

Remediation contractors typically use: (i) engineering subcontractors to prepare detailed design documents (*e.g.*, sheeting and shoring plans) and to obtain building permits; (ii) environmental/safety consultants to prepare environment, health and safety plans, perform air and personnel monitoring, and obtain wastewater discharge permits, waste transporters and waste management facilities for the disposal of wastes generated during the remediation project; and (iii) laboratories to perform analyses required by waste management facilities or for other purposes.

In addition, remediation contractors use various material and equipment suppliers and installers. The Company does not contract directly with these subcontractors because it believes that it is more appropriate to place responsibility for these activities on the contractor. This makes the contractor accountable for all aspects of the work, including work performed by subcontractors. For example, if there are delays in obtaining materials (*e.g.*, steel for sheeting), in obtaining permits (*e.g.*, City sewer discharge permit for wastewater, City Department of Buildings permits), or in obtaining approvals from waste management facilities, or delays caused by the presence of off-specification material for waste disposal, the contractor would be responsible. There is not sufficient regularly scheduled work to justify the purchase of specialized construction equipment and the hiring of specially trained operators. Examples of specialty equipment include large diameter (*e.g.*, 30 inches) drill rigs for installing secant piles, equipment used to install slurry walls, equipment for performing in-situ chemical treatment and equipment for performing in-situ contaminant stabilization.

1.3. Number and Location of Sites

- Indicate the number of SIR sites for which the company is wholly or partially responsible and describe the general locations of these sites.

Response to 1.3:

As of December 31, 2014, the Company was wholly or partially responsible for a total of 116 active SIR sites (sites for which costs were incurred during the reporting period and/or for which costs are currently projected to be incurred after the reporting period). Table 1 includes site-specific cost information (past costs through the reporting year, costs incurred during the reporting year and costs projected for the upcoming year) for each of these active sites. Information on past costs for sites for which no further action is required, no costs were incurred during the reporting period and no future costs are currently anticipated is provided in Table 1 by program and, where available, by site.

Most of the Company's SIR sites are located within the Company's service territory; some of the third-party Superfund sites are located outside this area.

2. OVERALL SIR COSTS

2.1. Costs Incurred By Utility To Date

- Briefly summarize the total costs incurred by the company for its SIR projects.

- Describe the estimated liability for the Company's overall SIR program and explain any changes or significant issues that have arisen since the previous reporting period.

- Complete Table 1 showing total estimated liability, total SIR costs to date, anticipated costs for reporting period, actual costs for reporting period and total project costs for upcoming reporting period for specific details.

Response to 2.1:

For active sites, Table 1 provides information on: (i) total SIR costs incurred by site through December 31, 2014; (ii) actual SIR costs by site incurred during the reporting period; and (iii) projected SIR costs by site for the upcoming reporting period.[1] For inactive sites where no further action is required, no costs were incurred during the reporting period and no future costs are currently projected, Table 1 provides information on total past SIR costs incurred by program and, to the extent available, by site.

i. <u>Total Past Costs</u>

Through December 31, 2014, Con Edison's total cumulative cost of its SIR Program was $560,441,898. As shown in Table 1, included in the total SIR program expenditures are:

- $530,816,224 for active sites (sites for which costs were incurred in 2014 and/or are expected to be incurred after 2014); and

- $29,625,674 for inactive sites. For MGP and Superfund Sites, total past costs are provided by site. For Appendix B, UST and Other Sites, total past costs are provided by program, and may include some historical past costs attributable to active sites, from the time before site specific accounts were established for these programs.

[1] All actual SIR costs in Table 1 are rounded to the nearest dollar; and all projected SIR costs for the upcoming reporting period are rounded to the nearest thousand dollars.

As shown on Table 1, the breakdown by SIR Program is as follows:

MGP Sites	$389,471,682
Superfund Sites	$57,372,411
Appendix B Sites	$18,894,332
Astoria Site	$61,120,863
UST Sites	$19,995,086
Other Sites	$13,587,524
Total	$560,441,898

ii. Total Projected Costs

As of December 31, 2014, the Company's accrual for potential liability was approximately $666 million for all its SIR Program sites. With respect to MGP sites, the Company's accrual for potential liability was approximately $489 million.

In 2014, the Company worked with a consultant to develop estimated future liability estimates for its MGP sites and its Astoria site. For those sites still in the investigation phase, or sites with completed investigations but which were still in the remedial alternative evaluation process, a probabilistic model was used to project total future liability through remediation and post-remediation long-term obligations. Based on updated assessments of environmental conditions and related uncertainties as to actual conditions and possible future remedies, using this probabilistic model, Con Edison estimated that the upper range of aggregate undiscounted potential liability for the investigation and remediation of coal tar and/or other MGP-related contaminants should be increased from $2.4 billion to $2.6 billion. These estimates were based on the assumption that there is contamination at all sites, including those that have not yet been fully investigated, and additional assumptions about the extent of the contamination and the type and extent of the remediation that may be required. Actual costs may be materially different. Revisions to the estimated total future liability will be made as the project progresses, the actual scope of required remediation becomes known, and firmer cost figures become available.

iii. Costs Incurred During the Reporting Period

For the reporting period, Con Edison incurred total SIR costs as follows:

MGP Sites	$9,282,529
Superfund Sites	$1,800,638
Appendix B Sites	$1,409,094
Astoria Site	$802,815
UST Sites	$736,498
Other Sites	$4,146,016
Total	$18,177,590

These costs were partially offset by $5,419,448.24 in insurance recovery for the Arthur Kill Superfund Site. These costs also reflect a total credit of $526,745 for a reversal of state and local sales tax charged to several of the projects during a prior reporting period after an internal review determined that certain past expenditures were not subject to such sales taxes. For each site where applicable, the individual credit associated with this sales tax reversal is identified in the site specific reports contained in Section 5.

iv. Projected Costs for the Upcoming Reporting Period

Con Edison's projected SIR costs are based on forecasted activities and spending levels for it SIR Program. These projections are reviewed on a quarterly basis so that they reflect current information as to the then anticipated timing, scope, and associated costs of the required investigation and remediation activities for these sites. The Company's projected SIR costs are subject to change based on, among other things, changes in the extent of known contamination, changes in the remedial design and construction-related contingencies, changes in regulatory requirements and regulatory approval schedules, changes in planned activities, local government permitting requirements, gaining access to the property or cooperation from property owners and other third-parties, unanticipated field conditions and/or force majeure events.

Based on current projections, the Company estimates that it will incur costs of approximately $22,019,500 for its SIR Program during the upcoming reporting period. The breakdown of these projected costs by SIR Program is provided below:

MGP Sites	$13,207,500
Superfund Sites	$2,514,000
Appendix B Sites	$2,483,000
Astoria Site	$2,668,000
UST Sites	$560,000
Other Sites	$587,000
Total	$22,019,500

v. Description of the SIR Cost Estimating Process

Estimating SIR costs is an iterative process that builds on information that is gathered over the course of the SIR process, including site characterization and investigation, remedy selection and remedy implementation. Over time, estimates become firmer as the site investigation and remediation process proceeds. The major change over time in the estimates is the evolution from investigation to remediation. The following description of how cost estimates for SIR projects are developed specifically addresses MGP sites and generally applies to other types of sites.

Initial cost estimates for SIR projects are based on costs associated with site characterization and investigation. These initial estimates capture the costs associated with determining whether or not there is evidence of historical contamination in the soil, soil vapor or

groundwater. The initial estimates may be based on assumed default values for each site. Once additional information is obtained concerning the planned scope of work, revised estimates may be developed by qualified environmental consultants in consultation with the Con Edison project manager. If evidence of contamination is found, additional rounds of investigation are conducted to more fully characterize and delineate the nature and extent of the contamination. As additional information is gathered, the estimates are updated to reflect the expanded investigation costs and, if warranted, potential remediation costs. Once a remedial investigation is completed, the DEC, in consultation with the DOH, determines whether remediation is required. If the DEC determines that remediation is required, an Alternative Analysis Report is prepared. This report identifies potential remedial alternatives; screens them to determine which alternatives appear technically feasible to implement; assesses the feasible alternatives using DEC-specified evaluation criteria; and recommends a preferred alternative. Cost estimates are developed at this time for the various alternatives evaluated, including the preferred alternative. If necessary, the cost estimate for the site is updated based on the preferred alternative that is selected. The DEC, in consultation with the DOH, evaluates the Alternative Analysis Report and tentatively selects a remedy, which may differ from Con Edison's recommended remedy. If necessary, the site's cost estimate is updated to reflect the selected remedy.

Once the DEC selects a remedy, a remedial design document, which includes detailed drawings, plans and specifications needed to implement the selected remedy, is prepared for DEC review. At this time, an engineering cost estimate is developed in conjunction with the detailed design and bid solicitation for implementation of the remedy. If appropriate, site cost estimates are once again updated to reflect the engineering cost estimate, which could change based on any DEC comments concerning the remedial design document. The site cost estimate may be adjusted again, based on the actual bid pricing in the remediation contract that is awarded after the procurement process has been completed. The cost estimate may be further adjusted during remedial construction to reflect findings of additional contamination or other changed conditions.

The major drivers of the magnitude and timing of SIR cost estimates and changes to those estimates include: the nature and extent of contamination; the timing of agency approvals; agency determinations, including decisions concerning the selected remedy (if any); third party property owner issues including access, environmental easements/deed restrictions and potential diminution in property value if institutional controls are required; site redevelopment; local government permit requirements; off-site impacts to private property or natural resources; and shifts in prioritization of sites for investigation and remediation. In the case of third party Superfund sites for which Con Edison is one of many PRPs, the cost estimates will also depend on the ultimate determination of Con Edison's share of the costs.

2.2. Impacts On Ratepayers

- Provide amount of SIR expense the company is currently recovering from its ratepayers, including base rates and surcharges.

- Describe the projected impacts to the company's ratepayers, including base rates and surcharges, the company requests in any pending rate filings.

Response to 2.2:

The SIR costs currently included in rates for Con Edison are:

Electric:	$43,075,000
Gas:	$8,149,000
Steam:	$2,295,000

Projected bill impacts by service based on SIR costs allowed in Con Edison's approved electric, gas and steam rate plans (Cases 13-E-0030, 13-G-0031, and 13-S-0032) for the Rate Year ending December 31, 2015 are as follows:

Electric:	0.40%
Gas:	0.38%
Steam:	0.30%

The following table shows the projected bill impacts by service based on SIR costs allowed in Con Edison's approved electric, gas and steam plans (Cases 13-E-0030, 13-G-0031, and 13-S-0032) for the Rate Year ending December 31, 2015.

Consolidated Edison Company of New York, Inc.
SIR Costs - Bill Impact of Approved SIR Costs for the Rate Year Ending December 31, 2015

	Electric	Gas	Steam
Case	13-E-0030	13-G-0031	13-S-0032
Effective	RY2 1/15 - 12/15	RY2 1/15 - 12/15	RY2 1/15 - 12/15
Operating Revenue (a)	$8,108,823,000	$1,635,521,000	$744,824,000
Additional Surcharge			
18A Surcharge (b)	164,682,391	31,342,596	11,269,432
Retail Access Energy Costs (b)	2,490,511,216	351,339,084	
Interruptible (b)		139,442,676	
Gas In Storage		598,102	
Total Revenue	$10,764,016,607	$2,158,243,458	$756,093,432
SIR Allowance	43,075,000	8,149,000	2,295,000
% of Bill Impact (Allowance/Revenue)	0.40%	0.38%	0.30%

Note

a) Amounts shown include base and full service sales revenues from the rate plans indicated above. Other operating revenues are not included.

b) Estimated energy revenues and surcharges are from the Company's 2014 18a Assessment filing.

2.3. General Cost Management and Mitigation Strategies

- Describe the Company's standard best management practices for SIR cost management/mitigation strategies.

Response to 2.3:

Con Edison follows the management/mitigation practices set forth in the Inventory of Best Practices for Utility SIR Programs adopted by the State's electric and gas utilities pursuant to the Commission's Order issued November 28, 2012 in Case 11-M-0034. A copy of the

Inventory of Best Practices for Utility SIR Programs dated March 28, 2013 is provided in Exhibit A.

With regard to Best Practice No. 15 (pursue third party contribution): the Company is currently in litigation with a property owner over the proper allocation of costs associated with the cleanup of a parcel located on a portion of the grounds of the Company's former West 18th Street Works MGP site. In March 2014, the property owner commenced an action in federal district court for the Southern District of New York against Con Edison seeking recovery of 100% of their claimed past and future response costs associated with the remediation of the property, as well as unspecified additional claimed damages. Con Edison is defending the action which is currently in the discovery phase.

With regard to Best Practice No. 16 (pursue insurance recovery): in February 2014, the Company received a payment of $5,419,448.24 from Associated Electric and Gas Insurance Services ("AEGIS") for costs incurred investigating and remediating PCB contamination caused by a September 1998 transformer fire at the Arthur Kill Station. Also, in December 2014, in connection with The Home Insurance Company ("THIC") liquidation proceeding pending in New Hampshire Superior Court (Merrimack County), Con Edison received an interim payment of 15% of its $6,840,000 claim ($1,026,000) for costs associated with its MGP sites. The Company does not presently know how much more, if any, it will recover on its claim against THIC. Future recoveries will be determined during the course of the liquidation proceeding by the Insurance Commissioner for the State of New Hampshire, acting as Liquidator.

2.4. Procurement Processes Overview

- Describe the company's policies and practices for procuring services required for SIR projects.

Response to 2.4:

Con Edison has a comprehensive system of internal controls in place to see that it performs its SIR projects at the lowest reasonable cost. The following internal controls are employed by the Company to achieve this objective: (i) standardized remediation contractor and consultant management protocols; (ii) established procedures for selecting and retaining environmental consultants and remediation contractors; (iii) rigorous process for the review and approval of SIR Program consultant and contractor invoices; and (iv) internal audit process.

i. <u>Remediation Contractor and Consultant Management Protocols</u>

The Company's remediation contractor management protocols include: the Company's Contract Administration Manual ("CAM"), Supplemental Construction Contract Requirements ("Supplemental Requirements"), and the Standard Terms and Conditions of Construction Contracts ("Standard Terms").

The purpose of the CAM is to provide direction for Company personnel in the administration of contracts to promote the efficient use of Company and contractor resources, as well as compliance with all applicable laws, rules, regulations, and guidance. The CAM provides detailed guidance for the administration of construction contracts, including remediation-related construction work. The manual describes the Company's procedures for requisitioning and procurement of construction contracts, establishes guidelines for executing changes to labor contracts after the purchase order or contract has been issued, defines the procedures utilized to process payments under construction contracts, and establishes a system for monitoring progress of major projects against a planned schedule. It also sets standards of performance for field activities and provides procedures to be followed in their execution and provides instructions to promote compliance with the Company's requirement that contractors working for Con Edison develop and implement site/task specific Environmental, Health and Safety Plans for their work.

The Supplemental Requirements contain requirements for the contractor's management of construction work, including remediation-related construction work. The Supplemental Requirements establish requirements for contractor performance regarding documentation, notice to proceed, approval of subcontractors, schedule monitoring, working hours, use of proper personal protective equipment ("PPE"), adherence to safety regulations, and the identification of hazards encountered at the job site. The Supplemental Requirements also identify required submittals and schedule of submissions for items such as shop and work drawings, operating procedures, substitution of materials and as-constructed drawings. The Supplemental Requirements supplement Con Edison's Standard Terms and govern the contractor's work regarding the use of qualified representatives, work permits, equipment and material delivery, handling, storage and site maintenance.

The Company's Standard Terms are incorporated into its contracts for construction services, including remediation-related construction work. The Standard Terms define the contractual obligations of the construction contractor and Con Edison. The obligations and stipulations that are addressed include, but are not limited to Contract Formation; Specifications, Plans, and Drawings; Price and Payment; Time for Completion; Excusable Delay; Safeguards in Work; Work Conditions; Contractor's Performance; Con Edison's Authority; Estimated Quantities; Warranties; Changes; Claims; Codes, Laws and Regulations, and Maintenance of Work.

The Company environmental consultant management protocols include the Standard Terms and Conditions of Service Contracts and Section 17 of the CAM, which specifically applies to service contracts. Section 17 addresses the procurement process, contractor oversight, contract modifications, payments, Environmental, Health and Safety Plans, and contractor evaluation.

ii. Procedures for Selecting and Retaining Environmental Consultants and Contractors

The following is a description of the process Con Edison uses to select its environmental consultants and contractors. While this discussion focuses primarily on the Company's MGP program, the process used by the Company to retain environmental consultants and contractors for other SIR program sites is generally similar.

a. Selection Process for SIR Consultants

The procurement process to hire an environmental consultant consists of the following general steps:

- Preparation of Purchase Requisition - This is the formal request to the Company's Purchasing Department ("Purchasing") for procurement action. The Purchase Requisition is issued by EH&S and includes the services requested, estimated budget, recommended bidders, scope of work and any other related documents. As described below, in some cases a technical evaluation is performed as a pre-qualification step before a Purchase Requisition is issued.

- The Purchase Requisition must be approved by the appropriate level within EH&S before it is sent to Purchasing.

- Issuance of Bid Package/Request for Proposal - After Purchasing receives a Purchase Requisition, a buyer is assigned to the project. The buyer works with EH&S to prepare a Request for Proposal ("RFP") inviting prospective consultants to submit a technical proposal and commercial proposal. The RFP may include a pre-bid meeting and always includes a deadline for submitting proposals.

- Pre-Bid Meeting (if necessary) – If necessary, a pre-bid meeting is usually conducted at least one week after the consultants receive the RFP. This allows the consultants to review the scope of work prior to the meeting and to ask pertinent questions.

- Review of Technical Proposals - The RFP requires the consultants to submit separate technical and commercial proposals. Technical proposals are forwarded by Purchasing to EH&S for review. The commercial proposals are retained by Purchasing for later evaluation if the bidding consultants' technical proposals are found to be acceptable. Technical evaluation criteria are normally established by EH&S prior to the issuance of the RFP, and the consultants are informed of those criteria. After completion of its technical review, EH&S provides a report with the review results to Purchasing. The report is transmitted by the person in EH&S who signed the Purchase Requisition.

- Review of Commercial Proposals - After receiving the results of the technical evaluation from EH&S, Purchasing opens the commercial proposals submitted by those consultants with acceptable technical scores. For projects that do not require a technical proposal, the commercial evaluation begins upon the receipt of the commercial proposals from the competing bidders. Purchasing identifies the low bidder (or bidders if multiple contracts are to be awarded), and negotiates pricing with the low bidder(s), if appropriate. A meeting with the consultant(s) may be held to avoid misunderstandings regarding the required work scope.

- Contract Award - The consultants that have been found to be technically acceptable and that have submitted the lowest cost proposals based on the

commercial evaluation are recommended by the Purchasing buyer for award of a purchase order to perform the consulting services. The level of approval required depends on the value of the purchase order.

In 2002, the Company retained a team of seven consultants to support its MGP program. In 2005, when the purchase orders issued to those consultants expired, Con Edison conducted a two-step selection process for the issuance of second-round purchase orders. For the pre-qualification phase, 20 environmental consulting firms were invited to submit responses to a questionnaire jointly developed by EH&S and Con Edison's Purchasing Department; 17 firms responded. Because the Company's MGP program was then moving from investigation to remedial planning and remediation at many of the MGP Sites, remediation experience was deemed to be a more important consideration in 2005 than in 2002. Con Edison considered each consultant's experience in innovative investigation and remediation technologies, as well as its success in negotiating with regulatory agencies, particularly DEC. The questionnaire included a test problem designed to give Con Edison insight into each such firm's capabilities in analyzing investigation results and other relevant information to develop cost-effective remedial alternatives that would likely be acceptable to the DEC and DOH. Ten of the 17 firms were rated high enough to participate in the second phase of the procurement process.

In the second and final phase, these ten firms were invited to provide pricing information for professional services and fieldwork (*e.g.*, drilling and other investigation-related activities). These rates were applied to a model investigation work scope to determine the reasonableness of pricing being offered by each firm for a typical MGP Site investigation. The Purchasing Department negotiated with the firms to reduce any premiums and reached acceptable agreements with nine firms. Purchase orders were awarded to those nine firms in November 2005.

These purchase orders were renewed with six firms in 2010 using updated prices. The Company renewed its contracts with its existing consulting firms in 2010 for a number of reasons. First, these firms are recognized leaders in the field of MGP investigation and remediation. Second, over the past several years, a number of nationally recognized firms have merged, thereby reducing the number of full service firms with significant MGP experience available for consideration. Third, by 2010, all of the MGP sites had been assigned to a firm.

In 2014, the contracts with the existing consulting firms were set to expire. Prior to this expiration, the Company once again used the procurement process described above to evaluate and select consultants to support the MGP Program for the next three-year period. Specifically, technical qualification questionnaires were provided to 20 firms of which 14 responded with completed technical qualification packages. The Company reviewed and assessed the qualification packages from these 14 consulting firms with six firms meeting the established criteria. The six consulting firms that met the established criteria submitted Commercial Proposals to the Purchasing Department, negotiated terms and were issued purchase orders. Additionally, The Company routinely assesses the performance of the firms conducting site investigation and remediation work, and these firms have demonstrated their value to the program. As there is a learning curve associated with work at any particular site, absent a

shortfall in performance, it is generally not cost-effective to start over with a new firm. So while qualification packages are regularly received and reviewed, the Company has had no need to add additional consulting firms to its current list. Should the Company find that a firm is not working up to the performance standards required to successfully complete the work required, that firm will be removed from the project. EH&S will continue to review prospective consulting firms soliciting MGP work from the Company, and should additional qualified firms be identified and a need for their services arise, they will be considered for future work as it becomes available.

By retaining a team of qualified and competitively priced consultants to support the investigation, remedial planning, and remediation oversight activities of the MGP program, the Company generally avoids having to conduct a separate procurement action for each individual site. However, EH&S, in conjunction with the Purchasing Department, may determine that a separate purchase order should be awarded after competitive bidding among the existing consultants for a particular MGP Site in certain circumstances, such as where a very high initial investigation cost estimate was projected based on the investigation work plan for that site.

The Company's procurement process to retain environmental consulting services for the other SIR programs is similar to the process described above for the MGP program. Currently, four environmental consultants have been retained to support sites already in the UST program and five environmental consultants have been retained to support new UST sites and other non-MGP sites (*e.g.*, Appendix B sites). There are two consultants that are common to both sets of contracts. During the reporting period, a procurement action was initiated for new multi-year non-MGP site consulting contracts. It is anticipated that this procurement action will be completed during the upcoming reporting period and may result in retention of different consulting firms than those currently under contract. For very large and complex site investigation projects, such as the Hudson Avenue Station Appendix B site and the consolidated Long Island City Site 79 under Appendix B, separate purchase orders were issued. Likewise, separate purchase orders have been issued to environmental consultants for the Company's New York State Superfund Sites, such as the former Maspeth Substation Site, Echo Avenue Substation Site, former Arthur Kill Generating Station Site, Flushing Creek Site and North First Street Terminal Site, which are currently owned or previously owned by Con Edison, and for the Curcio Scrap Metal federal Superfund Site, for which Con Edison is the major PRP. Finally, purchase orders have been awarded to four consulting firms for the Astoria RCRA Corrective Action Site, one for the site-wide investigation that was initiated in 1993, one for the risk assessment, remedial planning, remediation oversight and reporting for the North Storage Yard, one for the remedial design and oversight of the gravel embankment encapsulation, and one for the remedial planning, remediation oversight and reporting for the East Yard. In addition, the initial consultant retained for the site-wide investigation of the Astoria site is being replaced by a different consultant, since the original consultant was not retained as an MGP consultant during the 2014 MGP procurement action.

b. Selection Process for Remediation Contractors

The selection of remediation contractors is a multi-step process. The first step in Con Edison's remediation contractor procurement process for its SIR program is the development of a pre-qualified bidders list. The purpose of this list is to streamline the selection process by

establishing a short list of contractors pre-qualified to bid on future MGP Site and other remediation projects. The list obviates the need to evaluate which firms should be invited to bid on each remediation project.

In 2005, a questionnaire related to the contractor's experience with construction and remediation was sent to 28 remediation contractors. The questionnaire was developed by a team comprised of representatives from Con Edison's Purchasing, CM and EH&S Departments. Timely responses were received from 17 of the 28 firms. The responses were reviewed by a team from CM and EH&S in accordance with predetermined scoring criteria developed to evaluate potential contractor qualifications for remedial construction work. The team concluded, and the Purchasing Department concurred, that 15 of the 17 contractors met the Company's qualification requirements. Based on their past experience, including the size of the remediation projects previously handled by them, the 15 firms were placed in three categories, so that the smaller firms are not invited to bid on larger, more complex remediation projects. Subsequent to the approval of these 15 firms, the Company evaluated and approved five additional remediation contractors.

The procurement process to hire a remediation contractor consists of the following general steps:

- Preparation of Purchase Requisition - This is the formal request to Purchasing for procurement action. The Purchase Requisition is issued by CM with input from EH&S, and it includes the services requested, estimated budget, recommended bidders, detailed specifications and other related documents. The Purchase Requisition must be approved by an employee of the appropriate level within CM before it is sent to Purchasing.

- Issuance of Bid Package/Request for Proposal - After Purchasing receives a Purchase Requisition, a buyer is assigned to the project. The buyer works with CM and EH&S to prepare an RFP inviting the contractors to submit a technical proposal and commercial proposal. Depending on the scope of work and other considerations, Purchasing may issue a Request for Bids ("RFB") under which the contractors are requested to submit a commercial proposal without a technical proposal. The RFP or RFB includes a scheduled field visit to the site and a deadline to submit the proposals.

- Field Visit - The field visit is typically conducted at least one week after the contractors receive the RFP or RFB. This allows the contractors to review the specifications prior to the field visit and ask pertinent questions.

- Review of Technical Proposals - The RFP requires the contractors to submit separate technical and commercial proposals. Technical proposals are forwarded by Purchasing to CM and EH&S for their review. The commercial proposals are retained by Purchasing for later evaluation if the bidding contractors' technical proposals are found to be acceptable. Technical evaluation criteria are normally established by CM and EH&S prior to the issuance of the RFP, and the

contractors are informed of those criteria. After CM and EH&S complete their technical review, they provides a report with the review results for approval to the person in the Construction organization at the position level that signed the Purchase Requisition. Once that person approves the technical review report, the report is transmitted to Purchasing.

- Review of Commercial Proposals - After receiving the results of the technical evaluation from CM and EH&S, Purchasing opens the commercial proposals submitted by those contractors with acceptable technical scores. For projects that do not require a technical proposal, the commercial evaluation begins upon the receipt of the commercial proposals. Purchasing works with the Bid-Check Estimating Section to evaluate the pricing information submitted by the contractor with the lowest cost proposal to determine if the proposed labor rates, unit prices, lump sum prices and other cost items are reasonable and consistent with current market conditions. A meeting with the contractor may be held to avoid misunderstandings regarding the required work scope.

- Contract Award - The contractor that submitted a technically acceptable proposal and the lowest cost proposal based on the commercial evaluation is recommended by the Purchasing buyer for award of a purchase order to perform the remediation. The level of approval required before the purchase order can be finalized depends on the value of the purchase order.

iii. Review and Approval of SIR Program Consultant and Contractor Invoices

a. Types of Consultant and Contractor Contracts

With respect to consultants, purchase orders issued to support the Company's SIR program typically include a combination of consultant labor rates as well as fixed price and unit price items. For example, the preparation of a SCS work plan for an MGP Site is a lump sum item but the cost of drilling is on a per foot basis. Most of the professional consulting services such as investigation fieldwork, report preparation, and remedial alternatives evaluation are based on hourly labor rates negotiated with the consultants. In some cases, consultants use subcontractors to perform work for which there is not a fixed price or unit price specified in the consultants' contracts. In that situation, the consultant contracts allow the consultants to bill the Company based on their cost plus a negotiated mark-up.

As to contractors, remediation construction projects are procured primarily as fixed price contracts that may have unit prices for certain types of work such as soil excavation and disposal, import of clean backfill, and water treatment. All costs are competitively bid and are incorporated in the contract's purchase order. These costs are fixed and are not contracted on a fee plus cost basis.

b. Review and Approval of SIR Consultant Invoices

Con Edison's EH&S Department manages contracts with environmental consultants. The following steps are generally followed by EH&S project managers in their review of invoices submitted by the consultants:

- Utilize an accounting system that was implemented in July 2012 and that tracks all unit rates specified in the purchase order for labor, material charges, and other line items. This feature of the system eliminates the potential for consultants to charge rates that are not specified in the purchase order and eliminates potential contractor calculation errors that could occur with paper invoices.

- Reconcile the number of units for each line item/work activity claimed to have been used/performed with the number of units actually used/performed. This is done through a review of field notes and other supporting documentation. Under the current accounting system, consultants submit electronic invoices on the system in lieu of submitting paper invoices. Before a consultant submits an invoice electronically, the consultant provides the EH&S project manager with the quantity of each purchase order line item that it plans to invoice and the information that supports the planned invoice, such as time sheets or subcontractor invoices. The project manager then is required to review the supporting information to verify that it is consistent with the information specified in the purchase requisition used by Con Edison to request the consultant's services. Purchase requisitions specify the requested services by purchase order line item and identify the appropriate project and task numbers (previously known as account numbers or work order numbers) that will be charged.

- Once the project manager is satisfied that the charges proposed for invoicing by the consultant are substantiated, the project manager will enter the approved quantities for each line item in the system as having been received. Supporting documentation for invoices exceeding $3,000 will be reviewed by a project manager's Section Manager.

c. Review and Approval of Remediation Contractor Invoices

CM is responsible for the review and approval of SIR Program remediation contractor invoices. CM uses the following Con Edison documents to format, reconcile and process payment applications from such contractors: (1) the CAM; (2) the Supplemental Requirements; and (3) the Standard Terms. Remediation contractors are required to submit Performance Statements that correlate with their project schedules. Performance Statements are tabulated summaries of the contractor's work and mirror the contractor's price schedule. Lump sum, unit price and change order items are listed on the Performance Statement and include information on the description of work, the quantity of work, the unit price of work if applicable and the total value of work. The Performance Statements indicate the value of work completed to date, the value of work requested for the current payment application and the total value of work remaining. CM receives invoices from the contractor that includes back-up information such as weight tickets, survey measurements and as-built drawings that are used to substantiate the accuracy of the invoice. If the invoice is not approvable in its entirety, the contractor is required

to revise it as appropriate or approval of partial payment is recommended. Once the invoice is approved by the CM section that manages the remediation contractor, the invoice is sent to CM's Administrative Services Group, where invoice reconciliation is performed again. Once an invoice is approved, regardless of whether it is from an environmental consultant or remediation contractor, it is receipted on the Company's system for subsequent payment.

In connection with its administration and oversight of remediation contracts, CM utilizes established procedures contained in the CAM to monitor work and to execute changes to contracts. The CAM prescribes the responsibilities of the field personnel responsible for managing contract construction work and provides detailed procedures for documenting the progress of work in the field. Field Inspectors are assigned to projects and depending on the size and scope of the work will generally oversee the work of the contractor on a daily basis. The duties of Field Inspectors include, but are not limited to, such items as job set-up review; schedule review and compliance; review of work completed by the contractor; inspection of work, environmental and safety compliance; completion of the Con Edison daily log book; input into the Contractor Oversight System ("COS"); and project closeout procedures. The Field Inspector will set up and maintain a central filing system to retain pertinent contract correspondence and documents.

The Company's Field Inspectors are responsible for the implementation of changes to the base contract and are thoroughly familiar with the reason for the change, its scope and effect on the schedule. In the case of design changes, sufficient liaison with the EH&S project manager is required to make sure the change is implemented in a timely fashion so as to minimize its effect on the overall job. For all changes, the Field Inspector prepares a Finding of Fact that provides a description of the change, the reason for the change, a range figure estimate of material, equipment and labor costs and details the change's effect on the project schedule. Findings of Fact are reviewed and approved by the CI's supervisor and at higher levels of management depending on the individual and cumulative dollar value of the estimated cost of the change. The EH&S project manager for the remediation project also must concur with the Findings of Fact before they are approved. After the Findings of Fact are approved at the appropriate management level, a change order request is issued to the contractor to provide a price for the work. If the change order is estimated to be more than $25,000.00, Con Edison's Bid Check Estimating group will also provide an independent price for the work performed. Once a price agreement is reached, a contract modification is processed based once again on the designated management approval level, which is dependent on the individual and cumulative dollar value of the change. If agreement cannot be reached on a fixed price or unit price, then Con Edison may authorize the contractor to proceed to implement the change on a time and materials basis in accordance with the aforementioned contract management documents until an agreement is reached or in lieu of an agreement on a fixed or unit price.

d. Review of Financial Reports for SIR Sites

Con Edison's Accounting Department prepares and distributes reports on a monthly basis indicating site-specific and program-specific expenditures. The listed expenditures are reviewed by the Accounting Department and EH&S Remediation staff. If any expenditures are identified that appear to have been charged to a SIR site account erroneously, Accounting and EH&S investigate and, if appropriate, have the charge transferred to appropriate accounts.

iv. Audits of SIR Projects

Audits of SIR projects have been conducted by Con Edison's Auditing Department and an external consultant. The audit process reviews have included, among other things, whether:

- The project was competitively bid and awarded to the lowest bidder among the technically acceptable contractors;
- The engineering package was accurate and complete;
- EH&S regulations and contractor health and safety plans were complied with;
- Construction Management properly managed, monitored, and documented the project and any changes in the project scope were properly justified;
- Project payments were accurate and timely, and any increases in pricing were properly justified and reviewed for accuracy; and
- Construction Management effectively monitored contractor work and completed the appropriate oversight inspections and the required associated documentation.

3. ADHERENCE TO ESTABLISHED REMEDIATION SCHEDULES

3.1. SIR Program Schedule Summary

- Briefly describe the overall schedule of the company's SIR program.
- Provide an overview of the number of sites adhering to the anticipated schedule, the number of sites ahead of schedule and the number of sites experiencing schedule slippage.
- Indicate any schedule milestones achieved since the previous reporting date.

Response to 3.1:

Under the terms of its MGP Agreement with the DEC, by November 15th of each calendar year, the Company is required to submit for DEC approval a proposed schedule for the development and filing of draft investigation and remediation work plans during the following calendar year. These schedules are more accurately described as projections based on the best information available at the time they are made. As is the case with any projection, these schedules are subject to change due to various contingencies including: variation between anticipated and actual remedial investigation results; the discovery of different or more extensive contamination during pre-design investigation field work or remedy implementation; delays in applicable regulatory reviews or approvals; changes to anticipated remedies due to regulatory agency, community or affected landowner concerns; delays in obtaining required local agency permits for remedy implementation; access and cooperation issues with affected property owners for the implementation of investigation or remediation activities; and, unanticipated field conditions and/or force majeure.

Although not required under the MGP Agreement, the Company also submits to the DEC three-year site-specific projections of its planned activities for each of its MGP sites, including the MGP sites covered by the MGP Agreement. The projected schedule for the first year is presented on a quarterly basis. The projected schedule for the second and third years is presented for the entire year. These projections are presented by work task type, such as: site characterization, remedial investigation, remedial planning, and remedial action implementation. The purpose of these projections is two-fold. First, they serve as a critical planning tool for the Company to ensure that it proceeds with its required SIR activities in an orderly manner and makes appropriate provision for the services and resources it needs to meet its obligations under the MGP Agreement. Second, it provides DEC with a workflow estimate that allows the DEC to best manage its resources.

For the non-MGP program sites, any schedules and project milestones are established on an individual project basis through discussions and agreements with the DEC project managers responsible for the sites in question. Although these schedules and milestones are not submitted to the DEC on an annual basis nor formalized with the DEC, all schedules for non-MGP and MGP programs are reviewed and evaluated at least annually and more frequently for active projects. Specifically, project schedules are generally subject to revision due to the contingencies noted above.

Con Edison adheres to all formal schedule requirements imposed by the DEC and other regulatory agencies for the Company's SIR sites to the fullest extent possible. When site conditions or other factors necessitate a change in schedule, that information is shared promptly with the Company's regulators. During the reporting period, as shown on Table 2, changes in schedule occurred for seven sites (three Appendix B Sites: 20, 67 and 84; and four UST Sites: Amoco Fuel Oil Terminal, 3rd Avenue Yard Service Center, College Point Service Center and Van Nest Complex Service Center). The reasons for these changes are provided in Section 5.3 of this report, as part of the site-specific information presented for each active Con Edison SIR Program site.

3.2. SIR Program Schedule Changes

- Describe any changes in the anticipated schedule of the company's SIR program and provide an explanation for any scheduling delays resulting from non-site-specific causes.

Response to 3.2:

See response to Section 3.1 above. There are no scheduling delays resulting from non-site specific causes.

4. COMPLIANCE WITH NYSDEC AND OTHER REGULATORY ORDERS AND AGREEMENTS

4.1. Non-Compliance Sites

- Indicate all sites that are not in compliance and provide an explanation for the non-compliance.

Response to 4.1:

None.

4.2. Regulatory Requirements Changes

- Summarize any changes to the regulatory requirements for sites under the SIR program. Indicate the regulatory agency responsible for the change, describe the change, and indicate any anticipated effects such change will have on the program's overall schedule and cost.

Response to 4.2:

There were no changes to the regulatory requirements for Con Edison SIR Program Sites during the reporting year.

5. SITE SPECIFIC REPORTS

5.1. General Site Information

Provide the following information for all of the Company's SIR sites:

- Site name
- Site location
- NYSDEC (or other regulatory agency) remediation program and site identification number

5.2. Site Background

For each of the Company's non-Potentially Responsible Party (non-PRP) sites provide:

- A brief description of the requirements of the Company under the Record of Decision (ROD) or Decision Document (DD).
- The scope of SIR work for the site.
- Statement indicating the status of the Company's compliance with the ROD or Decision Document.

5.3. Status of Site Investigation and Remediation

5.3.1. Status of NYSDEC Remediation Program

- Briefly summarize the status of the investigation, remediation, and operation, maintenance and monitoring (OM&M) efforts for the non-PRP SIR sites and complete Table 2.

5.3.2. Scope of Work

- For any site where deviations from the approved remediation plan have occurred or are anticipated, provide justification for all such changes.

5.3.3. Schedule

- For any site in which a variation from the previously projected status is indicated in Table 2, provide a description and explanation for the variation.

5.4. Project Procurement Exceptions

- Indicate any contracts for project services awarded without following the company's standard procurement process described in Section 2.4 and provide justification for the exception.

5.5. Project Costs

5.5.1. Project Costs Summary

- Briefly summarize the anticipated and actual SIR costs for the reporting period and the projected costs for the upcoming reporting period for the non-PRP sites and complete Table 3.

5.5.2. Changes in Cost

- Explain and justify all material deviations (10% or $100,000, whichever is greater) from prior cost forecasts for the reporting period for each project.

5.5.3. Cost Management and Mitigation Strategies

- Describe the measures taken by the company to minimize its SIR costs for any individual site which deviates from the standard practices described in Section 2.3.

Response to 5:

This section of the report provides site-specific information. Individual site-specific reports are provided for all active sites identified in Table 1. They are also provided for four inactive MGP sites (East 32nd Street Station, East 39th Street Station, East 137th Street Works, and Kingsbridge Station) for which groundwater monitoring wells will have to be closed at some indeterminate future date after the DEC approves well decommissioning. Program status reports for all active non-PRP sites are provided in Table 2. Consultant, contractor and other costs are provided for all non-PRP sites for the reporting period and for the upcoming year in Table 3. Included in the "other costs" category are regulatory agency (*e.g.*, DEC, EPA) oversight costs and other legal and permitting costs and fees as well as internal costs. Internal costs primarily include labor costs of CECONY employees (mostly those persons in the Construction Management Department who directly oversee contractors performing field work at SIR sites). Internal costs may also include sampling and analysis costs by Con Edison's EH&S ChemLab; internal waste transportation costs by Con Edison's Central Field Services Department; and materials and supplies ordered through Con Edison's warehouse, such as empty drums for handling wastes.

For sites at which multiple activities occurred during the reporting period, the Company's accounting system does not explicitly break down all costs into the investigation, remediation and OM&M phases of work identified in Table 3. In those situations, the Company used its professional judgment to allocate costs into each phase.

Although not required by the template, for context, background information is provided for all active PRP sites. Other sections in the site-specific reports are not required for PRP sites.

All costs already incurred that are set forth in the site-specific reports and Tables 1 and 3 are rounded to the nearest dollar.

All projected costs were based on information available at the time they were developed and on anticipated actions of others such as approval by the DEC, access provided by property owners, and property owners' development plans. The projected estimated costs are subject to change based upon, among other things, design and construction-related contingencies, which may include regulatory review, approval schedules, permitting processes, and access and cooperation issues with property owners, results of site investigations, unanticipated field conditions and/or force majeure events. Delays in a project may result in acceleration or substitution of other projects. All projected costs provided in Table 1 and in site-specific reports, including those set forth in Table 3, are rounded to the nearest thousand dollars.

The site-specific report template includes reference to a ROD or DD where applicable. Although a ROD or DD is required for some of CECONY's SIR programs and sites (*e.g.*, MGP sites, most Superfund sites, an Other Program sites, such as the Kent Avenue Site, which is addressed under the MGP Voluntary Cleanup Agreement), a ROD or DD is not required for other SIR Programs and sites (Appendix B Sites, UST Sites, some Superfund Sites and most Other Program sites). For the Astoria Site, a hazardous waste permit modification would be the regulatory mechanism used instead of a ROD or DD. For sites requiring an agency to issue a ROD or DD, such ROD or DD will not be issued until an investigation has been completed and a remedy has been selected.

Site-specific information by SIR Program is provided below:

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5.1 General Site Information

Site Name: KENT AVENUE

Site Location: 500 Kent Avenue, Brooklyn, New York

Remediation Program: Other - DEC Voluntary Cleanup Program

Site Identification No.: DEC V00732-2 (site is included in MGP VCA)

5.2 Site Background (Non-PRP Sites Only)

The Kent Avenue site is a former power plant site that was purchased from the New York City Transit Authority. Power plant facilities at the site were demolished in the 1950s and during 2007-2009. Site investigation activities were performed before and after the most recent demolition project. In July 2010, this site was added to Con Edison's MGP Voluntary Cleanup Agreement ("VCA") with the DEC. Although the Kent Avenue Site is not an MGP site, it is located adjacent to a former MGP site that is being addressed by National Grid. The DEC decided to add the Kent Avenue site to Con Edison's VCA to provide a mechanism for DEC oversight of the SIR program for this site. In January 2012, Con Edison completed DEC-required remediation of the former ash pit on the site, which contained polychlorinated biphenyls ("PCB")-contaminated sediment. The remediation involved sediment removal, dewatering and disposal, and filling the ash pit with concrete. In February 2012, the DEC accepted the site investigation reports for the remainder of the property and concurred with Con Edison's recommendation to perform soil removal to address soil contamination (primarily heavy metals and asbestos) outside the footprint of the power plant building that was demolished in 2009. As a condition of its approval, the DEC required Con Edison to submit a work plan to perform a supplemental subsurface investigation ("SSI") between the demolished buildings and Wallabout Channel ("Supplemental SSI Work Plan") and to submit an Interim Remedial Measure ("IRM") work plan ("IRM Work Plan") for the soil removal. Con Edison submitted and the DEC approved the Supplemental SSI Work Plan. This SSI was completed in 2012, and an SSI report was submitted to the DEC. In June 2012, Con Edison submitted the IRM Work Plan to the DEC, which was approved by the DEC in October 2012. Subsequently, Con Edison decided that the soil remediation should be performed as the final site remedy instead of as an IRM. Therefore, Con Edison submitted a site-wide remedial action work plan ("RAWP"), including an Alternative Analysis Report ("AAR"). During 2013, the DEC approved the RAWP and AAR.

Record of Decision (ROD)/Decision Document (DD) Requirements:

On October 18, 2013, the DEC issued a Decision Document ("DD") that incorporates the DEC-approved RAWP and AAR discussed above for this site. The Decision Document's substantive requirements are summarized below:

- Completion of the remedial design;

- Excavation and off-site disposal of contaminated soil;
- Removal of an underground storage tank;
- Backfilling with clean materials;
- Implementation of institutional and engineering controls, including a deed restriction that requires compliance with a Site Management Plan ("SMP"), restricts use of groundwater and prohibits single family homes; and
- Implementation of an investigation to delineate the extent of MGP coal tar contamination emanating from the site of National Grid's former Nassau Gas Works MGP, which is located directly south of the Kent Avenue Site. It is anticipated that National Grid will perform the required MGP investigation under Con Edison oversight.

Scope of Site SIR Work:

Con Edison's phased site investigation indicated PCB-contaminated sediment in a former ash pit and asbestos, metals and organics contamination in soil. The ash pit was remediated as an IRM. During 2014, Con Edison completed the DEC-approved site-wide soil remediation in accordance with the Decision Document described above.

Status of Compliance with ROD/DD:

During the reporting period, Con Edison completed implementation of the Decision Document, including completion of the DEC-approved site-wide soil remediation, submittal of a Final Engineering Report ("FER") and SMP to the DEC for approval, and preparation and recordation of a deed restriction in the form of a Declaration of Covenants and Restrictions. Additionally, during the reporting period, National Grid performed the DEC-required MGP investigation on the Kent Avenue Site in accordance with an access agreement with Con Edison. The costs of the MGP investigation were borne by National Grid.

5.3 Status of Site Investigation and Remediation (Non-PRP Sites Only)

Briefly summarize status, with reference to Table 2.

As described above and indicated in Table 2, Con Edison has completed its remediation at this site, recorded a Declaration of Covenants and Restrictions for the site, and submitted an FER and an SMP to the DEC. The DEC approved the FER and SMP in March 2015 and issued Con Edison an Assignable Release and Covenant Not to Sue in April 2015.

Have deviations from the approved remediation plan occurred or are such deviations anticipated?

No.

Does Table 2 indicate a variation from the projected status?

No.

5.4 Project Procurement Exceptions (Non-PRP Sites Only)

Were any contracts awarded for this site without following the Company's standard procurement process?

No.

5.5 Project Costs (Non-PRP Sites Only)

With reference to Table 3, briefly summarize anticipated and actual SIR costs for the reporting period and projected costs for the upcoming reporting period.

As indicated in Table 3, Con Edison anticipated that it would incur $5,250,000 in total SIR costs during the reporting period at this site. Actual SIR costs incurred during the reporting period totaled $3,991,972 for completing the DEC-required site-wide soil remediation, preparing the FER and SMP, and reimbursing the DEC for site oversight costs. During the upcoming reporting period, Con Edison projects that it will incur SIR costs totaling approximately $9,000 to finalize the FER and SMP, initiate OM&M activities, and to reimburse the DEC for site oversight costs.

For the reporting period, did the actual cost differ from the forecasted cost by more than 10% or $100,000, whichever is greater?

Yes. Total SIR costs were lower than projected because the projected costs had included what was subsequently determined to be an overaccrual of $1,317,655 for the remediation contractor that has since been adjusted.

Did measures taken to minimize SIR costs for this site deviate from standard practices?

No. However, by working with the selected contractor, an asbestos abatement variance was obtained from the New York City Department of Environmental Protection which allowed the asbestos abatement to be performed without using a tented area. Con Edison has estimated that this asbestos abatement variance saved Con Edison approximately $2,500,000 in SIR costs.

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Table 3 - Site-Specific SIR Costs Incurred (non-PRP Sites)

SITE NAME: Kent Avenue (Former Generating Station) (500 Kent Avenue)

SITE TYPE: Other

REPORTING PERIOD COSTS ($) 2014

Cost Element	Site Investigation		Site Remediation & Restoration		Site Operation, Maintenance and Monitoring		Total SIR Costs	
	Anticipated	Actual	Anticipated	Actual	Anticipated	Actual	Anticipated	Actual
Consultant and Contractor Costs	0	0	5,016,000	3,760,249	0	0	5,016,000	3,760,249
Other Costs*	0	0	234,000	231,723	0	0	234,000	231,723
Total Costs	0	0	5,250,000	3,991,972	0	0	5,250,000	3,991,972

PROJECTED COSTS FOR UPCOMING REPORTING PERIOD ($) 2015

Cost Element	Site Investigation	Site Remediation & Restoration	Site Operation, Maintenance and Monitoring	Total SIR Costs
Consultant and Contractor Costs	0	2,000	2,000	4,000
Other Costs*	0	4,000	1,000	5,000
Total Costs	0	6,000	3,000	9,000

* "Other Costs" include internal costs and $38,568 in DEC oversight costs in 2014 and approximately $4,000 in DEC oversight costs in 2015.

Table 1

Site #	Site Name	Total SIR Costs Through 2014 ($)	Anticipated Total SIR Costs for 2014 ($)	Actual Total SIR Costs for 2014 ($)	Total Projected SIR Costs for 2015 ($)
SECTION I. ACTIVE SITES WITH CURRENT AND/OR FUTURE ANTICIPATED SIR COSTS					
MGP Sites					
	173rd Street MGP	17,494,485	5,000	964	15,000
	Cedar Street Works	962,914	450,000	510,084	50,000
	Central Avenue Works	858,585	20,000	29,745	11,000
	East 11th Street Works	4,122,085	60,000	6,534	200,000
	East 14th Street Works	5,501,205	61,000	20,562	20,000
	East 17 St. & East 19th St. (ST)	1,777,820	40,000	20,538	40,000
	East 21st Street MGP (PCV)	10,336,676	200,000	71,008	280,000
	East 99th Street Works	3,084,568	200,000	(40,438)	500,000
	East 108th Street Holder	495,889	225,000	0	25,000
	East 111th Street Works	2,176,378	125,000	4,524	25,000
	East 115th Street Works	5,018,305	4,067,000	1,190,094	4,185,000
	East 138th Street Works	885,736	105,000	48,930	67,500
	East 175th Street Station	436,095	0	92	0
	Farrington Gasholder	2,244,177	90,000	110,398	55,000
	Farrington Street MGP	1,290,731	462,000	293,512	345,000
	Greenburgh Station	375,197	0	54	0
	Hastings on Hudson MGP	676,518	100,000	16,544	140,000
	Hester Street Works	262,962	25,000	303	25,000
	Hunts Point Compressor	410,510	4,000	3,265	4,000
	Hunts Point MGP	18,069,906	1,207,000	694,527	1,871,000
	Ludlow Street Works	553,940	70,000	(5,686)	165,000
	Mount Vernon Works	33,565,056	905,000	294,622	440,000
	Ossining Works	3,374,158	100,000	761,631	1,030,000
	Pelham Works	131,293,870	1,058,000	1,302,291	995,000
	Pemart Avenue Works	1,532,603	170,000	140,289	215,000
	Purdy Street Station	2,014,616	235,000	157,314	195,000
	Rye Gas Works	2,551,911	351,000	189,923	341,000
	Saw Mill River Station	719,722	20,000	75,814	10,000
	Tarrytown (Leaseway)	24,604,004	0	0	0
	Unionport Works	1,677,938	200,000	262,669	100,000
	West 18th Street	32,609,638	1,775,000	2,840,699	90,000
	West 42nd Street Works	19,085,043	0	1,156	0
	West 45th Street Works	2,507,986	0	(12,134)	25,000
	White Plains MGP	34,157,022	(22,000)	(94,752)	933,000
	Woodworth Avenue Works	1,003,080	300,000	4,072	300,000
	York Avenue Station	808,826	200,000	52,419	125,000
	Zerega Avenue Station	573,710	25,000	1,669	25,000
	MGP Common Expenses	13,088,002	190,000	329,293	360,000
	Subtotal MGP	**382,201,867**	**13,023,000**	**9,282,529**	**13,207,500**
Superfund Sites					
	Arthur Kill Station	6,368,544	9,000	9,137	0
	Borne Chemical Company	305,025	0	0	21,000
	Cortese Landfill	749,791	38,000	0	50,000
	Curcio Scrap Metal	6,240,831	67,000	41,078	70,000
	Echo Avenue	5,441,245	190,000	10,807	180,000
	Flushing Creek	11,760,173	170,000	184,487	192,000
	Global Landfill	34,263	0	0	0
	Gowanus Canal	2,488,715	1,300,000	518,492	1,300,000
	Maspeth Substation	11,488,485	60,000	13,111	50,000
	Metal Bank	272,146	2,000	3,405	30,000

Site #	Site Name	Total SIR Costs Through 2014 ($)		Anticipated Total SIR Costs for 2014 ($)	Actual Total SIR Costs for 2014 ($)	Total Projected SIR Costs for 2015 ($)
	Newtown Creek	17,547		250,000	15,375	200,000
	North First Street Terminal	5,150,061	*	1,219,000	971,880	420,000
	World Trade Center	654,504		17,000	32,866	1,000
	Subtotal Superfund	**50,971,330**		**3,322,000**	**1,800,638**	**2,514,000**
Appendix B Sites						
2	East River Area	2,696,182		93,000	197,110	230,000
4a	12th St & 41st Ave	184,416		34,000	3,475	27,000
7a	FDR/E71st St. (Pipeline 2)	6,820		0	0	0
9	Astoria Blvd/78th Street	135,295		97,000	116,573	185,000
12	Farragut	799,753		200,000	204,304	220,000
14	Hudson Ave.	5,286,275		200,000	128,005	370,000
19	W. 49th St. Substation Area (11th Ave.)	120,140		50,000	4,457	30,000
20	Hellgate Area (Locust Ave)	55,722		11,000	4,908	22,000
22	Westchester Ave.	9,764		0	0	10,000
23	E. 25th St./FDR Drive	36,156		0	0	0
28	W. 59th St./11th Ave. (West End Ave)	37,131		60,000	13,045	150,000
30	Meeker Ave./Leonard St.	97,550		130,000	81,739	130,000
33	79th St./3rd Ave., B'klyn	35,670		40,000	23,363	55,000
35	Park Place / New York Ave., Bklyn	21,432		22,000	4,421	10,000
38	52nd St./1st Ave., B'klyn	24,360		90,000	12,856	2,000
39	108th Street & 64th Road	124,874		145,000	85,002	125,000
49	141st St./Brook Ave.	8,946		0	0	10,000
56	Broadway/131st St - 141st St	512,672		100,000	93,033	50,000
57	4th Ave. & Garfield St./6th St.	25,649		30,000	0	10,000
59	Jay St. and Concord St.	22,675		53,000	2,866	10,000
60	11th Street Conduit	22,831		8,000	5,948	100,000
61	Flushing Ave./Classon/BQE	6,714		0	(529)	10,000
63	Wythe Ave./North 13th St.	38,602		17,000	38,602	310,000
64	St. James/Gates/Fulton St.	11,472		0	(480)	10,000
65	189th St./Webster Ave.	6,596		0	0	10,000
66	233rd St./Webster Ave.	5,760		0	0	10,000
67	Morris Pk Av./E180th St-Bronx	1,293,054		102,000	48,606	0
68	Parkchester/Tremont Substation	14,415		0	2,160	12,000
69	Broadway/108th St - 125th St	631,336		15,000	743	5,000
70	Worth Street N. of Centre St.	13,090		0	0	10,000
71	West 59th Street & 5th Avenue	0		0	0	10,000
72	E. Broadway East of Grand St.	265,388		135,000	227,866	200,000
73	West 67th St. West of Broadway	26,611		20,000	15,473	20,000
76	E. 6th St./Ave. A	19,753		0	0	10,000
78	11th Ave./W. 29th St.	8,416		0	(1,478)	15,000
79	Vernon Blvd/Queens Combined Site	2,279,388		198,000	61,585	(45,000)
80	Cooper Ave./73rd Place	7,792		0	0	15,000
83	Dunwoodie S/S	330,129		10,000	0	15,000
84	Elmsford S/S	471,346		24,000	35,995	120,000
	Appendix B Common Expenses	65,310		0	(554)	0
	Subtotal Appendix B	**15,759,485**		**1,884,000**	**1,409,094**	**2,483,000**
Astoria Site						
	Subtotal Astoria	**61,120,863**		**1,887,000**	**802,815**	**2,668,000**
Underground Storage Tank (UST) Sites						
	3rd Avenue Yard Service Center	1,797,269		562,000	527,610	280,000
	Amoco Fuel Oil Terminal	5,611,374		25,000	14,744	22,000
	Atlantic Avenue Service Center	444,279		49,000	57,562	60,000
	Bruckner Blvd. Operations Center	129,005		35,000	17,040	0
	College Point Service Center	26,986		8,000	10,922	0
	Newtown Substation	250,275		140,00	56,595	140,00
	Rye Service Center	25,782		0	0	0
	Van Nest Complex Service Center	93,003		8,000	41,890	0

Site #	Site Name	Total SIR Costs Through 2014 ($)		Anticipated Total SIR Costs for 2014 ($)	Actual Total SIR Costs for 2014 ($)	Total Projected SIR Costs for 2015 ($)
	West 28th Street Service Center	41,315		8,000	10,135	8,000
	357 Tuckahoe Road, Yonkers	0		NA	0	50,000
	Subtotal UST	**8,419,288**		**835,000**	**736,498**	**560,000**
Other Sites						
	59th Street Station	23,591		0	0	0
	74th Street Station	66,180		12,000	9,038	0
	Dielectric Fuel Spill Sites	336,198		40,000	5,404	40,000
	Van Nest Parking Lot	87,727		0	0	0
	Kent Avenue	10,408,698	*	5,250,000	3,991,972	9,000
	Richmond Terrace	256,767		10,000	0	90,000
	24 Market Street, Ossining (former Substation)	90,680		NA	0	0
	24 St. Casimir Avenue/Columbus Place, Yonkers (former Substation)	280,788		NA	0	65,000
	2502-2512 Tilden Avenue (former Substation)	132,885		NA	0	95,000
	280 South Avenue, Staten Island (former Substation)	168,636		NA	0	0
	3290 Laconia Avenue/3299 Yates Avenue, Bronx (former Substation)	139,867		NA	1,075	136,000
	34 Ainslie Street (former Substation)	51,224		NA	8,150	50,000
	53 Smith Street, Portchester (former Substation)	0		NA	0	70,000
	75 Florence Place, Staten Island (former Substation)	173,417		NA	3,644	0
	800 Central Avenue, Peekskill (former Substation)	126,733		NA	126,733	7,000
	132nd Street PURS, Manhattan	0		NA	0	25,000
	Subtotal Other Sites	**12,343,391**		**5,312,000**	**4,146,016**	**587,000**
Total SIR Program Active Sites		**530,816,224**		**26,263,000**	**18,177,590**	**22,019,500**
SECTION II. INACTIVE SITES WITH NO CURRENT OR ANTICIPATED FUTURE SIR COSTS						
MGP Sites						
	286 Water Street	37,099		N/A	N/A	N/A
	Broadway/Dyckman Station	153,000		N/A	N/A	N/A
	Canal Street	45,053		N/A	N/A	N/A
	Cross/Little Street	280,376		N/A	N/A	N/A
	East 137th Street Works	281,546		N/A	N/A	N/A
	East 32nd Street Station	724,101		N/A	N/A	N/A
	East 39th Street Works	291,691		N/A	N/A	N/A
	Kingsbridge Station	267,237		N/A	N/A	N/A
	Portchester	3,796,201		N/A	N/A	N/A
	Roosevelt Street Station	282,467		N/A	N/A	N/A
	West 58th Street	511,426		N/A	N/A	N/A
	West 65th Street	282,207		N/A	N/A	N/A
	West 132nd Street	317,411		N/A	N/A	N/A
	Subtotal MGP	**7,269,815**		N/A	N/A	N/A
Superfund Sites						
	Samson Tank Cleaning	20,333		N/A	N/A	N/A
	Helen Kramer Landfill Site	3,333		N/A	N/A	N/A
	C&D Recycling Site	6,385		N/A	N/A	N/A
	Eastern Diversified	10,800		N/A	N/A	N/A
	Mattiace	4,782,740		N/A	N/A	N/A
	Maxey Flats	599,975		2,000	0	0
	NYC Municipal Refuse Landfills	632,101		N/A	N/A	N/A
	Port Refinery Site	1,846		N/A	N/A	N/A
	Frontier Chemical	2,011		N/A	N/A	N/A
	Spectron	6,020		N/A	N/A	N/A
	Carlstadt Site - SCP Superfund Site	1,726		N/A	N/A	N/A

Table 1 - Total SIR Costs for Active and Inactive Sites
By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Total SIR Costs Through 2014 ($)		Anticipated Total SIR Costs for 2014 ($)	Actual Total SIR Costs for 2014 ($)	Total Projected SIR Costs for 2015 ($)
	Quanta Resources	49,679		N/A	N/A	N/A
	Croton Landfill	363,172		N/A	N/A	N/A
	PCB Treatment, Inc. (Kansas City)	(86,007)		N/A	N/A	N/A
	Mercury Refining Superfund Site	6,967		N/A	N/A	N/A
	Subtotal Superfund	**6,401,081**		**2,000**	N/A	N/A
Appendix B Sites						
	Subtotal Appendix B Sites (43 Sites)	**3,134,847**		N/A	N/A	N/A
Underground Storage Tank (UST) Sites						
	Subtotal UST Sites (34 Sites)	**11,575,798**		N/A	N/A	N/A
Other Sites						
	Subtotal Other Sites (2 Sites)	**1,244,133**	**	N/A	N/A	N/A
Total SIR Program Inactive Sites		**29,625,674**		2,000	-	-
Total SIR Program Active & Inactive Sites		**560,441,898**		**26,265,000**	**18,177,590**	**22,019,500**

Notes

1. Section I of Table 1 includes active sites for which SIR costs were incurred during the reporting period and/or costs are projected to be incurred after the reporting period. Section II of Table 1 includes sites with no current or anticipated future SIR costs. In Section II, past costs are provided by site for Superfund and MGP sites and by program for the 43 inactive Appendix B sites, for the 33 inactive UST sites` and for the 2 Other sites.

2. All projected activities and costs were based on information available at the time they were developed and on anticipated actions of others such as approval by the DEC, access provided by property owners and property owners' development plans.

3. As of December 31, 2014, the accrued liability for CECONY's SIR programs was $665,896,257. In 2014, Con Edison estimated that its aggregate undiscounted potential liability for MGP sites and the Astoria site (which includes a MGP site) could range up to $2.6 billion.

* The Total SIR costs through 2014 for North First Street Terminal and Kent Avenue include site investigation costs incurred prior to 2014 that were reclassified during the reporting period.

** The Subtotal for Inactive Sites -- Other Sites, reflects an addition of $24,339 associated with an accounting adjustment for the Wadsworth Site.

Table 2

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	Reporting Year				Variation from Projection? (Y or N)	Projected Year			
			1Q14	2Q14	3Q14	4Q14		1Q15	2Q15	3Q15	4Q15
MGP Sites											
	173rd Street MGP	Continue ongoing post-remediation training of NYC Parks Department personnel on SMP requirements.	OMM*	OMM*	OMM*	OMM*	N	OMM*	OMM*	OMM*	OMM*
	Cedar Street Works	RI work plan approved and fieldwork underway	RI	RI	RI	RI	N	RI	RI	RI	RI
	Central Avenue Works	RI report submitted to DEC; assume deed restriction and SMP.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	East 11th Street Works	Draft OU-1 AAR submitted to DEC, AAR for OU-2 being prepared	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 14th Street Works	Erosion control completed.					N				
	East 17th Street & East 19th St. (ST)	Draft Decision Documents prepared by DEC.	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 21st Street MGP (PCV)	Draft AAR for OU-1 submitted in 7/10; draft IRM work plan for NAPL recovery submitted in 10/11. RI report for OU-3 under review by DEC.	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 99th Street Works	Draft AAR being prepared.	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 108th Street Holder	Draft AAR (includes E. 111st Street) submitted in 3/10.	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 111th Street Works	Draft AAR (includes E. 108th Street) submitted in 3/10. IRM completed as part of parking lot reconstruction at Lafayette Warehouse parcel.	RP	RP	RP	RP	N	RP	RP	RP	RP
	East 115th Street Works	Remedial design is ongoing. SSDS construction scheduled for Summer 2014.	RP	RP	RA	RP	N	RP	RP	RA	RP
	East 138th Street Works	SC is ongoing.	SC	SC	SC	SC	N	SC	SC	SC	SC
	East 175th Street Station	No further action required at this site.	NFA	NFA	NFA	NFA	NA	NFA	NFA	NFA	NFA
	Farrington Street Gasholder	RI is on-going.	RI	RI	RI	RI	N	RI	RI	RI	RI
	Farrington Street MGP	Continue post-Interim Remedial Measure groundwater monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Greenburgh Station	No further action required at this site.	NFA	NFA	NFA	NFA	NA	NFA	NFA	NFA	NFA
	Hastings on Hudson MGP	RI report submitted to DEC, awaiting DEC comments	RI	RI	RI	RI	N	RI	RI	RI	RI
	Hester Street Works	SC report approved, additional investigation not required; draft SMP submitted to DEC.	RP	RP	RP	RP	N	RP	RP	RP	RP
	Hunts Point Compressor	Continue ongoing post-remediation monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Hunts Point MGP	Working on obtaining access for SC at MTS and Sultana Citarella. Remedial Planning underway for Krasdale Foods OU-2.	SC RP	SC RP	SC RP	SC RP	N	SC RP	SC RP	SC RP	SC RP
	Ludlow Street Works	RI field work completed.	RI	RP	RP	RP	N	RI	RP	RP	RP
	Mount Vernon Works	Remediation completed. Longterm OM&M	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Ossining Works	AAR is being prepared	RP	RP	RP	RP	N	RP	RP	RP	RP

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
	Pelham Works	Remediation fieldwork completed; corrective action to address gap under sheeting completed. On-going OMM taking place. Additional investigation of off-site impacts completed, further field work required to complete delineation.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Pemart Avenue Works	Onsite RI completed. Draft AAR submitted to DEC - pending final approval. Remedial design commenced in 2013.	RP	RP	RP	RP	N	RP	RP	RP	RP
	Purdy Street Station	Revised AAR submitted to DEC in September 2013; draft decision document prepared by DEC; awaiting concurrence of property owner. IRM completed to support construction of new school building; DEC approved IRM Report.	RP	RP	RP	RP	N	RP	RP	RP	RP
	Rye Gas Works	RI completed, DEC approved RI report,	RI	RI	RI	RI	N	RI	RI	RI	RI
	Saw Mill River Station	Revised SC report approved. No MGP impacts were found. DEC requiring SMP.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Tarrytown (Leaseway)	Continue ongoing post-remediation monitoring.	OMM*	OMM*	OMM*	OMM*	N	OMM*	OMM*	OMM*	OMM*
	Unionport Works	RI for offsite areas will start after access is obtained; AAR being prepared	RP	RP	RP	RP	N	RP	RP	RP	RP
	West 18th Street	Owner has entered this property into the BCP and will implement the remedy under its BCA after DEC approval. This parcel is no longer being managed by Con Edison. Site-wide RIR and AAR submitted in 2010.	RP	RP	RP	RP	N	RP	RP	RP	RP
	West 42nd Street Works	RI report for off-site areas submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
	West 45th Street Works	OU-2 revised AAR submitted to DEC September 2013; approved by DEC, awaiting Intrepid Museum final redevelopment plans to design and implement remedy. OU-1 RAWP submitted to DEC for review.	RP	RP	RP	RP	N	RP	RP	RP	RP
	White Plains MGP	Final Engineering Report approved. Continue post-remediation semi-annual groundwater monitoring.	OMM*	OMM*	OMM*	OMM*	N	OMM*	OMM*	OMM*	OMM*
	Woodworth Avenue Works	SC work plan approved; working on access agreements.	RI	RI	RI	RI	N	RI	RI	RI	RI
	York Avenue Station	RI field work underway, working on access to complete remaining work.	RI	RI	RI	RI	N	RI	RI	RI	RI
	Zerega Avenue Station	RI report approved. Remedial action not anticipated other than deed restriction and SMP.	RP	RP	RP	RP	N	RP	RP	RP	RP
Superfund Sites											
	Arthur Kill Station	Remediation completed. Site delisted from NY State Registry of Inactive Waste Sites. No further action required.	NFA	NFA	NFA	NFA	N	NFA	NFA	NFA	NFA

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
	Curcio Scrap Metal	Soil remediation completed. Ongoing groundwater monitoring & reporting. To address EPA's request that we evaluate options to address trichloroethylene exceedances of groundwater standards, we submitted a technical memo under which we recommended a pilot test of in-situ treatment in one well. The technical memo was approved by EPA.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Echo Avenue	Remediation completed. DEC requires deed restriction & site management plan, which cannot be completed until Con Edison purchases State-owned property in the eastern portion of the site. Sale pending.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Flushing Creek	The DEC has issued a Decision Document approving the remedy, which will involve dredging PCB-contaminated sediment, restoring the dredged areas, and institutional controls. A Pre-Design investigation (PDI) has been completed and a 95% Remedial Design Report was submitted to DEC.	RP	RP	RP	RP	N	RA	RA	RA	RA
	Maspeth Substation	Soil remediation completed; NFA issued by DEC for remediated yard & adjacent residential properties. However, off-site groundwater monitoring and, as needed, oil recovery, are ongoing.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
Appendix B Sites											
2	East River Area	Initial investigation completed; investigation report under DEC review; a supplemental investigation has been completed; consultant preparing supplemental report for submittal to DEC; some remediation may be required; product recovery, manhole cleanouts & groundwater monitoring ongoing.	RI/RA/OMM	RI/RA/OMM	RI/RA/OMM	RI/RA/OMM	N	RI/RA/OMM	RI/RA/OMM	RI/RA/OMM	RI/RA/OMM
4a	12th St & 41st Ave	On going groundwater monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
7a	FDR/E71st St. (Pipeline 2)	Investigation Work Plan approved; field investigation pending. Will be addressed in conjunction with fuel oil pipeline closure activities.	RI	RI	RI	RI	N	RI	RI	RI	RI
9	Astoria Blvd/78th Street	Investigation underway.	RI	RI	RI	RI	N	RI	RI	RI	RI
12	Farragut	Initial and supplemental investigations completed and report submitted to and approved by the DEC; a remedial action work plan was submitted to and approved by the DEC to address oil finding.	RI	RI	RI	RI	N	RI/RA	RI/RA	RI/RA	RI/RA

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
14	Hudson Ave.	Investigation completed; DEC requested and the Company submitted a comprehensive report that assesses of all data to determine next steps; product recovery system operating; hydraulic control system for fuel oil tank farm area operated as needed; soil excavation will be required in some areas.	RA/OMM	RA/OMM	RA/OMM	RA/OMM	N	RI/RA	RI/RA	RI/RA	RI/RA
19	W. 49th St. Substation Area (11th Ave.)	Dielectric fluid related to an historic spill encountered during feeder repair; recovery system installed and product recovery ongoing. Additional investigation is required. Work plan submitted to DEC, which provided comments. Revised work plan submitted and is pending DEC approval.	RI	RI	RI	RI	N	RI/RA	RI/RA	RI/RA	RI/RA
20	Hellgate Area (Locust Ave)	DEC issued no further action letter; However, oil found when preparing to decommission monitoring wells. Work plan to address new oil finding pending DEC approval.	OMM	OMM	OMM	OMM	Y	OMM*	OMM*	OMM*	OMM*
22	Westchester Ave.	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
23	E. 25th St./FDR Drive	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
28	W. 59th St./11th Ave. (West End Ave)	Investigation Work Plan submitted to DEC, which has conditionally approved it pending final revisions to be submitted.	RI	RI	RI	RI	N	RI	RI	RI	RI
30	Meeker Ave./Leonard St.	Investigation Work Plan approved by the DEC; field investigation underway	RI	RI	RI	RI	N	RI	RI	RI	RI
33	79th St./3rd Ave., B'klyn	Revised Investigation Work Plan submitted to DEC, which provided additional comments. Response to DEC comments and revised work plan pending.	RI	RI	RI	RI	N	RI	RI	RI	RI
35	Park Place / New York Ave., B'klyn	Investigation Work Plan submitted to DEC, which provided comments. Responded to DEC comments and submitted revised work plan, which is pending DEC review..	RI	RI	RI	RI	N	RI	RI	RI	RI
38	52nd St./1st Ave., B'klyn	After DEC approved the investigation work plan, Con Edison determined that the open spill at this site should be transferred to another party and requested that the DEC transfer it. Such transfer request is pending DEC review. The schedule specified for 2015 assumes that the DEC will approve Con Edison's request in 2Q15.	RI	RI	RI	RI	N	RI	NFA	NFA	NFA
39	108th Street & 64th Road	Investigation performed. Additional investigation is required to address finding of oil.	RI	RI	RI	RI	N	RI	RI	RI	RI
49	141st St./Brook Ave.	Investigation Work Plan submitted to DEC, which provided comments.	RI	RI	RI	RI	N	RI	RI	RI	RI
56	Broadway/131st St - 141st St	Initial investigation completed; investigation report submitted to DEC, which provided comments. Supplemental investigation completed; investigation report and revised Remedial Action Work Plan under preparation.	RI/RP	RI/RP	RI/RP	RI/RP	N	RI/RP	RP	RP	RP

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
57	4th Ave. & Garfield St./6th St.	Investigation Work Plan submitted to DEC, which provided comments. Response to DEC comments and revised work plan pending.	RI	RI	RI	RI	N	RI	RI	RI	RI
59	Jay St. and Concord St.	Investigation Work Plan submitted to DEC, which provided comments. Submitted response, which triggered additional DEC comments.	RI	RI	RI	RI	N	RI	RI	RI	RI
60	11th Street Conduit	Investigation Work Plan submitted to DEC, which provided comments. Response to DEC comments and revised work plan pending.	RI	RI	RI	RI	N	RI	RI	RI	RI
61	Flushing Ave./Classon/BQE	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
63	Wythe Ave./North 13th St.	Investigation underway.	RI	RI	RI	RI	N	RI	RI	RI	RI
64	St. James/Gates/Fulton St.	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
65	189th St./Webster Ave.	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
66	233rd St./Webster Ave.	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
67	Morris Pk Av./E180th St-Bronx	Remediation completed. Remediation report submitted to the DEC. As a result of DEC comments, Con Edison performed additional investigation and submitted report to the DEC, which issued a no further action determination and granted the Company's spill closure request.	RI	RI	RI	NFA	Y	NFA	NFA	NFA	NFA
68	Parkchester/Tremont Substation	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
69	Broadway/108th St - 125th St	Initial investigation completed; investigation report submitted to DEC; supplemental investigation and some remediation may be required, although the DEC is reconsidering Con Edison's spill closure request. Periodic remediation in subway tunnel when oil is found there.	RI	RI	RI	RI	N	RI	RI	RI	RI
70	Worth Street N. of Centre St.	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
71	West 59th Street & 5th Avenue	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
72	E. Broadway East of Grand St.	Investigation completed. Additional investigation will be required to address finding of oil.	RI	RI	RI	RI	N	RI	RI	RI	RI
73	West 67th St. West of Broadway	Investigation Work Plan submitted to DEC, which provided comments. Response to DEC comments and revised work plan pending.	RI	RI	RI	RI	N	RI	RI	RI	RI
76	E. 6th St./Ave. A	Investigation Work Plan submitted to DEC	RI	RI	RI	RI	N	RI	RI	RI	RI
78	11th Ave./W. 29th St.	Investigation Work Plan submitted to DEC	RI	RI	RI	RI	N	RI	RI	RI	RI
79	Vernon Blvd/Queens Combined Site (includes Sites 1, 4, 26, 40, & 79)	The initial investigation was combined with those for Sites 1, 4, 26, and 40. Field investigation reports submitted. DEC issued NFA for Site 40 and some spills at Site 26. DEC requires additional investigation at other sites/spills. Investigation reports and supplemental investigation work plans pending DEC review.	RI	RI	RI	RI	N	RI	RI	RI	RI
80	Cooper Ave./73rd Place	Investigation Work Plan submitted to DEC.	RI	RI	RI	RI	N	RI	RI	RI	RI
83	Dunwoodie S/S	Investigation completed; groundwater monitoring & some product recovery ongoing.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
84	Elmsford S/S	Investigation and soil and manhole remediation completed; remediation report has been submitted to and approved by DEC. Product recovery ongoing. DEC has requested an investigation work plan to address an area where oil persists.	OMM	OMM	OMM	OMM/RI	Y	OMM/RI	OMM/RI	OMM/RI	OMM/RI
Astoria Site											
	Dry Weather Flow Treatment Plant	Deactivated in 1Q14. No further action required.	RA	NFA	NFA	NFA	N	RA	NFA	NFA	NFA
	Astoria (IRM)	On-going monitoring & product recovery.	RA	RA	RA	RA	N	RA	RA	RA	RA
	Astoria North Storage Yard Remediation	Remediation completed; cap inspection, maintenance & repair ongoing	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	East Yard Remediation	Investigation & pre-design investigation completed; Interim Corrective Measures Plan submitted to and approved by the DEC; 50% Remedial Design Report submitted to DEC for approval.	RP	RP	RP	RP	N	RP	RP	RP	RP
	Pump House Area Remediation	Investigation Work Plan submitted to DEC for approval.	RI	RI	RI	RI	N	RI	RI	RI	RI
	Gravel Embankment	Remediation completed	NFA	NFA	NFA	NFA	N	NFA	NFA	NFA	NFA
	Athletic Fields	Baseball & soccer fields remediated & NFA obtained. On-going OM&M.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Astoria MGP	Initial investigation report and supplemental investigation work plan submitted to DEC. The work plan is pending DEC approval.	RI	RI	RI	RI	N	RI	RI	RI	RI
	Astoria Site Overall	Additional MGP site investigation required. Sitewide investigation report for previous investigations pending DEC review. Various Interim Corrective Measures completed, underway, and planned. On going groundwater monitoring & product recovery. On-going OM&M of athletic fields and North Storage Yard remediation areas.	RI/RP/ RA/OMM	RI/RP/ RA/OMM	RI/RP/ RA/OMM	RI/RP/ RA/OMM	N	RI/RP/ RA/OMM	RI/RP/ RA/OMM	RI/RP/ RA/OMM	RI/RP/ RA/OMM
Underground Storage Tank (UST) Sites											
	3rd Ave Yard Service Center	Contamination found in various areas of the site; initial additional, sitewide investigation to delineate it performed; additional investigation needed to fill data gaps. On-going product recovery & groundwater monitoring. Remedial action plan for in-situ surfactant treatment of groundwater in one area pending DEC review.	RI/RP/OMM	RI/RP/OMM	RI/RP/OMM	RI/RP/OMM	Y	RI/RP/OMM	RI/RP/OMM	RI/RP/OMM	RI/RP/OMM
	Amoco Fuel Oil Terminal	Remediation completed; remediation report submitted to and approved by DEC, which issued no further action determination. Only remaining activity is to decommission monitoring wells.	RA	RA	RA	OMM	Y	OMM	OMM	NFA	NFA
	Atlantic Avenue Service Center	Investigation report submitted to the DEC. On-going groundwater monitoring; may need to address gasoline contamination after National Grid performs MGP investigation.	RI	RI	RI	RI	N	RI	RI	RI	RI

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
	Bruckner Blvd Operations Center	Soil remediation completed; remediation report approved by the DEC, which made no further action determination; monitoring wells decommissioned.	OMM	OMM	NFA	NFA	N	NFA	NFA	NFA	NFA
	College Point Service Center	Investigation completed. Remediation is not required. DEC made no further action determination; monitoring wells decommissioned.	OMM	OMM	NFA	NFA	Y	NFA	NFA	NFA	NFA
	Newtown Substation	Groundwater remediation system (funnel & gate) installed; on-going groundwater monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Rye Service Center	To be addressed under Rye Gas Works MGP Site.	Not Applicable				NA	Not Applicable			
	Van Nest Complex Service Center	Investigation has been completed and in-situ chemical oxidation treatment implemented. DEC made no further action determination; monitoring wells decommissioned.	OMM	OMM	NFA	NFA	Y	NFA	NFA	NFA	NFA
	West 28th Street Service Center	Investigation completed. In-situ chemical oxidation treatment implemented. On-going groundwater monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM*	OMM*	OMM*
	357 Tuckahoe Road, Yonkers	Investigation required to address gasoline contamination in groundwater.	NA	NA	NA	NA	NA	RI	RI	RI	RI
Other Remediation Sites											
	59th Street Station Fuel Oil Spill	Limited Investigation completed. Closure request submitted to DEC with investigation report. Pending DEC review.	RI	RI	RI	RI	N	RI	RI	RI	RI
	74th Street Station Kerosene Spill	Site investigation completed; DEC closed spill; well decommissioning completed.	OMM	OMM	NFA	NFA	N	NFA	NFA	NFA	NFA
	Dielectric Spill Sites	On going product recovery and/or groundwater monitoring.	OMM	OMM	OMM	OMM	N	OMM	OMM	OMM	OMM
	Kent Ave. (former Generating Station)	Remediation completed. Final Engineering Report and Site Management Plan pending DEC approval. Formal No Further Action determination and limited liability release pending from DEC.	RA	RA	RA	RA	N	RA	OMM*	OMM*	OMM*
	Richmond Terrace (former Generating Station)	Initial site investigation completed. Additional investigation pending decision on possible future use of site.	RI	RI	RI	RI	N	RI	RI	RI	RI
	Van Nest Parking Lot	Site investigation completed; report and NFA request pending DEC review.	RI	RI	RI	RI	N	RI	RI	RI	RI
	24 Market Street, Ossining (former Substation)	Initial investigation completed. Additional investigation will be performed after the existing building is demolished.	RI	RI	RI	RI	NA	RI	RI	RI	RI
	24 St. Casimir Avenue/Columbus Place, Yonkers (former Substation)	Investigation completed. Potential remedial alternatives under review.	RI	RI	RI	RP	NA	RP	RP	RP	RP
	2502-2512 Tilden Avenue (former Substation)	Initial investigation completed. Additional investigation will be performed after the existing building is demolished.	RI	RI	RI	RI	NA	RI	RI	RI	RI

Table 2 - Status of Active SIR Program (Non-PRP Sites)

By Consolidated Edison Company of New York, Inc.

Site #	Site Name	Current Status (as of 12/31/14)	1Q14	2Q14	3Q14	4Q14	Variation from Projection? (Y or N)	1Q15	2Q15	3Q15	4Q15
	280 South Avenue, Staten Island (former Substation)	Investigation completed. No additional investigation or remediation is currently planned.	RI	RI	RI	RI	NA	NFA	NFA	NFA	NFA
	3290 Laconia Avenue/3299 Yates Avenue, Bronx (former Substation)	Initial investigation completed. Additional investigations will be performed before and after the existing building and other structures are demolished.	RI	RI	RI	RI	NA	RI	RI	RI	RI
	34 Ainslie Street (former Substation)	Post building demolition investigation performed. Report will be submitted to DEC, which will determine if additional work is required.	RI	RI	RI	RI	NA	RI	RI	RI	RI
	53 Smith Street, Portchester (former Substation)	Investigation completed. Potential remedial alternatives under review.	RI	RI	RI	RP	NA	RP	RP	RP	RP
	75 Florence Place, Staten Island (former Substation)	Investigation completed. Need for and extent of potential additional investigation or remediation under review.	RI	RI	RI	RI	NA	RI	RI	RI	RI
	800 Central Avenue, Peekskill (former Substation)	Investigation completed. Need for and extent of potential additional investigation or remediation under review.	RI	RI	RI	RI	NA	RI	RI	RI	RI
	132nd Street PURS	Investigation required to address historical oil contamination from an unknown source.	NA	NA	NA	NA	NA	RI	RI	RI	RI

Site Characterization	SC	**From work plan preparation through report approval**
Remedial Investigation	RI	**From work plan preparation through report approval**
Remedial Planning	RP	**From AAR/FS/RAWP preparation through remedial design and procurement**
Remedial Action	RA	**From contractor submittals, through remediation and report approval**
Operation, Monitoring and Maintenance	OMM	
NFA or COC with OM&M	OMM*	
No Further Action Required	NFA	
Not Applicable	NA	**Variation from projection cannot be determined, since projected activities were not included in previous SIR Report**

Notes

1. All projected activities were based on information available at the time they were developed and on anticipated actions of others such as approval by the DEC, access provided by property owners and property owners' development plans.
2. If multiple activities are projected for a site during a quarter, then all such activities are listed and separated by slashes with no fill color used.

Exhibit A

NEW YORK STATE PUBLIC

SERVICE COMMISSION

Case 11-M-0034- Proceeding on Motion of the Commission to Commence Review and Evaluation of the Treatment of the State's Regulated Utilities' Site Investigation and Remediation (SIR) Costs

Inventory of Best Practices for Utility SIR Programs

Pursuant to the November 28, 2012, Order Concerning Costs for Site Investigation and Remediation issued in the above-referenced proceeding, the State's electric and gas utilities that appeared in this proceeding[1] (the "Utilities"), submit the following inventory of best practices for their SIR programs:

1. Operate the SIR program with knowledgeable staff, including site-specific project managers

2. Operate the SIR program using experienced, company-approved SIR program consultants and remediation contractors, and update approved contractor lists, as needed

3. Operate the SIR program using competitive bidding for individual projects or to establish competitive rates for qualified remedial consultants and contractors, except in unique situations such as time sensitive projects, which would not allow sufficient time for implementation of a competitive bidding process, or projects involving specialized services, such as expert legal or technical consultants with specialized expertise or contractors that specialize in a particular technology

4. Operate the SIR program using procurement procedures for construction contracts that include detailed design and contract terms that help bidders understand the scope of work

---

[1] The following companies comprise all the Utilities that appeared in this proceeding: Consolidated Edison Company of New York, Inc. ("Con Edison"), Orange and Rockland Utilities, Inc. ("Orange and Rockland"), Central Hudson Gas & Electric Corporation ("Central Hudson"), The Brooklyn Union Gas Company D/B/A National Grid NY ("KEDNY"), KeySpan Gas East Corporation D/B/A National Grid ("KEDLI"); National Fuel Gas Distribution Corporation ("National Fuel"); Niagara Mohawk Power Corporation D/B/A National Grid ("Niagara Mohawk"), New York State Electric & Gas Corporation ("NYSEG") and Rochester Gas and Electric Corporation ("RG&E").

5. Solicit bids from qualified contractors and evaluate whether the low bidder understands the requirements of the project and the bid specification and that the low bid is reasonable compared with other bids

6. Operate the SIR program using contract management and oversight processes that include change order and invoice review and approval processes

7. Pursue cost-effective remedies based on the current use and contemplated use or re-use of properties and their zoning

8. Use cost-effective waste management practices at remedial sites that minimize overall costs and liabilities, such as the re-use of excavated soils on site, to the extent feasible, and subject to government, property owner and facility requirements and environment, health and safety considerations

9. Work with other utilities to share the costs of research evaluating remedial technologies and risks from MGP contamination and other contaminants

10. Monitor and comment on proposed regulations that would significantly affect the SIR program

11. Evaluate the use of innovative and cost-effective techniques to investigate and remediate sites where appropriate.

12. Only use waste disposal facilities that have been pre-approved by the utility to minimize the potential for creating new liabilities

13. Conduct environmental due diligence reviews prior to purchasing or selling property

14. Perform on-going review of long-term post-construction monitoring programs to identify possible scope reduction and, where possible, site closure and cessation of monitoring

15. Pursue third party cost sharing opportunities, either as shared liability or by coordinating construction and remedial construction activities with property developers, where possible and appropriate

16. Pursue opportunities for insurance reimbursement of SIR costs, where appropriate

17. Maintain on-going communication and coordination with applicable regulatory agencies to ensure compliance with all permits and orders to avoid potential additional costs resulting from non-compliance.

Dated: March 28, 2013

Consolidated Edison Company
of New York, Inc.
31-01 20th Avenue
Long Island City NY 11105-2048
www.conEd.com

October 30th, 2018

Mr. Douglas MacNeal, P.E.
Division of Environmental Remediation
New York State Department of Environmental Conservation
Hunters Point Plaza
Region 2 Office
47-40 21st Street
Long Island City, NY 11101

RE: Consolidated Edison Company of New York, Inc.
Periodic Review Report October 2017 – October 2018
Kent Avenue Former Generation Station
Brooklyn, NY
NYSDEC Site Number: V00732-2

Dear Mr. MacNeal:

The enclosed Periodic Review Report has been prepared by Roux Environmental Engineering and Geology, D.P.C. (Roux), pursuant to the New York State Department of Environmental Conservation (NYSDEC) approved Site Management Plan for the Con Edison Former Generation Station located at 500 Kent Avenue in Brooklyn, New York, also referred to as Voluntary Cleanup Agreement #D2-0003-02-08, Amendment #2, Site No. V-00732-2, and as amended on July 16th, 2010. This report provides a summary of the sites history and current condition, including a completed Annual Inspection Form and Institutional and Engineering Controls Certification Form during the period of October 2017 - October 2018.

Please feel free to contact me at 718-204-4186 should you have any questions or if you need any assistance during your review of this submittal.

Sincerely,

Kristin Mobyed
Project Manager
EH&S, Remediation
Consolidated Edison Company of NY, Inc.

Attachment: Period Review Report 2018 – 500 Kent Avenue

cc: N. O'Halloran

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B. Inspection Forms
C. Institutional and Engineering Controls Certification Form
D. Photo Log

LIST OF ACRONYMS

Con Edison	Consolidated Edison Company of New York, Inc.
DCR	Declaration of Covenants and Restrictions
ECs	Engineering Controls
ICs	Institutional Controls
MGP	Manufactured Gas Plant
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
PRR	Periodic Review Report
Shaw	Shaw Environmental & Infrastructure Engineering of New York, P.C.
SMP	Site Management Plan
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

1. INTRODUCTION

This Periodic Review Report (PRR) was prepared by Roux Environmental Engineering and Geology, D.P.C. (Roux), as required by the Site Management Plan (SMP) which is an element of the remedial program at the Former Kent Avenue Generating Station (hereinafter referred to as the "Site") under the New York State (NYS) Voluntary Cleanup Program (VCP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with Voluntary Cleanup Agreement (VCA) #D2-0003-02- 08, Amendment #2, Site No. V-00732-2, which was executed on July 26, 2002 and last amended on July 16, 2010. The SMP was prepared by Shaw Environmental & Infrastructure Engineering of New York, P.C. (Shaw), on behalf of Consolidated Edison Company of New York, Inc. (Con Edison), in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 3, 2010, and the guidelines provided by NYSDEC. The SMP addresses the means for implementing and monitoring the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Declaration of Covenants and Restrictions (DCR) for the Site.

1.1 Site Background

1.1.1 Site Location and Description

The Site is located in Brooklyn, Kings County, New York and is identified as Block 2023 and Lot 10 on the Tax Map of the Borough of Brooklyn/Kings County. The site is an approximately 2.6- acre area bounded by Division Avenue to the north, a former manufactured gas plant site referred to as Former Nassau Gas Works which is owned by National Grid to the south, Kent Avenue to the east, and Wallabout Channel to the west (see Appendix A - **Figure 6** of the SMP). The boundaries of the Site are more fully described in the SMP. The Site is currently a vacant lot with no current operations.

1.1.2 Remaining Contamination

The Site contains residual contamination left after completion of the remedial action. The Site is underlain by historic urban fill and soil impacted by historic industrial operations at depths beyond the remedial excavation limits that have elevated levels of SVOCs and metals that may exceed regulatory cleanup objectives. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment. A more detailed description of the remaining contamination on-site can be found in Section 1.4.3 of the SMP.

1.1.3 Soil Cover System

Exposure to subsurface soil contamination is mitigated by a cover system that has been constructed on the Site. The cover system, as shown in the SMP on Figure 6 and included as Appendix A, consists of four different configurations:

- A deep cover system with a total thickness of between 4.5 to 11 feet, consisting of compacted structural fill covered with a minimum of 4 inches of 3/4-inch stone. This deep cover system, located within the North and South Excavation Areas, has a demarcation layer (orange plastic fencing) placed directly on top of the concrete slab floor at the base of the remedial program excavation;
- A deep cover with a total thickness of between 8 to 12 feet, consisting of clean fill covered with a minimum of 4 inches of 3/4-inch stone. This deep cover system, located within the Former Generating Station Building Foundation, does not have a demarcation layer on top of the concrete slab floor within the building foundation;

- A soil cap located within the southwest portion of the Site that consists of 20 inches of compacted structural fill covered with a minimum of 4 inches of 3/4-inch stone. This cap has a demarcation layer (orange plastic fencing) at its base, directly covering contaminated soil/fill; and
- A 4-foot-thick cover system consisting of clean fill, covered by structural fill, covered by a minimum of 4 inches of 3/4-inch stone. This clean fill directly covers contaminated soil/fill that was not removed during the remedial program, and there is no demarcation layer separating the clean fill from the contaminated soil/fill.

2. SITE MONITORING

2.1 Media Monitoring Program

With the exception of the historic urban fill underlying the entire Site, all sources of contamination have been removed and very little-known soil/fill contamination remains at the Site above the water table.

There is known groundwater contamination at the Site as a result of the adjacent former manufactured gas plant (MGP) site that was located immediately to the south of the Site. The full impact of the MGP-related contamination on the Site was determined by the 2014 subsurface investigation that was conducted by National Grid. It is anticipated that groundwater monitoring will be required at the Site and once National Grid has completed and reported on its MGP-related subsurface investigation, NYSDEC can identify the requirements of a groundwater monitoring program for the Site (Shaw 2015). No known subsurface investigation has been completed by National Grid at this time.

Previous site investigations did not collect any soil vapor data, but because of historic operations at the Site and the adjacent MGP, the potential for soil vapor intrusion exists. However, since there are no structures remaining on the property, the current site use does not warrant any soil vapor monitoring.

2.2 Inspection Results

As required by the SMP, the annual cover system inspection, as well as the annual site wide inspection, was performed on October 23, 2018. The completed inspection form is provided as Appendix B.

2.2.1 Engineering Controls

The soil cover system appears to be functioning as designed. There appeared to be very minor rutting (less than 2 inches in depth) from vehicular traffic in the vicinity of a stickup monitoring well installed in the southwest corner of the site. Based on the depth and location of the rutting, these do not affect the performance of the cover system.

2.2.2 Institutional Controls

The ICs detailed in the SMP are being followed as required by the DCR for the Site. The Site is limited to restricted residential, commercial or industrial uses only. The site is currently a vacant lot, in compliance with this restriction.

2.2.3 Media Monitoring Results

No sampling events were performed during this monitoring period.

2.2.4 Site Evaluation

The Engineering and Institutional Controls continue to perform as designed and prevent future exposure to residual contamination by controlling disturbances of the subsurface contamination and limiting the use and development of the Site to restricted residential, commercial or industrial uses only. No corrective actions are proposed at this time as the remedy continues to be effective. No preventative measures were recommended in the 2017 PRR. There are no preventive maintenance recommendations based on the 2018 inspection. The next cover system and site wide inspections are scheduled for 2019.

3. REFERENCES

Shaw Environmental & Infrastructure Engineering of New York, P.C, Former Kent Avenue Generating Station Site Management Plan. February 2015.

APPENDICES

A. SMP Figure
B. Inspection Forms
C. Institutional and Engineering Controls Certification Form
D. Photo Log

APPENDIX A

SMP Figure

OFFICE NEW YORK, NY | DRAWING NUMBER FIGURE 6

CONCRETE SLAB FOUNDATION

A

A'

WALLABOUT CHANNEL

PRESUMED LIMIT OF REMNANT BASEMENT SLAB

BURIED BOILER ROOM FOUNDATION WALL

PROPERTY LINE (TYP)

FORMER ASH PIT

FORMER NASSAU GAS WORKS

FORMER GENERATING STATION BUILDING FOUNDATION (BACKFILLED WITH CLEAN FILL)

DIVISION AVENUE

KENT AVENUE

N

SCALE
0 50 100 FEET

LEGEND

- DEEP COVER SYSTEM WITH DEMARCATION BARRIER ABOVE CONCRETE SLAB BOTTOM
- DEEP COVER SYSTEM WITH NO DEMARCATION BARRIER ABOVE CONCRETE SLAB BOTTOM
- SOIL CAP (2 FOOT THICK) SYSTEM
- FOUR FOOT THICK COVER SYSTEM WITH NO DEMARCATION BARRIER
- A — CROSS SECTION MARK (SECTION SHOWN ON FIGURE 7)
- CONCRETE CAP

SOURCE: "PHASE II INVESTIGATION REPORT:KENT AVENUE SITE", LAWLER, MATUSKY, AND SKELLY ENGINEERS, LLP, DATE: FEBRUARY 2000

Shaw Environmental & Infrastructure Engineering of NY, PC

DESIGNED BY: C. KRAEMER	CON EDISON			
DRAWN BY: S. SHATZ	LONG ISLAND CITY, NEW YORK			
CHECKED BY: C. KRAEMER	SITE COVER SYSTEMS			
	FORMER KENT AVENUE GENERATING STATION 500 KENT AVENUE, BROOKLYN, NEW YORK			
APPROVED BY: D. CHEN	DATE: 6/24/14	SCALE: AS SHOWN	DRAWING NO. FIGURE 6	REV NO. -

File: V:\ - CLIENT\Con Edison\146740 Kent Ave\Working\IRM\CADD\IRM\FER & SMP\SMP Figure 6.dwg
Plot Date/Time: Jun 24, 2014 - 9:53am
Plotted By: sara.shatz

APPENDIX B

Inspection Forms

Annual Inspection Form

Former Kent Avenue Generating Station
500 Kent Avenue, Brooklyn, New York

Inspector's Name: Christian Hoelzli	Weather Conditions: Cloudy
Inspection Date: 10/23/18	Air Temperature (ºF): 55
Inspection Time: 9:15	
Comments:	

COVER SYSTEM INSPECTION

1. Walk and inspect the entire perimeter of the Site.

2. Walk and inspect all of the unpaved areas of the Site.

* Are there any signs of significant cracks, settlement or deterioration? No
* Has any of the cover material been removed? No
* Are there signs of vehicular use on the unpaved areas (tire tracks, rutting, etc.)? Minor rutting (less than 2" inches in depth; no rutting in 2 foot cover system area)
* Have any structures been constructed on the unpaved areas? No
* Is the protective casing for the monitoring wells secured? Yes
* Are there any signs of soil washing or erosion (gullies, soil washed out into lower areas)? No
* Are there any signs of intrusive activities (digging, trenching, grading, excavating, etc.)? No
* Comments: None

Repair

Summarize needed/completed repairs to Cover System:

None

Inspector's Signature: Christian Hoelzli

APPENDIX C

Institutional and Engineering Controls Certification Form

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7):

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **V00732**

Site Name Kent Avenue Station Site

Site Address: 500 Kent Avenue Zip Code: 11211
City/Town: Brooklyn
County: Kings
Site Acreage: 2.6

Reporting Period: October 01, 2017 to October 01, 2018

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	X	☐
7. Are all ICs/ECs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

October 31, 2018
Date

SITE NO. V00732

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
2023-10	Con Ed	Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

A deed restriction restricts use of the site to restricted residential use and prohibits the use of groudwater under the site. A site management plan includes requirements for annual certification of the soil cover and a soil management plan if excavation is necessary on the site.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
2023-10	Cover System

A soil cover is in place. Annual certification of the soil cover's placement is necessary.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

October 31, 2018
Date

IC CERTIFICATIONS
SITE NO. V00732

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Christopher Proce (print name) at Roux Environmental Engineering and Geology, D.P.C. 209 Shafter Street, Islandia, NY 11749 (print business address),

am certifying as Designated Representative of Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification — Date: 10/31/18

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Ian L. Holst (print name) at Roux Environmental Engineering and Geology, D.P.C. 209 Shafter Street, Islandia, NY 11749 (print business address),

am certifying as a Qualified Environmental Professional for the Owner (Owner or Remedial Party)

STATE OF NEW YORK
IAN L HOLST
098652
LICENSED PROFESSIONAL ENGINEER

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date
		10/31/18

APPENDIX D

Photo Log



Photograph 1: Condition of stickup monitoring well in South Excavation Area with minor rutting



Photograph 2: Condition of flushmount monitoring well



Photograph 3: Boundary between South Excavation Area and Former Generating Station Building Foundation



Photograph 4: Condition of Remnant Basement Slab



Photograph 5: Condition of South Excavation Area



Photograph 6: Condition of Former Generating Station Building Foundation



Photograph 7: Condition of North Excavation Area