Chapter 10: Hazardous Materials

A. INTRODUCTION

This chapter assesses the potential for the presence of hazardous materials in soil and/or groundwater at the project sites. As described in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the goal of a hazardous materials assessment is to determine whether a proposed action would increase the exposure of people or the environment to hazardous materials, and if so, whether the increased exposure would lead to significant public health or environmental effects. As described in Chapter 1, "Project Description," the two applicants are requesting discretionary actions to facilitate the redevelopment of two project sites with a mix of residential and commercial uses (the "proposed projects") in the West Chelsea neighborhood of Manhattan Community District 4. The Project Area (project site A—601 West 29th Street, project site B—606 West 30th Street, and intervening Lot 38, which is not part of either project site) is located on Block 675, Lots 12, 29, 36, and 39 bounded by West 29th and West 30th Streets, Route 9A/Twelfth Avenue and Eleventh Avenue. The proposed projects would entail demolition of the existing structures and excavation for the proposed new buildings, foundations, and utilities.

B. PRINCIPAL CONCLUSIONS

The proposed actions would not result in any significant adverse impacts related to hazardous materials. The hazardous materials assessments identified various potential sources of subsurface contamination on, or in close proximity to, the proposed development sites. Potential sources of contamination include past or present industrial and automotive uses including a gasoline station and automobile/truck repair (with gasoline, diesel and waste oil above-ground storage tanks [ASTs] and underground storage tanks [USTs], and hydraulic lifts), spray paint booths, a freight business, a smelting and refining facility, an iron works, an asbestos warehouse, and a solid waste transfer station. There were also known petroleum spills on Lots 36 and 39; the spills were given a "closed" status by the New York State Department of Environmental Conservation (DEC); however, residual contamination likely remains in place.

To reduce the potential for adverse impacts associated with new construction resulting from the proposed actions, further environmental investigations and remediation will be required. To ensure that these investigations are undertaken, hazardous materials (E) Designations would be placed on the proposed project site lots and Lot 38. The (E) Designations require approval by the New York City Office of Environmental Remediation (OER) prior to obtaining NYC Buildings Department (DOB) permits for any new development entailing soil disturbance.

Impacts would be avoided by incorporating the following measures:

- The proposed projects would comply with the hazardous materials (E) Designation requirements. Prior to any new construction entailing subsurface disturbance, the applicant would submit a Phase I Environmental Site Assessment (ESA) and sampling protocol (for

any potential additional subsurface investigation) to OER for review and approval. A report documenting the subsurface investigation findings along with a Remedial Action Plan (RAP) setting out procedures to be followed prior to, during, and following construction (e.g., for soil management, tank removal, dust control, air monitoring for workers and the community, health and safety, and vapor controls for the new building) is then submitted for OER review and approval. Documentation that the RAP procedures were properly implemented is required by OER before New York City building permits allowing occupancy can be issued.

- If dewatering is necessary for the proposed construction, testing would be performed to ensure that the groundwater would meet New York City Department of Environmental Protection (DEP) sewer discharge requirements. If necessary, the water would be pretreated prior to discharge to the City's sewer system, as required by DEP permit/approval requirements.
- Prior to and during any demolition or renovation of any structures, federal, state and local requirements relating to asbestos-containing materials (ACM) and lead-based paint (LBP) would be followed.
- Unless there is labeling or test data indicating that any suspect polychlorinated biphenyls (PCBs)-containing hydraulic lift, electrical equipment, and fluorescent lighting fixtures do not contain PCBs, and that any fluorescent lighting bulbs do not contain mercury, disposal would be conducted in accordance with applicable federal, state, and local requirements.

With the (E) Designations in place and implementation of the measures described above, the proposed projects would not result in significant adverse impacts related to hazardous materials.

C. METHODOLOGY

Known or potential hazardous material conditions resulting from previous and existing uses in and near the Project Area were assessed through Phase I Environmental Site Assessments (ESAs) and Phase II Environmental Site Investigations. The Phase I ESAs included visual inspections; interviews with site owners/managers; and a review of federal, state, and local regulatory databases, New York City Fire Department (FDNY) and DOB databases, previous environmental reports, U.S. Geological Service maps, and recent and historical Sanborn fire insurance maps. The Subsurface (Phase II) Investigation on project site A included the advancement of eight soil borings with the collection and laboratory analysis of eight soil samples and five groundwater samples (from temporary wells installed in borings) and the installation of two soil vapor points with the collection of a soil vapor sample from each.

The following reports were reviewed:

- Project site A—*Phase I Environmental Site Assessment* (ESA) prepared by Fleming Lee-Shue and Velocity Consulting, Inc. dated April 2012; AKRF, Inc. performed a visual inspection and reviewed State and federal regulatory databases in March 2017 to update the 2012 Phase I ESA; *Phase II Environmental Site Investigation Report* prepared by Fleming Lee-Shue dated August 2013; and various reports documenting the spill remediation activities and quarterly groundwater monitoring conducted on Lot 36 from 2006 to 2014 concluding with the *Site Status Update Report* requesting closure dated November 24, 2014, prepared by ARCADIS of New York, Inc.
- Project site B—*Phase I Environmental Site Assessment Report* prepared by Hydro Tech Environmental, Corp. dated June 15, 2015.

The findings of the Phase I ESAs and subsurface investigations are discussed below in "Existing Conditions."

D. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The project sites are approximately 6.5 to 17.5 feet above mean sea level and the area slopes down to the west, toward the Hudson River. The project sites contain historical fill material given the original shoreline extended almost to the current location of Tenth Avenue; the subsurface investigations on project site A encountered fill material containing brick, ash and wood.

Bedrock is expected to be deeper than 25 feet below-grade. Groundwater was first encountered at approximately 11 to 14 feet below-grade during subsurface investigations on project site A and is expected to flow in a generally westerly to northwesterly direction towards the Hudson River. However, the actual flow direction can be affected by many factors including past filling, utilities and rail tunnels, old bulkheads, tidal fluctuations, and other factors beyond the scope of investigations conducted to date. Groundwater in Manhattan is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

HAZARDOUS MATERIALS ASSESSMENT

PROJECT SITE A

The 2012 Phase I ESA for project site A was performed in conformance with ASTM Standard E1527-05 and assessed the potential for the presence of hazardous materials, based on reconnaissance of the project site and surrounding area, review of data on geology and hydrology of the area, examination of historical Sanborn Fire Insurance maps and aerial photographs, review of prior reports, and review of pertinent federal and state regulatory databases. An updated regulatory database search and site inspection was conducted in March 2017. "Recognized Environmental Conditions" (RECs), meaning the presence or likely presence of any hazardous substances or petroleum products, were identified in, on, or at the project site; specifically:

- The northeastern corner of project site A (Lot 36) has been used as a gas station since circa 1927. The gasoline station was registered in the New York State Department of Environmental Conservation (DEC) Petroleum Bulk Storage (PBS) database with 29 underground storage tanks (USTs), six of which were in service at the time of the report.
- Petroleum Spill No. 93-05598 was reported in August 1993 when contaminated soil was encountered during removal of seventeen 550-gallon gasoline USTs. According to multiple *Site Status Update Reports* by ARCADIS, enhanced fluid recovery (EFR) events were conducted from January 2006 to March 2010, with additional vacuum-enhanced recovery, high vacuum dual-phase extraction (HVDPE) and soil vapor extraction (SVE) occurring in 2012 and 2013 in response to continuing free product. Chemical oxidation injections were performed in June 2010. Well gauging and product-absorbing sock replacements were conducted from until August 2014. ARCADIS reported that further recovery/remediation of residual free product was not feasible due to low soil permeability and site logistics. According to the spill file notes, the cleanup did not meet DEC standards but further

remediation was infeasible. Contamination was reportedly limited to groundwater in one area and was not migrating off-site. In a letter dated November 26, 2014, the DEC granted closure to the spill case with a "does not meet standards" classification.

- Historical uses at project site A included automobile/truck repair, freight businesses, a smelting and refining facility, an iron works, a waste transfer business, and an asbestos warehouse.
- Historical and current industrial uses in the surrounding area included rail and freight yards, garages and auto-related facilities with gasoline tanks, and a Con Edison Service Center. The regulatory database identified additional nearby sites with PBS, Brownfield, Resource Conservation and Recovery Act (RCRA), and active- and closed-status spill listings.
- The gasoline station used two hydraulic lifts, which might have contained PCBs. Based on the ages of the buildings, LBP, ACM, and PCBs may be present in building materials.
- The southeastern corner of project site A (Lot 29) site was identified as a Small Quantity Generator (SQG) of hazardous wastes, with waste manifests indicating generation of spent non-halogenated solvents, ignitable, methyl ethyl ketone, chromium, and barium. Paints and solvents were observed during the site inspection, with no evidence of material release noted. There were no violations reported for this SQG facility.

A Subsurface (Phase II) Investigation on project site A included the advancement of eight soil borings with the collection and laboratory analysis of eight soil samples and five groundwater samples (from temporary wells installed in borings) and the installation of two soil vapor points with the collection of a soil vapor sample from each. A summary of the laboratory analytical results is provided below.

- Soil Analysis—No volatile organic compounds (VOCs) or pesticides were detected above the 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs), the most stringent criteria used by DEC. Numerous semivolatile organic compounds (SVOCs) and metals were identified in soil samples above USCOs, but generally at concentrations typical of urban fill material. Additionally, total PCBs were detected in one soil sample above the USCO.
- Groundwater Analysis—Two VOCs were identified in two groundwater samples at concentrations above the DEC ambient water quality standards (AWQSs), the standards DEC uses throughout the State, but which were developed assuming use as drinking water (a scenario which does not occur now and which would not occur in the future). Groundwater samples were not analyzed for SVOCs, metals, pesticides, or PCBs.
- Soil Vapor Analysis—The chlorinated solvent tetrachloroethene (PCE) was detected in one soil vapor above the New York State Department of Health (NYSDOH) Air Guideline Value (AGV), but below the NYSDOH Matrix Value. Methylene chloride was also detected above its AGV, but was likely a laboratory contaminant (as it was detected in the laboratory blank). Additionally, VOCs commonly associated with petroleum and solvents (for which there are no AGVs or Matrix Values) were detected at concentrations not atypical of current/former commercial/industrial neighborhoods.

PROJECT SITE B AND LOT 38

The 2015 Phase I ESA for project site B was performed in conformance with ASTM Standard E1527-13 and assessed the potential for the presence of hazardous materials, based on reconnaissance of the project site and surrounding area, review of data on geology and

hydrology of the area, examination of historical Sanborn Fire Insurance maps and aerial photographs, review of prior reports, and review of pertinent federal and state regulatory databases. The Phase I ESA identified RECs; specifically:

- Historical and current uses of project site B and Lot 38 as a vehicle maintenance garage and automobile repair. Drums of oil associated with vehicle repair were stored on project site B.
- Project site B was registered in the PBS database with nine out-of-service (removed) diesel, motor oil, hydraulic oil, and waste oil ASTs and USTs. There is also one in-service waste oil AST registered for Lot 38.
- Spill #0602047 was reported on May 24, 2006, when petroleum product was encountered in the annular space on project site B (between the tank and the secondary containment) of a 2,500-gallon diesel UST. In October 2007 two 2,500-gallon diesel USTs were replaced and DEC files indicate that no contamination was observed during the tank removal. No confirmatory laboratory samples were indicated. The spill was closed by DEC on April 12, 2010.
- Historical fire insurance maps showed gasoline tanks located on project site B from 1950 to at least 2005. Evidence of petroleum storage tanks (patched pipe in floor and historical photograph showing possible gasoline-type roof vent) were also noted. No documentation of gasoline tank closure or removal was provided.
- Potential Vapor Encroachment Conditions were identified for both project site B and Lot 38.
- Suspect ACM and LBP may be present in building materials for both project site B and Lot 38.

A Phase II work plan has been prepared with respect to project site B and would be prepared with respect to Lot 38. Following implementation, a report summarizing the findings will be prepared along with a RAP, as required to satisfy the (E) Designations (see Section F below).

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS

In the future without the proposed projects, no new buildings would be constructed on any of the project sites. Although each of the project sites has the potential for subsurface contamination, without the subsurface disturbance associated with construction-related activities, there would be no potential for exposure and thus no significant adverse hazardous materials impacts. Legal requirements (including local, state, and federal regulations) relating to any tanks, spills, ACM, LBP, and potential PCB-containing equipment would need to be followed.

F. THE FUTURE WITH THE PROPOSED ACTIONS

The proposed projects would entail demolition of the existing structures and excavation for the new developments. The greatest potential for exposure to contaminated materials would occur during subsurface disturbance associated with construction of the proposed buildings. The potential for adverse impacts would be avoided by placing hazardous materials (E) Designations on each of the project site lots (Lots 12, 29, 36, and 39) and Lot 38 incorporating the following:

- The proposed projects would comply with the hazardous materials (E) Designation requirements. An (E) Designation requires that prior to any new construction entailing subsurface disturbance, the applicants would prepare and implement a soil and groundwater testing protocol; and conduct remediation where appropriate, to the satisfaction of OER before building permits for development involving soil disturbance or changes to more

sensitive uses (e.g., from non-residential to residential) can be issued by DOB. A report documenting the subsurface investigation findings along with a RAP setting out procedures to be followed prior to, during, and following construction (e.g., for soil management, tank removal, dust control, air monitoring for workers and the community, health and safety, and vapor controls for the new buildings) is then submitted for OER review and approval. For each project site, documentation that the RAP procedures were properly implemented is required by OER before New York City building permits allowing occupancy can be issued.

- During excavation for the proposed buildings on each project site, any known or unexpectedly encountered tanks would be properly closed and removed along with any contaminated soil and would be registered with DEC and/or the New York City Fire Department, if applicable. Any evidence of a petroleum spill would be reported to DEC and addressed in accordance with applicable requirements.
- If dewatering is necessary for the proposed construction on any of the project sites, testing would be performed to ensure that the groundwater would meet DEP sewer discharge requirements. If necessary, the water would be pretreated prior to discharge to the City's sewer system, as required by DEP permit/approval requirements.
- Prior to and during any demolition or renovation of any structures, federal, state, and local requirements relating to ACM and LBP would be followed.
- Unless there is labeling or test data indicating that any suspect PCB-containing hydraulic lifts, electrical equipment, and fluorescent lighting fixtures do not contain PCBs, and that any fluorescent lighting bulbs do not contain mercury, disposal would be conducted in accordance with applicable federal, state, and local requirements.

With the (E) Designations in place and implementation of the measures described above, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the proposed projects. ✷