

EXECUTIVE SUMMARY

Site Description, Physical Setting and Site History

The Site is identified as 1600 Pelham Parkway in Bronx, New York. MJM Construction Services is filing an application to enter into the New York City Brownfield Cleanup Program (NYC BCP) under the management of the Mayor's Office of Environmental Remediation (OER) as a Volunteer. The Site is associated with Brownfield Cleanup Program ID number 11CBCP001X.

The Site is approximately 24,042 square feet in area, consists of two adjacent lots identified as 30 and 36 (Block 4223) and is located on the southern side of Pelham Parkway South, to the east of Stillwell Avenue in Bronx, NY. The topography of the Site is generally level. The Site Location Map is provided as Figure 1.

Lot 30 is currently developed with a 2-story commercial building with a partial basement, a 1-story shed, an asphalt parking lot. Lot 36 is currently vacant and undeveloped. The Site is currently unoccupied. The surrounding property uses are predominantly commercial and industrial.

The applicant is proposing to make the Site protective of human health and the environment consistent with the contemplated end use for residential and commercial purposes.

Summary of Past Uses of Site and Areas of Concern

Lot 30 was historically utilized for commercial purposes, with the current building developed on-site in 1952. Phase I Environmental Site Assessment (ESA) Report by Advanced Cleanup Technologies, Inc. for the Applicant was reviewed to establish the site history. Lot 36 has been a vacant land since 1929. Information for past uses of Site was obtained by evaluating the Fire Insurance Maps and Regulatory Agency Databases.

AOCs are listed below:

1. Hazardous Materials & Noise E designation, E-166: CEQR #06DCP071X
2. Subsurface anomaly indicative of a UST in northwestern portion of Site believed to be a heating oil tank.

3. Presence of historical fill on the property.
4. Proximity to industrial properties and to a major highway.

Summary of the Work Performed under the Remedial Investigation

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed ten soil borings across the entire project Site, and collected twenty soil samples for chemical analysis from the soil borings to evaluate soil quality.
3. Installed six groundwater monitoring wells throughout the Site to establish groundwater flow and collected five groundwater samples for chemical analysis to evaluate groundwater quality. One monitoring well was dry during sampling.
4. Installed four soil vapor probes around Site perimeter and collected four samples for chemical analysis.
5. Performed a ground penetrating radar geophysical survey(s) over 50 percent of the Site and identified geophysical anomalies;

Summary of the Hydrogeological Findings

The Site is located in the northeastern portion of the Borough of Bronx, New York. The elevation of the Site is approximately 10 feet above mean sea level (USGS 7.5-Minute Central Park, New York Quadrangle, 1969, Photorevised 1979).

Bronx geology is characterized by a metamorphosed sequence of bedrock known as the Manhattan Prong of the Hartland Formation. The Hartland Formation was formed during the late Cambrian to early Ordovician period and consists of undivided pelitic schist with gneiss and amphibolite. The formation is frequently cross cut by transverse and parallel faults. The area is overlain by Pleistocene aged glacial till deposits. Outcrops of bedrock are common place in the Bronx.

Bedrock with materials class ranging from 2 to 75 was identified beneath the Site. The bedrock is generally metamorphic in character and Ordovician and Precambrian in age. Bedrock was encountered at 12 feet during fieldwork.

Groundwater in the Bronx area and around the Site is not used as a potable (drinking) water source. Bronx residents receive their drinking water supply from surface reservoirs located in upstate New York.

Summary of the Environmental Contamination

1. Depth to groundwater ranges from 6 to 12 feet at the Site.
2. Groundwater flow is generally from north to south beneath the Site.
3. Depth to bedrock is approximately 12 feet at the Site.
4. The stratigraphy, from surface grade to 12 feet down, consists of several feet of historic fill underlain by up to 12 feet of organic silty clay.
5. Boring samples collected during the RI indicate the presence of historic fill material on-Site. Historic fill was identified from zero to at least 2 feet throughout the Site. The fill mainly consists of coal, glass and brick fragments.
6. Soil samples collected during the RI confirmed the presence of Semi-Volatile Organic Compounds (SVOCs) and metals on-Site and are attributable to the presence of historic fill. SVOCs, specifically characterized as Poly Aromatic Hydrocarbons (PAHs) are present in shallow soil in the northeastern, western and eastern quadrants of the Site and in deep soil in the northeastern and north-central portions of the Site at concentrations exceeding the Unrestricted Soil Cleanup Objectives USCO. VOCs were not detected in soil above Track 1 Soil Cleanup Objectives (SCOs). In addition, individual Metals were detected across the entire site at concentrations exceeding the USCO. Two pesticides detected in the western quadrant of the Site from 0 to 2 feet, at concentrations exceeding USCO.
7. Low levels of one VOC/ SVOC (Napthalene) was detected in a single location off-Site and cross- hydraulic gradient. Groundwater containing dissolved metals at concentrations exceeding the respective 6NYCRR Part 703.5 Class GA Groundwater Quality Standards in unfiltered samples. Filtered samples exhibit much lower metals concentrations and achieve groundwater standards. Evaluation of groundwater suggests some saline intrusion or road salt and some impact of sample turbidity and overall indicates that the Site does not adversely affect off-site groundwater resources.

8. Soil vapor samples collected during the RI confirmed the presence of volatile organic compounds in the range from 1,038.26 ug/m³ to 5,781.4 ug/m³ on the north side of the property in the south side of the sidewalks along Pelham Parkway South and Stillwell Avenue. The site contaminants observed in soil vapor are attributable to a gasoline or gasoline-associated source. VOCs were not identified in groundwater and were not found in soil samples above Track 1 Soil Cleanup Objectives. Gasoline management activities were not identified in past usage of the site and the soil vapors are not attributed to an onsite source.
9. An underground Storage Tank (UST) is suspected at one location. The UST is believed to be formerly used for space heating for the adjacent two-story building. All USTs will be removed during remediation. Soil sampling adjacent to the suspected UST area did not show any petroleum contamination or NAPL.
10. Aboveground Storage Tanks (ASTs) are absent at the Site.

Qualitative Human Health Exposure Assessment

A Qualitative Human Health Exposure Assessment (QHHEA) was performed and indicated that that potential exposure pathways are considered incomplete for future post remedial conditions and complete for onsite workers during the remedial action. The latter requires appropriate Health and Safety program and community air monitoring program during remedial action.

Summary of the Remedy

The preferred remedy listed below achieves protection of public health and the environment for the intended use of the property. The preferred remedial action alternative achieves all of the remedial action objectives established for the project and addresses applicable SCGs. The preferred remedial action alternative is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants. The preferred remedial action alternative is cost effective, implementable and uses standards methods that are well established in the industry. The remedial action includes:

1. Preparation of a Community Protection Statement and performance of all required NYC BCP citizen participation activities according to an approved Citizen Participation Plan (CPP).
2. Establishment of site specific soil cleanup objectives (SCOs) for soils.
3. Removal of all Underground Storage Tanks and removal of any soils that exceed the site specific SCOs. Proper precautions will be taken to appropriately register and close the tank(s), to identify potential spills and notify DEC. A separate tank removal plan will be developed for management under DEC authority.
4. Installation of a vapor barrier at the base of the building slab and an active sub-slab depressurization system under the entire footprint of the building to prevent migration of soil vapor from off-site into the occupied building.
5. Construction and maintenance of an engineered composite cover consisting of asphalt and sub-course or concrete and sub-course to prevent human exposure to residual contaminated soil/fill remaining under the Site;
6. Installation of a demarcation layer on top of the residual soil horizon in areas without a building excavation.
7. Performance of Community Air Monitoring Program for particulates and volatile organic carbon compounds.
8. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of SCOs.
9. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
10. Screening for indications of contamination (by visual means, odor, and monitoring with a photo ionization detector (PID)) of excavated soil/fill during all invasive work.
11. Implementation of storm-water pollution prevention measures in accordance with applicable laws and regulations.

12. Performance of all activities associated with the remedial action, including permitting requirements and pretreatment requirements, in accordance with all applicable Federal, State and City laws and regulations.
13. Transportation and off-Site disposal of all soil/fill material removed from the Site at permitted facilities in accordance with all Federal, State and City laws and regulations for handling, transport, and disposal.
14. Sampling and analysis of excavated media as required by disposal facilities.
15. Appropriate segregation of excavated media for off-site disposal.
16. Import of materials to be used for backfill and cover in compliance with OER approved plan and in accordance with all Federal, State and City laws and regulations.
17. Recording of a Declaration of Covenants and Restrictions that includes a full listing of Engineering Controls and Institutional Controls and notice that these controls must be maintained within a Site Management Plan to prevent future exposure to any residual contamination remaining at the Site.
18. Establishment in a recorded Declaration of Covenants and Restrictions, a series of Institutional Controls on the Site, including: (1) compliance with the provisions of the recorded Declaration of Covenants and Restrictions; (2) compliance with provisions of the approved Site Management Plan; (3) operation and maintenance of Engineering Controls as specified in the Site Management Plan; (4) inspection and certification of all Engineering Controls at a frequency and in a manner defined in the Site Management Plan; (5) performance of environmental and public health monitoring as defined in the Site Management Plan; (6) reporting at a frequency and in a manner defined in the Site Management Plan; (7) protection of on-Site monitoring devices in a manner specified in the SMP; and (8) prohibition of discontinuation of Engineering Controls without an OER-approved amendment or extinguishment of the Declaration of Covenants and Restrictions.
19. Establishment in a recorded Declaration of Covenants and Restrictions, a series of site restriction Institutional Controls on the Site, including: (1) prohibition of vegetable gardening and farming; (2) prohibition of the use of groundwater without treatment

rendering it safe for the intended use; (3) prohibition on all disturbance of residual contaminated material unless it is conducted in accordance with the provisions in the Site Management Plan; and (4) prohibition on higher level of land usage without an OER-approved amendment or extinguishment of this Declaration of Covenants and Restrictions.

20. Submission of a RAR which describes the remedial activities including any changes from this RAWP, certifies that the remedial requirements have or will be achieved, defines the Site boundaries, and describes any Engineering and Institutional Controls to be implemented at the Site.
21. Submission of an approved Site Management Plan in the Remedial Action Report for long-term management of residual contamination, including plans for Institutional and Engineering Controls for: (1) inspection and certification, (2) monitoring, (3) operation and maintenance, and (4) reporting.