403 GREENWICH STREET

NEW YORK, NEW YORK

Remedial Action Report

NYC VCP Project Number: 13CVCP103M

OER Project Number: 13EH-N090M

Prepared for:

403 Greenwich Enterprises, LLC
77 Fifth Avenue, Suite 4A
New York, NY 10003

Prepared by:

EBC

ENVIRONMENTAL BUSINESS

1808 Middle Country Road

Ridge, NY 11961

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AUGUST 2017

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LIST OF ACRONYMS

Acronym	Definition
CAMP	Community Air Monitoring Plan
DER-10	NYS DEC Division of Environmental Remediation Technical Guidance Manual 10
EC	Engineering Control
HASP	Health and Safety Plan
IC	Institutional Control
NYC VCP	New York City Voluntary Cleanup Program
NYC DEP	New York City Department of Environmental Protection
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
ORC	Oxygen Release Compound
PID	Photoionization Detector
QA/QC	Quality Assurance/Quality Control
QEP	Qualified Environmental Professional
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan
SCG	Standards, Criteria and Guidance
SCO	Soil Cleanup Objective
SMMP	Soil/Materials Management Plan
SMP	Site Management Plan
SVOCs	Semi-Volatile Organic Compounds
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

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CERTIFICATION

I, Ariel Czemerinski, certify the following:

- I am currently a registered professional engineer licensed by the State of New York.
- I performed professional engineering services and had primary direct responsibility for implementation of the remedial program for the redevelopment project located at 403 Greenwich Street, New York, NY, site number 13CVCP103M.
- I have reviewed this document, to which my signature and seal are affixed.
- The vapor barrier, and composite cover system implemented as part of construction constructed during this remedial action were designed by me or a person under my direct supervision and achieve the goals established in the Remedial Action Work Plan for this site.
- The vapor barrier, and composite cover system implemented as part of construction constructed during this remedial action were professionally observed by me or by a person under my direct supervision are accurately reflected in the text and drawings for as-built design reported in this Remedial Action Report.
- The OER-approved Remedial Action Work Plan dated November 2012 and Stipulations in a letter dated January 23, 2013, were implemented and that all requirements in those documents have been substantively complied with.
- I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

Name Ariel Czemerinski

PE License Number 076508

Signature

Date 9/13/17

I, Kevin Brussee, certify the following:

- I am a Qualified Environmental Professional.
- I had primary direct responsibility for implementation of the remedial program for the redevelopment project located at 403 Greenwich Street, New York, NY, site number 13CVCP103M.
- The OER-approved Remedial Action Work Plan dated November 2012 and Stipulations in a letter dated January 23, 2013, were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

QEP Name KEVIN BRUSSEE

QEP Signature

Date 9/13/2017

EXECUTIVE SUMMARY

403 Greenwich Enterprises, LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 403 Greenwich Street in Manhattan, New York. A Remedial Investigation (RI) was performed to compile and evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A remedial action was performed pursuant to an OER-approved RAWP in a manner that has rendered the Site protective of public health and the environment consistent with the proposed use of the property. This RAR describes the remedial action performed under the RAWP. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

Site Location and Background

The Site is located 403 Greenwich Street in the Tribeca section of Manhattan, New York, and is identified as Block 214 and Lot 4 on the New York City Tax Map. Lot 4 is a rectangular shaped lot located on the east side of Greenwich Street. Lot 4 consists of 25 feet of street frontage along Greenwich Street and extends 100 feet for a total lot area of approximately 2,489 ft^2. The Site is bordered by a six-story brick apartment building with first floor commercial space to the north (Block 214, Lot 7501), a five story commercial/office building to the south (Block 214, Lot 3), a 6-story brick institutional building to the east (Block 214, Lot 1), and Greenwich Street to the west.

Prior to redevelopment, the Site was developed with a vacant 2-story mixed-use retail and office building with a small basement in the front corner of the building.

Summary of Redevelopment Plan

A new 9-story residential building has been constructed at the Site. The current zoning designation for the Site is C6-2A. The use is consistent with existing zoning for the property.

The 25 foot wide tax lot was developed with a nine-story residential building. The new building extends approximately 70 feet from the front, leaving a 30 by 25 foot rear yard. The gross building square footage for the building is 15,688 ft^2. The rear courtyard consists of 3ft wide by

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2ft thick layer of topsoil installed over a demarcation barrier around the perimeter of the courtyard, and 2 inch thick concrete pavers with 1 inch river rock between the paver joints. The pavers and river rock are underlain with a 3 inch layer of mason sand, and a 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.

The ground floor of the building consists of the residential lobby, the water meter and pump room, gas meter room, trash room, electrical meter room, water booster pump room, and an apartment that faces the rear courtyard. The first floor also has a hatch that provides access to the 8 ft 7 inch by 9 ft 8.25 inch mechanical pit.

The mechanical pit required excavation to a depth of approximately 9 feet below grade, and the elevator pit required excavation to a depth of approximately 7 feet below grade. To remove the B1(0-2') metals hot-spot identified during the RI, the northern corner of the rear court yard was excavated to a depth of approximately 4 feet below grade, and the remainder of the rear courtyard was excavated to a depth of approximately 2 feet below grade. The remainder of the Site required excavation to a depth of approximately 3 to 4 feet for construction of the building's 24 inch to 34 inch thick mat slab. A total of 711.21 tons of soil/fill were removed. Approximately 223.51 tons of D008 Hazardous Lead soil was removed from the lead hotspot in the rear of the lot and transported to Clean Earth of North Jersey, located at 105 Jacobus Avenue, Kearny, New Jersey. A total of 487.70 tons of non-hazardous soil/fill was removed across the remainder of the Site and transported to Clean Earth of Carteret, located at 24 Middlesex Avenue, Carteret, New Jersey.

Summary of Description of Surrounding Property

The area surrounding the Site consists of a mix of residential and commercial properties. The Montessori School of Manhattan is the adjacent property to the East. No other hospitals, daycare facilities or schools are located within a 500 ft radius of the Site.

Surrounding Property Usage

Direction	Property Description
North – Adjacent property	Block 214, Lot 7501 (405 Greenwich Street) – The entire 2,500 ft^2 lot is developed with a six-story brick apartment building with first floor commercial space.
South – Adjacent Property	Block 214, Lot 3 (401 Greenwich Street) – The entire 2,500 ft^2 lot is developed with a five story commercial/office building constructed in 2001.

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East – Adjacent property	Block 214, Lot 1 (53 Beach Street) – The entire 5,027 ft^2 lot is developed with a 30,000 ft^2 building currently utilized by the Montessori School of Manhattan.
West – Opposite side of Greenwich St	Block 216, Lot 1 (235 West Street) – The entire 90,004 ft^2 lot is developed with a 760,000 ft^2 commercial/ office building.

Summary of Past Uses of Site and Areas of Concern

A Phase I Environmental Site Assessment report was prepared by IVI Assessment Services, Inc. on July 31, 2012.

Historical information (DOB records, Sanborn Maps and City Directory listings) reviewed for the Site identified the Site as being developed prior to 1894 with a 4-story apartment building with first floor commercial space. In the 1940's the Site was redeveloped with the 2-story building that currently stands at the Site. From the 1960's to recently, the building was labeled on historic Sanborn maps as a garage and storage space.

The 1950 City Directory listings indicate the Site was utilized as Jayspid Manufacturing and Distribution, and the Site was listed as Erie Steel Co. Inc. in 1962. In 1970, the Site was listed as International Longshoreman's Association, but no listings were provided after 1970 for the Site.

Certificates of Occupancy available for the Site note a 2-story building with storage and a boiler room in the cellar, a factory and storage area on the first floor, and a factory on the 2nd floor in 1948 and 1959, and a 2-story building with storage and a boiler room in the cellar, a store on the 1st floor and an office on the 2nd floor in 1984.

The AOCs identified for this Site include:

- Historic fill is present at the Site to a depth of approximately 10 feet below grade.

Summary of the Work Performed under the Remedial Investigation

EBC performed the following scope of work in October of 2012:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 3 soil borings (B1, B2, and B3) across the entire project Site, and collected 6 soil samples and one duplicate soil sample for chemical analysis from the soil borings to evaluate soil quality;

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3. Installed 3 groundwater monitoring wells (MW1, MW2, and MW3) throughout the Site to establish groundwater flow and collected three groundwater samples and one duplicate for chemical analysis to evaluate groundwater quality; and
4. Installed 3 soil vapor probes (SG1, SG2, and SG3) across the Site and collected 3 soil vapor samples for chemical analysis.

Summary of Findings of Remedial Investigation

1. Elevation of the property is approximately 13 feet.
2. Depth to groundwater at the Site is approximately 13 feet.
3. Groundwater flow is generally from north to south beneath the Site.
4. Depth to bedrock at the Site is greater than 100 feet.
5. The stratigraphy of the Site, from the surface down, consists of approximately 10 feet of historic fill underlain by dark brown silty sand.
6. Soil/fill samples collected during the RI were compared to NYSDEC Restricted Residential Use Soil Cleanup Objectives as presented in 6NYCRR Part 375-6.8 and CP51. Soil/fill samples collected during the RI showed neither pesticides nor PCBs at detectable concentrations. The only VOC detected was naphthalene which was identified in one shallow soil boring at a low concentration (99 µg/Kg). SVOCs, including benz(a)anthracene (21,000 µg/Kg), benzo(a)pyrene (18,000 µg/Kg), benzo(b)-fluoranthene (22,000 µg/Kg), benzo(k)fluoranthene (5,400 µg/Kg), chrysene (21,000 µg/Kg), dibenz(a,h)anthracene (3,800 µg/Kg), and indeno(1,2,3-cd)pyrene (9,500 µg/Kg) were detected above Restricted Residential Use SCOs in one shallow soil sample (B-1). Three metals, including barium (762 ppm), mercury (0.82 ppm), and lead (7,280 ppm), exceeded Restricted Residential Use SCOs in one shallow soil sample (B-1). No VOCs, SVOCs, pesticides, PCBs or metals were detected above Unrestricted Use SCOs within any of the deep soil samples collected at the Site. Overall, with the exceptions of the high levels of metals detected within one of the shallow soil/ fill samples, the findings were consistent with observations for other historical fill sites.
7. Groundwater samples collected were compared to New York State 6NYCRR Part 703.5 Class GA Groundwater Quality Standards (GQS). Groundwater samples collected during the RI showed no detectable concentrations of VOCs or pesticides in any of the

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groundwater samples collected at the Site. Five SVOCs, including benz(a)anthracene (0.27 µg/L), benzo(b)fluoranthene (0.31 µg/L), benzo(k)fluoranthene (0.09 µg/L), chrysene (0.26 µg/L), and indeno(1,2,3-cd)pyrene (0.12 µg/L) were detected above their corresponding GQSs within one of the three groundwater samples. The following dissolved metals were detected above their respective NYSDEC GQS: magnesium (max of 65,500 µg/L), manganese (max of 17,300 µg/L), and sodium (max of 715,000 µg/L). One PCB, PCB-1254 (0.39 µg/L) was detected within the duplicate groundwater sample above NYSDEC GQS, but the PCB was not detected within the original sample, nor in on-Site soil. The RI indicates that groundwater is not impacted by Site conditions and did not reveal any sources of contaminants on-Site.

8. Soil vapor results collected during the RI were compared to the compounds listed in Table 3.1 Air Guideline Values Derived by the New York State Department of Health (NYSDOH) located in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion dated October 2006. Soil vapor samples collected during the RI showed petroleum and chlorinated VOCs at generally low concentrations. BTEX concentrations were generally low at a maximum of 36.04 µg/m^3. PCE was identified in all samples at a maximum concentration of 10.4 µg/m^3, and TCE was identified in one sample at a maximum concentration of 1.56 µg/m^3. The TCE and PCE concentrations are below the monitoring level ranges established within the State DOH soil vapor guidance matrix.

Summary of the Remedial Action

The remedial action achieved protection of public health and the environment for the intended use of the property. The remedial action achieved all of the remedial action objectives established for the project and addressed applicable standards, criterion, and guidance; was effective in both the short-term and long-term and reduced mobility, toxicity and volume of contaminants; was cost effective and implementable; and used standards methods that are well established in the industry.

A summary of the milestones achieved in the Remedial Action is as follows:

- A Pre-Application Meeting was held on August 24, 2012.
- A Remedial Investigation (RI) was performed in September of 2012 and a RI Report dated October 2012 was prepared to evaluate data and information necessary to develop a

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Remedial Action Work Plan (RAWP).

- A Site Contact List was established and a RAWP dated November 2012 was prepared and released with a Fact Sheet on November 21, 2012, for a 30-day public comment period.
- The RAWP with a Stipulation List dated January 23, 2013, was approved by the New York City Office of Environmental Remediation (OER) on September 17, 2014.
- A pre-construction meeting was held on February 27, 2015.
- Remedial action began on June 11, 2015, and was completed in June of 2017. Appendix B contains the RAWP and Stipulation List.

The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan;
2. Mobilized site security and equipment; completed utility mark outs; and marked and staked excavation areas in April of 2015.
3. Performed Waste Characterization Study prior to excavation activities. Two waste characterization soil samples were collected on March 17, 2015. Waste characterization samples were collected at a frequency dictated by disposal facility(s);
4. EBC performed soil borings within the rear yard on March 17, 2015, to collect soil samples in an attempt to vertically and horizontally delineate the D008 Hazardous Lead soil. Based on the laboratory results, it was determined that all fill material [depth of at least 2 feet] from the rear yard required transportation and disposal as D008 Hazardous Lead soil;
5. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
6. Established Track 4 Site Specific Soil Cleanup Objectives (SCOs). The following Track 4 SCOs were utilized: Total SVOCs: 350 ppm; barium: 800 ppm; lead: 1,200 ppm; and mercury: 1.5ppm.
7. The following excavations were performed:
   - excavated to a depth of approximately 4 feet in the northern corner of the rear courtyard to remove the B1(0-2') metals hotspot identified during the RI, and

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excavated 2 feet across the remainder of the rear courtyard;

- excavated to a depth of approximately 9 feet below grade for the mechanical pit,
- excavated to a depth of approximately 7 feet below grade for the elevator pit, and
- excavated the remainder of the Site to a depth of approximately 3 to 4 feet for construction of the building's 24 inch to 34 inch thick mat slab.

8. Transported and disposed all soil/fill material at permitted facilities in accordance with all applicable laws and regulations for handling, transporting, and disposing, and the RAWP. Removed 223.51 tons of D008 hazardous lead soil under EPA assigned Generator ID number NYR000218578 from B1(0-2') metals hotspot, and transported to Clean Earth of North Jersey, located at 115 Jacobus Avenue, Kearny, NJ 07032, and removed 487.70 tons of non-hazardous historic fill material and transported to Clean Earth of Carteret, located at 24 Middlesex Avenue, Carteret, NJ. A total of 711.21 tons of soil and fill were removed during this remedial action;
9. Screened excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;
10. Conducted materials management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials
11. Collected and analyzed four end-point soil samples to determine the performance of the remedy with respect to attainment of SCOs. Two endpoints (EP-1 and EP-2) were collected following excavation of the top 2 feet of soil from the B1(0-2) metals hotspot, and two endpoints (EP-3 and EP-4) were collected from the footprint of the new building excavation. Track 4 Site-Specific SCOs were achieved for endpoint soil samples EP-3 and EP4. However, total SVOCs, mercury and lead were detected above Track 4 Site-Specific SCOs in EP-1, and mercury was detected above Track 4 Site-Specific SCOs in EP-2. A follow-up endpoint soil sample (EP-1A) was collected after an additional 2 feet of soil was removed from the EP-1 collection location. Only mercury was detected above Track 4 Site-Specific SCOs. Therefore, Track 4 Site-Specific SCOs were not achieved for mercury within EP-1A (4.66 mg/kg) and EP-2 (2.34 mg/kg);

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12. Removed one 550-gallon motor fuel underground storage tank and one 250-gallon underground storage tank from the Site Tank removal affidavit was filed with FDNY on July 20, 2015;
13. Installed a waterproofing/vapor barrier system beneath the building's 24 to 34 inch thick concrete mat slab and up around the sides of the mat slab. The waterproofing membrane installed below the mat slab, below/around the elevator pit and mechanical pit was Grace Preprufe® 300R. Preprufe® 300R is a 1.2 mm (0.046in) thick HDPE film with a pressure sensitive adhesive that bonds to the poured concrete. The waterproofing membrane extends throughout the entire area of the building and encapsulates the mechanical pit and elevator. All vapor barrier seams, penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions. The waterproofing/vapor barrier system is a permanent Engineering Control. The membrane system was installed by the excavation contractor, Wonder Works Construction Corp;
14. Installed a demarcation barrier across the entire rear yard consisted of plastic orange safety fencing;
15. Constructed an engineered composite cover system across the entire Site to prevent human exposure to residual soil/fill remaining under the Site. The composite cover system is a permanent engineering control and was installed by Wonder Works Construction Corp. The engineered composite cover system consists of the following:
    - The new building's 24 to 34 inch thick concrete mat slab underlain by Grace Preprufe® 300R waterproofing, a 2 inch rat slab and a 6 to 12 inch layer of ¾ inch blue stone; and
    - The rear courtyard is capped with a 2ft thick composite cover installed over an orange plastic demarcation barrier. The composite cover consists of a 3ft wide by 2 ft thick layer of topsoil installed over the demarcation barrier around the perimeter of the rear courtyard, and 2 inch thick concrete pavers with 1 inch diameter river rock between the pavers. The pavers and river rock are underlain with a 3 inch layer of mason sand, and an 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.
16. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and

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regulations;

17. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations;
18. Submitted reports during construction oversight activities. Reports were submitted from 5/6/2015 to 11/27/2015;
19. Imported the following materials for use as backfill:
    - Two truck loads (approximately 40 cubic yards) of ¾ inch bluestone from was imported from Thalle Industries, Inc. to create a 6 to 12 inch layer of stone below the mat slab;
    - Two truck loads (approximately 36.81 tons) of ¾" bluestone was imported from the New York Sand & Stone, LLC facility located at the Brooklyn Navy Yard Pier J for use as backfill above the demarcation barrier installed in the rear courtyard.
    - Approximately 20 cubic yards of topsoil was delivered from M&D Nursery & Equipment Corp. The topsoil was installed over the demarcation barrier and was used to create a 3ft wide and 2 ft deep planting area around the perimeter of the rear courtyard.
20. Submitted a Sustainability Report;
21. Submitted an RAR that describes the Remedial Action; certifies that the remedial requirements defined in the RAWP have been achieved; defines the Site boundaries; and lists any changes from the RAWP.
22. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for maintenance and inspection of the performance of Engineering Controls and Institutional Controls. Inspections will be performed 10 years. First inspection report will be submitted by July 31, 2027 (for calendar years 2017-2026), and by July 31 every tenth year thereafter. Inspection Reports will cover all calendar years since the prior reporting period; and
23. The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Engineering Controls and Institutional Controls will be managed in compliance with the SMP. Institutional Controls will include prohibition of the following: (1) prohibition of vegetable gardening and farming in residual soil; (2) prohibition of the use of groundwater beneath the site without treatment rendering it safe

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for the intended use; (3) prohibition of disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) prohibition of higher levels of land usage than the restricted residential uses addressed by this remedial action without prior notification and approval by OER.

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REMEDIAL ACTION REPORT

1.0 SITE BACKGROUND

403 Greenwich Enterprises, LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 403 Greenwich Street in Manhattan, New York. The boundary of the property subject to this Remedial Action is shown in Figure 2 and includes, in its entirety, Manhattan Block 214 and Lot 4. The Remedial Action was performed pursuant to the OER-approved RAWP in a manner that has rendered the property protective of public health and the environment consistent with its intended use. This RAR describes the remedial action performed under the RAWP. The remedial action described in this document provides for the protection of public health and the environment, complies with applicable environmental standards, criteria and guidance and applicable laws and regulations.

1.1 Site Location and Background

The Site is located 403 Greenwich Street in the Tribeca section of Manhattan, New York, and is identified as Block 214 and Lot 4 on the New York City Tax Map. Lot 4 is a rectangular shaped lot located on the east side of Greenwich Street. Lot 4 consists of 25 feet of street frontage along Greenwich Street and extends 100 feet back for a total lot area of approximately 2,489 ft^2. The Site is bordered a six-story brick apartment building with first floor commercial space to the north (Block 214, Lot 7501), a five story commercial/office building to the south (Block 214, Lot 3), a 6-story brick institutional building to the east (Block 214, Lot 1), and Greenwich Street to the west. A map of the site boundary is shown on Figure 2.

Prior to redevelopment, the Site was developed with a vacant 2-story mixed-use retail and office building with a small basement in the front corner of the building.

1.2 Redevelopment Plan

A new 9-story residential building has been constructed at the Site. Layout of the site redevelopment is presented in Figure 3. The current zoning designation for the Site is C6-2A. The use is consistent with existing zoning for the property.

The 25 foot wide tax lot was developed with a nine-story residential building. The new building extends approximately 70 feet from the front, leaving a 30 by 25 foot rear yard. The gross

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building square footage for the building is 15,688 ft^2. The rear courtyard consists of 3ft wide by 2ft thick layer of topsoil installed over a demarcation barrier around the perimeter of the courtyard, and 2 inch thick concrete pavers with 1 inch river rock between the paver joints. The pavers and river rock are underlain with a 3 inch layer of mason sand, and a 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.

The ground floor of the building consists of the residential lobby, the water meter and pump room, gas meter room, trash room, electrical meter room, water booster pump room, and an apartment that faces the rear courtyard. The first floor also has a hatch that provides access to the 8 ft 7 inch by 9 ft 8.25 inch mechanical pit.

The mechanical pit required excavation to a depth of approximately 9 feet below grade, and the elevator pit required excavation to a depth of approximately 7 feet below grade. The rear court yard required remedial excavation to a depth of approximately 3 feet below grade to remove a lead hot-spot, and the remainder of the Site required excavation to a depth of approximately 3 to 4 feet for construction of the building's 24 inch to 34 inch thick mat slab. A total of 711.21 tons of soil/fill were removed. Approximately 223.51 tons of D008 Hazardous Lead soil was removed from the lead hotspot in the rear of the lot and transported to Clean Earth of North Jersey, located at 105 Jacobus Avenue, Kearny, New Jersey. An additional 487.70 tons of non-hazardous soil/fill was removed across the remainder of the Site and transported to Clean Earth of Carteret, located at 24 Middlesex Avenue, Carteret, New Jersey.

The remedial action contemplated under this RAWP may be implemented independently of the proposed redevelopment plan.

1.3 Description of Surrounding Property

The area surrounding the Site consists of a mix of residential and commercial properties. Figure 4 shows the surrounding land usage of the adjacent properties listed below as well as additional properties located up to 500 feet away from the Site. The Montessori School of Manhattan is the adjacent property to the East. No other hospitals, daycare facilities or schools are located within a 500 ft radius of the Site.

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Surrounding Property Usage

Direction	Property Description
North – Adjacent property	Block 214, Lot 7501 (405 Greenwich Street) – The entire 2,500 ft^2 lot is developed with a six-story brick apartment building with first floor commercial space.
South – Adjacent Property	Block 214, Lot 3 (401 Greenwich Street) – The entire 2,500 ft^2 lot is developed with a five story commercial/office building constructed in 2001.
East – Adjacent property	Block 214, Lot 1 (53 Beach Street) – The entire 5,027 ft^2 lot is developed with a 30,000 ft^2 building currently utilized by the Montessori School of Manhattan.
West – Opposite side of Greenwich St	Block 216, Lot 1 (235 West Street) – The entire 90,004 ft^2 lot is developed with a 760,000 ft^2 commercial/ office building.

1.4 Summary of Past Uses of Site and Environmental Findings

A Phase I Environmental Site Assessment report was prepared by IVI Assessment Services, Inc. on July 31, 2012.

Historical information (DOB records, Sanborn Maps and City Directory listings) reviewed for the Site identified the Site as being developed prior to 1894 with a 4-story apartment building with first floor commercial space. In the 1940's the Site was redeveloped with the 2-story building that currently stands at the Site. From the 1960's to recently, the building was labeled on historic Sanborn maps as a garage and storage space.

The 1950 City Directory listings indicate the Site was utilized as Jayspid Manufacturing and Distribution, and the Site was listed as Erie Steel Co. Inc. in 1962. In 1970, the Site was listed as International Longshoreman's Association, but no listings were provided after 1970 for the Site,

Certificates of Occupancy available for the Site indicate 2-story building with storage and a boiler room in the cellar, a factory and storage area on the first floor, and a factory on the 2nd floor in 1948 and 1959, and 2-story building with storage and a boiler room in the cellar, a store on the 1st floor and an office on the 2nd floor in 1984.

The AOCs identified for this Site include:

- Historic fill is present at the Site to a depth of approximately 10 feet below grade.

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1.5 Summary of Work Performed Under the Remedial Investigation

EBC performed the following scope of work in October of 2012:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 3 soil borings (B1, B2, and B3) across the entire project Site, and collected 6 soil samples and one duplicate soil sample for chemical analysis from the soil borings to evaluate soil quality;
3. Installed 3 groundwater monitoring wells (MW1, MW2, and MW3) throughout the Site to establish groundwater flow and collected three groundwater samples and one duplicate for chemical analysis to evaluate groundwater quality; and
4. Installed 3 soil vapor probes (SG1, SG2, and SG3) across the Site and collected 3 soil vapor samples for chemical analysis.

1.6 Summary of Findings of Remedial Investigation

1. Elevation of the property is approximately 13 feet.
2. Depth to groundwater at the Site is approximately 13 feet.
3. Groundwater flow is generally from north to south beneath the Site.
4. Depth to bedrock at the Site is greater than 100 feet.
5. The stratigraphy of the Site, from the surface down, consists of approximately 10 feet of historic fill underlain by dark brown silty sand.
6. Soil/fill samples collected during the RI were compared to NYSDEC Restricted Residential Use Soil Cleanup Objectives as presented in 6NYCRR Part 375-6.8 and CP51. Soil/fill samples collected during the RI showed neither pesticides nor PCBs at detectable concentrations. The only VOC detected was naphthalene which was identified in one shallow soil boring at a low concentration (99 µg/Kg). SVOCs, including benz(a)anthracene (21,000 µg/Kg), benzo(a)pyrene (18,000 µg/Kg), benzo(b)-fluoranthene (22,000 µg/Kg), benzo(k)fluoranthene (5,400 µg/Kg), chrysene (21,000 µg/Kg), dibenz(a,h)anthracene (3,800 µg/Kg), and indeno(1,2,3-cd)pyrene (9,500 µg/Kg) were detected above Restricted Residential Use SCOs in one shallow soil sample (B-1). Three metals, including barium (762 ppm), mercury (0.82 ppm), and lead (7,280 ppm), exceeded Restricted Residential Use SCOs in one shallow soil sample (B-1). No VOCs,

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SVOCs, pesticides, PCBs or metals were detected above Unrestricted Use SCOs within any of the deep soil samples collected at the Site. Overall, with the exceptions of the high levels of metals detected within one of the shallow soil/ fill samples, the findings were consistent with observations for other historical fill sites.

7. Groundwater samples collected were compared to New York State 6NYCRR Part 703.5 Class GA Groundwater Quality Standards (GQS). Groundwater samples collected during the RI showed no detectable concentrations of VOCs or pesticides in any of the groundwater samples collected at the Site. Five SVOCs, including benz(a)anthracene (0.27 µg/L), benzo(b)fluoranthene (0.31 µg/L), benzo(k)fluoranthene (0.09 µg/L), chrysene (0.26 µg/L), and indeno(1,2,3-cd)pyrene (0.12 µg/L) were detected above their corresponding GQSs within one of the three groundwater samples. The following dissolved metals were detected above their respective NYSDEC GQS: magnesium (max of 65,500 µg/L), manganese (max of 17,300 µg/L), and sodium (max of 715,000 µg/L). One PCB, PCB-1254 (0.39 µg/L) was detected within the duplicate groundwater sample above NYSDEC GQS, but the PCB was not detected within the original sample, nor in on-Site soil. The RI indicates that groundwater is not impacted by Site conditions and did not reveal any sources of contaminants on-Site.
8. Soil vapor results collected during the RI were compared to the compounds listed in Table 3.1 Air Guideline Values Derived by the New York State Department of Health (NYSDOH) located in the NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion dated October 2006. Soil vapor samples collected during the RI showed petroleum and chlorinated VOCs at generally low concentrations. BTEX concentrations were generally low at a maximum of 36.04 µg/m^3. PCE was identified in all samples at a maximum concentration of 10.4 µg/m^3, and TCE was identified in one sample at a maximum concentration of 1.56 µg/m^3. The TCE and PCE concentrations are below the monitoring level ranges established within the State DOH soil vapor guidance matrix.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR (Appendix A) and the RAWP (Appendix B), disposal of significant amounts of hazardous waste was not suspected or encountered at this Site.

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2.0 DESCRIPTION OF REMEDIAL ACTIONS

The remedial action was performed in accordance with an OER approved Remedial Action Work Plan (Appendix B) and achieved the remedial action objectives established for the project. The remedial action was evaluated in an alternatives analysis and was determined to be protective of human health and the environment, compliant with standards, criteria, and guidelines (SCGs), effective in the short-term, effective in the long-term, capable of attaining appropriate levels of reduction of toxicity, mobility, or volume of contaminated material, implementable, cost effective, acceptable to the community, consistent with land uses, and sustainable.

A summary of the milestones achieved in the Remedial Action is as follows:

- A Pre-Application Meeting was held on August 24, 2012.
- A Remedial Investigation (RI) was performed in September of 2012 and a RI Report dated October 2012 was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP).
- A Site Contact List was established and a RAWP dated November 2012 was prepared and released with a Fact Sheet on November 21, 2012, for a 30-day public comment period.
- The RAWP with a Stipulation List dated January 23, 2013, was approved by the New York City Office of Environmental Remediation (OER) on September 17, 2014.
- A pre-construction meeting was held on February 27, 2015.
- Remedial action began on June 11, 2015, and was completed in June of 2017. Appendix B contains the RAWP and Stipulation List.

The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan;
2. Mobilized site security and equipment; completed utility mark outs; and marked and staked excavation areas in April of 2015.
3. Performed Waste Characterization Study prior to excavation activities. Two waste characterization soil samples were collected on March 17, 2015. Waste characterization samples were collected at a frequency dictated by disposal facility(s);

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4. EBC performed soil borings within the rear yard on March 17, 2015, to collect soil samples in an attempt to vertically and horizontally delineate the D008 Hazardous Lead soil. Based on the laboratory results, it was determined that all fill material [depth of at least 2 feet] from the rear yard required transportation and disposal as D008 Hazardous Lead soil;
5. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
6. Established Track 4 Site Specific Soil Cleanup Objectives (SCOs). The following Track 4 SCOs were utilized: Total SVOCs: 350 ppm; barium: 800 ppm; lead: 1,200 ppm; and mercury: 1.5ppm.
7. The following excavations were performed:
   - excavated to a depth of approximately 4 feet in the northern corner of the rear courtyard to remove the B1(0-2') metals hotspot identified during the RI, and excavated 2 feet across the remainder of the rear courtyard;
   - excavated to a depth of approximately 9 feet below grade for the mechanical pit,
   - excavated to a depth of approximately 7 feet below grade for the elevator pit, and
   - excavated the remainder of the Site to a depth of approximately 3 to 4 feet for construction of the building's 24 inch to 34 inch thick mat slab.
8. Transported and disposed all soil/fill material at permitted facilities in accordance with all applicable laws and regulations for handling, transporting, and disposing, and the RAWP. Removed 223.51 tons of D008 hazardous lead soil under EPA assigned Generator ID number NYR000218578 from B1(0-2') metals hotspot, and transported to Clean Earth of North Jersey, located at 115 Jacobus Avenue, Kearny, NJ 07032, and removed 487.70 tons of non-hazardous historic fill material and transported to Clean Earth of Carteret, located at 24 Middlesex Avenue, Carteret, NJ. A total of 711.21 tons of soil and fill were removed during this remedial action;
9. Screened excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;
10. Conducted materials management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials

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11. Collected and analyzed four end-point soil samples to determine the performance of the remedy with respect to attainment of SCOs. Two endpoints (EP-1 and EP-2) were collected following excavation of the top 2 feet of soil from the B1(0-2) metals hotspot, and two endpoints (EP-3 and EP-4) were collected from the footprint of the new building excavation. Track 4 Site-Specific SCOs were achieved for endpoint soil samples EP-3 and EP4. However, total SVOCs, mercury and lead were detected above Track 4 Site-Specific SCOs in EP-1, and mercury was detected above Track 4 Site-Specific SCOs in EP-2. A follow-up endpoint soil sample (EP-1A) was collected after an additional 2 feet of soil was removed from the EP-1 collection location. Only mercury was detected above Track 4 Site-Specific SCOs. Therefore, Track 4 Site-Specific SCOs were not achieved for mercury within EP-1A (4.66 mg/kg) and EP-2 (2.34 mg/kg);
12. Removed one 550-gallon motor fuel underground storage tank and one 250-gallon underground storage tank from the Site Tank removal affidavit was filed with FDNY on July 20, 2015;
13. Installed a waterproofing/vapor barrier system beneath the building's 24 to 34 inch thick concrete mat slab and up around the sides of the mat slab. The waterproofing membrane installed below the mat slab, below/around the elevator pit and mechanical pit was Grace Preprufe® 300R. Preprufe® 300R is a 1.2 mm (0.046in) thick HDPE film with a pressure sensitive adhesive that bonds to the poured concrete. The waterproofing membrane extends throughout the entire area of the building and encapsulates the mechanical pit and elevator. All vapor barrier seams, penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions. The waterproofing/vapor barrier system is a permanent Engineering Control. The membrane system was installed by the excavation contractor, Wonder Works Construction Corp;
14. Installed a demarcation barrier across the entire rear yard consisted of plastic orange safety fencing;
15. Constructed an engineered composite cover system across the entire Site to prevent human exposure to residual soil/fill remaining under the Site. The composite cover system is a permanent engineering control and was installed by Wonder Works Construction Corp. The engineered composite cover system consists of the following:

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- The new building's 24 to 34 inch thick concrete mat slab underlain by Grace Preprufe® 300R waterproofing, a 2 inch rat slab and a 6 to 12 inch layer of ¾ inch blue stone; and
- The rear courtyard is capped with a 2ft thick composite cover installed over an orange plastic demarcation barrier. The composite cover consists of a 3ft wide by 2 ft thick layer of topsoil installed over the demarcation barrier around the perimeter of the rear courtyard, and 2 inch thick concrete pavers with 1 inch diameter river rock between the pavers. The pavers and river rock are underlain with a 3 inch layer of mason sand, and an 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.

16. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
17. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations;
18. Submitted reports during construction oversight activities. Reports were submitted from 5/6/2015 to 11/27/2015;
19. Imported the following materials for use as backfill:
    - Two truck loads (approximately 40 cubic yards) of ¾ inch bluestone from was imported from Thalle Industries, Inc. to create a 6 to 12 inch layer of stone below the mat slab;
    - Two truck loads (approximately 36.81 tons) of ¾" bluestone was imported from the New York Sand & Stone, LLC facility located at the Brooklyn Navy Yard Pier J for use as backfill above the demarcation barrier installed in the rear courtyard.
    - Approximately 20 cubic yards of topsoil was delivered from M&D Nursery & Equipment Corp. The topsoil was installed over the demarcation barrier and was used to create a 3ft wide and 2 ft deep planting area around the perimeter of the rear courtyard.
20. Submitted a Sustainability Report;

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21. Submitted an RAR that describes the Remedial Action; certifies that the remedial requirements defined in the RAWP have been achieved; defines the Site boundaries; and lists any changes from the RAWP.
22. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for maintenance and inspection of the performance of Engineering Controls and Institutional Controls. Inspections will be performed 10 years. First inspection report will be submitted by July 31, 2027 (for calendar years 2017-2026), and by July 31 every tenth year thereafter. Inspection Reports will cover all calendar years since the prior reporting period; and
23. The property will continue to be registered with an E-Designation by the NYC Department of Buildings. Engineering Controls and Institutional Controls will be managed in compliance with the SMP. Institutional Controls will include prohibition of the following: (1) prohibition of vegetable gardening and farming in residual soil; (2) prohibition of the use of groundwater beneath the site without treatment rendering it safe for the intended use; (3) prohibition of disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) prohibition of higher levels of land usage than the restricted residential uses addressed by this remedial action without prior notification and approval by OER.

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3.0 COMPLIANCE WITH REMEDIAL ACTION WORK PLAN

3.1 Construction Health & Safety Plan (CHASP)

The remedial construction activities performed under this program were in compliance with the Construction Health and Safety Plan and applicable laws and regulations. The Site Safety Coordinator was Kevin Waters - EBC.

3.2 Community Air Monitoring Plan (CAMP)

The Community Air Monitoring Plan provided for the collection and analysis of air samples during remedial construction activities to ensure proper protections were employed to protect workers and the neighboring community. Monitoring was performed from May 6, 2015, to October 23, 2015, in compliance with the Community Air Monitoring Plan in the approved RAWP. There were no CAMP exceedances. The results of Community Air Monitoring are shown in Appendix D.

3.3 Soil/Materials Management Plan

The Soil/Materials Management Plan in the RAWP provided detailed plans for managing all soils/materials that were disturbed at the Site, including excavation, handling, storage, transport and disposal. It also included a series of controls to assure effective, nuisance free remedial activity in compliance with applicable laws and regulations. Remedial construction activities performed under this program were in full compliance with the SMMP in the approved RAWP.

3.4 Storm-Water Pollution Prevention

Storm water pollution prevention included physical methods and processes to control and/or divert surface water flows and to limit the potential for erosion and migration of Site soils, via wind or water. Remedial construction activities performed under this program were in full compliance with methods and processes defined in the RAWP for storm water prevention and applicable laws and regulations.

3.5 Deviations From the Remedial Action Work Plan

Deviations from the Remedial Action Work Plan are summarized below:

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- The proposed redevelopment plan within the Remedial Action Work Plan (EBC, November 2012) described a nine-story residential building with a full cellar, which would have required excavation of the first 70 feet of the lot to a depth of 11 feet below grade. However, the redevelopment plans were revised to a slab-on grade building, with excavation limited to 3 to 4 feet for the new building's 24 to 34 inch thick mat slab. To prevent exposure to remaining soil/fill with compounds at concentrations greater than Track 4 Site-Specific SCOs, an engineered Composite Cover System has been built at the Site.
- The Remedial Action Work Plan (EBC, November 2012) proposed Track 4 Site-Specific SCOs. Track 4 Site-Specific SCOs were achieved with the excavation of mercury within EP-1A (4.66 mg/kg) and EP-2 (2.34 mg/kg). OER was notified of the mercury Track 4 Site-Specific SCO exceedences in EP-1A and EP-2 via email on May 22, 2015. OER responded via email on May 22, 2015, stating the soil can remain in place. To prevent exposure to remaining soil/fill with compounds at concentrations greater than Restricted Residential Use SCOs, and Track 4 Site-Specific SCOs, an engineered Composite Cover System has been built at the Site.
- Excavation and truck loading was performed on June 2, 2015. However, EBC was not contacted to provide oversight and air monitoring. Therefore, community air monitoring, truck inspection, and soil screening was not performed and a daily status report was not prepared. However, truck loading was limited to one truck.
- Tank removal endpoint soil samples were inadvertently not collected. However, no olfactory or PID evidence of contamination was noted below the tanks. In addition, no VOCs or SVOCs were detected at elevated concentrations within endpoint soil sample EP-4 which was collected from the base of the excavation within the same approximate area of the tanks, and no VOCs or SVOCs were detected within RI soil sample B3(12-14) which was also collected from the same approximate location of the tanks.
- The Remedial Action Work Plan (EBC, November 2012) proposed the installation of GSE 20-mil vapor barrier to be installed beneath the structure slab and along the foundation. However, Grace Preprufe® 300R 46-mil vapor barrier was installed beneath the building slab, below/ around the elevator pit and mechanical pit.
- Approximately 40 cubic yards of ¾" blue stone was imported from Thalle Industries Inc. Fishkill Quarry without OER sign-off. OER was informed of this import afterwards.

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However, in accordance with NYSDEC DER-10 /Technical Guidance for Site Investigation and Remediation (Issued may 3, 2010), virgin mined stone from quarry is suitable for use as backfill without chemical testing provided that the recycled concrete contains less than 10% by weight material which would pass through a size 80 sieve. The material contains no fines and is suitable for use as backfill below the cellar slab.

- A total of 160 50lb bags of mason sand were purchased from Coney Island Wholesale Supply, Inc. located at 814 Coney Island Avenue, Brooklyn, NY without OER sign-off. However, mason sand is suitable for use as an underlayment for the pavers installed in the rear courtyard.

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4.0 REMEDIAL PROGRAM

4.1 Project Organization

The PE responsible for implementation of the remedial action for this project was Ariel Czmerinski P.E., AMC Engineering. On-Site air monitoring in accordance with the CHASP and CAMP, soil screening and soil sampling was performed by Erica Mungall, Dexter Carter, Greg Swirson, or Kevin Waters of EBC. The Qualified Environmental Professional which implemented the remedial action was Kevin Brussee, Project Manager of EBC. The excavation and foundation contractor was Wonder Works Construction Corp.

4.2 Site Controls

Site Preparation

Building demolition was signed off on July 3, 2012. Plans for the new building (NYC DOB Job number NB-121088526) were approved on May 3, 2013. Waste characterization soil sampling was performed on March 17, 2015, prior to mobilization to obtain soil disposal approval and to minimize the need for on-Site soil stockpiles. On May 6, 2015, equipment was mobilized to the Site to begin excavation of on-Site soil. An OER Project Notice was erected at the project entrance and was in place during all phases of the Remedial Action.

Soil Screening

Intrusive soil excavation activities were overseen by an EBC qualified environmental professional (QEP). In addition to extensive sampling and chemical testing of soils on the Site, excavated soil was screened continuously using a photo-ionization detector, by sight, and by smell to ensure proper material handling and management, and community protection.

Based on the waste characterization results collected in March 17, 2015, historic fill material in the rear of the Site required classification as D008 Hazardous Lead due to a TCLP lead concentration greater than 5.0 mg/L. EBC performed soil borings within the rear yard on March 17, 2015, to collect soil samples in an attempt to vertically and horizontally delineate the D008 Hazardous Lead soil. Based on the laboratory results, it was determined that all fill material [depth of at least 2 feet] from the rear yard required transportation and disposal as D008 Hazardous Lead soil.

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Historic fill material was encountered across the Site to final excavation depth. No physical or olfactory evidence of a spill was observed during Site excavation.

One 250-gallon No. 2 fuel oil underground storage tank and one 550-gallon gasoline underground storage tank was encountered in the front of the Site. Both tanks were cut and cleaned by Brookside Environmental. EBC field screened soil from immediately below each tank after they were removed. No physical or olfactory evidence of petroleum contamination was noted.

Stockpile Management

For the majority of the project, soil was excavated from the ground and live loaded into trucks to eliminate the need for stockpiling. However, any soil stockpiles that were generated and kept overnight were covered with 6-mil poly-sheeting to prevent dust and minimize odors. Stockpile covers were inspected by the EBC QEP.

Truck Inspection

A stabilized construction entrance was constructed at the front of the Site, which exited and entered from Greenwich Street. The stabilized entrance was constructed of a bed of bluestone which was sloped back toward the interior of the Site. The stabilized entrance was inspected on a daily basis during soil loading activities and reinforced as needed with additional bluestone to prevent the accumulation of ruts, mud or soil and to minimize the potential for impacted soil to be dispersed beyond the Site boundary. Before exiting the Site, trucks were examined for evidence of contaminated soil on the undercarriage, body, and wheels. If soil/debris was observed, it was removed utilizing brooms or shovels.

Site Security

An 8-ft high construction fence was constructed around the perimeter of the property. The fence was locked with a chain and padlock during non-working hours/days.

Nuisance Controls

No petroleum or other odors were detected during removal of the historic fill layer or native soil. On-site soil screening did not detect any excessive PID readings and no complaints were reported. Dust and odor was minimized by excavating and live-loading directly into trucks, and

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covering stockpiles with 6-mil poly sheeting overnight during off-work hours.

Reporting

Daily status reports were prepared and forwarded to the OER project manager for construction days in which soil disturbance activities were performed (soil excavation/loading). Daily reports were submitted during construction oversight activities from 5/6/2015 to 6/16/2017. A copy of each of the daily status reports is included in Appendix E.

Digital photographs of the remedial action are included in Appendix C.

4.3 Materials Excavation and Removal

4.3.1 Waste Characterization Soil Sampling

In order to collect waste characterization soil samples, the Site was divided into two colored Grid Sections: Blue (building footprint) and Red (B1(0-2) metals hotspot). On March 17, 2015, five hand excavated pits were excavated to a depth of approximately 2 feet within the Red Grid Section to form a 5-point composite waste characterization soil sample representing the soil/fill that required excavation from the rear courtyard. An additional five hand excavated pits were excavated to a depth of approximately 4 feet below grade across the area that required excavation for the new buildings' mat slab to form a 5-point composite waste characterization soil sample. EBC also retained one grab sample from each Grid Section.

The 5-point composite soil sample collected from the Red Grid Section (metals hotspot) was submitted to Phoenix Environmental Laboratories, Inc. (Phoenix) for analysis of SVOCs, pesticides, PCBs, herbicides, TAL metals and hexavalent chromium, Full TCLP, RCRA characteristics, and TOX. The grab soil sample submitted to Phoenix for laboratory analysis of VOCs and TPH DRO/GRO. Only one VOC was detected (naphthalene at 1.3 µg/Kg) within the grab soil sample. No herbicides, pesticides or PCBs were detected within the 5-point composite soil sample, and no metals were detected above Restricted Residential Use SCOs with the exception of lead (1,230 mg/kg) and barium (438 mg/kg). However, the TCLP lead concentration for the same waste characterization soil sample was 30.4 mg/L, which is above the EPA Regulatory Level of 5.0 mg/L. Therefore, historic fill material from the Red Grid Section was characterized as D008 Hazardous Lead soil.

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The 5-point composite soil sample collected from the Blue Grid Section was submitted to Phoenix for analysis of SVOCs, pesticides, PCBs, TAL metals, TCLP metals, RCRA characteristics, and EPH. The grab soil sample was submitted to Phoenix for laboratory analysis of VOCs. No VOCs were detected within the grab soil sample, and no pesticides, PCBs or SVOCs were detected above Unrestricted Use SCOs within the 5-point composite soil sample. No metals were detected above Restricted Residential Use SCOs within the waste characterization soil sample.

4.3.2 Excavation/Removal of D008 Hazardous Lead Soil

Excavation of D008 Hazardous Lead fill/soil from the 25 ft by 25 ft area in the rear of the lot identified as the B1(0-2) metals hot-spot (Red Grid Section) began on May 7, 2015, and was completed by May 22, 2015. Excavation was performed using a track mounted excavator and was conducted across the entire 25 ft by 25 ft area to a depth of approximately 2 feet. The laboratory results of two endpoint samples collected after the top 2 feet of D008 Hazardous Lead soil was removed (EP1 and EP2) indicated soil/fill with an elevated lead concentration remained in the northeast corner (EP1). Therefore, additional excavation to a depth of approximately 4 feet below grade was performed across a 12 ft by 15 ft area around EP1. A follow-up endpoint soil sample was collected (EP-1A) which confirmed the D008 Hazardous Lead soil had been removed. A total of approximately 223.51 tons of D008 Hazardous Lead fill/soil was transported to Clean Earth of North Jersey. Photographs of the B1(0-2) metals hot-spot excavation are included in Appendix C. Figure 5 depicts the areas and depths of D008 Hazardous Lead fill/soil excavation.

4.3.3 Excavation/Removal of Non-Hazardous Historic Fill Material

Following removal of the D008 Hazardous Lead soil/fill, non-hazardous historic fill material was excavated from across the remainder of the Site to a depth of approximately 3 to 4 feet below grade. Additional excavation was performed to a depth of approximately 9 feet below grade for the mechanical pit, and 7 feet below grade for the elevator pit. All non-hazardous soil was loaded into trucks for transport to Clean Earth of Carteret. A total of approximately 487.70 tons of non-hazardous historic fill material and native soil was transported to Clean Earth of Carteret. Figure 5 depicts the areas and depths of excavation performed at the Site

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After excavation was completed for the two proposed endpoints samples located within the footprint of the building, EBC collected 2 endpoint soil samples (EP3 and EP4). The approximate collection location of the endpoint soil samples is shown on Figure 6. No material was reused on-Site.

4.3.4 Tank Removal

One 550-gallon gasoline underground storage tank and one 250-gallon No. 2 fuel oil underground storage tank were encountered during excavation in the front of the Site. The approximate location of the tank is shown on Figure 5. Photos of the tank removal are included in Appendix C. The 250-gallon underground storage tank was removed from the ground by the excavation contractor on June 2, 2015. The 550-gallon underground storage tank was removed from the ground by the excavation contractor on July 16, 2015. EBC field screened soil from immediately below both tanks after they were removed. No physical or olfactory evidence of petroleum contamination was noted. EBC inadvertently failed to collect endpoint samples from the below the underground storage tanks after they were removed.

On June 2, 2015, and July 16, 2015, Brookside Environmental cut and cleaned both tanks. A total of six drums of non-hazardous liquid and tank sludge was removed from the tanks and transported to Clean Water of New York for disposal. A copy of the non-hazardous waste manifest for the drums is included in Appendix K. A copy of the NYFD Tank Removal Affidavit for the tank dated July 20, 2015 is also included Appendix K. A NYSDEC PBS Application was submitted to the NYSDEC to register/deregister both tanks. A copy of the NYSDEC PBS application submitted to the NYSDEC, and a printout of the NYSDEC Bulk Storage Database listing the tanks as unregistered is attached in Appendix K.

4.3.5 End Point Sample Results

Track 4 Site-Specific Soil Cleanup Objectives established for the Site were the following:

Contaminant	**Track 4 Site Specific SCOs**
Total SVOCs	350 ppm
Lead	1,200 ppm
Mercury	1.5 ppm
Barium	800 ppm

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Two endpoints (EP-1 and EP-2) were collected following excavation of the top 2 feet of soil from the B1(0-2) metals hotspot, and two endpoints (EP-3 and EP-4) were collected from the footprint of the new building excavation at a depth of approximately 3 feet below sidewalk grade. The location of each of the endpoint soil samples is shown on Figure 6. Dedicated disposable sampling equipment was utilized to collect each endpoint sample, eliminating the need for field equipment (rinsate) blanks.

The endpoint soil samples were appropriately packaged, placed in a cooler and picked up by laboratory courier for transport to the analytical laboratory. The samples were containerized in laboratory provided glassware and shipped in plastic coolers preserved utilizing ice or "cold-paks" to maintain a temperature of 4^{o}C.

Endpoint samples EP1 through EP4 were submitted to Phoenix Environmental Laboratories, Inc. (Phoenix) located at 587 East Middle Turnpike, in Manchester, CT 06040 (NYS ELAP Certification No. 11301). Endpoint soil samples EP1 through EP4 were submitted for laboratory analysis utilizing the following methodology:

- Semi-volatile organic compounds by EPA Method 8270; and
- Target Analyte List metals by EPA Method 6010 and 7471.

Due to the absence of pesticides and PCBs within soil samples collected during the Remedial Investigation, laboratory analysis of the endpoint soil samples for these parameters was not warranted. A copy of each of the laboratory reports for the endpoint soil samples is attached in Appendix J. A tabular summary of the laboratory results of the deep soil samples collected during the Remedial Investigation and of the end-point soil sample results is included on Table 1 (VOCs), Table 2 (SVOCs), Table 3 (pesticides/PCBs), and Table 4 (metals). The laboratory results of the endpoint soil samples indicate Track 4 Site-Specific SCOs were achieved for endpoint soil samples EP-3, and EP4. However, total SVOCs, mercury and lead were detected above Track 4 Site-Specific SCOs in EP-1, and mercury was detected above Track 4 Site-Specific SCOs in EP-2.

A follow-up endpoint soil sample (EP-1A) was collected after an additional 2 feet of soil was removed from the EP-1 collection location. Endpoint soil sample EP-1A was submitted to

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Phoenix for laboratory analysis of Target Analyte List metals by EPA Method 6010 and 7471. A copy of each of the laboratory report is included in Appendix J, and the laboratory results a summarized on Table 4 (metals). Only mercury was detected above Track 4 Site-Specific SCOs. Therefore, Track 4 Site-Specific SCOs were achieved with the exception of mercury within EP-1A (4.66 mg/kg) and EP-2 (2.34 mg/kg). OER was notified of the mercury Track 4 Site-Specific SCO exceedences in EP-1A and EP-2 via email on May 22, 2015. OER responded via email on May 22, 2015, stating the soil can remain in place. A copy of the correspondence is included in Appendix N. To prevent exposure to remaining soil/fill with compounds at concentrations greater than Restricted Residential Use SCOs and Track 4 Site-Specific SCOs, an engineered Composite Cover System has been built at the Site

4.4 Materials Disposal

In accordance with Section 3010 of Subtitle C of Resource Conservation and Recovery Act (RCRA), EPA was notified of hazardous waste generation (D008 hazardous lead soil) by submitting Notification of RCRA Subtitle C Activity, EPA Form 8700-12. EPA assigned Generator ID number NYR000218578. The laboratory results, profile form with the EPA Generator ID Number and a formal letter describing the sampling process and material type, was forwarded to Clean Earth, Inc. to obtain soil disposal approval for the D008 hazardous lead soil at Clean Earth of North Jersey. Clean Earth of North Jersey is located at 115 Jacobus Avenue, Kearny, NJ 07032. The facility is a RCRA Part B permitted transfer, storage and disposal facility (TSDF) that accepts hazardous and industrial waste under New Jersey Permit No. NJD991291105.

From May 7, 2015 to May 22, 2015, a total of approximately 223.51 tons of D008 Hazardous Lead fill/soil was excavated from the rear yard and transported to Clean Earth of North Jersey. Copies of each of the Uniform Hazardous Waste Manifests and associated scale tickets are included in Appendix H. A Clean Earth of North Jersey Profile Report, which summarizes the shipping date, manifest number, trucking company name and truck number, and tonnage for each truck load is also included in Appendix H.

All non-hazardous fill material was approved for transport to Clean Earth of Carteret (CEC) located at 24 Middlesex Avenue, Carteret, NJ. The CEC facility (ID# 13231) is a Class B

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Recycling Center operating under permit No. CBG060003 issued by the New Jersey Department of Environmental Protection (NJDEP). From May 6, 2015, through October 23, 2015, a total of approximately 487.70 tons of non-hazardous soil/fill was transported to Clean Earth of Carteret. Copies of each of the manifests and associated scale tickets are included in Appendix I. Two Clean Earth of Carteret Profile Reports that summarize the shipping date, manifest number, trucking company name and truck number, and tonnage for each truck load are also included in Appendix I.

The volume/tonnage and destination of material removed and disposed off-Site is presented below:

Table 6 - Disposal Quantities and Disposal Facilities

Destination	Type of Material	Quantity
Clean Earth of North Jersey 105 Jacobus Avenue, Kearny, NJ 07032	D008 Hazardous Lead Soil/Fill	223.51 tons
Clean Earth of Carteret 24 Middlesex Avenue, Carteret, NJ 07008	Non-Hazardous Fill Material	487.70 tons

4.5 Backfill Import

In October of 2015, two truck loads (approximately 40 cubic yards) of ¾" bluestone was imported from Thalle Industries Inc. Fishkill Quarry. The ¾" bluestone was imported for use below the building slab. A copy of each of the truck tickets for ¾" blue stone from Thalle Industries Inc. is attached in Appendix L. In addition, a copy of the sieve analysis report for the ¾" bluestone from Thalle Industries Inc. is included in Appendix L.

From June 12, 2017, to June 13, 2017, two truck loads (approximately 36.81 tons) of ¾" bluestone was imported from the New York Sand & Stone, LLC facility located at the Brooklyn Navy Yard Pier J. A formal import request was forwarded to OER via email on June 9, 2017. The request included a copy of the sieve analysis report. A copy of each of the source scale tickets for each load of ¾" bluestone from New York Sand & Stone, LLC. is attached in Appendix L. In addition, a copy of the sieve analysis report for the ¾" bluestone from New York Sand & Stone, LLC is included in Appendix L. The ¾" bluestone was imported for use as backfill above the demarcation barrier installed in the rear yard.

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On June 16, 2017, one truck load (approximately 20 cubic yards) of topsoil was delivered from M&D Nursery & Equipment Corp. located at 2270 Stillwell Avenue, Brooklyn, New York 11223. A formal import request was forwarded to OER via email on June 9, 2017. A copy of the source ticket for both truck loads of topsoil from M&D Nursery & Equipment Corp. is attached in Appendix J. The topsoil was installed over the demarcation barrier (orange safety fence) and was used to create a 3ft wide and 2 ft deep planting area around the perimeter of the rear courtyard.

A total of 160 50lb bags of mason sand were purchased from Coney Island Wholesale Supply, Inc. located at 814 Coney Island Avenue, Brooklyn, NY without OER sign-off. The mason sand was used to create a 3 inch underlayment for the 2 inch thick concrete pavers installed in the rear courtyard.

No other backfill was imported to the Site. The volume/tonnage of backfill materials imported to the Site, and the facility name/address from which the backfill was obtained is presented below:

Table 7 – Backfill Quantities and Sources

Facility	Type of Material	Quantity
Coney Island Wholesale Supply Inc. 814 Coney Island Avenue, Brooklyn, NY 11218	Mason Sand for below Rear Yard Pavers	(160) 50lb bags
M&D Nursery & Equipment Corp. 2270 Stillwell Avenue, Brooklyn, NY 11223	Topsoil over demarcation barrier in rear landscaped courtyard	20 cubic yards
New York Sand & Stone, LLC Brooklyn Navy Yard – Pier J 63 Flushing Avenue, Brooklyn, NY (sourced from Lafarge in Ravena, NY)	¾" bluestone	36.81 tons
Thalle Industries Inc. 172 Route 9, Fishkill, NY 12524	¾" bluestone	40 cubic yards

4.6 Demarcation

Prior to finishing the rear courtyard, a demarcation barrier was installed across the entire area at a depth of approximately 2 feet below finished grade. The demarcation barrier consists of a plastic orange security fence. Photos depicting installation of the demarcation barrier are

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included in Appendix C. Approximately 36.82 tons of ¾" blue stone and 20 cubic yards of topsoil were imported for use as backfill above the demarcation barrier. The topsoil was used to create a 3ft wide by 2 ft deep strip around the perimeter of the courtyard to create a landscaped/planting area. The remainder of the courtyard is finished with pavers installed on a 3 inch underlayment of mason sand, and 18 inches of ¾" bluestone. Figure 7 depicts the "As-Built" composite cover design installed at the Site.

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5.0 ENGINEERING CONTROLS

Engineering Controls were employed in the remedial action to address residual soil contamination remaining at the Site. The Site has two primary Engineering Control Systems. These are:

(1) Composite Cover System

(2) Vapor Barrier System

Composite Cover System

As part of development, exposure to residual soil/fill is prevented by an engineered Composite Cover System that has been built on the entire Site. The engineered composite cover system consists of the following:

- The new building's 24 to 34 inch thick concrete mat slab underlain by Grace Preprufe® 300R waterproofing, a 2 inch rat slab and a 6 to 12 inch layer of ¾ inch blue stone; and
- The rear courtyard is capped with a 2ft thick composite cover installed over an orange plastic demarcation barrier. The composite cover consists of a 3ft wide by 2 ft thick layer of topsoil installed over the demarcation barrier around the perimeter of the rear courtyard, and 2 inch thick concrete pavers with 1 inch diameter river rock between the pavers. The pavers and river rock are underlain with a 3 inch layer of mason sand, and an 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.

Figure 7 depicts the location and design of the Site's Composite Cover System. Photographs of construction of the Composite Cover System are included in Appendix C. The composite cover system was installed by Wonder Works Construction Corp.

Waterproofing Membrane/Vapor Barrier

As part of development, exposure to soil vapor is prevented by a Vapor Barrier System that has been built on the Site. Migration of soil vapor from potential off-site sources is mitigated with a combination of building slab and vapor barrier. The Vapor Barrier System installed below the entire building's 24 to 34 inch thick concrete mat slab consists of Preprufe 300R as manufactured by Grace. Preprufe 300 is a 1.2 mm (0.046in) thick HDPE film with a pressure sensitive adhesive that bonds to the poured concrete.

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All waterproofing membrane seams, penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions. Photos of the waterproofing membrane being installed are included in Appendix C and the approximate layout is shown on Figure 8. The vapor barrier was installed by the foundation contractor, Wonder Works Construction Corp.

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6.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required under this Remedial Action to assure permanent protection of public health by elimination of exposure to residual materials. These ICs define the program to operate, maintain, inspect, and certify the performance of Engineering Controls and Institutional Controls on this property. These Institutional Controls will be implemented in accordance with the Site Management Plan included in this RAR. Institutional Controls for this property are:

(1) The property will continue to be registered with an E-Designation with the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;
(2) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;
(3) Engineering Controls will not be discontinued without prior OER approval;
(4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
(5) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;
(6) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;
(7) All future activities on the Site that will disturb residual soil/fill must be conducted pursuant to the Soil/Materials Management provisions of the SMP, or otherwise approved by OER;
(8) The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

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7.0 SITE MANAGEMENT PLAN

Site management is the last phase of the remedial process and begins after the approval of the Remedial Action Report (RAR) and issuance of the Notice of Completion (NOC) by OER. It is the responsibility of the property owner (403 Greenwich Enterprises LLC) to ensure that all Site management responsibilities are performed. The penalty for failure to implement the SMP includes revocation of the Notice of Completion and all associated certifications and liability protections providing notice of the revocation to the NYC DOB. If the building is sold, the new owners will be notified of the SMP requirements.

Engineering Controls (ECs) and Institutional Controls (ICs) have been incorporated into this remediation to ensure that the Site remains protective of public health and the environment. EC's provide physical protective measures. ICs provide restrictions on Site usage and provide operation, maintenance, inspection and certification measures. This SMP includes all methods necessary ensure compliance with ECs and ICs required for the property.

The SMP provides a detailed description of procedures required to manage residual material at the Site following the completion of remedial construction in accordance with the NYC Voluntary Cleanup Agreement with OER. This includes: (1) operation and maintenance of Engineering Controls (2) periodic inspections of IC's and EC's and (3) certification of Engineering Controls and Institutional Controls.

ENGINEERING AND INSTITUTIONAL CONTROLS

Engineering Controls

Engineering Controls are employed in the remedial action to address residual materials remaining at the Site. The Site has a two Engineering Controls. These are:

- Soil Vapor Barrier System; and
- Composite Cover System.

Operation and Maintenance of the Composite Cover System

The engineered composite cover system consists of the following:

- The new building's 24 to 34 inch thick concrete mat slab underlain by Grace Preprufe® 300R waterproofing, a 2 inch rat slab and a 6 to 12 inch layer of ¾ inch blue stone; and

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- The rear courtyard is capped with a 2ft thick composite cover installed over an orange plastic demarcation barrier. The composite cover consists of a 3ft wide by 2 ft thick layer of topsoil installed over the demarcation barrier around the perimeter of the rear courtyard, and 2 inch thick concrete pavers with 1 inch diameter river rock between the pavers. The pavers and river rock are underlain with a 3 inch layer of mason sand, and an 18 inch layer of 3/4" bluestone installed above an orange plastic demarcation barrier.

The composite cover system is a permanent Engineering Control for the Site. The composite cover system does not require any special operation or maintenance in order to perform as designed in the RAWP. A Soil/Materials Management Plan is included in this Site Management Plan to outline the procedures to be followed in the event that the composite cover system and underlying residual soil/material must be disturbed after the remedial action is complete.

The system will be inspected and its performance certified at specified intervals defined in this SMP. Procedures for the inspection and maintenance of this cover are provided below.

Maintenance of Vapor Barrier System

Chapter 5 describes the Vapor Barrier System utilized in this Remedial Action and provides as-built design details and the system location. The Vapor Barrier System is a permanent Engineering Control for the Site. The system will be inspected and its performance certified at specified intervals defined in this SMP.

The Vapor Barrier System does not require any special operation or maintenance activities. If the system is breached during future construction activities, the system will be rebuilt by reconstructing the vapor barrier layers and sealing the newly constructed materials with equivalent barrier materials in accordance with manufacturer specifications.

Institutional Controls

A series of Institutional Controls are required under this Remedial Action to assure permanent protection of public health by elimination of exposure to residual materials. These IC's define the program to operate, maintain, inspect and certify the performance of Engineering Controls and Institutional Controls on this property. These Institutional Controls will be implemented in accordance with the Site Management Plan included in this RAR.

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Institutional Controls for this property are:

(1) The property will continue to be registered with an E-Designation with the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;
(2) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;
(3) Engineering Controls will not be discontinued without prior OER approval;
(4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
(5) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;
(6) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;
(7) All future activities on the Site that will disturb residual soil/fill must be conducted pursuant to the Soil/Materials Management provisions of the SMP, or otherwise approved by OER;
(8) The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

INSPECTIONS

Engineering Controls and Institutional Controls will be inspected by a qualified environmental professional and certification of inspection shall be submitted by July 31, 2027 (for calendar years 2017-2026) and will be performed every ten years thereafter.

The QEP inspections will evaluate the following:

- If Engineering Controls or Institutional Controls employed at the Site continue to perform as designed and continue to be protective of human health and the environment;
- If anything has occurred that impairs the ability of the Engineering Controls or Institutional Controls to protect public health and the environment;
- If changes are needed to the remedial systems or controls;

- If compliance with this SMP has been maintained;
- If site records are complete and up to date; and
- General Site conditions at the time of inspection.

In an addition, if an emergency occurs, such as a natural disaster, or if an unforeseen failure of any of the Engineering Controls occurs, an inspection of the Site will be performed within 30 days to evaluate the Engineering Controls and a letter report of findings will be submitted to OER.

Engineering Control Inspection

Inspection of Composite Cover System

The Site consists of a 9-story residential building with a small mechanical pit. Inspection of the composite cover will consist of a visual inspection of the concrete slab for the building and mechanical pit, and the rear courtyard which is capped with 2 inch thick concrete pavers and 1 inch river rock between the pavers, and 24 inches of topsoil around the perimeter of the rear yard. The inspection will include all accessible locations including the site perimeter and all internal access points, including the mechanical pit. The inspector will document any faulty or defective conditions observed during the inspection, broken or damaged concrete, or any failure in the integrity of the floor that would compromise the ability of the composite cover to perform as an Engineering Control. Cracks, holes, perforations or slab disturbances shall be recorded on the Inspection Checklist (Appendix O).

Inspection of Vapor Barrier System

The vapor barrier system will be inspected by a qualified environmental professional to assure that it is functioning properly. The vapor barrier system is not visible and cannot be directly inspected. However, it can be inspected in concert with inspection of the building slab. If the inspector observes a failure in the slab that exposes the vapor barrier, then the underlying vapor barrier will be inspected for any damage, including tears or perforations, which would prevent the vapor barrier from completing its intended purpose. Cracks, holes, perforations or slab disturbances shall be recorded on the Inspection Checklist (Appendix O) and remediated as appropriate.

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Site Use Prohibitions

Inspections to evaluate the status of site use prohibitions will include an evaluation of all of the ICs listed above, including:

- whether there is vegetable gardening or farming in residual soil/fill;
- whether groundwater underlying the site has been used without treatment rendering it safe for its intended use;
- whether activities that have disturbed site soil/fill have been conducted pursuant to the Soil/Material Management provisions of the SMP, or otherwise approved by OER; and
- whether the site has been used for a higher level of use other than the restricted residential use addressed by the Remedial Action.

INSPECTION AND CERTIFICATION LETTER REPORT

Results of inspections performed during a reporting period and certification of performance of all Engineering Controls and Institutional Controls will be included in an Inspection and Certification Letter Report to be submitted by July 31, 2027 (for calendar years 2017-2026) and will be performed every ten years thereafter. Inspection and Certification Letter Reports will be submitted to OER in digital format. The letter report will include, at a minimum:

- Date of inspections;
- Personnel conducting inspections;
- Description of the inspection activities performed;
- Any observations, conclusions, or recommendations;
- Copy of any inspection forms;
- Certification of the performance of Engineering Controls and Institutional Controls executed by the P.E or QEP responsible for this Inspection and Certification Letter Report, as discussed below; and
- Confirmation of regular periodic inspection of engineering controls by building superintendent.

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The certification of the performance of EC's and IC's will establish:

- If Engineering Controls or Institutional Controls employed at the Site continue to be in place and perform as designed and continue to be protective of human health and the environment;
- If anything has occurred that impairs the ability of Engineering Controls or Institutional Controls to protect public health and the environment;
- If changes are needed to the remedial systems or controls;
- If compliance with this Site Management Plan has been maintained;
- If the Site has been used for a higher level of use other than the restricted residential use addressed by the Remedial Action;
- If site records are complete and up to date;
- If the Site continues to be registered as an E-Designated property by the NYC Department of Buildings;

OER may enter the Site upon notice for the purpose of evaluating the performance of EC's & IC's.

NOTIFICATIONS

Notifications are to be submitted by the property owner to OER as described below:

- 60-day advance notice of any proposed changes in Site use to Unrestricted Use that is not contemplated is the Remedial Action.
- Notice within 30 days 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.

SOIL/MATERIALS MANAGEMENT PLAN

Any future intrusive work that will disturb residual soil/fill beneath the property, including modifications or repairs to the existing composite cover system, will be performed in compliance with this Soil/Materials Management Plan (SMMP). Intrusive work will also be conducted in accordance with the procedures defined in the Community Air Monitoring Plan (CAMP) in this plan and a Construction Health and Safety Plan (HASP). The HASP is the responsibility of the property owner and should be in compliance with NYSDEC DER-10 Technical Guide and 29 CFR 1910 and 1926, and all other applicable Federal, State and City regulations. Intrusive

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construction work should be compliant with this SMMP and described in the next Inspection and Certification Letter Report.

Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed under the supervision of a Qualified Environmental Professional (QEP). Soil screening will be performed during any future intrusive work.

Stockpile Methods

Stockpiles will be used to isolate excavated soil and will be removed as soon as practicable. While stockpiles are in place, they will be inspected daily, and before and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by OER. Excavated soils will be stockpiled on, at minimum, double layers of 6-mil minimum sheeting, will be kept covered at all times with appropriately anchored plastic tarps, and will be routinely inspected. Broken or ripped tarps will be promptly replaced.

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters, and other discharge points.

Characterization of Excavated Materials

Soil/fill or other excavated media that is transported off-Site for disposal will be sampled in a manner required by the receiving facility, and in compliance with applicable laws and regulations. Excavated soil will only be reused on-site with prior approval by OER.

Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

- oversee intrusive work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this management plan;

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- ensure that Site maintenance activities and maintenance-related grading cuts will not interfere with, or otherwise impair or compromise the remedial measures established during the remediation construction phase;
- ensure that the presence of utilities and easements on the Site has been investigated and that any identified risks from work proposed under this plan are properly addressed by appropriate parties;
- ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site;
- ensure that all egress points for truck and equipment transport from the Site will be kept clean of Site-derived materials during Site intrusive work.

Locations where vehicles exit the Site shall be inspected daily for evidence of soil tracking off premises. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance.

Outbound truck transport routes are shown on Figure 9. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

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Materials Disposal Off-Site

The following documentation will be established and reported by the PE/QEP for each disposal destination used in this project to document that the disposal of regulated material exported from the Site conforms with applicable laws and regulations: (1) a letter from the PE/QEP or Enrollee to each disposal facility describing the material to be disposed and requesting written acceptance of the material. This letter will state that material to be disposed is regulated material generated at an environmental remediation Site in Brooklyn, New York under a governmental remediation program. The letter will provide the project identity and the name and phone number of the PE/QEP or Enrollee. The letter will include as an attachment a summary of all chemical data for the material being transported; and (2) a letter from each disposal facility stating it is in receipt of the correspondence (1, above) and is approved to accept the material.

Documentation associated with disposal of all material will include records and approvals for receipt of the material. All impacted soil/fill or other waste excavated and removed from the Site will be managed as regulated material and will be disposed in accordance with applicable laws and regulations. Historic fill and contaminated soils taken off-Site will be handled as solid waste and will not be disposed at a Part 360-16 Registration Facility (also known as a Soil Recycling Facility).

Waste characterization will be performed for off-Site disposal in a manner required by the receiving facility and in conformance with its applicable permits. Waste characterization sampling and analytical methods, sampling frequency, analytical results and QA/QC will be retained and included in the following Inspection and Certification Report. A manifest system for off-Site transportation of exported materials will be employed. Hazardous wastes derived from on-Site will be stored, transported, and disposed of in compliance with applicable laws and regulations.

Materials Reuse On-Site

All of the soil excavated during any future repair or construction purposes will be placed in the same excavation it was derived from or will be disposed of off-site unless otherwise approved by OER beforehand.

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Repair of Remedial Systems

After completion of invasive work, any damage of the engineering controls (composite cover system, vapor barrier, etc.) will be restored to the original condition established during initial construction.

Import of Backfill Soil from Off-Site Sources

In the event that soil importation is needed for the backfilling purposes, this Section presents the requirements for imported fill materials. All imported soils will meet OER-approved backfill and cover soil quality objectives for this Site. The backfill and cover soil quality objectives including NYSDEC Part 375 Track 2 Residential SCOs and groundwater protections standards. A process will be established to evaluate sources of backfill and cover soil to be imported to the Site, and will include an examination of source location, current and historical use(s), and any applicable documentation. Material from industrial sites, spill sites, environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The following potential sources may be used pending attainment of backfill and cover soil quality objectives:

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;
- Clean soil from roadway or other transportation-related projects in compliance with applicable laws and regulations;
- Clean recycled concrete aggregate (RCA) from facilities permitted or registered by the regulations of NYS DEC; and
- Virgin quarried material or other materials with an approved Beneficial Use Determination (BUD) from NYSDEC for reuse as clean fill.

All materials received for import to the Site will be approved by a PE/QEP and will be in compliance with provisions in this SMP. The Inspection and Certification Report will report the source of the fill, evidence that an inspection was performed on the source, chemical sampling results, frequency of testing, and a Site map indicating the locations where backfill or soil cover was placed.

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Source Screening and Testing

Inspection of imported fill material will include visual, olfactory, and PID screening for evidence of contamination. Materials imported to the Site will be subject to inspection, as follows:

- Trucks with imported fill material will be in compliance with applicable laws and regulations and will enter the Site at designated locations;
- The PE/QEP is responsible to ensure that every truck load of imported material is inspected for evidence of contamination; and
- Fill material will be free of solid waste including pavement materials, debris, stumps, roots, and other organic matter, as well as ashes, oil, perishables or foreign matter.

Composite samples of imported material from the identified clean soil sources will be taken at a minimum frequency of one sample for every 500 cubic yards of material. One composite sample will be collected from each source of virgin quarried material or other material with an NYSDEC approved BUD, unless otherwise approved by OER. Once it is determined that the fill material meets imported backfill or cover soil chemical requirements and is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) may be imported from facilities permitted or registered by NYSDEC. A PE/QEP is responsible to ensure that the facility is compliant with 6NYCRR Part 360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA will not be used as cover material.

Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported, and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by

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transportation and disposal at an off-Site treatment facility. Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by NYSDEC.

Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during the remedial program. All existing storm water systems will be inspected to ensure proper operation.

Odor Control

All necessary means will be employed to prevent on- and off-Site odor nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) use of foams to cover exposed odorous soils. If odors develop and cannot otherwise be controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; and (e) use of chemical odorants in spray or misting systems.

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEPs.

Dust Control

Dust management during invasive on-Site work will include, at a minimum:

- Use of a dedicated water spray methodology for roads, excavation areas and stockpiles.
- Use of properly anchored tarps to cover stockpiles.
- Exercise extra care during dry and high-wind periods.
- Use of gravel or recycled concrete aggregate on egress and other roadways to provide a clean and dust-free road surface.

If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been

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abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEPs.

Noise

Noise control will be exercised during the remedial program. All remedial work will conform, at a minimum, to NYC noise control standards.

COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the Community Air Monitoring Plan (CAMP) will be reported to the OER Project Manager and included in the Daily Report.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment

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appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for OER personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

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- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for OER personnel to review.

CONTINGENCY PLAN

Emergency Telephone Numbers

In the event of any emergency condition pertaining to this remedial system, or if the building slab is disturbed, removed or altered, the Owner's representative(s) should contact the appropriate parties from the contact list below. Prompt contact should also be made to EBC. These emergency contact lists must be maintained in an easily accessible location at the Site.

Emergency Contact Numbers

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

Contact Numbers

Environmental Business Consultants	(631) 504-6000
Office of Environmental Remediation	(212) 788-8841; 311

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TABLES

TABLE 1
403 Greenwich St, New York, NY
Soil Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Remedial Investigation Results					
			B1		B2		B3	
			9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg	
1,1,1,2-Tetrachlorothane			ND	-	ND	-	ND	-
1,1,1-Trichloroethane	680	100,000	ND	-	ND	-	ND	-
1,1,2,2-Tetrachloroethane			ND	-	ND	-	ND	-
1,1,2-Trichloroethane			ND	-	ND	-	ND	-
1,1-Dichloroethane	270	26,000	ND	-	ND	-	ND	-
1,1-Dichloroethene	330	100,000	ND	-	ND	-	ND	-
1,1-Dichloropropene			ND	-	ND	-	ND	-
1,2,3-Trichlorobenzene			ND	-	ND	-	ND	-
1,2,3-Trichloropropane			ND	-	ND	-	ND	-
1,2,4-Trichlorobenzene			ND	-	ND	-	ND	-
1,2,4-Trimethylbenzene	3,600	52,000	ND	-	ND	-	ND	-
1,2-Dibromo-3-chloropropane			ND	-	ND	-	ND	-
1,2-Dichlorobenzene	1,100	100,000	ND	-	ND	-	ND	-
1,2-Dichloroethane	20	3,100	ND	-	ND	-	ND	-
1,2-Dichloropropane			ND	-	ND	-	ND	-
1,3,5-Trimethylbenzene	8,400	52,000	ND	-	ND	-	ND	-
1,3-Dichlorobenzene	2,400	4,900	ND	-	ND	-	ND	-
1,3-Dichloropropane			ND	-	ND	-	ND	-
1,4-Dichlorobenzene	1,800	13,000	ND	-	ND	-	ND	-
2,2-Dichloropropane			ND	-	ND	-	ND	-
2-Chlorotoluene			ND	-	ND	-	ND	-
2-Hexanone (Methyl Butyl Ketone)			ND	-	ND	-	ND	-
2-Isopropyltoluene			ND	-	ND	-	ND	-
4-Chlorotoluene			ND	-	ND	-	ND	-
4-Methyl-2-Pentanone			ND	-	ND	-	ND	-
Acetone	50	100,000	ND	-	ND	-	ND	-
Acrylonitrile			ND	-	ND	-	ND	-
Benzene	60	4,800	ND	-	ND	-	ND	-
Bromobenzene			ND	-	ND	-	ND	-
Bromochloromethane			ND	-	ND	-	ND	-
Bromodichloromethane			ND	-	ND	-	ND	-
Bromoform			ND	-	ND	-	ND	-
Bromomethane			ND	-	ND	-	ND	-
Carbon Disulfide			ND	-	ND	-	ND	-
Carbon tetrachloride	760	2,400	ND	-	ND	-	ND	-
Chlorobenzene	1,100	100,000	ND	-	ND	-	ND	-
Chloroethane			ND	-	ND	-	ND	-
Chloroform	370	49,000	ND	-	ND	-	ND	-
Chloromethane			ND	-	ND	-	ND	-
cis-1,2-Dichloroethene	250	100,000	ND	-	ND	-	ND	-
cis-1,3-Dichloropropene			ND	-	ND	-	ND	-
Dibromochloromethane			ND	-	ND	-	ND	-
Dibromoethane			ND	-	ND	-	ND	-
Dibromomethane			ND	-	ND	-	ND	-
Dichlorodifluoromethane			ND	-	ND	-	ND	-
Ethylbenzene	1,000	41,000	ND	-	ND	-	ND	-
Hexachlorobutadiene			ND	-	ND	-	ND	-
Isopropylbenzene			ND	-	ND	-	ND	-
m&p-Xylenes	260	100,000	ND	-	ND	-	ND	-
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	-	ND	-	ND	-
Methyl t-butyl ether (MTBE)	930	100,000	ND	-	ND	-	ND	-
Methylene chloride	50	100,000	ND	-	ND	-	ND	-
Naphthalene	12,000	100,000	ND	-	ND	-	ND	-
n-Butylbenzene	12,000	100,000	ND	-	ND	-	ND	-
n-Propylbenzene	3,900	100,000	ND	-	ND	-	ND	-
o-Xylene	260	100,000	ND	-	ND	-	ND	-
p-Isopropyltoluene			ND	-	ND	-	ND	-
sec-Butylbenzene	11,000	100,000	ND	-	ND	-	ND	-
Styrene			ND	-	ND	-	ND	-
tert-Butylbenzene	5,900	100,000	ND	-	ND	-	ND	-
Tetrachloroethene	1,300	19,000	ND	-	ND	-	ND	-
Tetrahydrofuran (THF)			ND	-	ND	-	ND	-
Toluene	700	100,000	ND	-	ND	-	ND	-
Total Xylenes	190	100,000	ND	-	ND	-	ND	-
trans-1,2-Dichloroethene			ND	-	ND	-	ND	-
trans-1,3-Dichloropropene			ND	-	ND	-	ND	-
trabs-1,4-dichloro-2-butene			ND	-	ND	-	ND	-
Trichloroethene	470	21,000	ND	-	ND	-	ND	-
Trichlorofluoromethane			ND	-	ND	-	ND	-
Trichlorotrifluoroethane			ND	-	ND	-	ND	-
Vinyl Chloride	20	900	ND	-	ND	-	ND	-
Total BTEX Concentration			ND		ND		ND	
Total VOCs Concentration			ND		ND		ND	

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 2
403 Greenwich St, New York, NY
Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Remedial Investigation Results						Endpoint Results									
			B1		B2		B3		EP1		EP1A		EP2		EP3		EP4	
			9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg		5/6/2015 (24") µg/Kg		5/12/2015 (32") µg/Kg		5/6/2015 (24") µg/Kg		5/20/2015 (6") µg/Kg		5/20/2015 (6") µg/Kg	
1,2,4,5-Tetrachlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
1,2,4-Trichlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
1,2-Dichlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
1,3-Dichlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
1,4-Dichlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,4,5-Trichlorophenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,4,6-Trichlorophenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,4-Dichlorophenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,4-Dimethylphenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,4-Dinitrophenol			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
2,4-Dinitrotoluene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2,6-Dinitrotoluene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2-Chloronaphthalene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2-Chlorophenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2-Methylnaphthalene			ND	-	ND	-	ND	-	6,500	6,600	360	260	< 270	270	< 250	250	< 240	240
2-Methylphenol (o-cresol)	330	100,000	ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
2-Nitroaniline			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
2-Nitrophenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
3&4-Methylphenol (m&p-cresol)	330	100,000	ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
3,3'-Dichlorobenzidine			ND	-	ND	-	ND	-	< 19000	19,000	< 740	740	< 760	760	< 730	730	< 690	690
3-Nitroaniline			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
4,6-Dinitro-2-methylphenol			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
4-Bromophenyl phenyl ether			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
4-Chloro-3-methylphenol			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
4-Chloroaniline			ND	-	ND	-	ND	-	< 19000	19,000	< 740	740	< 760	760	< 730	730	< 690	690
4-Chlorophenyl phenyl ether			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
4-Nitroaniline			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
4-Nitrophenol			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
Acenaphthene	20,000	100,000	ND	-	ND	-	ND	-	13,000	6,600	680	260	< 270	270	< 250	250	120	240
Acenaphthylene	100,000	100,000	ND	-	ND	-	ND	-	6,300	6,600	480	260	< 270	270	< 250	250	< 240	240
Acetophenone			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Aniline			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
Anthracene	100,000	100,000	ND	-	ND	-	ND	-	39,000	6,600	1,600	260	< 270	270	< 250	250	250	240
Benzo(a)anthracene	1,000	1,000	ND	-	ND	-	ND	-	100,000	6,600	5,700	2,600	130	270	310	250	920	240
Benzidine			ND	-	ND	-	ND	-	< 19000	19,000	< 740	740	< 760	760	< 730	730	< 690	690
Benzo(a)pyrene	1,000	1,000	ND	-	ND	-	ND	-	99,000	6,600	5,000	260	130	270	240	250	780	240
Benzo(b)fluoranthene	1,000	1,000	ND	-	ND	-	ND	-	79,000	66,000	5,600	2,600	170	270	300	250	1,100	240
Benzo(g,h,i)perylene	100,000	100,000	ND	-	ND	-	ND	-	31,000	6,600	3,100	260	< 270	270	140	250	340	240
Benzo(k)fluoranthene	800	3,900	ND	-	ND	-	ND	-	32,000	6,600	2,000	260	< 270	270	< 250	250	280	240
Benzoic Acid			ND	-	ND	-	ND	-	< 47000	47,000	< 1900	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
Butyl benzyl phthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Bis(2-chloroethoxy)methane			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Bis(2-chloroethyl)ether			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Bis(2-chloroisopropyl)ether			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Bis(2-ethylhexyl)phthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	150	250	< 240	240
Carbazole			ND	-	ND	-	ND	-	10,000	47,000	490	1,900	< 1900	1,900	< 1800	1,800	< 1700	1,700
Chrysene	1,000	3,900	ND	-	ND	-	ND	-	110,000	6,600	5,200	2,600	140	270	340	250	930	240
Dibenzo(a,h)anthracene	330	330	ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Dibenzofuran	7,000	59,000	ND	-	ND	-	ND	-	15,000	6,600	730	260	< 270	270	< 250	250	< 240	240
Diethyl phthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Dimethyl phthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Di-n-butylphthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Di-n-octylphthalate			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Fluoranthene	100,000	100,000	ND	-	ND	-	ND	-	180,000	66,000	12,000	2,600	260	270	460	250	1,200	240
Fluorene	30,000	100,000	ND	-	ND	-	ND	-	9,200	6,600	500	260	< 270	270	< 250	250	< 240	240
Hexachlorobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Hexachlorobutadiene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Hexachlorocyclopentadiene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Hexachloroethane			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Indeno(1,2,3-cd)pyrene	500	500	ND	-	ND	-	ND	-	28,000	6,600	2,600	260	< 270	270	< 250	250	320	240
Isophorone			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Naphthalene	12,000	100,000	ND	-	ND	-	ND	-	< 6600	6,600	560	260	< 270	270	< 250	250	< 240	240
Nitrobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
N-Nitrosodimethylamine			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
N-Nitrosodi-n-propylamine			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
N-Nitrosodiphenylamine			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Pentachloronitrobenzene			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Pentachlorophenol	800	6,700	ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Phenanthrene	100,000	100,000	ND	-	ND	-	ND	-	180,000	66,000	8,800	2,600	140	270	600	250	840	240
Phenol	330	100,000	ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240
Pyrene	100,000	100,000	ND	-	ND	-	ND	-	160,000	66,000	10,000	2,600	270	270	460	250	1,100	240
Pyridine			ND	-	ND	-	ND	-	< 6600	6,600	< 260	260	< 270	270	< 250	250	< 240	240

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
403 Greenwich St, New York, NY
Soil Analytical Results
Pesticides / PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Remedial Investigation Results					
			B1		B2		B3	
			9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg		9/4/2012 (12-14') µg/Kg	
PCB-1016	1,000	1,000	ND	-	ND	-	ND	-
PCB-1221	1,000	1,000	ND	-	ND	-	ND	-
PCB-1232	1,000	1,000	ND	-	ND	-	ND	-
PCB-1242	1,000	1,000	ND	-	ND	-	ND	-
PCB-1248	1,000	1,000	ND	-	ND	-	ND	-
PCB-1254	1,000	1,000	ND	-	ND	-	ND	-
PCB-1260	1,000	1,000	ND	-	ND	-	ND	-
PCB-1262	1,000	1,000	ND	-	ND	-	ND	-
PCB-1268	1,000	1,000	ND	-	ND	-	ND	-
4,4-DDD	3.3	13,000	ND	-	ND	-	ND	-
4,4-DDE	3.3	8,900	ND	-	ND	-	ND	-
4,4-DDT	3.3	7,900	ND	-	ND	-	ND	-
a-BHC	20	480	ND	-	ND	-	ND	-
Alachlor			ND	-	ND	-	ND	-
Aldrin	5	97	ND	-	ND	-	ND	-
b-BHC	36	360	ND	-	ND	-	ND	-
Chlordane	94	4,200	ND	-	ND	-	ND	-
d-BHC	40	100,000	ND	-	ND	-	ND	-
Dieldrin	5	200	ND	-	ND	-	ND	-
Endosulfan I	2,400	24,000	ND	-	ND	-	ND	-
Endosulfan II	2,400	24,000	ND	-	ND	-	ND	-
Endosulfan Sulfate	2,400	24,000	ND	-	ND	-	ND	-
Endrin	14	11,000	ND	-	ND	-	ND	-
Endrin aldehyde			ND	-	ND	-	ND	-
Endrin ketone			ND	-	ND	-	ND	-
gamma-BHC			ND	-	ND	-	ND	-
Heptachlor	42	2,100	ND	-	ND	-	ND	-
Heptachlor epoxide			ND	-	ND	-	ND	-
Methoxychlor			ND	-	ND	-	ND	-
Toxaphene			ND	-	ND	-	ND	-

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

NA - Guidance value not available

***ND - Due to matrix interference from non target compounds in the sample an elevated RL was reported**

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
403 Greenwich St, New York, NY
Soil Analytical Results
Metals

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Remedial Investigation Results						Endpoint Results									
			B1		B2		B3		EP1		EP1A		EP2		EP3		EP4	
			9/4/2012 (12-14') mg/Kg		9/4/2012 (12-14') mg/Kg		9/4/2012 (12-14') mg/Kg		5/6/2015 (24") mg/Kg		5/12/2015 (32") mg/Kg		5/6/2015 (24") mg/Kg		5/20/2015 (6") mg/Kg		5/20/2015 (6") mg/Kg	
Aluminum			8,970	-	5,560	-	5,390	-	5,410	38	7,250	37	6,110	35	5,850	36	4,920	32
Antimony			BRL	-	BRL	-	BRL	-	87	1.9	< 1.9	1.9	< 1.8	1.8	< 1.8	1.8	< 1.6	1.6
Arsenic	13	16	1.8	-	0.9	-	1.5	-	10.8	0.8	5.2	0.7	4.6	0.7	2.5	0.7	1.6	0.6
Barium	350	350	60.3	-	45	-	58.1	-	830	0.8	161	0.7	62.3	0.7	92.7	0.7	118	0.6
Beryllium	7.2	14	0.58	-	0.4	-	0.37	-	0.33	0.30	0.42	0.30	0.37	0.28	0.38	0.29	0.36	0.26
Cadmium	2.5	2.5	BRL	-	BRL	-	BRL	-	1.45	0.38	0.23	0.37	< 0.35	0.35	0.36	0.36	0.3	0.32
Calcium			949	-	1,250	-	8,080	-	61,100	38	15,100	37	2,680	3.5	25,800	36	6,920	3.2
Chromium	30	180	27.6	-	14.9	-	16.1	-	19.5	0.38	16	0.37	23.6	0.35	13.5	0.36	12	0.32
Cobalt			6.93	-	5.24	-	4.94	-	6.46	0.38	5.88	0.37	5.37	0.35	5.81	0.36	5.71	0.32
Copper	50	270	10.9	-	8.55	-	30.6	-	70.9	0.38	45.8	0.37	49	0.35	15.3	0.36	25.1	0.32
Iron			16,000	-	11,300	-	11,800	-	32,300	38	13,500	37	10,800	35	9,790	36	10,300	32
Lead	63	400	9.63	-	10.8	-	24.6	-	10,200	76	626	7.5	537	7.0	112	0.7	152	6.4
Magnesium			2,920	-	2,460	-	2,420	-	8,540	38	4,830	3.7	2,600	3.5	7,760	36	4,050	3.2
Manganese	1,600	2,000	227	-	202	-	229	-	288	3.8	417	3.7	105	0.35	256	3.6	414	3.2
Mercury	0.18	0.81	BRL	-	BRL	-	0.11	-	1.63	0.13	4.66	0.14	2.34	0.14	0.27	0.03	0.15	0.03
Nickel	30	140	29.4	-	20.6	-	20.4	-	17.6	0.38	18.7	0.37	15.6	0.35	14.6	0.36	22	0.32
Potassium			1,790	-	1,480	-	1,520	-	1,560	8	1,860	7	1,250	7	2,160	7	1,880	6
Selenium	3.9	36	BRL	-	BRL	-	BRL	-	< 1.5	1.5	< 1.5	1.5	< 1.4	1.4	< 1.4	1.4	< 1.3	1.3
Silver	2	36	BRL	-	BRL	-	BRL	-	0.78	0.38	0.38	0.37	1.64	0.35	< 0.36	0.36	< 0.32	0.32
Sodium			164	-	156	-	158	-	1,090	8	895	7	412	7	519	7	368	6
Thallium			BRL	-	BRL	-	BRL	-	< 1.5	1.5	< 1.5	1.5	< 1.4	1.4	< 1.4	1.4	< 1.3	1.3
Vanadium			22.1	-	14.9	-	14.7	-	25.8	0.4	21.2	0.4	15.6	0.4	19.3	0.4	15.6	0.3
Zinc	109	2,200	24	-	18.4	-	32.2	-	910	7.6	114	0.7	31.3	0.7	72.4	0.7	125	0.6

Notes:

* - NYSDEC Technical and Administative Guidance Memorandum 4046, 1994

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives

ND - Not-detected

NA - Guidance value not available

BRL - Below Reporting Limit

Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value

Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water	Unrestricted Use
		Residential	Restricted-Residential	Commercial	Industrial			
METALS								
Arsenic	7440-38 -2	16f	16f	16f	16f	13f	16f	13 [c]
Barium	7440-39 -3	350f	400	400	10,000 d	433	820	350 [c]
Beryllium	7440-41 -7	14	72	590	2,700	10	47	7.2
Cadmium	7440-43 -9	2.5f	4.3	9.3	60	4	7.5	2.5 [c]
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1e	19	1 [b]
Chromium, trivalent[h]	16065-83-1	36	180	1,500	6,800	41	NS	30 [c]
Copper	7440-50 -8	270	270	270	10,000 d	50	1,720	50
Total Cyanide [h]		27	27	27	10,000 d	NS	40	27
Lead	7439-92 -1	400	400	1,000	3,900	63f	450	63 [c]
Manganese	7439-96 -5	2,000f	2,000f	10,000 d	10,000 d	1600f	2,000f	1600 [c]
Total Mercury		0.81j	0.81j	2.8j	5.7j	0.18f	0.73	0.18 [c]
Nickel	7440-02 -0	140	310	310	10,000 d	30	130	30
Selenium	7782-49 -2	36	180	1,500	6,800	3.9f	4f	3.9[c]
Silver	7440-22 -4	36	180	1,500	6,800	2	8.3	2
Zinc	7440-66 -6	2200	10,000 d	10,000 d	10,000 d	109f	2,480	109 [c]
PESTICIDES / PCBs								
2,4,5-TP Acid (Silvex)	93-72-1	58	100a	500b	1,000c	NS	3.8	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 e	17	0.0033 [b]
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 e	136	0.0033 [b]
4,4'-DDD	72-54-8	2.6	13	92	180	0.0033 e	14	0.0033 [b]
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19	0.005 [c]
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04g	0.02	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09	0.036
Chlordane (alpha)	5103-71 -9	0.91	4.2	24	47	1.3	2.9	0.094
delta-BHC	319-86-8	100a	100a	500b	1,000c	0.04g	0.25	0.04
Dibenzofuran	132-64-9	14	59	350	1,000c	NS	210	7
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1	0.005[c]
Endosulfan I	959-98-8	4.8i	24i	200i	920i	NS	102	2.4
Endosulfan II	33213-65-9	4.8i	24i	200i	920i	NS	102	2.4
Endosulfan sulfate	1031-07 -8	4.8i	24i	200i	920i	NS	1,000c	2.4
Endrin	72-20-8	2.2	11	89	410	0.014	0.06	0.014
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38	0.042
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1	0.1
Polychlorinated biphenyls	1336-36 -3	1	1	1	25	1	3.2	0.1
SEMI-VOLATILES								
Acenaphthene	83-32-9	100a	100a	500b	1,000c	20	98	20
Acenapthylene	208-96-8	100a	100a	500b	1,000c	NS	107	100 [a]
Anthracene	120-12-7	100a	100a	500b	1,000c	NS	1,000c	100 [a]
Benz(a)anthracene	56-55-3	1f	1f	5.6	11	NS	1f	1[c]
Benzo(a)pyrene	50-32-8	1f	1f	1f	1.1	2.6	22	1[c]
Benzo(b) fluoranthene	205-99-2	1f	1f	5.6	11	NS	1.7	1[c]
Benzo(g,h,i) perylene	191-24-2	100a	100a	500b	1,000c	NS	1,000c	100
Benzo(k) fluoranthene	207-08-9	1	3.9	56	110	NS	1.7	0.8 [c]
Chrysene	218-01-9	1f	3.9	56	110	NS	1f	1[c]
Dibenz(a,h) anthracene	53-70-3	0.33e	0.33e	0.56	1.1	NS	1,000c	0.33 [b]
Fluoranthene	206-44-0	100a	100a	500b	1,000c	NS	1,000c	100 [a]
Fluorene	86-73-7	100a	100a	500b	1,000c	30	386	30
Indeno(1,2,3-cd) pyrene	193-39-5	0.5f	0.5f	5.6	11	NS	8.2	0.5 [c]
m-Cresol	108-39-4	100a	100a	500b	1,000c	NS	0.33e	0.33 [b]
Naphthalene	91-20-3	100a	100a	500b	1,000c	NS	12	12
o-Cresol	95-48-7	100a	100a	500b	1,000c	NS	0.33e	0.33 [b]
p-Cresol	106-44-5	34	100a	500b	1,000c	NS	0.33e	0.33 [b]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8e	0.8e	0.8[b]
Phenanthrene	85-01-8	100a	100a	500b	1,000c	NS	1,000c	100
Phenol	108-95-2	100a	100a	500b	1,000c	30	0.33e	0.33[b]
Pyrene	129-00-0	100a	100a	500b	1,000c	NS	1,000c	100

TABLE 5
Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water	Unrestricted Use
		Residential	Restricted-Residential	Commercial	Industrial			
VOLATILES								
1,1,1-Trichloroethane	71-55-6	100a	100a	500b	1,000c	NS	0.68	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27	0.27
1,1-Dichloroethene	75-35-4	100a	100a	500b	1,000c	NS	0.33	0.33
1,2-Dichlorobenzene	95-50-1	100a	100a	500b	1,000c	NS	1.1	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02f	0.02[c]
cis-1,2-Dichloroethene	156-59-2	59	100a	500b	1,000c	NS	0.25	0.25
trans-1,2-Dichloroethene	156-60-5	100a	100a	500b	1,000c	NS	0.19	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1e	0.1e	0.1[b]
Acetone	67-64-1	100a	100b	500b	1,000c	2.2	0.05	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06	0.06
Butylbenzene	104-51-8	100a	100a	500b	1,000c	NS	12	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76	0.76
Chlorobenzene	108-90-7	100a	100a	500b	1,000c	40	1.1	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1	1
Hexachlorobenzene	118-74-1	0.33e	1.2	6	12	NS	3.2	0.33[b]
Methyl ethyl ketone	78-93-3	100a	100a	500b	1,000c	100a	0.12	0.12
Methyl tert-butyl ether	1634-04 -4	62	100a	500b	1,000c	NS	0.93	0.93
Methylene chloride	75-09-2	51	100a	500b	1,000c	12	0.05	0.05
n-Propylbenzene	103-65-1	100a	100a	500b	1,000c	NS	3.9	3.9
sec-Butylbenzene	135-98-8	100a	100a	500b	1,000c	NS	11	11
tert-Butylbenzene	98-06-6	100a	100a	500b	1,000c	NS	5.9	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3	1.3
Toluene	108-88-3	100a	100a	500b	1,000c	36	0.7	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6	3.6
1,3,5-Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02	0.02
Xylene (mixed)	1330-20 -7	100a	100a	500b	1,000c	0.26	1.6	0.26

All soil cleanup objectives (SCOs) are in parts per million (ppm). NS=Not specified. See Technical Support Document (TSD). Footnotes

a The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

b The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

c The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

d The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

FIGURES

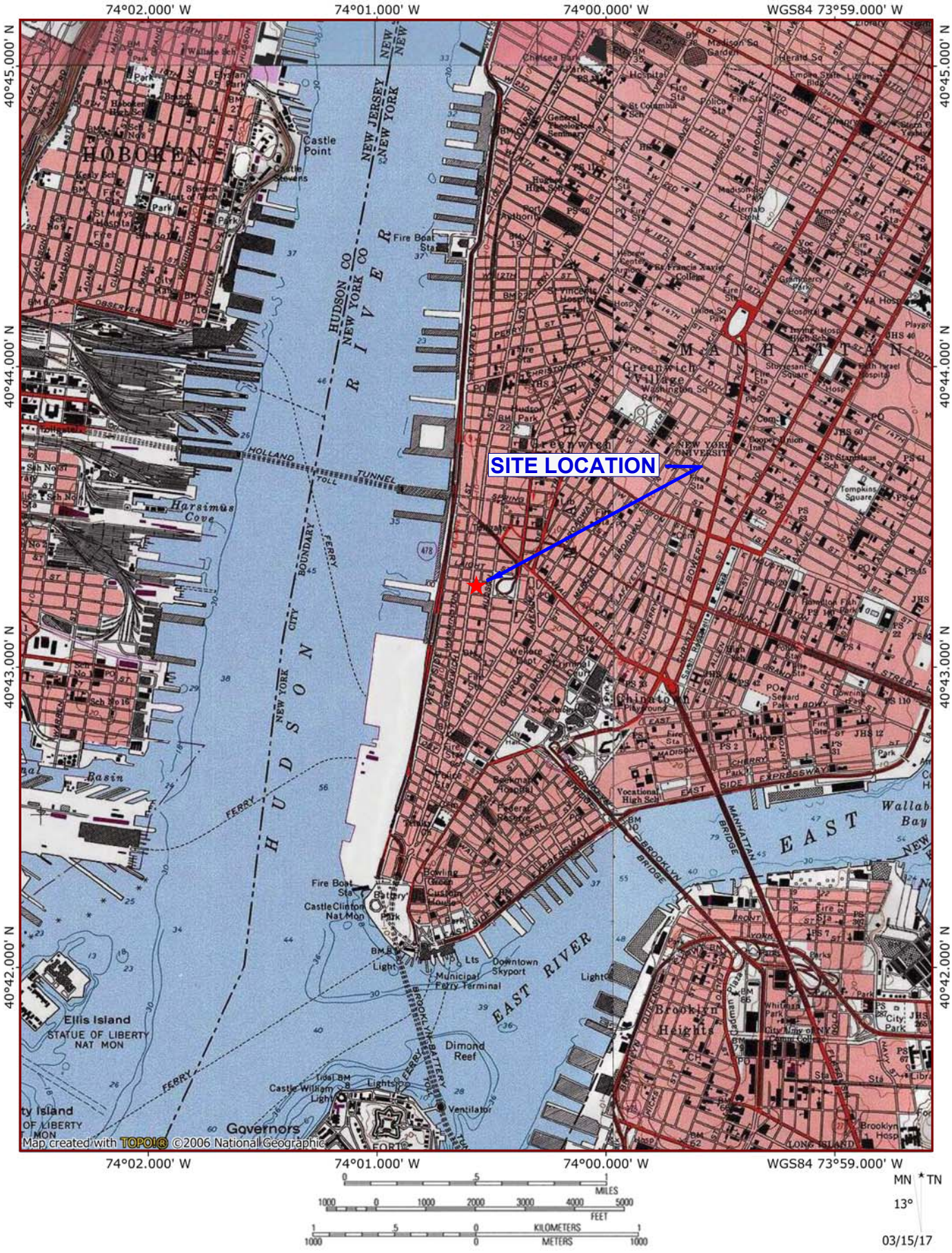

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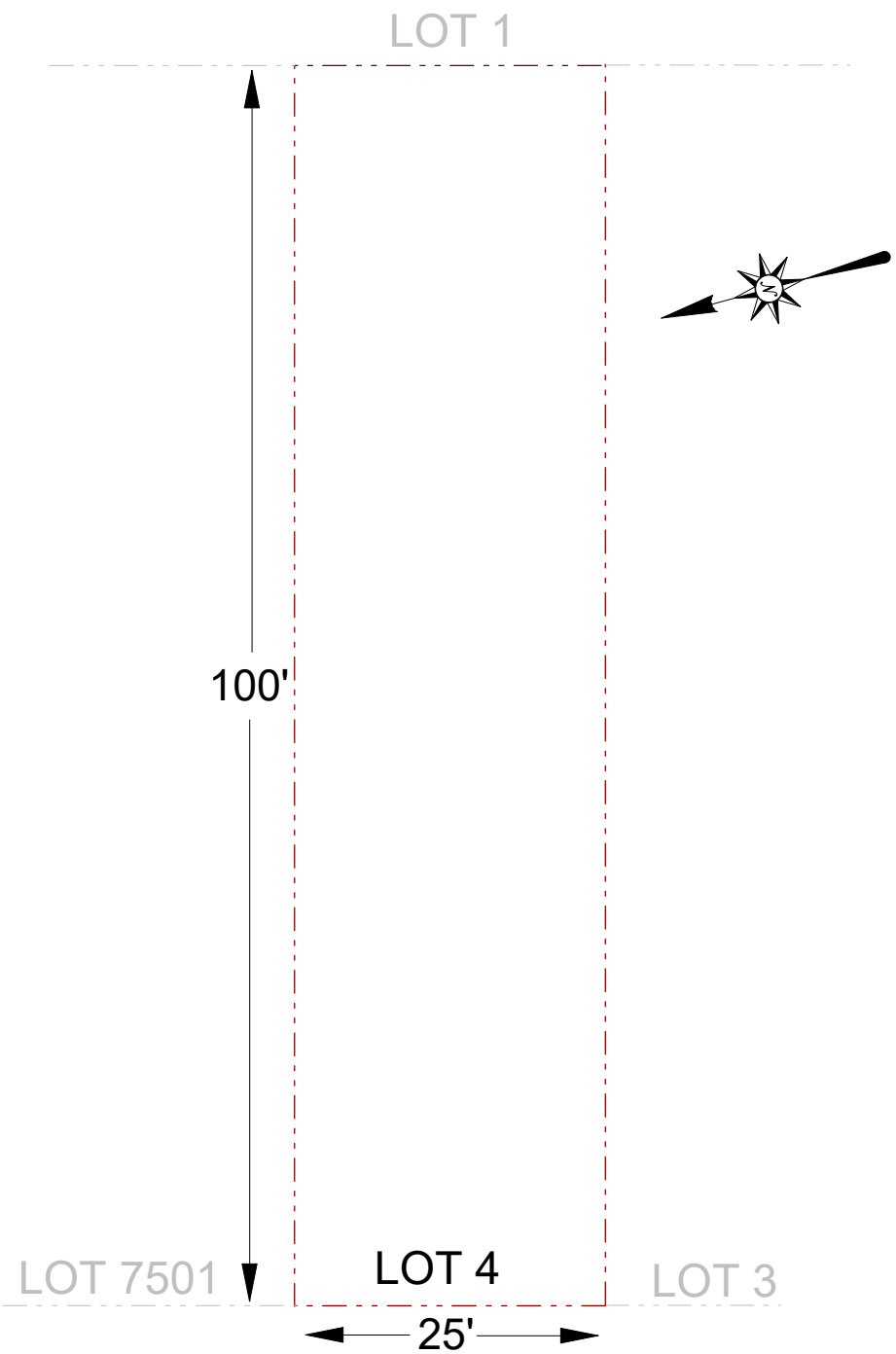
Figure No. 1

Site Name: REDEVELOPMENT PROJECT

Site Address: 403 GREENWICH STREET, NEW YORK, NY

Drawing Title: SITE LOCATION MAP



KEY:

Property Boundary

SCALE:

0 10 15

1 inch = 15 feet

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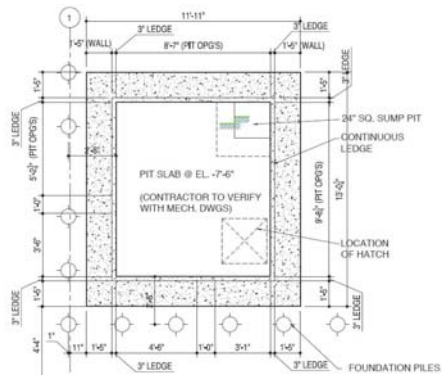
Figure No. **2**

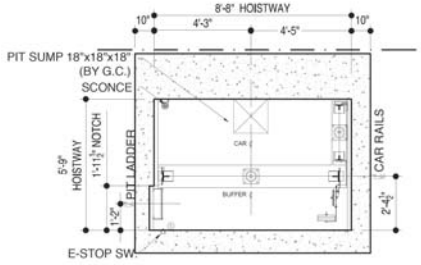
Site Name: REDEVELOPMENT PROJECT

Site Address: 403 GREENWICH STREET, NEW YORK, NY

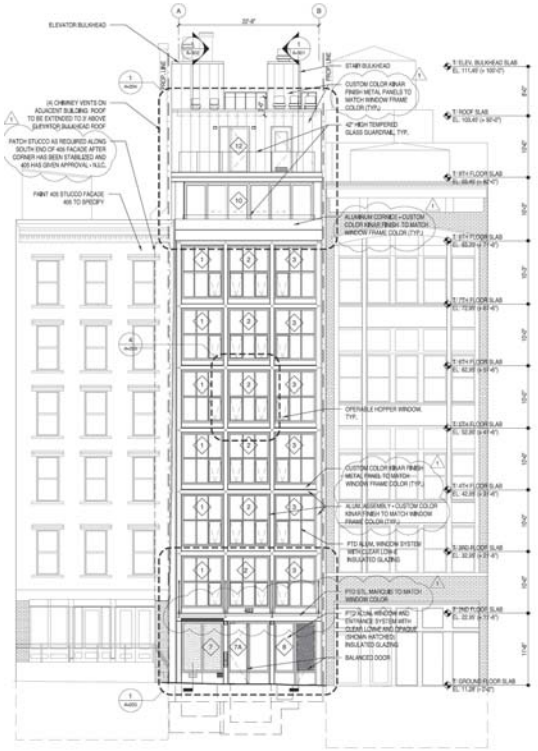
Drawing Title: SITE BOUNDARY MAP



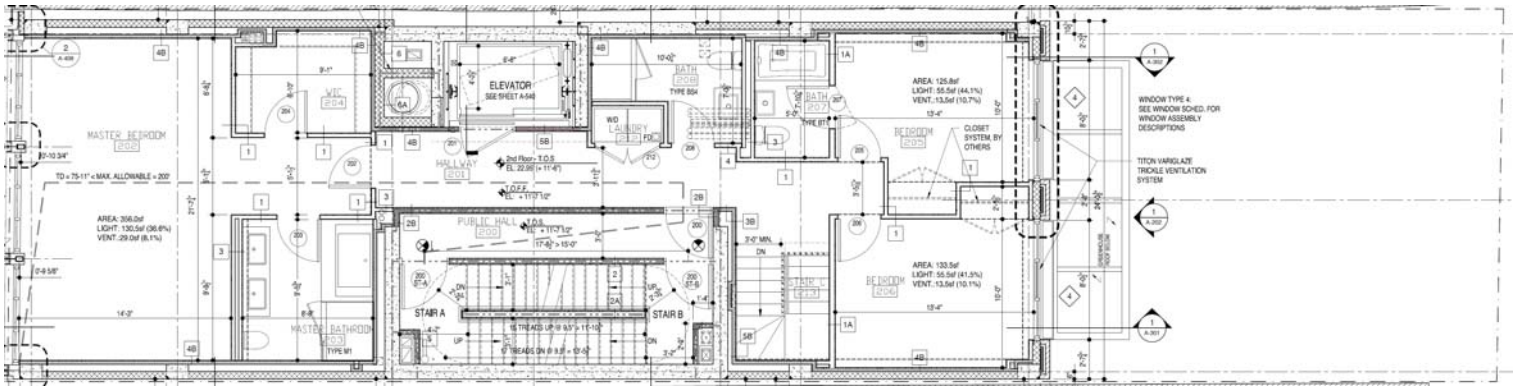
Mechanical Pit Plan



Elevator Pit Plan



Side Elevation



Ground Floor Plan

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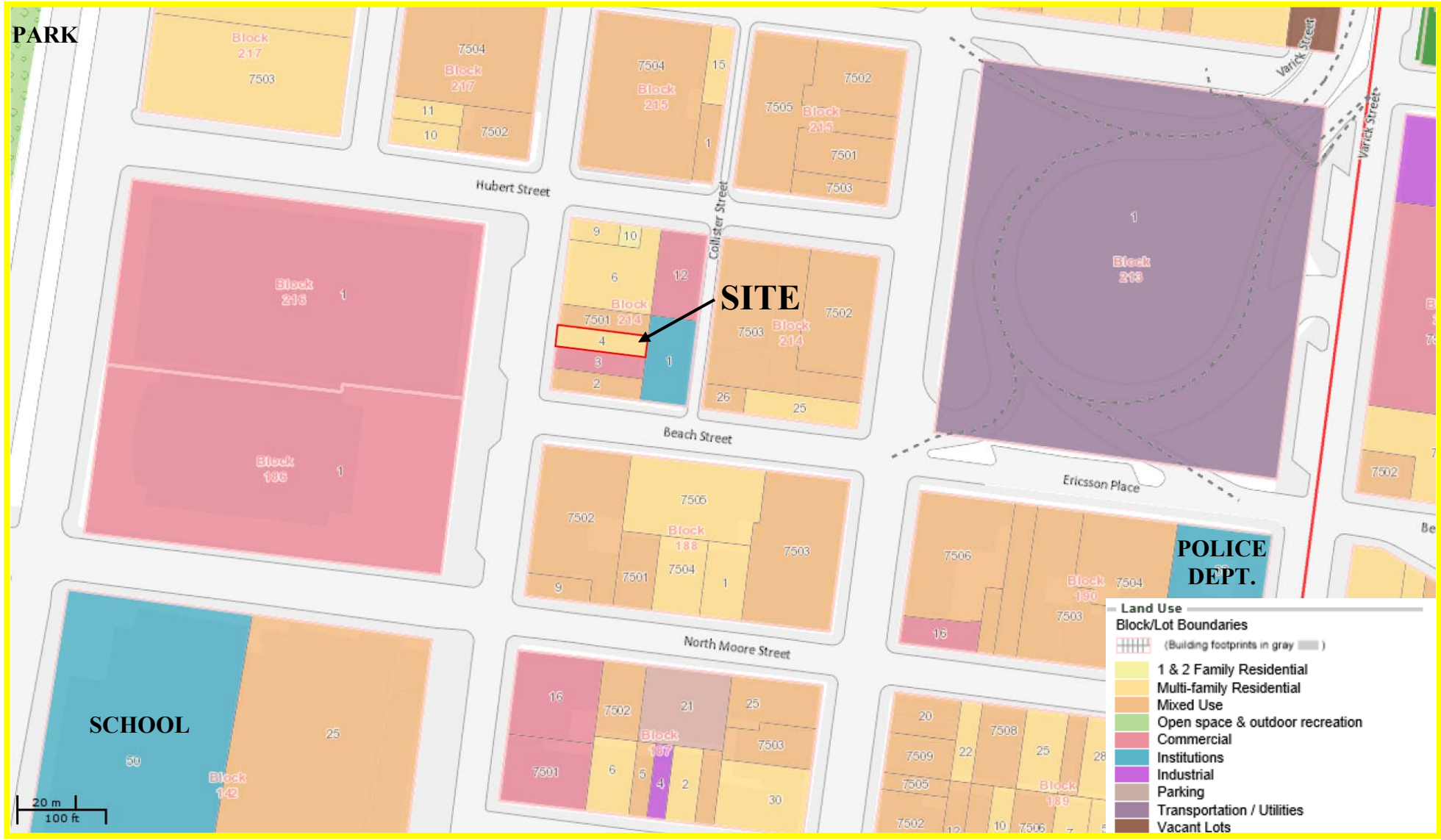
Figure 3

Site Name: Redevelopment Project
Site Address: 403 Greenwich Street, New York, NY
Drawing Title: Redevelopment Plans

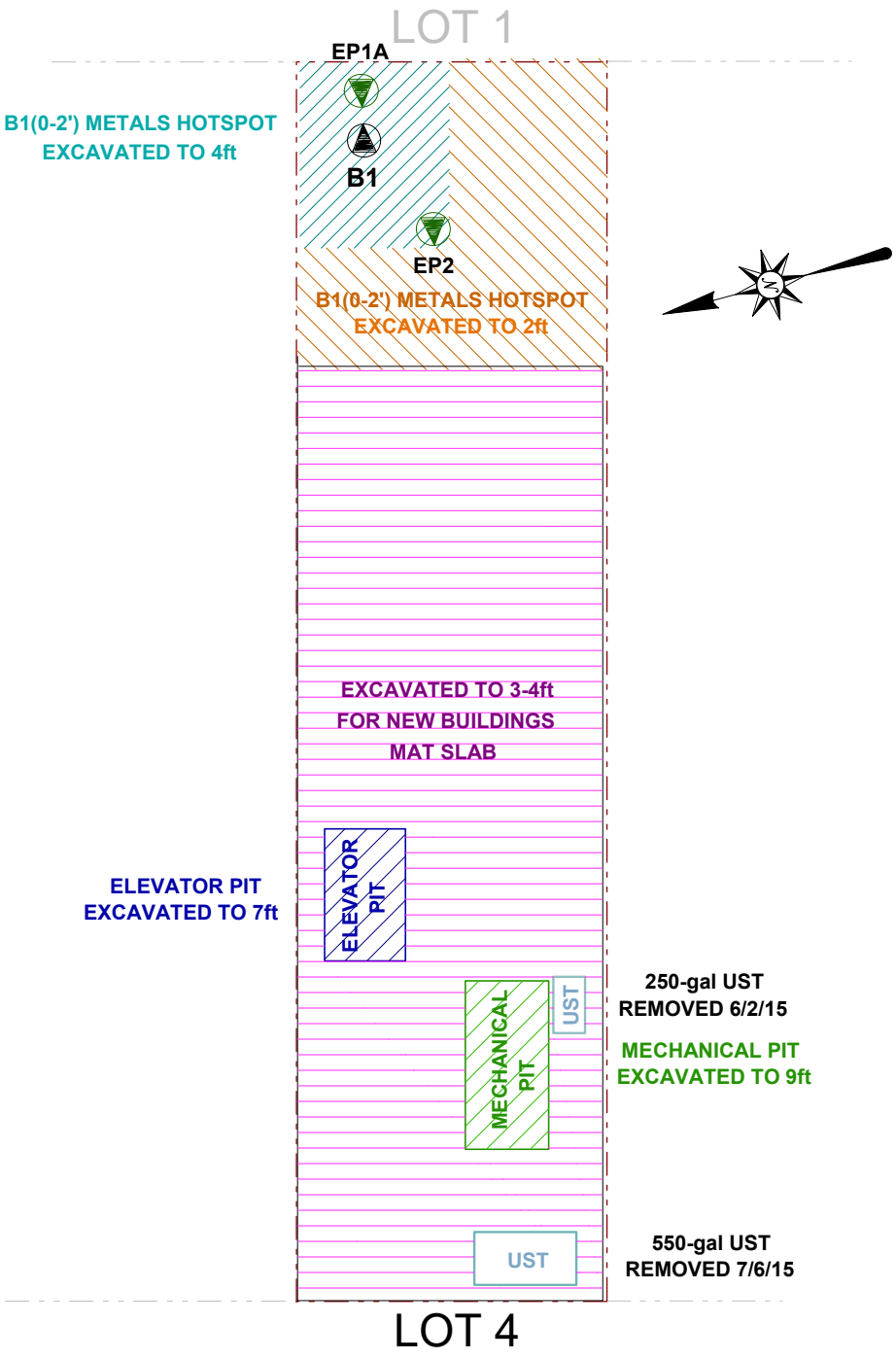


Source: http://www.oasisnyc.net/map.aspx

FIGURE 4
SURROUNDING LAND USE MAP

403 GREENWICH STREET, MANHATTAN NY
REMEDIAL ACTION REPORT

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD, RIDGE, NEW YORK 11961
PHONE: (631) 504-6000 FAX: (631) 924-2870



KEY:

Property Boundary

SCALE:

0 10 15

1 inch = 15 feet

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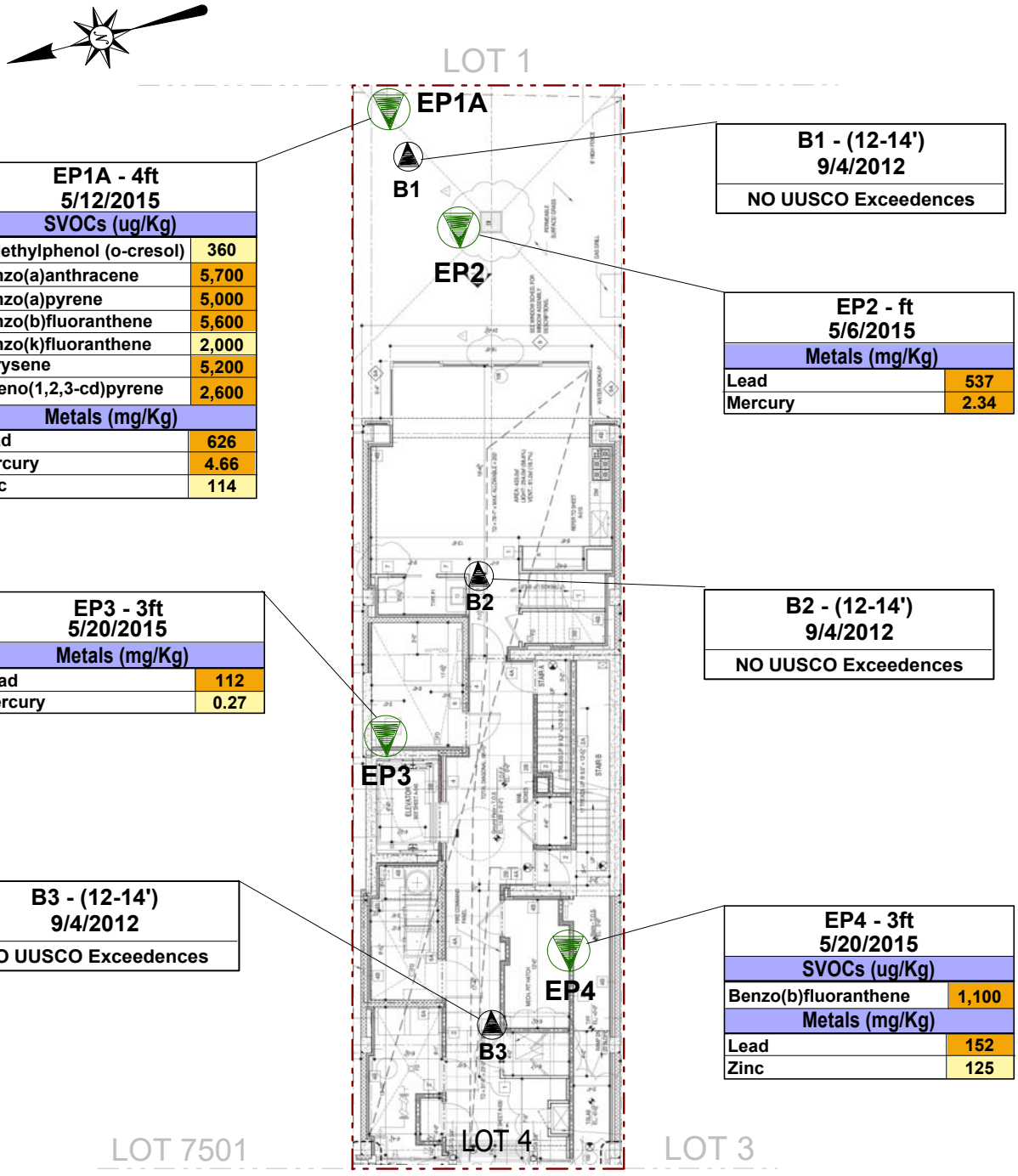
Figure No. 5

Site Name: REDEVELOPMENT PROJECT
Site Address: 403 GREENWICH STREET, NEW YORK, NY
Drawing Title: EXCAVATION DIAGRAM



KEY:

- Property Boundary
- RI Soil Boring
- Endpoint Sample
- Exceedence of Restricted Residential SCO
- Exceedence of Unrestricted Use SCO

SCALE:

0 10 15

1 inch = 15 feet

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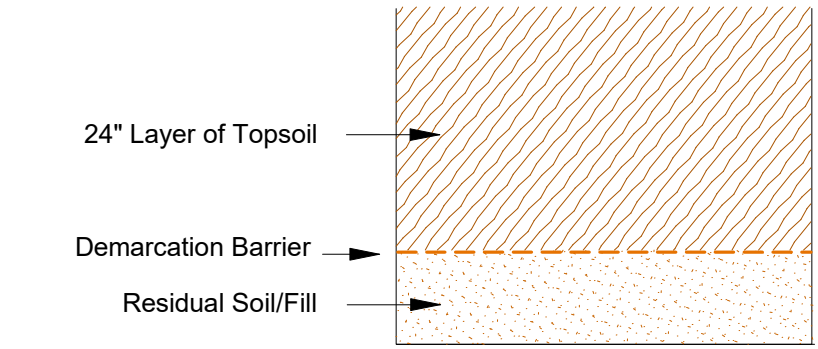
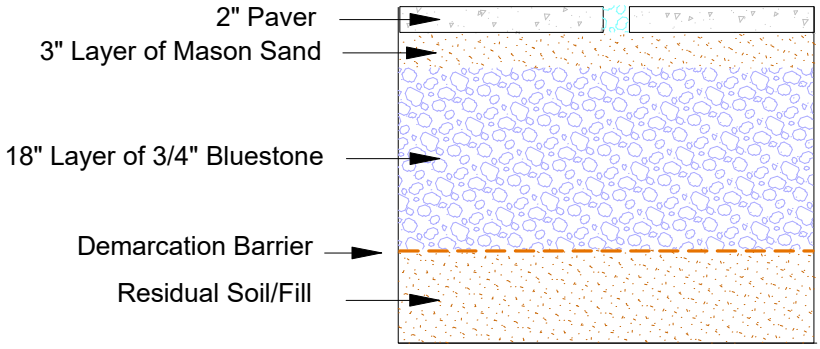
Figure No. **6**

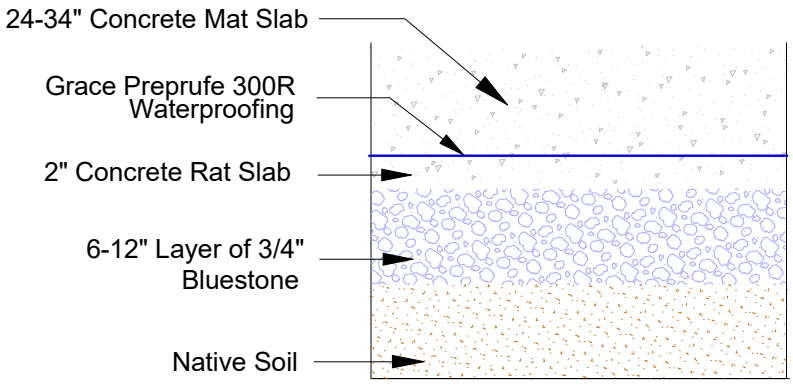
Site Name: Redevelopment Project
Site Address: 403 Greenwich Street, New York, NY
Drawing Title: Endpoint Sampling Locations



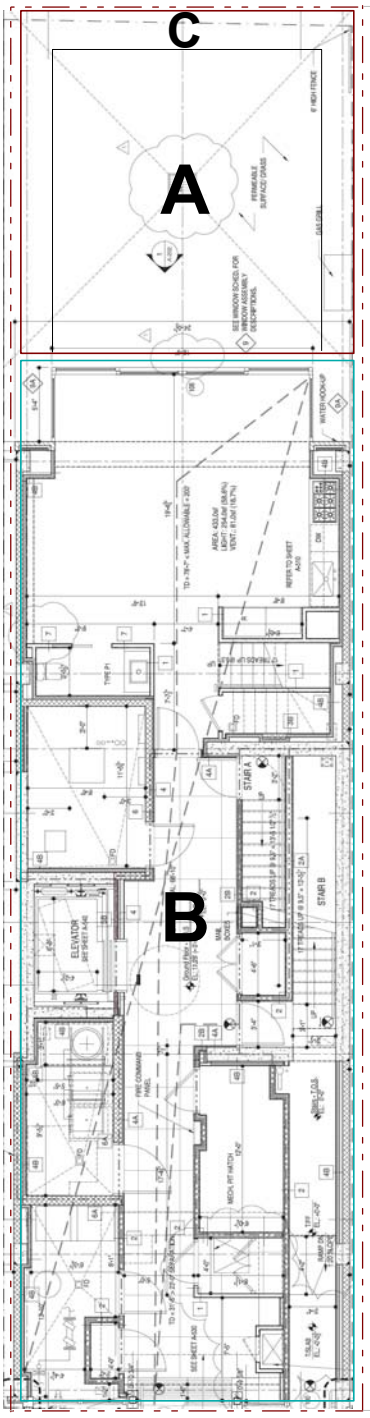
Detail C



Detail A



Detail B



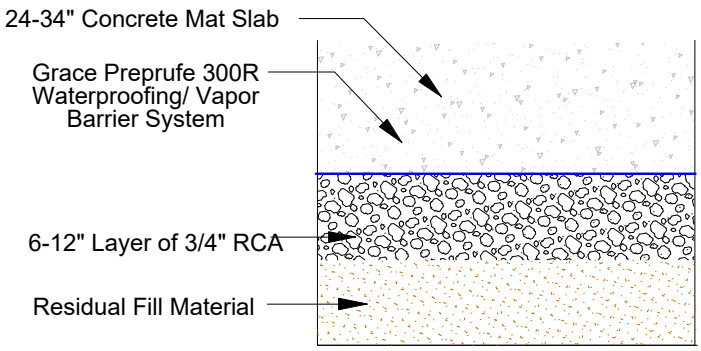
KEY:

Property Boundary

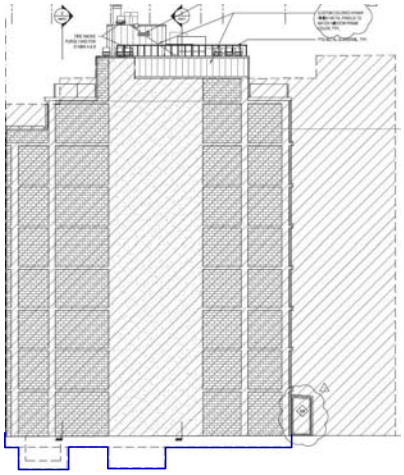
AMC Engineering
1836 42nd Street
Astoria, NY 11105

Figure No. **7**

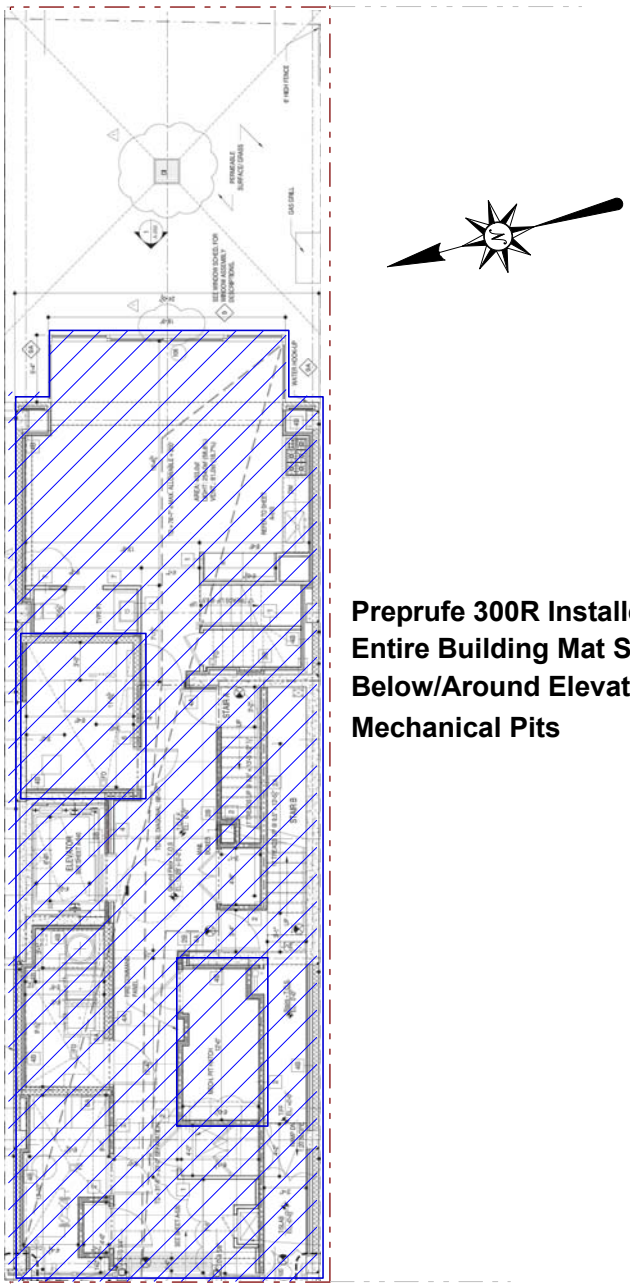
Site Name: REDEVELOPMENT PROJECT
Site Address: 403 GREENWICH STREET, NEW YORK, NY
Drawing Title: COMPOSITE COVER DIAGRAM



Detail A



Detail B (NTS)



Preprufe 300R Installed Below Entire Building Mat Slab, and Below/Around Elevator and Mechanical Pits

KEY:

- Property Boundary
- Grace Preprufe 300R
- Grace Preprufe 300R

SCALE:

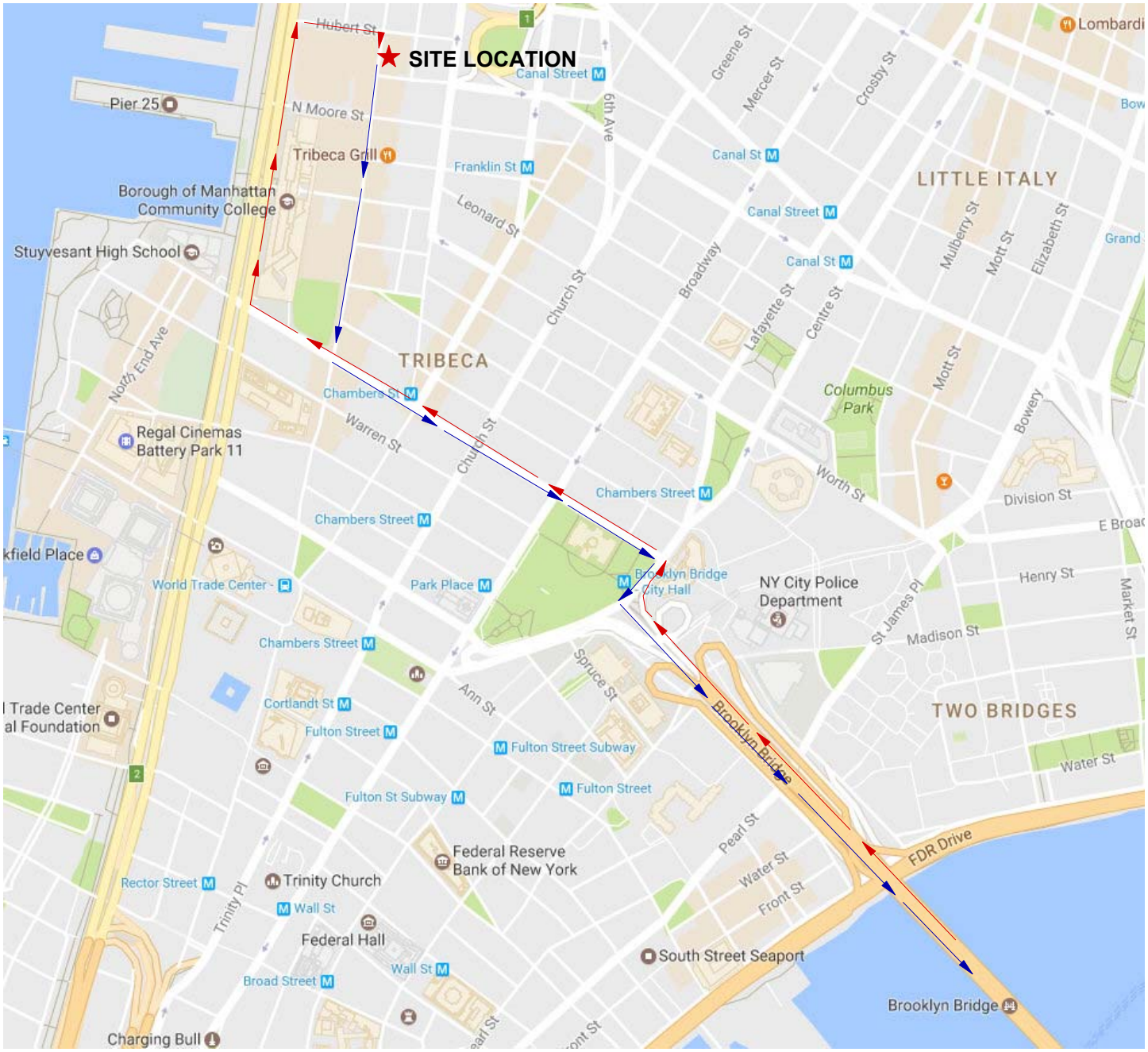
0 10 15

1 inch = 15 feet

AMC Engineering
1836 42nd Street
Astoria, NY 11105

Figure No. **8**

Site Name: REDEVELOPMENT PROJECT
Site Address: 403 GREENWICH STREET, NEW YORK, NY
Drawing Title: VAPOR BARRIER LAYOUT



Key:

Truck Route From Site

Truck Route To Site

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 9

Site Name: REDEVELOPMENT PROJECT
Site Address: 403 GREENWICH STREET, NEW YORK, NY
Drawing Title: TRUCK ROUTE