

# **Hazardous Materials Remedial Closure Report**

**313 West 125<sup>th</sup> Street  
313 West 125<sup>th</sup> Street, New York, NY 10027  
Block 1952, Lot 23  
OER Project Number 10EHAN238M**

**E-Designation E-201  
CEQR Number 07DCP030M  
125<sup>th</sup> Street Corridor Rezoning and Related Actions**

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# REMEDIAL CLOSURE REPORT

## TABLE OF CONTENTS

FIGURES, TABLES, APPENDICES.....	II
LIST OF ACRONYMS .....	III
CERTIFICATION .....	V
EXECUTIVE SUMMARY .....	1
REMEDIAL CLOSURE REPORT .....	6
<b>1.0 SITE BACKGROUND .....</b>	<b>6</b>
1.1 Site Location and Prior Usage .....	6
1.2 Redevelopment Plan .....	6
1.3 Environmental Investigations .....	7
<b>2.0 DESCRIPTION OF REMEDIAL ACTIONS .....</b>	<b>9</b>
<b>3.0 COMPLIANCE WITH REMEDIAL ACTION PLAN .....</b>	<b>11</b>
3.1 Health & Safety Plan (CHASP).....	11
3.2 Community Air Monitoring Plan.....	11
3.3 Soils/Materials Management Plan .....	11
3.4 Storm-Water Pollution Prevention.....	11
3.5 Deviations from the Remedial Action Plan .....	11
<b>4.0 REMEDIAL PROGRAM .....</b>	<b>13</b>
4.1 Project Organization .....	11
4.2 Site Controls.....	11
4.3 Materials Excavation and Removal .....	11
4.4 Materials Disposal .....	114
4.5 Backfill Import.....	116
4.6 Demarcation.....	116
<b>5.0 ENGINEERING CONTROLS .....</b>	<b>19</b>
<b>6.0 INSTITUTIONAL CONTROLS.....</b>	<b>19</b>
<b>7.0 SITE MANAGEMENT PLAN .....</b>	<b>219</b>

## **FIGURES**

- Figure 1: Site Location Map
- Figure 2: Site Boundary Map with Surrounding Area
- Figure 3: Redevelopment Plan
- Figure 4: Excavation Map
- Figure 5: Location of Stockpiled Material
- Figure 6: Soil Re-use Locations
- Figure 7: Vapor Barrier Location
- Figure 8: Composite Cover with Vapor Barrier Detail

## **TABLES**

- Table 1: Soil Cleanup Objectives
- Table 2: Summary of Waste-Classification Sampling for VOCs
- Table 3: Summary of Waste-Classification Sampling for SVOCs
- Table 4: Summary of Waste-Classification Sampling for Herbicides, Pesticides, and PCBs
- Table 5: Summary of Waste-Classification Sampling for Metals and Solids

## **APPENDICES**

- Appendix 1: Final Architectural Plans
- Appendix 2: Photographs of Remedial Action
- Appendix 3: CAMP Results
- Appendix 4: Daily Reports
- Appendix 5: Details of Composite Cover and Vapor Barrier System
- Appendix 6: Phase II Site Investigation Report
- Appendix 7: Laboratory Analytical Report for Waste Classification Sampling
- Appendix 8: Soil Disposal Requests, Acceptance Letters, and Disposal Manifests

## LIST OF ACRONYMS

<b>Acronym</b>	<b>Definition</b>
AST	Aboveground Storage Tank
CAMP	Community Air Monitoring Plan
C&D	Construction & Demolition
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
CO	Certificate of Occupancy
CPC	City Planning Commission
DSNY	Department of Sanitation
“E”	E-Designation
EAS	Environmental Assessment Statement
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
EC/IC	Engineering Control and Institutional Control
ELAP	Environmental Laboratory Accreditation Program
FDNY	New York City Fire Department
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IDW	Investigation Derived Waste
Notice - NNO	Notice of No Objection
Notice - NTP	Notice to Proceed
Notice - NOS	Notice of Satisfaction
Notice - FNOS	Final Notice of Satisfaction
NYC BSA	New York City Board of Standards and Appeals
NYC DCP	New York City Department of City Planning
NYC DEP	New York City Department of Environmental Protection
NYC DOB	New York City Department of Buildings
NYC DOF	New York City Department of Finance
NYC HPD	New York City Housing Preservation and Development
NYCRR	New York Codes Rules and Regulations

NYC OER	New York City Office of Environmental Remediation
NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DEC PBS	New York State Department of Environmental Conservation Petroleum Bulk Storage
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
OSHA	United States Occupational Health and Safety Administration
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PID	Photo Ionization Detector
PM	Particulate Matter
QEP	Qualified Environmental Professional
RA	Register Architect
RAP	Remedial Action Plan
RCA	Recycled Concrete Aggregate
RCR	Remedial Closure Report
RD	Restrictive Declaration
RI	Remedial Investigation
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOCs	Semi-Volatile Organic Compounds
USCS	Unified Soil Classification System
USGS	United States Geological Survey
UST	Underground Storage Tank
TAL	Target Analyte List
TCL	Target Compound List
TCO	Temporary Certificate of Occupancy
VB	Vapor Barrier
VOCs	Volatile Organic Compounds

## CERTIFICATION

I, Spiro Dongaris, 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 313 West 125<sup>th</sup> Street, New York, NY site, site number 10EHAN238M.
- I have reviewed this document, to which my signature and seal are affixed.
- Engineering Controls implemented 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 Engineering Controls constructed during this remedial action were professionally observed by me or by a person under my direct supervision and (1) are consistent with the Engineering Control design established in the Remedial Action Plan and (2) are accurately reflected in the text and drawings for as-built design reported in this Remedial Closure Report.
- The OER-approved Remedial Action Work Plan dated March 2011 and Stipulations in a letter dated January 2016 were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquid or other material from the property was taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

Name

Spiro Dongaris

PE License Number

095954

Signature



Date

8/28/2017



I, A.J. Infante, certify the following:

- I am a Qualified Environmental Professional. I had primary direct responsibility for implementation of the remedial program for the 313 West 125<sup>th</sup> Street, New York, NY site, site number 10EHAN238M.
- The OER-approved Remedial Action Work Plan dated March 2011 and Stipulations in a letter dated January 2016 were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquid or other material from the property was taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

QEP Name

A.J. Infante

QEP Signature



Date

8/28/2017

## **EXECUTIVE SUMMARY**

Real Estate Equities Corporation has performed this remedial action to remediate a 4,800-square foot site located at 313 West 125<sup>th</sup> Street in Manhattan, New York. A Phase II Subsurface Investigation (Phase II) was performed to compile and evaluate data and information necessary to develop a Remedial Action Plan (RAP) and Stipulation Letter. The remedial action described in this document fulfills the remedial objectives defined in the RAP and Stipulation Letter, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

### **Site Location and Background**

The Site is located at 313 West 125<sup>th</sup> Street in the Harlem section in Manhattan, New York and is identified as Block 1952 and Lot 23 on the New York City Tax Map. The Site is 4,800-square feet and is bounded by a vacant lot to the north, 3-story commercial building to the west, 2-story commercial building currently under renovation to the east, and a 4-story commercial building to the south.. Prior to remedial action, the Site was unoccupied and most recently utilized for commercial purposes.

### **Summary of Redevelopment Plan**

Redevelopment of the Site consisted of renovating the existing 5-story commercial use building with a basement. The basement of the building covers the entire footprint of the Site. The on Site building consists of retail use on ground floor, accessory storage use on cellar floor, and office use on floors 2 through 5. Prior to the start of the renovations, there was no 2<sup>nd</sup> floor in the building; the 2<sup>nd</sup> floor slab was removed. During the renovation activities, the 2<sup>nd</sup> floor slab was reconstructed. The total floor area of the building increased to 23,385-square feet from 19,036-square feet. Minor excavation took place for installation of two additional footings, egress stairs, and a new elevator pit in the cellar. 53.51 tons of material was removed from the site. The remainder of the cellar slab was not disturbed. A new bulkhead was installed on the roof and the total height of the building is 76'-7" including the bulkhead. The current zoning designation is C4-4D. The use is consistent with existing zoning for the property.

## **Summary of Description of Surrounding Property**

The Site is 4,800-square feet and is bounded by a vacant lot to the north, 3-story commercial building to the west, 2-story commercial building currently under renovation to the east, and a 4-story commercial building to the south, across West 125<sup>th</sup> Street. The current on-Site building has been at the subject property from at least 1902 and used for commercial purposes. This past use of the Site was not considered to be recognized environmental condition to the Site.

## **Summary of Past Uses and Areas of Concern**

According to a prior Remedial Action Work Plan prepared by Atlantic Environmental Solutions, Inc. in March 2011, the current on-Site 5-story building with a full cellar has been at the property since at least 1902. The building was previously identified as the Picker Building, and has included such previous uses as multiple commercial restaurants, a cabaret and dance hall, offices, and laboratories. At the time of the remedial action work plan, the on Site building was unoccupied.

The AOCs identified for this Site include:

- The listing of the Site on the E-Designation database

## **Summary of Findings of Remedial Investigation:**

A remedial investigation report (RIR) was prepared for the site in the form of a Phase II Site Investigation Report by Atlantic Environmental Solutions, Inc. in March, 2011, and presented the following environmental findings:

- The property elevation is approximately 31 feet above mean sea level (msl).
- Depth to bedrock is expected at approximately 15 feet bgs and was not encountered during the remedial investigation.
- The stratigraphy of the Site, from the surface down, consists of approximately 14 feet of brown silt, with some gravel and fill material/brick. Fill material was not observed during the excavation events for additional footings.
- All soil samples were dry and had PID readings of zero ppm. Refusals prior to the target depths are thought to be caused by boulders, fill material or bedrock in this area. Analyses indicated that all samples in the basement of the project Site were non-detect or

below the SCOs for commercial properties for all VOC's, SVOC's, and Pesticides. One shallow sample, SB-4 (1'-2') had concentrations of arsenic at 19.6 ppm, which is above the Commercial Use SCO of 16 ppm. Another shallow sample at SB-6 (1'-2') had an aroclor-1254 PCB concentration of 2.78 ppm above the one (1) ppm Commercial Use SCO.

- Results of the background air sample indicated concentrations of trichlorofluoromethane, toluene, n-hexane, methylene chloride, methyl ter-butyl ether, ethanol, dichlorodifluoromethane, chloroform, benzene, 2,2,4-trimethylpentane, 1,1,2-trichloroethane and 1,2,2-trifluoroethane higher than concentrations found in sub-slab samples. Concentrations of 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, methyl ethyl ketone, tert-butyl alcohol, tetrachloroethene, xylenes (o), xylenes (m&p) were found above ambient air concentrations in both sub-slab samples. 1,2-dichloroethene and trichloroethene were above their ambient values in only one sample. Chemicals found to be above ambient air levels were of low level concentrations. Tetrachloroethene and trichloroethene were the only compounds on Table 3.1 air guidance values of the Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York. These two chemicals were below the guidance values.

### **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; addressed applicable standards, criteria, and guidance; reduced mobility, toxicity and volume of contaminants; was cost effective and implementable; and used standard methods that are well established in the industry. The remedial action is effective in the short-term and long-term.

The remedial action consisted of the following tasks:

1. Performed Community Air Monitoring Program for particulates and volatile organic carbon compounds.
2. Established NYSDEC Part 375 Commercial Use Soil Cleanup Objectives (SCOs).

3. Excavated 53.51 tons of non-hazardous soil/fill. 53.51 tons were transported to Clean Earth of Carteret in New Jersey.
4. End point sampling was not part of the RAP or Stipulation Letter scope due to the limited scope of excavation at the Site.
5. Constructed and maintained an engineered composite cover system consisting of a 4” concrete slab to prevent human exposure to residual soil/fill remaining under the Site. The contractor for the cover construction was Pride Builders.
6. Installed a vapor barrier system beneath all new footings, egress stairs, and portions of the building slab that were redone. The contractor for the vapor barrier system was Pride Builders.
7. Sampled and analyzed excavated media as required by disposal facilities as part of the waste characterization plan, and appropriately segregated excavated media.
8. Re-used excavated on-Site materials as backfill in compliance with OER approved plan and in accordance with all Federal, State and City laws and regulations.
9. Screened excavated fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a photo ionization detector (PID).
10. Mobilized for remedial action involving Site security setup, equipment mobilization, utility mark outs and marking excavation areas.
11. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in accordance with all applicable laws and regulations.
12. Submitted RCR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, describes any Engineering Controls to be implemented at the Site, and explains any changes from the RAP.

# REMEDIAL CLOSURE REPORT

## 1.0 SITE BACKGROUND

This Remedial Closure Report (RCR) has been developed for 313 West 125<sup>th</sup> Street located at 313 West 125<sup>th</sup> Street in the Harlem section of Manhattan, New York (the Site). This project has been assigned project number 10EHAN238M by OER. This RCR describes the remediation and/or mitigation activities implemented at the Site in coordination with the New York City Office of Environmental Remediation (OER) for the purposes of satisfying the requirements of the Hazardous Materials E-Designation Program and obtaining a Notice of Satisfaction. An E-Designation for Hazardous Materials (E-201) was placed on the Site by the New York City Department of City Planning (DCP) as part of the November 19, 2008, 125th Street Corridor Rezoning and Related Actions (CEQR number 07DCP030M).

### 1.1 Site Location and Prior Usage

The Site is located at 313 West 125<sup>th</sup> Street in the Harlem section in Manhattan, New York and is identified as Block 1952 and Lot 23 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 4,800-square feet and is bounded by a vacant lot to the north, 3-story commercial building to the west, 2-story commercial building currently under renovation to the east, and a 4-story commercial building to the south. A map of the site boundary is shown in Figure 2. The current on-Site building has been at the subject property from at least 1902 and used for commercial purposes.

### 1.2 Redevelopment Plan

Redevelopment of the Site consisted of renovating the existing 5-story commercial use building with a basement. The basement of the building covers the entire footprint of the Site. The on Site building consists of retail use on ground floor, accessory storage use on cellar floor, and office use on floors 2 through 5. Prior to the start of the renovations, there was no 2<sup>nd</sup> floor in the building; the 2<sup>nd</sup> floor slab was removed. During the renovation activities, the 2<sup>nd</sup> floor slab was reconstructed. The total floor area of the building increased to 23,385-square feet from 19,036-square feet. Figure 3 shows the building redevelopment plan. Minor excavation took place for installation of two additional footings, egress stairs, and a new elevator pit in the cellar. The

remainder of the cellar slab was not disturbed. A Site excavation map is included in Figure 4. A new bulkhead was installed on the roof and the total height of the building is 76'-7" including the bulkhead. The current zoning designation is C4-4D. The use is consistent with existing zoning for the property. The final architectural drawings are included in Appendix 1.

### **1.3 Environmental Investigations**

- A Phase II Site Investigation was performed and the results are documented in a Phase II Site Investigation Report dated March 2011 by Atlantic Environmental Solutions, Inc.
- A Remedial Action Work Plan for Historic Fill Removal dated March 2011 was also prepared by Atlantic Environmental Solutions.
- A Stipulation Letter dated January 13, 2016 was prepared by Athenica Environmental Services, Inc. to document the revised proposed development plan and soil management plan during the proposed development activities.

### **Summary of the Work Performed Under the Remedial Investigation**

The Remedial Investigation consisted of soil and soil vapor sampling to characterize subsurface conditions in response to the testing and sampling protocol of the Site's E-Designation listing. The remedial investigation included installation of three (3) soil borings and two (2) sub-slab vapor points. For the evaluation of soil and soil vapor quality, six (6) soil (two from each boring) and two (2) sub-slab vapor samples were collected for laboratory analysis. Soil samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and Target Analyte List (TAL) metals. Sub-slab vapor samples were analyzed for TO-15 VOCs. Copies of the prior Phase II Subsurface Investigation Work Plan and Final report are included in Appendix 6.

### **Summary of Environmental Findings**

Significant environmental findings are summarized below. NYSDEC Part 375 Soil Cleanup Objectives (SCOs) are presented in Table 1. Results of the remedial investigation are presented in Appendix 6. Results of the waste-classification sampling, along with comparison to NYSDEC Part 375 criteria are presented in Tables 2-5.

1. The property elevation is approximately 31 feet above mean sea level (msl).
2. Depth to bedrock is expected at approximately 15 feet bgs and was not encountered during the remedial investigation.
3. The stratigraphy of the Site, from the surface down, consists of approximately 14 feet of brown silt, with some gravel and fill material/brick. Fill material was not observed during the excavation events for additional footings.
4. All soil samples were dry and had readings of zero ppm. Refusals prior to the target depths are thought to be caused by boulders, fill material or bedrock in this area. Analyses indicated that all samples in the basement of the project Site were non-detect or below the SCOs for commercial properties for all VOC's, SVOC's, and Pesticides. One shallow sample, SB-4 (1'-2') had concentrations of arsenic at 19.6 ppm, which is above the Commercial Use SCO of 16 ppm. Another shallow sample at SB-6 (1'-2') had an aroclor-1254 PCB concentration of 2.78 ppm above the one (1) ppm Commercial Use SCO.
5. Results of the background air sample indicated concentrations of trichlorofluoromethane, toluene, n-hexane, methylene chlorine, methyl ter-butyl ether, ethanol, dichlorodifluoromethane, chloroform, benzene, 2,2,4-trimethylpentane, 1,1,2-trichloroethane and 1,2,2-trifluoroethane higher than concentrations found in sub-slab samples. Concentrations of 1,2,4-trimethylbenze, 1,3,5-trimethylbenzen, ethylbenzene, methyl ethyl ketone, tert-butyl alcohol, tetrachloroethene, xylenes (o), xylenes (m&p) were found above ambient air concentrations in both sub-slab samples. 1,2-dichloroethene and trichloroethene were above their ambient values in only one sample. Chemicals found to be above ambient air levels were of low level concentrations. Tetrachloroethene and trichloroethene were the only compounds on Table 3.1 air guidance values of the Department of Health Guidance for Evaluating Soil Vapor Intrusion in the State of New York. These two chemicals were below the guidance values.

For more detailed results, consult the Phase II Soil Investigation Report. A copy of the Atlantic Environmental Solutions Phase II Soil Investigation is included in Appendix 6.

## **2.0 DESCRIPTION OF REMEDIAL ACTIONS**

The Site was remediated in accordance with the scope of work presented in the OER-approved Remedial Action Plan (RAP) dated March, 2011 and Stipulation List dated January 13, 2016. Remedial actions were taken in accordance with applicable laws and regulations, and the site-specific-construction Construction Health and Safety Plan (CHASP). Any deviations from the RAP are noted below.

The following remedial actions were completed in this program:

1. Performed Community Air Monitoring Program for particulates and volatile organic carbon compounds.
2. Established NYSDEC Part 375 Commercial Use Soil Cleanup Objectives (SCOs).
3. Excavated 53.51 tons of non-hazardous soil/fill. 53.51 tons were transported to Clean Earth of Carteret in New Jersey.
4. End point sampling was not part of the RAP or Stipulation Letter scope due to the limited scope of excavation at the Site.
5. Constructed and maintained an engineered composite cover system consisting of a 4” concrete slab to prevent human exposure to residual soil/fill remaining under the Site. The contractor for the cover construction was Pride Builders.
6. Installed a vapor barrier system beneath all new footings, egress stairs, and portions of the building slab that were redone. The contractor for the vapor barrier system was Pride Builders.
7. Sampled and analyzed excavated media as required by disposal facilities as part of the waste characterization plan, and appropriately segregated excavated media.
8. Re-used excavated on-Site materials as backfill in compliance with OER approved plan and in accordance with all Federal, State and City laws and regulations.
9. Screened excavated fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a photo ionization detector (PID).

10. Mobilized for remedial action involving Site security setup, equipment mobilization, utility mark outs and marking excavation areas.
11. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in accordance with all applicable laws and regulations.
12. Submitted RCR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, describes any Engineering Controls to be implemented at the Site, and explains any changes from the RAP.

Appendix 2 includes photographs of the remedial activities performed.

## **3.0 COMPLIANCE WITH REMEDIAL ACTION PLAN**

### **3.1 Construction Health and Safety Plan**

The remedial construction activities performed under this program were in compliance with the site-specific CHASP and applicable laws and regulations. The Site Safety Coordinator was Vincent Siniscalchi.

### **3.2 Community Air Monitoring Plan**

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 in compliance with the Community Air Monitoring Plan in the approved RAP. The results of Community Air monitoring are shown in Appendix 3.

### **3.3 Soil/Materials Management Plan**

The Soil/Materials Management Plan in the RAP 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 compliance with the SMMP in the approved RAP.

### **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 compliance with applicable storm-water pollution prevention laws and regulations and the RAP.

### **3.5 Deviations from the Remedial Action Plan**

There were two deviations from the RAP and Stipulation Letter. These deviations are as follows:

- 1- The Stipulation Letter detailed excavation to approximately five feet below cellar grade and off-site disposal of soil for installation of additional footings and a new elevator pit.

During construction, additional footings and elevator pit excavations were conducted to approximately three feet and one foot below cellar grade, respectively. In addition to the excavations documented in the Stipulation Letter, an additional excavation for the installation of egress stairs along the northeastern corner of the cellar was conducted to approximately 11 feet below grade. The depth of excavations and the addition of the egress stairs excavation represents a deviation from the RAP and Stipulation Letter. This deviation is just as protective of public health and the environment as the original excavation plan.

- 2- The proposed vapor barrier system in the Stipulation Letter dated January 13, 2016 was Vapor Block Plus 20, manufactured by Raven Industries. However during the foundation work, the vapor barrier system was changed to Stego Wrap, manufactured by Stego Industries due to schedule-related reasons. The originally proposed vapor barrier was not found to be sourced in a timely manner. The vapor barrier was still installed beneath the new footings, new elevator pit, pre-existing open excavation pits, and egress stairs, therefore it provides the same protection as the previously proposed system. This deviation of the Vapor Barrier from the approved Stipulation Letter is protective of public health and the environment.

No other significant deviations from the Remedial Action Plan or Stipulation Letter occurred during the renovation activities.

## **4.0 REMEDIAL PROGRAM**

### **4.1 Project Organization**

The project owner/developer is Gambino & LaPorta Architecture, DPC. Pride Builders LLC (the contractor) provided construction management services, provided excavation services, and assisted with off-site disposal of construction/demolition debris. Excavated soils were disposed of at Clean Earth of Carteret. Principal personnel who participated in the remedial action include Spiro Dongaris, A.J. Infante, and Adib Rahman. The Professional Engineer (PE) and Qualified Environmental Professionals (QEP) for this project are Spiro Dongaris, P.E. and A.J. Infante, respectively. For the vapor barrier installation, Spiro Dongaris, PE, provided oversight. For the other components of the RAP, Adib Rahman, Environmental Scientist provided oversight for excavation activity on-Site.

### **4.2 Site Controls**

#### **Site Preparation**

Site preparation was completed in accordance with the schedule indicated below.

- Mobilization was conducted as necessary for each phase of work at the Site. Mobilization included field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member attended an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures. Mobilization occurred in December 2015.
- Fencing was installed at the Site in March 2016.
- The presence of utilities and easements on the Site were fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. All invasive activities were performed in compliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities were contacted to locate and mark the locations. Proper safety and protective measures pertaining to utilities and easements, and

compliance with all laws and regulations will be employed during invasive and other work performed under the RAP.

- The building department issued a building permit for the Site on February 3, 2016.

### **Soil Screening**

Visual, olfactory and PID soil screening and assessment were performed under the supervision of a Qualified Environmental Professional during all invasive work performed during the remedy.

### **Stockpile Management**

Stockpiles were used to segregate the soil material from the abundant boulders found at the Site. All stockpiles were covered with tarps to prevent dust migration, accidental contact, and odor. The stockpiles were inspected frequently. A map showing the location where stockpiled material was located is included in Figure 5.

### **Truck Inspection**

Out-bound trucks were inspected and cleaned prior to departing the Site from the trucking gate located in the northern entrance to the property on 316 West 126<sup>th</sup> Street to prevent any off-Site migrations of contamination. Cleaning of the adjacent streets was performed as needed during the trucking event. No evidence of significant off-Site migration of soil was observed during remedial construction.

### **Site Security**

Site access was controlled by a 24-hour duty security guard.

### **Nuisance Controls**

#### **Odor Control**

All necessary means were employed to prevent on- and off-Site odor nuisances. At a minimum, procedures included: (a) limiting the area of open excavations, and (b) shrouding open excavations with tarps and other covers. This odor control plan was capable of controlling emissions of nuisance odors.

#### **Dust Control**

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

- Use of properly anchored tarps to cover stockpiles.

This dust control plan was capable of controlling emissions of dust.

### **Other Nuisances**

Noise control was exercised during the remedial program. All remedial work conformed, at a minimum, to NYC noise control standards. Rodent control was provided during Site clearing and grubbing, and during the remedial program, as necessary, to prevent nuisances.

### **Reporting**

#### **Daily Reports**

Daily reports providing a general summary of activities for each day of *active remedial work relating to disturbance of historic fill* was emailed to the OER Project Manager by the end of the following day. Those reports included:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

Daily reports of the remedial action are included in Appendix 4.

#### **Record Keeping and Photo-Documentation**

Job-site record keeping for all remedial work was performed. These records were maintained on-Site during the project and are available for inspection by OER staff. Representative photographs were taken of the Site prior to any remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas.

Digital photographs of the remedial action are included in Appendix 2.

### **4.3 Materials Excavation and Removal**

Native material was excavated in two footings to a depth of approximately three (3) feet each, approximately one (1) foot for an elevator footing at the southeast side of the cellar, and approximately eleven (11) feet for egress stairs. Approximately 34 yards of soil was excavated from the new footings and approximately 53.51 tons of soil was excavated for the egress stairs.

Excavated materials from the new footings were appropriately stockpiled and the soil was segregated from demolition debris and boulders. Approximately 22 yards of segregated boulders, with cement and brick associated with demolition of the existing slab were removed from the Site for disposal at Empire Recycling facility in Brooklyn, NY. The remaining soil from the new footings was reused to backfill the pre-existing elevator pit and pre-existing excavations created by the previous developer. The soil excavated for the new egress stairs was removed from the Site for disposal at Clean Earth of Carteret.

A map showing the location where excavations were performed is shown in Figure 4. A map indicating the location of stockpiles is shown in Figure 5 and the location of on-Site soil reuse is shown in Figure 6. A copy of the soil disposal manifests is provided in Appendix 8.

### **End Point Sample Results**

End point sampling was not part of the RAP or Stipulation Letter scope due to the limited scope of excavation. One (1) waste classification sample was collected from the stockpile generated from the excavation of new footings. The waste classification sample detected only one (1) VOC; methylene chloride, however it was detected below its respective Unrestricted Use SCO. No SVOCs, herbicides, pesticides, or PCBs were detected above laboratory MDLs in the sample taken. Several metals were detected including arsenic (2.66 ppm), barium (57.90 ppm), beryllium (0.27 ppm), copper (24.50 ppm), lead (13.80 ppm), manganese (1,270 ppm), nickel (16.90 ppm), selenium (1.44 ppm), and zinc (17.80 ppm). All of the detected metals were below their respective Unrestricted Use SCOs. A copy of the laboratory analytical report is included in Appendix 7.

Athenica reviewed soil sampling results collected as part of a Phase II Site Investigation Report (RIR), prepared by Atlantic Environmental Solutions, Inc. and dated March 2011. A total of twelve (12) soil samples were collected from six (6) soil borings and submitted to an ELAP-certified laboratory for chemical analysis. As described above, all soil samples were dry and had PID readings of zero ppm. Refusals prior to the target depths are thought to be caused by boulders, fill material or bedrock in this area. Analyses indicated that all samples in the basement of the project Site were non-detect or below the Commercial Use SCOs for all VOCs, SVOCs, and Pesticides. One shallow sample, SB-4 (1'-2') had concentrations of arsenic at 19.6 ppm,

which is above the Commercial Use SCO of 16 ppm. Another shallow sample at SB-6 (1'-2') had an Aroclor-1254 PCB concentration of 2.78 ppm above the one (1) ppm Commercial Use SCO. Residual exceedances of Commercial Use SCOs are managed in place by engineering controls constructed at the Site.

**Quality Assurance/Quality Control**

The soil samples were appropriately containerized, labeled and assigned a unique sample identification number along with sampling description, location, and depth. The soil samples were accompanied by a completed Chain-of-Custody document. Sampling methods, sample preservation requirements, sampling handling times, and decontamination procedures for field equipment conformed to applicable industry standards.

**4.4 Materials Disposal**

As indicated previously, excavated material from the new footings and the pre-existing stockpiles were segregated to separate soil from boulders. Soil was reused on-Site to backfill the pre-existing elevator pit and pre-existing footing excavations. The boulders and construction debris associated with the demolition of the existing slab were properly characterized and disposed of in accordance with applicable laws and regulations for handling, transport, and disposal.

The quantity of material removed and disposed off-Site is presented below:

Destination	Type of Material	Quantity
Empire Recycling	Boulders, construction and demolition debris from former building slab and foundation	22 yards
Clean Earth of Carteret, NJ	Non-hazardous Native Soil	53.51 Tons

Letters from Pride Builders to disposal facility providing materials type, source and data; acceptance letters from disposal facility stating it is approved to accept these materials; and soil disposal manifests are attached in Appendix 8. The table above shows the total quantities of each class of material removed from the Site and the disposal locations.

#### **4.5 Backfill Import**

Backfill was used at the Site to fill pre-existing excavations and the existing elevator pit. The backfill was sourced from on-Site excavated soil which was separated from boulders and fill material.

Tables summarizing chemical analytical results for backfill are included in Tables 2 through 5. A map showing backfill placement locations at the Site is shown in Figure 6.

#### **4.6 Demarcation**

A demarcation barrier was not installed at the Site due to the limited scope of excavation. All minor excavations conducted at the Site include installation of a Vapor Barrier System and therefore a demarcation barrier was not required to address residual soil.

## 5.0 ENGINEERING CONTROLS

Engineering Controls were employed in the remedial action to address residual contamination remaining at the site. The Site has two (2) primary Engineering Control Systems. These are:

### **Vapor Barrier**

The Vapor Barrier System was installed as part of development to prevent infiltration of vapors into the Structure. The vapor barrier consisted of Stego Wrap 20-mil manufactured by Stego Industries, LLC and was installed beneath all newly excavated footings, the elevator pit, and the egress stairs to prevent infiltration of vapor into the structure. In addition, vapor barrier was installed below the pre-existing excavation pits after they were backfilled prior to pouring the concrete slab. The vapor barrier was a 20-mil liner specifically designed for volatile organic compounds and methane gas. The penetrations were sealed with manufacturer specified Stego Tape after overlapping the membrane a minimum of 12 inches. The contractor made sure the surfaces were dry prior to applying the seal tape.

Figures 7 and 8 show the location and detail of the vapor barrier installed beneath the floor slab, new footings, and under the egress stairs. Specifications and installation diagrams from the manufacturer are provided in Appendix 5. The professional engineer responsible for the Vapor Barrier System was Spiro Dongaris. The contractor responsible for the Vapor Barrier System installation was Pride Builders.

### **Composite Cover System**

Exposure to residual soil/fill is prevented by an engineered, composite cover system that has been built on the Site. This composite cover system is comprised of the existing 4-inch building slab and all new footing installations and slab repairs. Figure 8 shows the approved design for each remedial cover type used on this Site. Figure 9 shows the location of each cover type built at the Site.

## 6.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required under this Remedial Closure 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 RCR.

Institutional Controls for this property are:

- (1) The property will continue to be registered with an E-Designation by 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 ECs and ICs. The property owner and property owner's successors and assigns will inspect ECs and ICs 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 ECs and ICs;
- (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 commercial use and will not be used for a higher level of use without prior approval by OER.

## **7.0 SITE MANAGEMENT PLAN**

Site Management is the last phase of the remedial process and begins after the approval of the Remedial Closure Report (RCR) and issuance of the Notice of Completion (NOC) by OER. It is the responsibility of the property owner 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.

Engineering Controls and Institutional Controls have been incorporated into this Remedial Action to ensure that the site remains protective of public health and the environment. Generally, ECs provide physical protective measures and ICs provide restrictions on Site usage and establish remedial operation, maintenance, inspection and certification measures. This Site Management Plan has been established to govern long-term performance of ECs and ICs for this 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 and (2) certification of performance of ECs and ICs.

### **ENGINEERING CONTROLS**

Engineering Controls were employed in the remedial action to address residual materials remaining at the site. The Site has two Engineering Control Systems. Engineering Controls for this property are:

- Vapor Barrier System; and
- Composite Cover System

#### **Operation and 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 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 existing barrier materials in accordance with manufacturer specifications.

Furthermore, the Vapor Barrier System installed at the Site was only constructed in areas where the existing building slab was disturbed for installation of additional footings, an elevator pit, and an egress stairwell. Any potential future disturbance to the existing building slab will require similar engineering controls and OER approval.

### **Operation and Maintenance of Composite Cover System**

Chapter 5 describes the Composite Cover System utilized in this Remedial Action and provides as-built design details and the location of each cover type. The Composite Cover System is a permanent Engineering Control for the Site. A Soil/Materials Management Plan is included in this Site Management Plan and outlines 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 Composite Cover System does not require any special operation or maintenance activities. If the system is breached during future construction activities [or “normal wear and tear”], the system will be rebuilt by reconstructing the system according to the original design and tying newly constructed cover layers into existing cover layers to form a continuous layer(s).

### **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 RCR.

Institutional Controls are also designed to prevent future exposure to residual soil/materials by controlling disturbances in the subsurface, restricting higher uses of the property than those addressed by the Remedial Action and establishing restrictions on activities and site usage.

Institutional Controls for this property are:

- (1) The property will continue to be registered with an E-Designation by 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 ECs and ICs. The property owner and property owner's successors and assigns will inspect ECs and ICs 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 ECs and ICs;
- (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 commercial use and will not be used for a higher level of use without prior approval by OER.

## **INSPECTIONS**

Due to the limited scope of this Remedial Action, Engineering Controls and Institutional Controls do not need to be inspected.

**OER may enter the Site upon notice for the purpose of evaluating the performance of ECs and ICs.**

## **NOTIFICATIONS**

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

- 60-day advance notice of any proposed changes in Site use, such as an upgrade from existing use to residential use that was not contemplated in the Remedial Action.

- Notice within 30 days of any emergency, such as a fire, flood, or earthquake that 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) included in this chapter 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 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**

If stockpiles are used to isolate excavated soil they 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;
- 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 permits or authorized notifications.
- Ensure that all loaded outbound trucks are inspected and cleaned if necessary before leaving the Site; and
- 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.

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.

### **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) an OER Historical Fill Notification Form and letter from the PE/QEP or property owner 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 New York City 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 non-hazardous 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.

### **Repair of Remedial Systems**

After completion of invasive work, any damage to 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 include 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 Letter 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.

### **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, is non-hazardous, and lacks petroleum contamination, the material will be loaded onto trucks for delivery to the Site.

Recycled concrete aggregate (RCA) without fines 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.

[Clarify use of Asphalt Millings]

### **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 feasible, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility or some other means compliant with applicable laws and regulations. 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 be controlled by these means, 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.

The odor control plan must be 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/QEP.

### **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 soil/fill stockpiles;
- Exercise extra care during dry and high-wind periods; and
- Use of asphalt millings, 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 dust will be identified and corrected. Work will not resume until all nuisance dust emissions have been 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 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 shut down.

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.

If the downwind PM-10 particulate level is 100 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) 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  $150 \mu\text{g}/\text{m}^3$  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  $150 \mu\text{g}/\text{m}^3$  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  $150 \mu\text{g}/\text{m}^3$  of the upwind level and in preventing visible dust migration.

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

### **Contingency Plan**

This contingency plan is developed for the remedial construction or repair work to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during invasive Site work will be promptly communicated to OER's Project Manager. Petroleum spills will be reported to the NYS DEC Spill Hotline. If previously unidentified contaminant sources are found during on-Site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to OER. Chemical analytical testing will be performed for TAL metals, TCL volatiles and semi-volatiles, TCL pesticides and PCBs, as appropriate.

### **Emergency Telephone Numbers**

In the event of any emergency condition pertaining to these remedial systems, the Owner's representative(s) should contact the appropriate parties from the contact list below. Prompt contact should also be made to A.J. Infante, QEP. These emergency contact lists must be maintained in an easily accessible location at the Site.

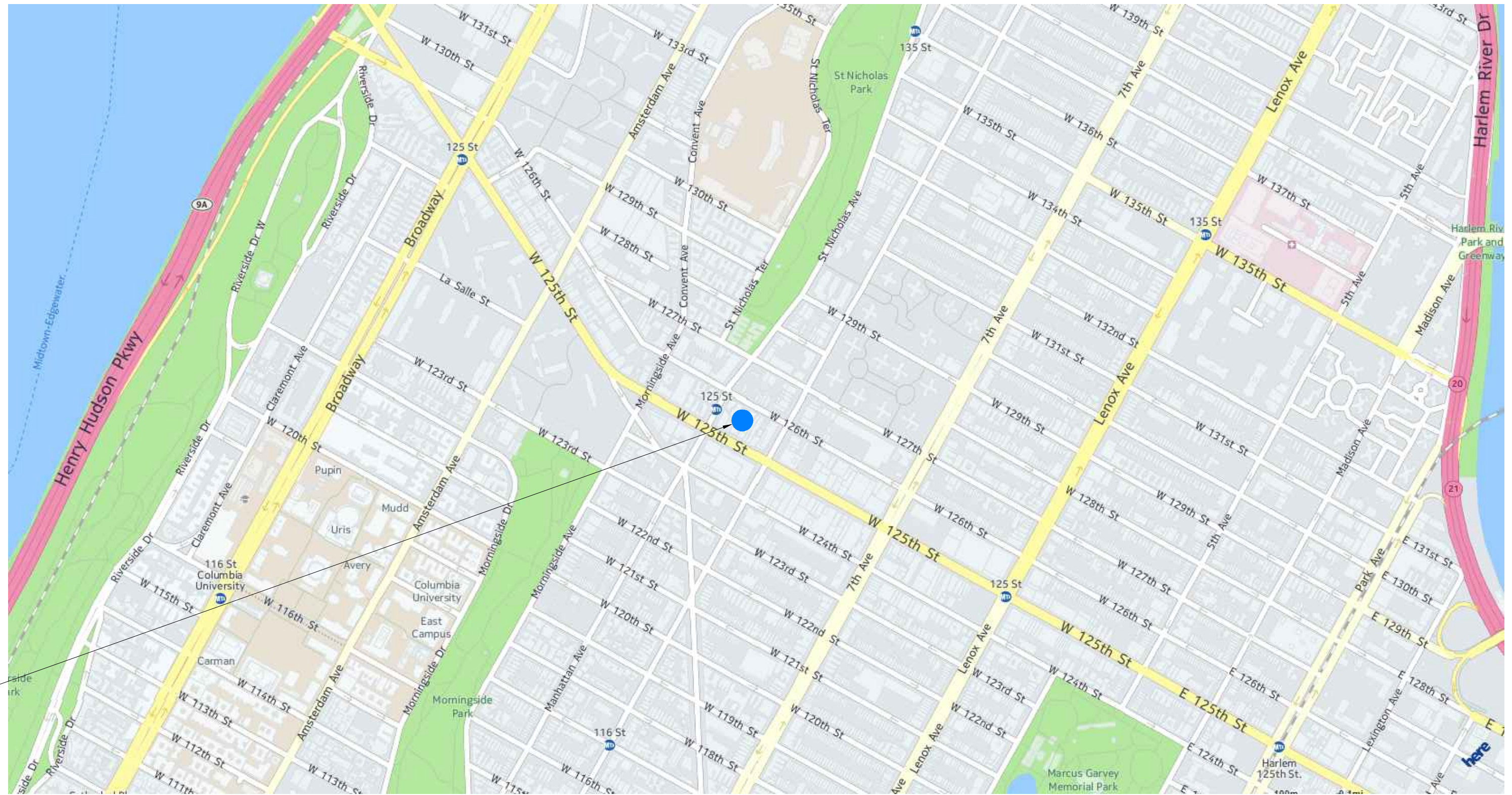
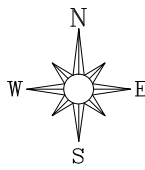
### Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center: 3 day notice required for utility mark-out	(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

A.J. Infante, Athenica Environmental	(718) 784-7490
Office of Environmental Remediation	(212) 788-8841; 311

# FIGURES



SITE LOCATION

**LEGEND:**

 SITE LOCATION

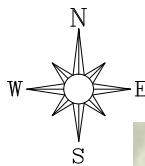


**ATHENICA ENVIRONMENTAL SERVICES, INC.**  
Environmental Engineering Consultants

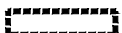
45-09 GREENPOINT AVENUE  
LONG ISLAND CITY, NY 11104  
TEL: (718) 784-7490  
FAX: (718) 784-4085


Date:	JANUARY 03, 2017
Drawn by:	VOLODYMYR PROTSYUK
Checked by:	CURTIS BREUER
Drawing Scale:	NOT TO SCALE
Project No.:	15-133-1462

Site:	313 WEST 125TH STREET NEW YORK, NY 10027
Figure:	1
Title:	REMEDIAL CLOSURE REPORT. SITE LOCATION



LEGEND:

 - SITE BOUNDARY



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Environmental Engineering Consultants  
45-09 GREENPOINT AVENUE  
LONG ISLAND CITY, NY 11104  
TEL: (718) 784-7490  
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Date:	JANUARY 03, 2017
Drawn by:	VOLODYMYR PROTSYUK
Checked by:	CURTIS BREUER
Drawing Scale:	NOT TO SCALE
Project No.:	15-133-1462

Site:	313 WEST 125TH STREET NEW YORK, NY 10027
Figure:	2
Title:	REMEDIAL CLOSURE REPORT. SITE BOUNDARY MAP



LEGEND:



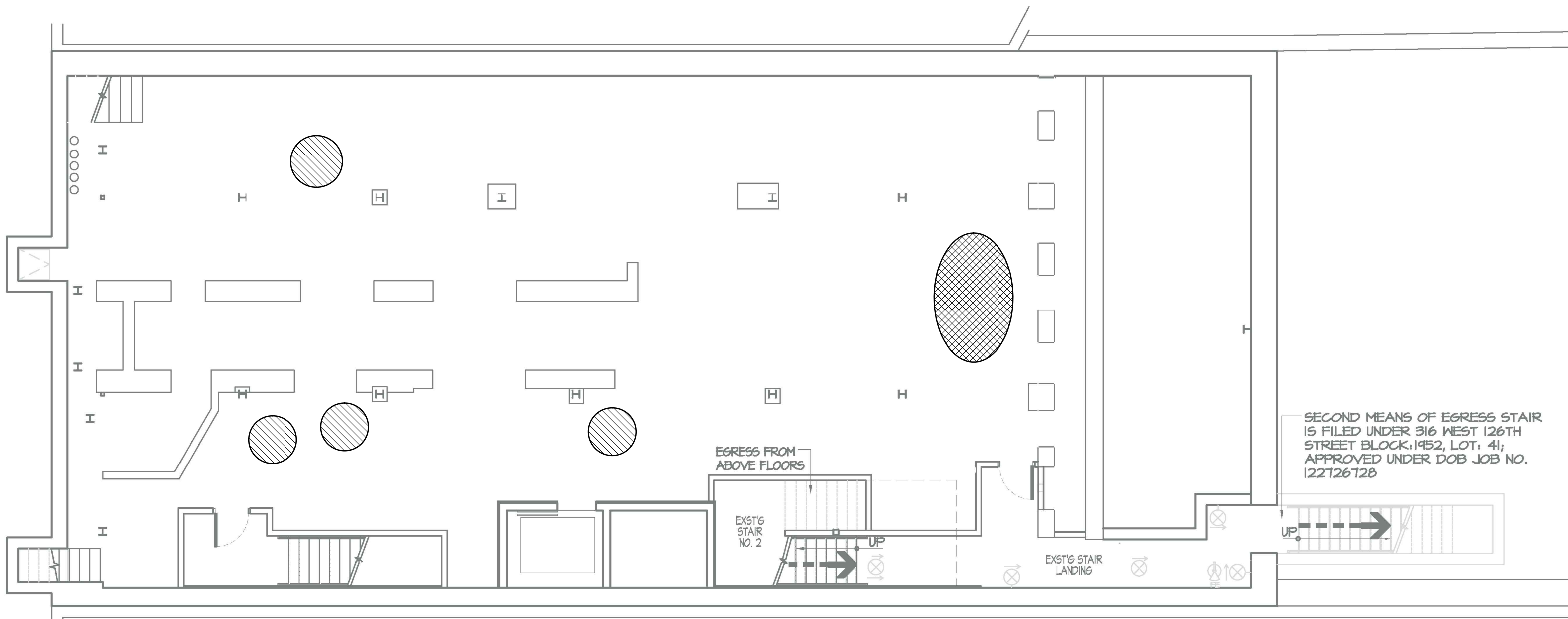
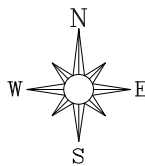
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Project No.:	15-133-1462



Site: 313 WEST 125TH STREET  
NEW YORK, NY 10027

Figure: 3  
Title: REMEDIAL CLOSURE REPORT.  
REDEVELOPMENT PLAN





SECOND MEANS OF EGRESS STAIR IS FILED UNDER 316 WEST 126TH STREET BLOCK:1952, LOT: 41; APPROVED UNDER DOB JOB NO. 122726728

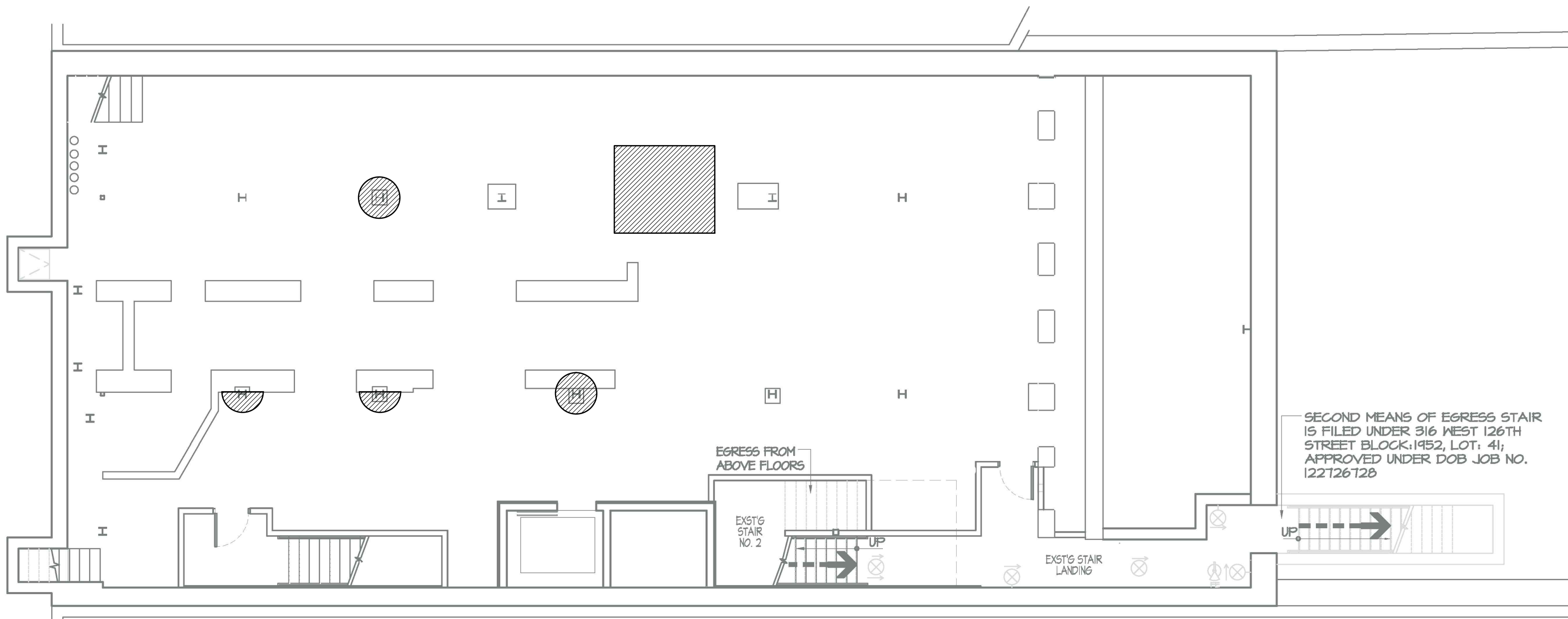
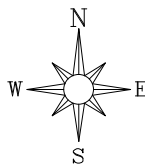
**LEGEND:**  
 - LOCATION OF PRE-EXISTING STOCKPILES  
 - LOCATION OF NEW STOCKPILES

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Date: JANUARY 03, 2017  
 Drawn by: VOLODYMYR PROTSYUK  
 Checked by: CURTIS BREUER  
 Drawing Scale: NOT TO SCALE  
 Project No.: 15-133-1462

Site: 313 WEST 125TH STREET  
 NEW YORK, NY 10027  
 Figure: 5  
 Title: REMEDIAL CLOSURE REPORT.  
 LOCATION OF STOCKPILED MATERIAL



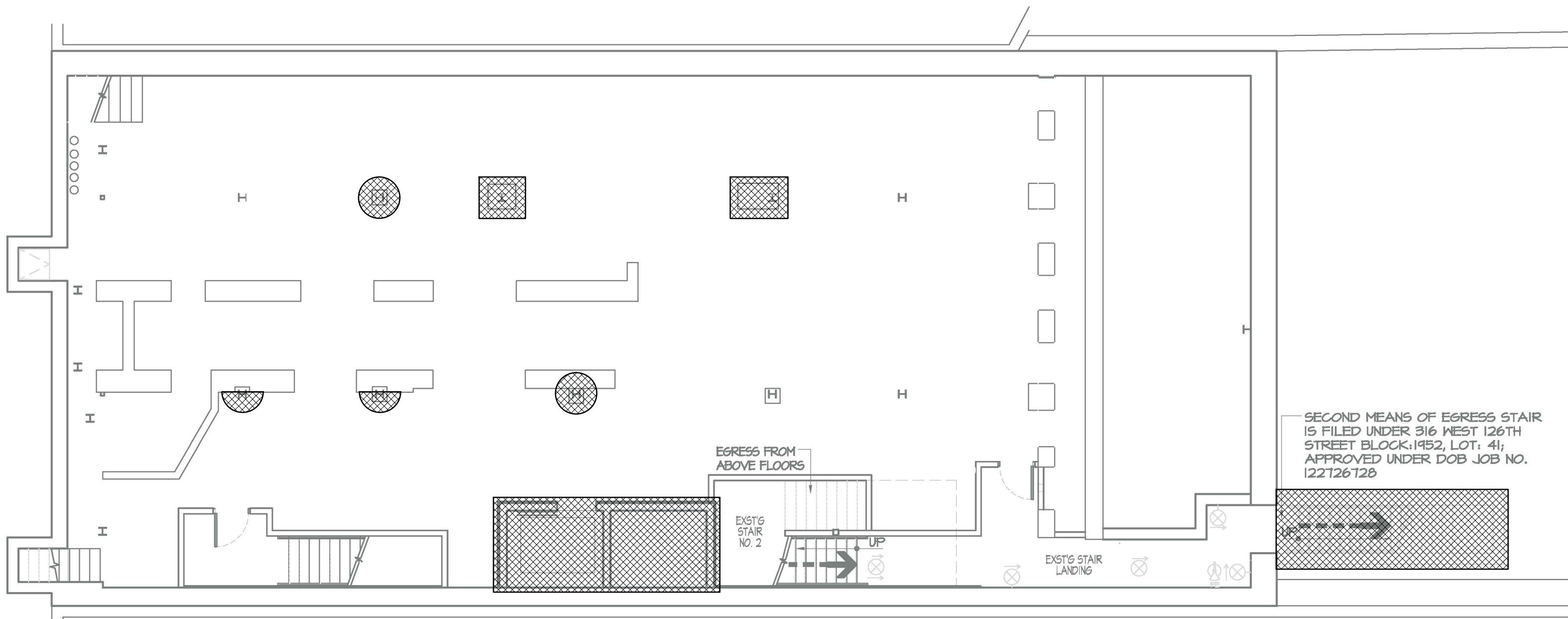
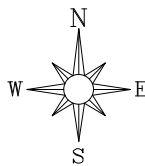
SECOND MEANS OF EGRESS STAIR IS FILED UNDER 316 WEST 126TH STREET BLOCK:1952, LOT: 41; APPROVED UNDER DOB JOB NO. 122726728

**LEGEND:**  
 - LOCATION OF ON-SITE SOIL REUSE

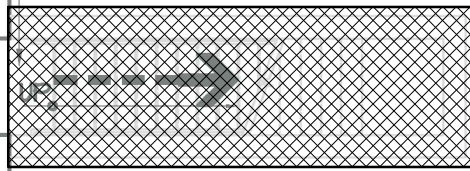
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 Checked by: CURTIS BREUER  
 Drawing Scale: NOT TO SCALE  
 Project No.: 15-133-1462

Site: 313 WEST 125TH STREET  
 NEW YORK, NY 10027  
 Figure: 6  
 Title: REMEDIAL CLOSURE REPORT.  
 SOIL REUSE LOCATIONS



SECOND MEANS OF EGRESS STAIR IS FILED UNDER 316 WEST 126TH STREET BLOCK:1952, LOT: 41; APPROVED UNDER DOB JOB NO. 122726728



LEGEND:

 - LOCATION OF VAPOR BARRIER

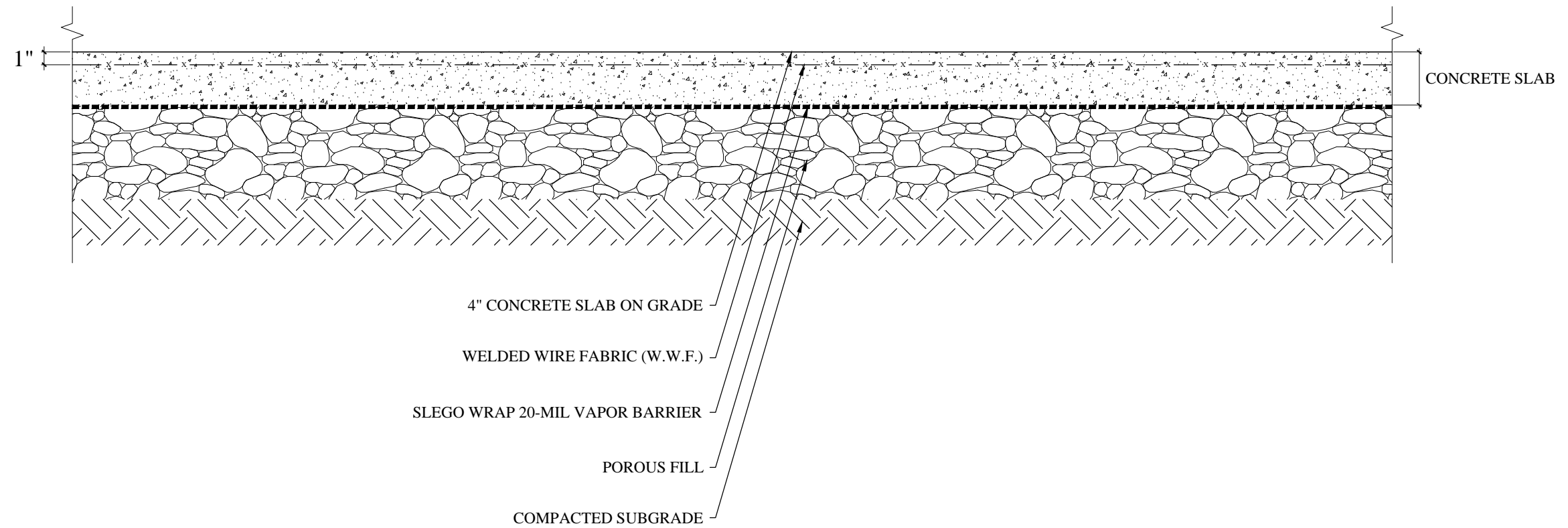


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Date:	JANUARY 03, 2017
Drawn by:	VOLODYMYR PROTSYUK
Checked by:	CURTIS BREUER
Drawing Scale:	NOT TO SCALE
Project No.:	15-133-1462

Site: 313 WEST 125TH STREET  
NEW YORK, NY 10027  
Figure: 7  
Title: REMEDIAL CLOSURE REPORT.  
VAPOR BARRIER LOCATIONS



TYPICAL CONCRETE SLAB ON GRADE

LEGEND:



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Date:	JANUARY 03, 2017	Site:	313 WEST 125TH STREET NEW YORK, NY 10027
Drawn by:	VOLODYMYR PROTSYUK	Figure:	8
Checked by:	CURTIS BREUER	Title:	REMEDIAL CLOSURE REPORT. AS-BUILT COMPOSITE COVER WITH VAPOR BARRIER DETAIL
Drawing Scale:	NOT TO SCALE		
Project No.:	15-133-1462		

# TABLES

Table 1  
Soil Cleanup Objectives (SCOs)  
313 West 125th Street, Harlem, New York

Contaminant	CAS Number	NYSDEC Part 375-6 SCOs for Unrestricted Use (ppm)	NYSDEC Part 375-6 SCOs for Restricted Commercial Use (ppm)
<b>Volatile Organic Compounds</b>			
1,1,1-Trichloroethane	71-55-6	0.68	500
1,1-Dichloroethane	75-34-3	0.27	240
1,1-Dichloroethene	75-35-4	0.33	500
1,2-Dichlorobenzene	95-50-1	1.1	500
1,2-Dichloroethane	107-06-2	0.02	30
cis-1,2-Dichloroethene	156-59-2	0.25	500
trans-1,2-Dichloroethene	156-60-5	0.19	500
1,3-Dichlorobenzene	541-73-1	2.4	280
1,4-Dichlorobenzene	106-46-7	1.8	130
1,4-Dioxane	123-91-1	0.1	130
Acetone	67-64-1	0.05	500
Benzene	71-43-2	0.06	44
Butylbenzene	104-51-8	12	500
Carbon tetrachloride	56-23-5	0.76	22
Chlorobenzene	108-90-7	1.1	500
Chloroform	67-66-3	0.37	350
Ethylbenzene	100-41-4	1	390
Hexachlorobenzene	118-74-1	0.33	6
Methyl ethyl ketone	78-93-3	0.12	500
Methyl tert-butyl ether	1634-04-4	0.93	500
Methylene chloride	75-09-2	0.05	500
n-Propylbenzene	103-65-1	3.9	500
sec-Butylbenzene	135-98-8	11	500
tert-Butylbenzene	98-06-6	5.9	500
Tetrachloroethene	127-18-4	1.3	150
Toluene	108-88-3	0.7	500
Trichloroethene	79-01-6	0.47	200
1,2,4-Trimethylbenzene	95-63-6	3.6	190
1,3,5-Trimethylbenzene	108-67-8	8.4	190
Vinyl chloride	75-01-4	0.02	13
Xylene (mixed)	1330-20-7	0.26	500
<b>Semivolatile Organic Compounds</b>			
Acenaphthene	83-32-9	20	500
Acenaphthylene	208-96-8	100	500
Anthracene	120-12-7	100	500
Benz(a)anthracene	56-55-3	1	5.6
Benzo(a)pyrene	50-32-8	1	1
Benzo(b)fluoranthene	205-99-2	1	5.6
Benzo(g,h,i)perylene	191-24-2	100	500
Benzo(k)fluoranthene	207-08-9	0.8	56
Chrysene	218-01-9	1	56
Dibenz(a,h)anthracene	53-70-3	0.33	0.56
Fluoranthene	206-44-0	100	500
Fluorene	86-73-7	30	500
Ideno(1,2,3-cd)pyrene	193-39-5	0.5	5.6
m-Cresol	108-39-4	0.33	500
Naphthalene	91-20-3	12	500
o-Cresol	95-48-7	0.33	500
p-Cresol	106-44-5	0.33	500
Pentachlorophenol	87-86-5	0.8	6.7
Phenanthrene	85-01-8	100	500
Phenol	108-95-2	0.33	500
Pyrene	129-00-0	100	500
<b>Pesticides/PCBs</b>			
2,4,5-TP Acid (Silvex)	93-72-1	3.8	500
4,4'-DDE	72-55-9	0.0033	62
4,4'-DDT	50-29-9	0.0033	47
4,4'-DDD	72-54-8	0.0033	92
Aldrin	309-00-2	0.005	0.68
alpha-BHC	319-84-6	0.02	3.4
beta-BHC	319-85-7	0.036	3
Chlordane (alpha)	5103-71-9	0.094	24
delta-BHC	319-86-8	0.04	500
Dibenzofuran	132-64-9	7	350
Dieldrin	60-57-1	0.005	1.4
Endosulfan I	959-98-8	2.4	200
Endosulfan II	33213-65-9	2.4	200
Endosulfan sulfate	1031-07-8	2.4	200
Endrin	72-20-8	0.014	89
Heptachlor	76-44-8	0.042	15
Lindane	58-89-9	0.1	9.2
Polychlorinated biphenyls	1336-36-3	0.1	1
<b>Metals</b>			
Arsenic	7440-38-2	13	16
Barium	7440-39-3	350	400
Beryllium	7440-41-7	7.2	590
Cadmium	7440-43-9	2.5	9.3
Chromium hexavalent	18540-29-9	1	400
Chromium trivalent	16065-83-1	30	1500
Copper	7440-50-8	50	270
Total Cyanide		27	27
Lead	7439-92-1	63	1000
Manganese	7439-96-5	1600	10000
Total Mercury		0.18	2.8
Nickel	7440-02-0	30	310
Selenium	7782-49-2	3.9	1500
Silver	7440-22-4	2	1500
Zinc	7440-66-6	109	10000

Table 2: Summary of Waste Classification Results  
 VOCs in Soil Samples  
 313 West 125th Street, Harlem, New York

Sample ID Lab ID Sampling Depth Sampling Date Sampling Matrix Dilution Factor Unit of Measure	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives Commercial	WC-1 16D0826-01 (0-3') 4/21/2016 Soil 1 mg/Kg	G-1 16D0826-02 (0-3') 4/21/2016 Soil 1 mg/Kg
1,1,1,2-Tetrachloroethane	NS	NS	NT	0.0023 ND
1,1,1-Trichloroethane	0.68	500	NT	0.0023 ND
1,1,2,2-Tetrachloroethane	NS	NS	NT	0.0023 ND
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NS	NS	NT	0.0023 ND
1,1,2-Trichloroethane	NS	NS	NT	0.0023 ND
1,1-Dichloroethane	0.27	240	NT	0.0023 ND
1,1-Dichloroethylene	0.33	500	NT	0.0023 ND
1,1-Dichloropropylene	NS	NS	NT	0.0023 ND
1,2,3-Trichlorobenzene	NS	NS	NT	0.0023 ND
1,2,3-Trichloropropane	NS	NS	NT	0.0023 ND
1,2,4-Trichlorobenzene	NS	NS	NT	0.0023 ND
1,2,4-Trimethylbenzene	3.6	190	NT	0.0023 ND
1,2-Dibromo-3-chloropropane	NS	NS	NT	0.0023 ND
1,2-Dibromoethane	NS	NS	NT	0.0023 ND
1,2-Dichlorobenzene	1.1	500	NT	0.0023 ND
1,2-Dichloroethane	0.02	30	NT	0.0023 ND
1,2-Dichloropropane	NS	NS	NT	0.0023 ND
1,3,5-Trimethylbenzene	8.4	190	NT	0.0023 ND
1,3-Dichlorobenzene	2.4	280	NT	0.0023 ND
1,3-Dichloropropane	NS	NS	NT	0.0023 ND
1,4-Dichlorobenzene	1.8	130	NT	0.0023 ND
1,4-Dioxane	0.1	130	NT	0.045 ND
2,2-Dichloropropane	NS	NS	NT	0.0023 ND
2-Butanone	0.12	500	NT	0.0023 ND
2-Chlorotoluene	NS	NS	NT	0.0023 ND
2-Hexanone	NS	NS	NT	0.0023 ND
4-Chlorotoluene	NS	NS	NT	0.0023 ND
4-Methyl-2-pentanone	NS	NS	NT	0.0023 ND
Acetone	0.05	500	NT	0.0045 ND
Acrolein	NS	NS	NT	0.0045 ND
Acrylonitrile	NS	NS	NT	0.0023 ND
Benzene	0.06	44	NT	0.0023 ND
Bromobenzene	NS	NS	NT	0.0023 ND
Bromochloromethane	NS	NS	NT	0.0023 ND
Bromodichloromethane	NS	NS	NT	0.0023 ND
Bromoform	NS	NS	NT	0.0023 ND
Bromomethane	NS	NS	NT	0.0023 ND
Carbon disulfide	NS	NS	NT	0.0023 ND
Carbon tetrachloride	0.76	22	NT	0.0023 ND
Chlorobenzene	1.1	500	NT	0.0023 ND
Chloroethane	NS	NS	NT	0.0023 ND
Chloroform	0.37	350	NT	0.0023 ND
Chloromethane	NS	NS	NT	0.0023 ND
cis-1,2-Dichloroethylene	0.25	500	NT	0.0023 ND
cis-1,3-Dichloropropylene	NS	NS	NT	0.0023 ND
Cyclohexane	NS	NS	NT	0.0023 ND
Dibromochloromethane	NS	NS	NT	0.0023 ND
Dibromomethane	NS	NS	NT	0.0023 ND
Dichlorodifluoromethane	NS	NS	NT	0.0023 ND
Ethyl Benzene	1	390	NT	0.0023 ND
Hexachlorobutadiene	NS	NS	NT	0.0023 ND
Isopropylbenzene	NS	NS	NT	0.0023 ND
Methyl acetate	NS	NS	NT	0.0023 ND
Methyl tert-butyl ether (MTBE)	0.93	500	NT	0.0023 ND
Methylcyclohexane	NS	NS	NT	0.0023 ND
Methylene chloride	0.05	500	NT	0.014 ND
n-Butylbenzene	12	500	NT	0.0023 ND
n-Propylbenzene	3.9	500	NT	0.0023 ND
o-Xylene	NS	NS	NT	0.0023 ND
p- & m- Xylenes	NS	NS	NT	0.0045 ND
p-Isopropyltoluene	NS	NS	NT	0.0023 ND
sec-Butylbenzene	11	500	NT	0.0023 ND
Styrene	NS	NS	NT	0.0023 ND
tert-Butyl alcohol (TBA)	NS	NS	NT	0.0045 ND
tert-Butylbenzene	5.9	500	NT	0.0023 ND
Tetrachloroethylene	1.3	150	NT	0.0023 ND
Toluene	0.7	500	NT	0.0023 ND
trans-1,2-Dichloroethylene	0.19	500	NT	0.0023 ND
trans-1,3-Dichloropropylene	NS	NS	NT	0.0023 ND
Trichloroethylene	0.47	200	NT	0.0023 ND
Trichlorofluoromethane	NS	NS	NT	0.0023 ND
Vinyl acetate	NS	NS	NT	0.0023 ND
Vinyl Chloride	0.02	13	NT	0.0023 ND

ND=analyte not detected at or above the level indicated  
 NT=this indicates the analyte was not a target for this sample  
 NS=no regulatory limit has been established for this analyte

Table 3: Summary of Waste Classification Results  
SVOCs in Soil Samples  
313 West 125th Street, Harlem, New York

Sample ID Lab ID Sampling Depth Sampling Date Sampling Matrix Dilution Factor Unit of Measure	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Commercial	WC-1 16D0826-01 (0-3') 4/21/2016 Soil 2 mg/Kg	G-1 16D0826-02 (0-3') 4/21/2016 Soil 1 mg/Kg	
1,1'-Biphenyl	NS	NS	0.066	ND	NT
1,2,4,5-Tetrachlorobenzene	NS	NS	0.13	ND	NT
1,2,4-Trichlorobenzene	NS	NS	0.066	ND	NT
1,2-Dichlorobenzene	1.1	500	0.066	ND	NT
1,2-Diphenylhydrazine (as Azobenzene)	NS	NS	0.066	ND	NT
1,3-Dichlorobenzene	2.4	280	0.066	ND	NT
1,4-Dichlorobenzene	1.8	130	0.066	ND	NT
2,3,4,6-Tetrachlorophenol	NS	NS	0.13	ND	NT
2,4,5-Trichlorophenol	NS	NS	0.066	ND	NT
2,4,6-Trichlorophenol	NS	NS	0.066	ND	NT
2,4-Dichlorophenol	NS	NS	0.066	ND	NT
2,4-Dimethylphenol	NS	NS	0.066	ND	NT
2,4-Dinitrophenol	NS	NS	0.13	ND	NT
2,4-Dinitrotoluene	NS	NS	0.066	ND	NT
2,6-Dinitrotoluene	NS	NS	0.066	ND	NT
2-Chloronaphthalene	NS	NS	0.066	ND	NT
2-Chlorophenol	NS	NS	0.066	ND	NT
2-Methylnaphthalene	NS	NS	0.066	ND	NT
2-Methylphenol	0.33	500	0.066	ND	NT
2-Nitroaniline	NS	NS	0.13	ND	NT
2-Nitrophenol	NS	NS	0.066	ND	NT
3- & 4-Methylphenols	NS	NS	0.066	ND	NT
3,3'-Dichlorobenzidine	NS	NS	0.066	ND	NT
3-Nitroaniline	NS	NS	0.13	ND	NT
4,6-Dinitro-2-methylphenol	NS	NS	0.13	ND	NT
4-Bromophenyl phenyl ether	NS	NS	0.066	ND	NT
4-Chloro-3-methylphenol	NS	NS	0.066	ND	NT
4-Chloroaniline	NS	NS	0.066	ND	NT
4-Chlorophenyl phenyl ether	NS	NS	0.066	ND	NT
4-Nitroaniline	NS	NS	0.13	ND	NT
4-Nitrophenol	NS	NS	0.13	ND	NT
Acenaphthene	20	500	0.066	ND	NT
Acenaphthylene	100	500	0.066	ND	NT
Acetophenone	NS	NS	0.066	ND	NT
Aniline	NS	NS	0.26	ND	NT
Anthracene	100	500	0.066	ND	NT
Atrazine	NS	NS	0.066	ND	NT
Benzaldehyde	NS	NS	0.066	ND	NT
Benzidine	NS	NS	0.26	ND	NT
Benzo(a)anthracene	1	5.6	0.066	ND	NT
Benzo(a)pyrene	1	1	0.066	ND	NT
Benzo(b)fluoranthene	1	5.6	0.066	ND	NT
Benzo(g,h,i)perylene	100	500	0.066	ND	NT
Benzo(k)fluoranthene	0.8	56	0.066	ND	NT
Benzoic acid	NS	NS	0.066	ND	NT
Benzyl alcohol	NS	NS	0.066	ND	NT
Benzyl butyl phthalate	NS	NS	0.066	ND	NT
Bis(2-chloroethoxy)methane	NS	NS	0.066	ND	NT
Bis(2-chloroethyl)ether	NS	NS	0.066	ND	NT
Bis(2-chloroisopropyl)ether	NS	NS	0.066	ND	NT
Bis(2-ethylhexyl)phthalate	NS	NS	0.066	ND	NT
Caprolactam	NS	NS	0.13	ND	NT
Carbazole	NS	NS	0.066	ND	NT
Chrysene	1	56	0.066	ND	NT
Dibenzo(a,h)anthracene	0.33	0.56	0.066	ND	NT
Dibenzofuran	7	350	0.066	ND	NT
Diethyl phthalate	NS	NS	0.066	ND	NT
Dimethyl phthalate	NS	NS	0.066	ND	NT
Di-n-butyl phthalate	NS	NS	0.066	ND	NT
Di-n-octyl phthalate	NS	NS	0.066	ND	NT
Fluoranthene	100	500	0.066	ND	NT
Fluorene	30	500	0.066	ND	NT
Hexachlorobenzene	0.33	6	0.066	ND	NT
Hexachlorobutadiene	NS	NS	0.066	ND	NT
Hexachlorocyclopentadiene	NS	NS	0.066	ND	NT
Hexachloroethane	NS	NS	0.066	ND	NT
Indeno(1,2,3-cd)pyrene	0.5	5.6	0.066	ND	NT
Isophorone	NS	NS	0.066	ND	NT
Naphthalene	12	500	0.066	ND	NT
Nitrobenzene	NS	NS	0.066	ND	NT
N-Nitrosodimethylamine	NS	NS	0.066	ND	NT
N-nitroso-di-n-propylamine	NS	NS	0.066	ND	NT
N-Nitrosodiphenylamine	NS	NS	0.066	ND	NT
Pentachlorophenol	0.8	6.7	0.066	ND	NT
Phenanthrene	100	500	0.066	ND	NT
Phenol	0.33	500	0.066	ND	NT
Pyrene	100	500	0.066	ND	NT
Pyridine	NS	NS	0.26	ND	NT

ND=analyte not detected at or above the level indicated

NT=this indicates the analyte was not a target for this sample

NS=no regulatory limit has been established for this analyte

Table 4: Summary of Waste Classification Results  
Herbicides, Pesticides, and PCBs in Soil Samples  
313 West 125th Street, Harlem, New York

Sample ID Lab ID Sampling Depth Sampling Date Sampling Matrix Unit of Measure	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Commercial	WC-1 16D0826-01 (0-3') 4/21/2016 Soil mg/Kg	G-1 16D0826-02 (0-3') 4/21/2016 Soil mg/Kg
<b>Dilution Factor</b>			1	
2,4,5-T	NS	NS	0.021 ND	NT
2,4,5-TP (Silvex)	3.8	500	0.021 ND	NT
2,4-D	NS	NS	0.021 ND	NT
<b>Dilution Factor</b>			5	
4,4'-DDD	0.0033	92	0.0017 ND	NT
4,4'-DDE	0.0033	62	0.0017 ND	NT
4,4'-DDT	0.0033	47	0.0017 ND	NT
Aldrin	0.005	0.68	0.0017 ND	NT
alpha-BHC	0.02	3.4	0.0017 ND	NT
alpha-Chlordane	0.094	24	0.0017 ND	NT
beta-BHC	0.036	3	0.0017 ND	NT
Chlordane, total	NS	NS	0.0069 ND	NT
delta-BHC	0.04	500	0.0017 ND	NT
Dieldrin	0.005	1.4	0.0017 ND	NT
Endosulfan I	2.4	200	0.0017 ND	NT
Endosulfan II	2.4	200	0.0017 ND	NT
Endosulfan sulfate	2.4	200	0.0017 ND	NT
Endrin	0.014	89	0.0017 ND	NT
Endrin aldehyde	NS	NS	0.0017 ND	NT
Endrin ketone	NS	NS	0.0017 ND	NT
gamma-BHC (Lindane)	0.1	9.2	0.0017 ND	NT
gamma-Chlordane	NS	NS	0.0017 ND	NT
Heptachlor	0.042	15	0.0017 ND	NT
Heptachlor epoxide	NS	NS	0.0017 ND	NT
Methoxychlor	NS	NS	0.0087 ND	NT
Toxaphene	NS	NS	0.088 ND	NT
<b>Dilution Factor</b>			1	
Aroclor 1016	NS	NS	0.018 ND	NT
Aroclor 1221	NS	NS	0.018 ND	NT
Aroclor 1232	NS	NS	0.018 ND	NT
Aroclor 1242	NS	NS	0.018 ND	NT
Aroclor 1248	NS	NS	0.018 ND	NT
Aroclor 1254	NS	NS	0.018 ND	NT
Aroclor 1260	NS	NS	0.018 ND	NT
Total PCBs	0.1	1	0.018 ND	NT

ND=analyte not detected at or above the level indicated

NT=this indicates the analyte was not a target for this sample

NS=no regulatory limit has been established for this analyte

Table 5: Summary of Waste Classification Results  
 Metals and Solids in Soil Samples  
 313 West 125th Street, Harlem, New York

Sample ID Lab ID	NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives	NYSDEC Part 375 Restricted Use Soil Cleanup Objectives- Commercial	WC-1 16D0826-01 (0-3') 4/21/2016 Soil 1 mg/Kg	G-1 16D0826-02 (0-3') 4/21/2016 Soil 1 mg/Kg
Aluminum	NS	NS	5,290	NT
Antimony	NS	NS	0.52 ND	NT
Arsenic	13	16	2.66	NT
Barium	350	400	57.90	NT
Beryllium	7.2	590	0.27	NT
Cadmium	2.5	9.3	0.32 ND	NT
Calcium	NS	NS	2,270	NT
Chromium	NS	NS	12.50	NT
Cobalt	NS	NS	6.07	NT
Copper	50	270	24.50	NT
Iron	NS	NS	9,930	NT
Lead	63	1000	13.80	NT
Magnesium	NS	NS	2,840	NT
Manganese	1600	10000	1,270 E	NT
Mercury by 7473	0.18	2.8	0.032 ND	NT
Nickel	30	310	16.90	NT
Potassium	NS	NS	859	NT
Selenium	3.9	1500	1.44	NT
Silver	2	1500	0.52 ND	NT
Sodium	NS	NS	121	NT
Thallium	NS	NS	1.05 ND	NT
Vanadium	NS	NS	13.90	NT
Zinc	109	10000	17.80	NT
<b>Unit of Measure</b>			<b>mg/L</b>	
<b>TCLP Metals</b>				
Arsenic	13	16	0.0040 ND	NT
Barium	350	400	0.40	NT
Cadmium	2.5	9.3	0.0030 ND	NT
Chromium	NS	NS	0.0060 ND	NT
Lead	63	1000	0.061	NT
Mercury (TCLP by 7473)	0.18	2.8	0.0002 ND	NT
Selenium	3.9	1500	0.014 B	NT
Silver	2	1500	0.0060 ND	NT
<b>Unit of Measure</b>			<b>pH units</b>	
pH	NS	NS	9.31	NT
<b>Unit of Measure</b>			<b>mg/Kg</b>	
Cyanide, total	27	27	0.52 ND	NT
Reactivity - Cyanide	NS	NS	0.25 ND	NT
Reactivity - Sulfide	NS	NS	15 ND	NT
Ignitability	NS	NS	Non-Ignit.	NT

ND=analyte not detected at or above the level indicated

B=analyte found in the analysis batch blank

E=result is estimated and cannot be accurately reported due to levels encountered or interferences

NT=this indicates the analyte was not a target for this sample

NS=no regulatory limit has been established for this analyte