

REMEDIAL ACTION REPORT

March 22, 2016

Submitted for:

Compass Residences Phase I
1512 Boone Avenue
Bronx, NY 10460
Block 3013, Lot 29
NYC VCP# 13CVCP141X

Submitted to:

New York City Office of Environmental Remediation
100 Gold Street, 2nd Floor
New York, NY 10038

Prepared for:

Allied West Farms (NY) LLC.
2209 Merrick Road Suite 200
Merrick, NY 11566

Submitted by:

Impact Environmental Closures, Inc.
170 Keyland Court
Bohemia, NY 11716

IE Project Number:

5197-03-02-2000



REMEDIAL ACTION REPORT

TABLE OF CONTENTS

CONTENTS	
TABLE OF CONTENTS.....	i
LIST OF ACRONYMS	iv
CERTIFICATION	v
EXECUTIVE SUMMARY	vi
REMEDIAL ACTION REPORT	1
1.0 SITE BACKGROUND	1
1.1 SITE LOCATION AND BACKGROUND.....	1
1.2 REDEVELOPMENT PLAN	1
1.3 DESCRIPTION OF SURROUNDING PROPERTY.....	2
1.4 SUMMARY OF PAST SITE USES AND AREAS OF CONCERN.....	2
1.5 SUMMARY OF WORK PERFORMED UNDER THE REMEDIAL INVESTIGATION.....	3
1.6 SUMMARY OF FINDINGS OF REMEDIAL INVESTIGATION	3
2.0 DESCRIPTION OF REMEDIAL ACTIONS	5
3.0 COMPLIANCE WITH REMEDIAL ACTION WORK PLAN	8
3.1 HEALTH & SAFETY PLAN.....	8
3.2 COMMUNITY AIR MONITORING PLAN	8
3.3 SOIL/MATERIALS MANAGEMENT PLAN	8
3.4 STORM-WATER POLLUTION PREVENTION.....	8
3.5 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN.....	8
4.0 REMEDIAL PROGRAM	10
4.1 PROJECT ORGANIZATION	10
4.2 SITE CONTROLS	10

4.3	MATERIALS EXCAVATION AND REMOVAL	11
4.4	LEAD HOTSPOT DELINEATION	12
4.5	END POINT SAMPLE RESULTS	13
4.6	MATERIALS DISPOSAL	15
4.7	SOIL REUSE ON-SITE	16
4.8	BACKFILL IMPORT.....	16
4.9	DEMARACTION.....	17
5.0	ENGINEERING CONTROLS	18
5.1	COMPOSITE COVER SYSTEM.....	18
5.2	VAPOR BARRIER SYSTEM	18
5.3	PARKING VENTILATION SYSTEM	19
6.0	INSTITUTIONAL CONTROLS	20
7.0	SITE MANAGEMENT PLAN	21
7.1	ENGINEERING CONTROLS	21
7.2	INSTITUTIONAL CONTROLS	23
7.3	INSPECTIONS	24
7.4	NOTIFICATIONS	26
7.5	SOIL/MATERIALS MANAGEMENT PLAN	26
7.6	COMMUNITY AIR MONITORING PLAN	34
7.7	CONTINGENCY PLAN	36
8.0	SUSTAINABILITY REPORT	38

FIGURES

Figure 1: Site Boundary Map

Figure 2: Site Location Map

Figure 3: Excavation and End-Point Sample Location Plan

Figure 4: Composite Covers & Soil Reuse Location Plan

TABLES

Table 1: Summary of End-point Analytical Results

Table 2: Onsite Soil Reuse Analytical Comparison Table

Table 3: Imported Fill Analytical Comparison Table

Table 4: Disposal Quantities and Disposal Facilities

APPENDICES

Appendix A: Redevelopment Plans

Appendix B: Vapor Barrier Documentation

Appendix C: Parking Structure Ventilation System Documentation

Appendix D: Daily and Monthly Reports to OER

Appendix E: Community Air Monitoring Program Logs

Appendix F: Photographic Log of Remedial Action

Appendix G: Disposal Facility Approval Letters

Appendix H: Shipping and Disposal Manifests

Appendix I: Onsite Soil for Reuse Laboratory Reports

Appendix J: Imported Fill Delivery Tickets

Appendix K: Imported Fill Laboratory Report

Appendix L: Lead Hotspot Delineation Data

Appendix M: End-point sample analytical laboratory data

Appendix N: Remedial Investigation Report

Appendix O: Remedial Action Work Plan

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

CERTIFICATION

I, Joel Rogers, 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 Compass Residences Phase I site, located at 1512 Boone Avenue, Bronx, site number 13CVCP141X.
- 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 Work Plan and (2) 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 June 26, 2013 and Stipulations in a letter dated September 30, 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 Joel Rogers, P.E.

PE License Number 083034

Signature 

Date 3/23/2016



EXECUTIVE SUMMARY

Allied West Farms (NY) LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 1512 Boone Avenue in the Crotona Park East section of Bronx, New York (Block 3013 and Lot 29). 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.

Site Location and Background

The Site is located at 1512 Boone Avenue in the Bronx, New York and is identified as Block 3013 and Lot 29 (previously lots 12, 29, 31, 35, 37, and 46) on the New York City Tax Map. The Site is 37,833-square feet and is bound by East 172nd Street to the north, a New York City public high school (1021 Boone Avenue) to the south, West Farms Road to the east, and Boone Avenue to the west. Prior to development, the Site was unoccupied and contained one (1) single-story former auto repair shop with a parking lot, one (1) two-story masonry steel manufacturing building, and two (2) residential dwellings. The surface area of the Sites consisted of asphalt parking areas, concrete walkways, exposed soils, exposed bedrock, and natural vegetation.

Summary of Redevelopment Plan

The Site redevelopment consisted of the construction of a mixed-use residential/commercial retail nine-story building (“Building 1A”) and an adjacent fifteen-story building (“Building 1B”), which together form over 250,000 square feet of residential space (237 apartment units) and 4,700 square feet of retail space. One level of partial sub-grade parking was constructed. In addition to parking, the basement level also includes building utilities and bicycle storage. The new buildings do not cover the entire footprint of the Site. Two grade-level open spaces were developed; a landscaped 8,000 square foot mid-block open area and a landscaped 7,800 square foot resident courtyard between the two buildings. The buildings, including landscaped courtyard were built out to the northern, eastern and western property lines of the site. The building

footprint was set back 60'-7" from the southern property line on Boone Avenue and 60'-11" from the southern property line on West Farms Road. The set-back area contains the landscaped mid-block open area. Pre-development grade at the western boundary of the site on Boone Avenue was higher than the grade at the eastern boundary of the site on West Farms Road; therefore, the bottom of excavation was approximately 18.5 feet below grade at the western boundary and approximately 5.5 feet below grade at the eastern boundary.

Summary of Surrounding Property

The site is located in the Crotona Park East neighborhood of the South Bronx. Crotona Park East is bound from the Cross Bronx Expressway to the north, Bronx River to the east, East 167th Street to the south and Crotona-Prospect Avenue to the west. Historically, Crotona Park East consisted of tenement buildings, multi-unit homes, vacant lots, and public housing units. The Crotona Park East / West Farms Rezoning Resolution was issued in 2011 to encourage the transformation and revitalization of the derelict and underutilized area through redevelopment of residential and commercial retail properties. Two schools are located within a 250-ft radius of the Site; Fannie Lou Hamer Freedom High School located at 1021 Jennings Street and PS-066 located at 1001 Jennings Street. One school is located within a 500-ft radius of the Site; PS-811 located at 1434 Longfellow Avenue. There are no hospitals or daycare centers located within a 500-ft radius of the Site.

Summary of Past Site Uses of Site and Areas of Concern

A Phase I Environmental Site Assessment (ESA) prepared in 2007 by Impact Environmental revealed through investigation of historic Sanborn maps that the Site has been developed as early as 1896 with several residential buildings and a mill yard. Commercial and industrial use buildings began to appear on the site as early as 1951 including auto repair shops, auto junk yard with filling stations, steel manufacturing plant and iron work shops.

The Areas of Concern (AOCs) for this site include:

1. Historical usage of property with auto junk yard, auto body shop since 1977 and a filling station.
2. Closed spill #0300164 associated with this property.

3. Historical site usage as a steel manufacturing plant/ iron works.
4. Presence of historic fill ranging from 0 to 6 feet below grade, which was primarily comprised of concrete, brick, stone, gravel, wood, and trace coal and slag in a brown silty sand matrix

Summary of the Work Performed under the Remedial Investigation

The Remedial Investigation encompassed the following investigative tasks:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 9 soil borings across the entire project Site, and collected 15 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed 4 groundwater monitoring wells throughout the Site, and collected 4 groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed 5 soil vapor probes throughout the site, and collected 5 samples for chemical analysis.
5. Prepared RIR based on investigation results.

Summary of Findings of Remedial Investigation

1. Elevation of the property ranges from 17 to 45 feet.
2. Depth to groundwater ranges from 2.5 to 11.5 feet at the Site.
3. Groundwater flow is generally from west to east beneath the Site.
4. Depth to bedrock is ranges throughout the site from approximately 3 feet to 14 feet at the Site. There is also an approximate 20 foot high bedrock outcrop in the southwest portion of the site.
5. Subsurface soil at the Site consisted of historic fill, which was primarily comprised of concrete, brick, stone, gravel, wood, and trace coal and slag in a brown silty sand matrix. Existing grade elevations vary greatly throughout the site due to shallow depth of

- bedrock outcrops. Historic fill was encountered at a depth interval ranging from 0 to 2 feet below grade surface (bgs) at borings SB-1, SB-7 and SB-8, 0 to 4 feet bgs at borings SB-2, SB-3, SB-5 and SB-6, 0 to 8 feet bgs at boring SB-4, 0 to 3 feet bgs at boring SB-9. Native material consisted of light brown medium-coarse sand and silty sand with decomposed rock fragments. Native material was encountered at a depth of 5 feet bgs at borings SB-2, SB-3, SB-5 and SB-6, 9 feet bgs at boring SB-4, 4 feet bgs at boring SB-9. Decomposed rock and bedrock was encountered at 3 feet bgs at borings SB-1, SB-7 and SB-8, 14 feet bgs at boring SB-2, 5 feet bgs at boring SB-3, 9 feet bgs at boring SB-4, 11 feet bgs at borings SB-5 and SB-6, 13 feet bgs at boring SB-9. A predominant rock outcrop approximately 20 feet in height is located in the south western portion of the site.
6. BTEX and other petroleum associated volatile organic compounds (VOCs) were detected at trace levels and below Track 1 SCOs in 8 of 15 soil samples. The only VOC exceedence of Track 1 Unrestricted Use SCOs was acetone at 130 ppb in one soil sample. Several SVOCs including benzo(a)anthracene (40 ppm), benzo(a)pyrene (39 ppm), benzo(b)fluoranthene (46 ppm), benzo(k)fluoranthene (22 ppm), chrysene (37 ppm), dibenzo(a,h)anthracene (5.8 ppm), and indeno(1,2,3-cd)pyrene (20 ppm) were detected above Track 2 Restricted Residential SCOs within one shallow soil sample (SB9). SVOCs were not detected above Track 1 Unrestricted Use SCOs in any other samples. Four pesticides including 4,4'-DDD (max. of 27 ppb); 4,4'-DDE (max. of 17 ppb); 4,4'-DDT (max. of 227 ppb) and dieldrin (max. of 5.5 ppb) were detected above Track 1 Unrestricted Use SCOs. Polychlorinated biphenyls (PCBs) were detected above Track 1 Unrestricted Use SCOs in one shallow soil sample (109 ppb). Several metals including arsenic (max. of 48 ppm), barium (max. of 560 ppm), lead (max. of 3,000 ppm), and mercury (max. of 0.85 ppm), were detected above Track 2 Restricted Residential Use SCOs in shallow soil samples. In addition, chromium (trivalent), copper, nickel, silver, and zinc were detected above Track 1 Unrestricted Use SCOs, but below Track 2 Restricted Residential Use SCOs in 8 shallow and 2 deep soil samples. Overall, the results were consistent with observations of historic fill material at Sites throughout NYC, with the exception of shallow soil sample SB-9 which showed the highest concentrations of metals and SVOCs and will be treated as a hotspot.
7. Laboratory analysis of groundwater samples collected during the RI did not detect PCBs in any groundwater sample, and no pesticides, metals, or SVOCs were detected above

- GQSs. Five VOCs including 1,2,4-trimethylbenzene (17 ug/L), benzene (2.1 ug/L), ethylbenzene (6.8 ug/L), methylene chloride (40 ug/L) and vinyl chloride (3.7 ug/L) were detected exceeding their respective GQSs. The chlorinated VOCs PCE, TCE, and cis-1,2-dichloroethene, as well as petroleum-related VOCs, and acetone were also detected in groundwater at trace-to-low levels below Groundwater Quality Standards (GQSs). Petroleum-related VOCs were detected in the area of the historic petroleum spill and gas station operations, however separate phase product was not detected in any of the monitoring wells.
8. Laboratory analysis of soil vapor samples indicated low level detections of several petroleum-related and chlorinated VOCs in all soil vapor samples. Concentrations of all compounds were below 20 ug/m³ except, one detection of trichlorofluoromethane at a concentration of 618,000 ug/m³. TCA, TCE and carbon tetrachloride were not detected in any of the soil vapor samples; and, PCE was detected at low concentrations (maximum of 12.5 ug/m³).

Summary of the Remedial Action

The remedial action was performed in accordance with an OER approved Remedial Action Work Plan 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 November 11, 2012. A Remedial Investigation (RI) was performed between February 13, 2013 and March 10, 2013. A RI Report was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established. A RAWP was prepared and released with a Fact Sheet on July 26, 2013 for a 30-day public comment period. The RAWP dated June 26, 2013 was approved by the New York City Office of Environmental Remediation (OER) in a letter dated September 21, 2013. A RAWP Stipulations List was prepared and submitted on September 20, 2013. A Pre-Construction meeting was held on January 2, 2014. A Fact Sheet providing notice of the start of the remedial

action was issued on January 14, 2014. The remedial action was begun on January 10, 2014 and completed in February 2016.

The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implementation of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan;
2. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
3. Established Track 4 Site-specific Soil Cleanup Objectives (SCOs) consisting of the following:

<u>Contaminant</u>	<u>Track 4 SCOs</u>
Total SVOCs	250 ppm
Arsenic	24 ppm
Lead	1,200 ppm;

4. Mobilized site security, equipment, utility mark outs and marking & staking excavation areas;
5. Performed in situ delineation of lead hotspot identified in the northwest portion of the Site during the initial phase of the Remedial Action.
6. The following excavations were performed: soil/fill exceeding Track 4 Site-specific SCOs was removed to a depth approximately 18.5 feet below existing grade in the northwest section down to approximately 5.5 feet below existing grade in the northeast section and approximately 2 feet below existing grade in the southeast section of the Site. A total of 11,155.16 tons of non-hazardous soil/fill was excavated and removed from the property;
7. Performed screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;

8. Transported and disposed off-Site of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampled and analyzed excavated media as required by disposal facilities. Appropriately segregated excavated media onsite prior to disposal;
9. Excavated 8,046.22 tons of non-hazardous soil/fill and transported to Clean Earth of Carteret, in Carteret, NJ; excavated 988.98 tons of non-hazardous soil/fill from the lead hotspot and transported to Bay Shore Soil Management, in Keasbey, NJ; excavated 1,743.46 tons of non-hazardous soil/fill and transported to Morris Fairmont Associates Urban Renewal LLC, in Blanchard, NJ; excavated 376.50 tons of non-hazardous soil/fill and transported to Phase III Environmental Former NJ Zinc West Plant, in Palmerton, PA and excavated approximately 2,500 cubic yards of rock to Tilcon – Bronx Recycle;
10. Collected and analyzed 8 end-point samples and determined that Track 4 SCOs were achieved;
11. Imported materials to be used for backfill and cover in compliance with the RAWP and in accordance with applicable laws and regulations;
12. Installed a Waterproofing/ Vapor Barrier System that consisted of a 47 mil Grace PrePrufe 300R HDPE liner beneath the building slab; Sonneborne/Sonoshield HLM 5000 liquid membrane and 0.44-inch Grace Hydroduct 220 behind two side foundation walls and 32 mil Grace PrePrufe 160R HDPE waterproofing/vapor barrier behind one face foundation walls. The contractor for the Vapor Barrier System construction was Eurocraft Contracting, LLC;
13. Constructed an engineered composite cover throughout the building footprints consisting of a 5 inch thick building foundation slab, 12 inch thick concrete foundation walls. In the 15,500 SF of open area; a 2 foot thick imported clean fill cover was placed in the planting areas and 4 inch thick concrete walkways were constructed throughout the remaining portions of the open space areas to prevent human exposure to residual soil/fill remaining under the Site. The contractor for the Composite Cover System construction was Eurocraft Contracting, LLC;
14. Installed high volume air exchange ventilation system in the indoor/subgrade vehicle parking area;

15. Residual soil is present beneath the cover layer and will be subject to Site Management under this Remedial Action.
16. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations;
17. Submitted a Sustainability Report.
18. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
19. Submitted a RAR that describes the remedial activities, certifies that the remedial requirements defined in the Remedial Action Work Plan have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls applicable to the Site;
20. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for operation, maintenance, inspection and certification of the performance of Engineering Controls and Institutional Controls. Inspections will be performed annually. Inspection and Certification reports will be submitted by July 30, 2026 (for the reporting period calendar year 2016-2025), and every ten years thereafter (for the reporting period consisting of the ten prior calendar years). Inspection and Certification Reports will cover all calendar years since the prior reporting period;
21. The property will continue to be registered with a Restrictive Declaration 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) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) higher levels of land usage than the restricted residential uses addressed by this remedial action without prior notification and approval by OER.

REMEDIAL ACTION REPORT

1.0 SITE BACKGROUND

Allied West Farms (NY) LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 1512 Boone Avenue in the Crotona Park East section of Bronx, New York. The boundary of the property subject to this Remedial Action is shown in **Figure 1** and include, in their entirety, Block 3013 and Lot 29. 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 at 1512 Boone Avenue in the Bronx, New York and is identified as Block 3013 and Lot 29 (previously lots 12, 29, 31, 35, 37, and 46) on the New York City Tax Map. **Figure 2** shows the Site location. The Site is 37,833-square feet and is bound by East 172nd Street to the north, a New York City public high school (1021 Boone Avenue) to the south, West Farms Road to the east, and Boone Avenue to the west. A map of the site boundary is shown in **Figure 1**. Prior to development, the Site was unoccupied and contained one (1) single-story former auto repair shop with a parking lot, one (1) two-story masonry steel manufacturing building, and two (2) residential dwellings. The surface area of the Sites consisted of asphalt parking areas, concrete walkways, exposed soils, exposed bedrock, and natural vegetation.

1.2 REDEVELOPMENT PLAN

The Site redevelopment consisted of the construction of a mixed-use residential/commercial retail nine-story building (“Building 1A”) and an adjacent fifteen-story building (“Building 1B”), which together form over 250,000 square feet of residential space (237 apartment units) and 4,700 square feet of retail space. One level of partial sub-grade parking was constructed. In addition to parking, the basement level also includes building utilities and bicycle storage. The new buildings do not cover the entire footprint of the Site. Two grade-level open spaces were developed; a landscaped 8,000 square foot mid-block open area and a landscaped 7,800 square foot resident courtyard between the two buildings. The buildings, including landscaped courtyard were built out to the northern, eastern and western property lines of the

site. The building footprint was set back 60'-7" from the southern property line on Boone Avenue and 60'-11" from the southern property line on West Farms Road. The set-back area contains the landscaped mid-block open area. Pre-development grade at the western boundary of the site on Boone Avenue was higher than the grade at the eastern boundary of the site on West Farms Road; therefore, the bottom of excavation was approximately 18.5 feet below grade at the western boundary and approximately 5.5 feet below grade at the eastern boundary.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The site is located in the Crotona Park East neighborhood of the South Bronx. Crotona Park East is bound from the Cross Bronx Expressway to the north, Bronx River to the east, East 167th Street to the south and Crotona-Prospect Avenue to the west. Historically, Crotona Park East consisted of tenement buildings, multi-unit homes, vacant lots, and public housing units. The Crotona Park East / West Farms Rezoning Resolution was issued in 2011 to encourage the transformation and revitalization of the derelict and underutilized area through redevelopment of residential and commercial retail properties. Two schools are located within a 250-ft radius of the Site; Fannie Lou Hamer Freedom High School located at 1021 Jennings Street and PS-066 located at 1001 Jennings Street. One school is located within a 500-ft radius of the Site; PS-811 located at 1434 Longfellow Avenue. There are no hospitals or daycare centers located within a 500-ft radius of the Site.

1.4 SUMMARY OF PAST SITE USES AND AREAS OF CONCERN

A Phase I Environmental Site Assessment (ESA) prepared in 2007 by Impact Environmental revealed through investigation of historic Sanborn maps that the Site has been developed as early as 1896 with several residential buildings and a mill yard. Commercial and industrial use buildings began to appear on the site as early as 1951 including auto repair shops, auto junk yard with filling stations and iron work shops.

Areas of Concern (AOCs) for the Site include:

1. Historical usage of property with auto junk yard, auto body shop since 1977 and a filling station.
2. Closed spill #0300164 associated with this property.
3. Historical site usage as a steel manufacturing plant/ iron works.
4. Presence of historic fill ranging from 0 to 6 feet below grade, which was primarily comprised of concrete, brick, stone, gravel, wood, and trace coal and slag in a brown silty sand matrix.

1.5 SUMMARY OF WORK PERFORMED UNDER THE REMEDIAL INVESTIGATION

The Remedial Investigation encompassed the following investigative tasks:

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed 9 soil borings across the entire project Site, and collected 15 soil samples for chemical analysis from the soil borings to evaluate soil quality;
3. Installed 4 groundwater monitoring wells throughout the Site, and collected 4 groundwater samples for chemical analysis to evaluate groundwater quality;
4. Installed 5 soil vapor probes throughout the site, and collected 5 samples for chemical analysis.
5. Prepared RIR based on investigation results.

1.6 SUMMARY OF FINDINGS OF REMEDIAL INVESTIGATION

1. Elevation of the property ranges from 17 to 45 feet.
2. Depth to groundwater ranges from 2.5 to 11.5 feet at the Site.
3. Groundwater flow is generally from west to east beneath the Site.
4. Depth to bedrock is ranges throughout the site from approximately 3 feet to 14 feet at the Site. There is also an approximate 20 foot high bedrock outcrop in the southwest portion of the site.
5. Subsurface soil at the Site consisted of historic fill, which was primarily comprised of concrete, brick, stone, gravel, wood, and trace coal and slag in a brown silty sand matrix. Existing grade elevations vary greatly throughout the site due to shallow depth of bedrock outcrops. Historic fill was encountered at a depth interval ranging from 0 to 2 feet below grade surface (bgs) at borings SB-1, SB-7 and SB-8, 0 to 4 feet bgs at borings SB-2, SB-3, SB-5 and SB-6, 0 to 8 feet bgs at boring SB-4, 0 to 3 feet bgs at boring SB-9. Native material consisted of light brown medium-coarse sand and silty sand with decomposed rock fragments. Native material was encountered at a depth of 5 feet bgs at borings SB-2, SB-3, SB-5 and SB-6, 9 feet bgs at boring SB-4, 4 feet bgs at boring SB-9. Decomposed rock and bedrock was encountered at 3 feet bgs at borings SB-1, SB-7 and SB-8, 14 feet bgs at boring SB-2, 5 feet bgs at boring SB-3, 9 feet bgs at boring SB-4, 11 feet bgs at borings SB-5 and SB-6, 13 feet bgs at boring SB-9. A predominant rock outcrop approximately 20 feet in height is located in the south western portion of the site.
6. BTEX and other petroleum associated volatile organic compounds (VOCs) were detected at trace levels and below Track 1 SCOs in 8 of 15 soil samples. The only VOC exceedence of Track 1

Unrestricted Use SCOs was acetone at 130 ppb in one soil sample. Several SVOC including benzo(a)anthracene (40 ppm), benzo(a)pyrene (39 ppm), benzo(b)fluoranthene (46 ppm), benzo(k)fluoranthene (22 ppm), chrysene (37 ppm), dibenzo(a,h)anthracene (5.8 ppm), and indeno(1,2,3-cd)pyrene (20 ppm) were detected above Track 2 Restricted Residential SCOs within one shallow soil sample (SB9). SVOCs were not detected above Track 1 Unrestricted Use SCOs in any other samples. Four pesticides including 4,4'-DDD (max. of 27 ppb); 4,4'-DDE (max. of 17 ppb); 4,4'-DDT (max. of 227 ppb) and dieldrin (max. of 5.5 ppb) were detected above Track 1 Unrestricted Use SCOs. Polychlorinated biphenyls (PCBs) were detected above Track 1 Unrestricted Use SCOs in one shallow soil sample (109 ppb). Several metals including arsenic (max. of 48 ppm), barium (max. of 560 ppm), lead (max. of 3,000 ppm), and mercury (max. of 0.85 ppm), were detected above Track 2 Restricted Residential Use SCOs in shallow soil samples. In addition, chromium (trivalent), copper, nickel, silver, and zinc were detected above Track 1 Unrestricted Use SCOs, but below Track 2 Restricted Residential Use SCOs in 8 shallow and 2 deep soil samples. Overall, the results were consistent with observations of historic fill material at Sites throughout NYC, with the exception of shallow soil sample SB-9 which showed the highest concentrations of metals and SVOCs and will be treated as a hotspot.

7. Laboratory analysis of groundwater samples collected during the RI did not detect PCBs in any groundwater sample, and no pesticides, metals, or SVOCs were detected above GQSs. Five VOCs including 1,2,4-trimethylbenzene (17 ug/L), benzene (2.1 ug/L), ethylbenzene (6.8 ug/L), methylene chloride (40 ug/L) and vinyl chloride (3.7 ug/L) were detected exceeding their respective GQSs. The chlorinated VOCs PCE, TCE, and cis-1,2-dichloroethene, as well as petroleum-related VOCs, and acetone were also detected in groundwater at trace-to-low levels below Groundwater Quality Standards (GQSs). Petroleum-related VOCs were detected in the area of the historic petroleum spill and gas station operations, however separate phase product was not detected in any of the monitoring wells.
8. Laboratory analysis of soil vapor samples indicated low level detections of several petroleum-related and chlorinated VOCs in all soil vapor samples. Concentrations of all compounds were below 20 ug/m³ except, one detection of trichlorofluoromethane at a concentration of 618,000 ug/m³. TCA, TCE and carbon tetrachloride were not detected in any of the soil vapor samples; and, PCE was detected at low concentrations (maximum of 12.5 ug/m³).

2.0 DESCRIPTION OF REMEDIAL ACTIONS

The remedial action was performed in accordance with an OER approved Remedial Action Work Plan 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 November 11, 2012. A Remedial Investigation (RI) was performed between February 13, 2013 and March 10, 2013. A RI Report was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established. A RAWP was prepared and released with a Fact Sheet on July 26, 2013 for a 30-day public comment period. The RAWP dated June 26, 2013 was approved by the New York City Office of Environmental Remediation (OER) in a letter dated September 21, 2013. A RAWP Stipulations List was prepared and submitted on September 20, 2013. A Pre-Construction meeting was held on January 2, 2014. A Fact Sheet providing notice of the start of the remedial action was issued on January 14, 2014. The remedial action was begun on January 10, 2014 and completed in February 2016.

The remedial action consisted of the following tasks:

1. Prepared a Community Protection Statement and implementation of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan;
2. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
3. Established Track 4 Site-specific Soil Cleanup Objectives (SCOs) consisting of the following:

<u>Contaminant</u>	<u>Track 4 SCOs</u>
Total SVOCs	250 ppm
Arsenic	24 ppm
Lead	1,200 ppm;

4. Mobilized site security, equipment, utility mark outs and marking & staking excavation areas;
5. Performed in situ delineation of lead hotspot identified in the northwest portion of the Site during

the initial phase of the Remedial Action;

6. The following excavations were performed: soil/fill exceeding Track 4 Site-specific SCOs was removed to a depth approximately 18.5 feet below existing grade in the northwest section down to approximately 5.5 feet below existing grade in the northeast section and approximately 2 feet below existing grade in the southeast section of the Site. A total of 11,155.16 tons of non-hazardous soil/fill was excavated and removed from the property;
7. Performed screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;
8. Transported and disposed off-Site of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampled and analyzed excavated media as required by disposal facilities. Appropriately segregated excavated media onsite prior to disposal;
9. Excavated 8,046.22 tons of non-hazardous soil/fill and transported to Clean Earth of Carteret, in Carteret, NJ; excavated 988.98 tons of non-hazardous soil/fill from the lead hotspot and transported to Bay Shore Soil Management, in Keasbey, NJ; excavated 1,743.46 tons of non-hazardous soil/fill and transported to Morris Fairmont Associates Urban Renewal LLC, in Blanchard, NJ and excavated 376.50 tons of non-hazardous soil/fill and transported to Phase III Environmental Former NJ Zinc West Plant, in Palmerton, PA and excavated approximately 2,500 cubic yards of rock to Tilcon – Bronx Recycle;
10. Collected and analyzed 8 end-point samples and determined that Track 4 SCOs were achieved;
11. Imported materials to be used for backfill and cover in compliance with the RAWP and in accordance with applicable laws and regulations;
12. Installed a Waterproofing/ Vapor Barrier System that consisted of a 47 mil Grace PrePrufe 300R HDPE liner beneath the building slab; Sonneborne/Sonoshield HLM 5000 liquid membrane and 0.44-inch Grace Hydroduct 220 behind two side foundation walls and 32 mil Grace PrePrufe 160R HDPE waterproofing/vapor barrier behind one face foundation walls. The contractor for the Vapor Barrier System construction was Eurocraft Contracting, LLC;
13. Constructed an engineered composite cover throughout the building footprints consisting of a 5 inch thick building foundation slab, 12 inch thick concrete foundation walls. In the 15,500 SF of open area; a 2 foot thick imported clean fill cover was placed in the planting areas and 4 inch thick concrete walkways were constructed throughout the remaining portions of the open space areas to prevent human exposure to residual soil/fill remaining under the Site. The contractor for the

Composite Cover System construction was Eurocraft Contracting, LLC;

14. Installed high volume air exchange ventilation system in the indoor/subgrade vehicle parking area;
15. Residual soil is present beneath the cover layer and will be subject to Site Management under this Remedial Action.
16. Implemented storm-water pollution prevention measures in compliance with applicable laws and regulations;
17. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
18. Submitted a Sustainability Report.
19. Submitted a RAR that describes the remedial activities, certifies that the remedial requirements defined in the Remedial Action Work Plan have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls applicable to the Site;
20. Submitted a Site Management Plan (SMP) for long-term management of residual soil, including plans for operation, maintenance, inspection and certification of the performance of Engineering Controls and Institutional Controls. Inspections will be performed annually. Inspection and Certification reports will be submitted by July 30, 2026 (for the reporting period calendar year 2016-2025), and every ten years thereafter (for the reporting period consisting of the ten prior calendar years). Inspection and Certification Reports will cover all calendar years since the prior reporting period;
21. The property will continue to be registered with a Restrictive Declaration 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) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual soil material unless it is conducted in accordance with the SMP; and (4) higher levels of land usage than the restricted residential uses addressed by this remedial action without prior notification and approval by OER.

3.0 COMPLIANCE WITH REMEDIAL ACTION WORK PLAN

3.1 HEALTH & SAFETY PLAN

The remedial construction activities performed under this program were in compliance with the Health and Safety Plan and applicable laws and regulations. The Site Safety Coordinator was John Herbig.

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 RAWP. The results of Community Air monitoring are shown in **Appendix E**.

3.3 SOIL/MATERIALS MANAGEMENT PLAN

The Soil/Materials Management Plan provided detailed plans for managing all soil/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 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

One deviation was encountered from the approved RAWP during the remedial action: The proposed vapor barrier was VaporBlock Plus 20-mil manufactured by Raven Industries. During construction, the vapor barrier was changed to a waterproofing/ vapor barrier system that consisted of a 47 mil Grace PrePrufe 300R HDPE liner beneath the building slab; Sonneborne/Sonoshield HLM 5000 liquid membrane and 0.44-inch Grace Hydroduct 220 behind two side foundation walls and 32 mil Grace PrePrufe 160R HDPE waterproofing/vapor barrier behind one face foundation walls. This deviation of the Vapor Barrier from the approved RAWP is protective of public health and the environment.

No other significant deviations from the RAWP occurred.

4.0 REMEDIAL PROGRAM

4.1 PROJECT ORGANIZATION

The New York State Professional Engineer responsible for overseeing implementation of this RAWP is Joel Rogers, of Impact Environmental. Implementation of the RAWP was overseen by Ben Hernandez-Salazar, Impact Environmental Closures Project Manager, and the Health and Safety Officer was John Herbig of Impact Environmental.

4.2 SITE CONTROLS

Site Preparation

- Site work began in January 2014; perimeter fences were constructed, equipment was delivered to the Site, and soil and rock excavation and foundation pile installation began.
- A hose was made available, and was utilized to wash down truck wheels prior to them leaving site on an as needed basis. Trucks were positioned on a layer of RCA while being loaded to greatly reduce the chance of onsite materials migrating offsite.

An OER Project Notice was erected at the project entrance and was in place during all phases of the Remedial Action.

Soil Screening

Soils were screened during remedial excavations, using visual, olfactory and PID measurement methods. The historical fill layer, which extended down from approximately 10 feet to 4 feet below grade throughout the Site and was comprised of brown soils mixed with brick, concrete, metal and wood. None of the materials exhibited any odor or visibly significant signs of contamination, nor were any VOCs present when screening with the PID. The historical fill layer was underlain by native material comprised of medium coarse sandy soils underlain by relatively shallow bedrock. The native layer was also devoid of any signs of contamination.

Stockpile Management

Stockpiles were managed in accordance with the Soil/Materials Management Plan included in the RAWP. Soils were generally stockpiled in the vicinity of either of the two site entrances located on Boone Avenue and West Farms Road. When possible, stockpiling of excavated material was avoided by live-loading into trucks for immediate off-site transport and disposal.

Truck Inspection

Trucks loaded onsite were positioned within the entranceway or designated loading area within the site, and on a layer of RCA material, a measure to prevent the migration of onsite soils offsite. Truck wheels were washed using a pressure hose when needed.

Site Security

The Site was surrounded by an approximately 8 foot wood and chain link fence. The Site entrances were secured using ¼” chains and heavy duty padlocks.

Nuisance Controls

No nuisances were noted during the remedial work, nor were any odor or dust complaints received. However, constant periodic dust monitoring and air quality monitoring was conducted during any and all soil disturbances, and no elevated levels were noted. During dry days when dust was more likely to be agitated, the site was wet down to suppress any potential for dust migration.

Reporting

Daily Reports

Daily reports providing a general summary of activities for each day of active remedial work were be 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 any citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

All daily reports are included in **Appendix D**. Digital photographs of the Remedial Action are included in **Appendix F**.

4.3 MATERIALS EXCAVATION AND REMOVAL

Urban fill, construction and demolition debris, rock and native soil were excavated and removed from the entire Site footprint from approximately 18.5 feet below existing grade in the northwest section down to approximately 5.5 feet below existing grade in the northeast section and approximately 2 feet below

existing grade in the southeast section of the Site to allow for the installation of the building's foundation structure. A predominant rock outcrop protruding approximately 20 feet above grade existed in the southwestern portion of the Site and bedrock was encountered at shallow depths throughout the western half of the Site. As part of development excavation, a substantial portion of the rock outcrop was excavated down to bottom of foundation footing depths, with the southernmost portion of the outcrop sculpted for inclusion into the mid-block open area design. Redevelopment excavation required all soil/fill in the western half of the site to be excavated and disposed offsite, excavation continued further into bedrock. The bottom of excavation in the western portion of the Site consisted of bedrock; no residual soils remained in this area, including the lead hotspot. Redevelopment excavation in the eastern half of the Site ranged from 5.5 feet to 2 feet below existing grade. Onsite residual soils remained at the bottom of excavation in this area. Excavation depths and locations of residual soils are depicted in **Figure 3**.

A total of 11,155.16 tons of material were excavated from the Site. All excavated soil/fill material was exported for off-site disposal at properly licensed/regulated facilities in accordance with waste characterization sampling results, facility approvals and field screening observations. Soil/fill originating from the Site was transported for off-site disposal as non-hazardous material to Clean Earth of Carteret, in Carteret, NJ; Morris Fairmont Associates Urban Renewal LLC, in Blanchard, NJ and Phase III Former NJ Zinc – West facility in Palmerton, PA. Soil/fill originating from the lead hotspot was transported for off-site disposal as non-hazardous material to Bay Shore Soil Management, in Keasbey, NJ. Approximately 2,500 cubic yards of excavated bedrock was transported for off-site disposal to Tilcon Bronx Recycle in Bronx, NY.

4.4 LEAD HOTSPOT DELINEATION

Lead was detected at an elevated concentration of 3,000 ppm during the February-March 2013 Remedial Investigation (RI) in soil sample "SB-9 (0'-2')", collected from the northwest section of the Site. In accordance with the RAWP, in-situ delineation of the elevated lead soil/fill in the vicinity of RI sample SB-9 was conducted prior to redevelopment activities in order to delineate and define the extents of the "lead hotspot". On October 23, 2013, Impact installed four (4) soil borings at a 15-foot radius from the location of RI sample SB-9 and an additional four (4) soil borings at a 30-foot radius from the location of RI sample SB-9. A total of thirteen (13) soil grab samples were collected from grade to approximately 6-feet below grade and submitted for total lead analysis to a certified laboratory. A composite sample was prepared from sample volumes at each delineation grab sample location and submitted for certified laboratory analysis of TCLP lead to determine if hotspot soils were hazardous. In addition a waste

characterization sample was collected from the hotspot area and submitted for certified laboratory analysis accordance with disposal facility requirements.

Laboratory analysis of the delineation grab samples detected total lead concentrations ranging from 3.1 ppm to 8,200 ppm. Laboratory TCLP analysis of the composite sample detected lead at 2.4 mg/l, below the respective RCRA hazardous level. The extent of the elevated lead soil/fill corresponded to the footprints of the previous warehouse structures located in the northeast corner of the Site. The laboratory analysis data of the lead hotspot waste characterization samples were submitted to Bayshore Soil Management of Keasbey, NJ and approved for disposal in accordance with the RAWP and SMMP. A plan depicting the hotspot delineation and laboratory reports are included as **Appendix L**. As part of redevelopment excavation, all soil/fill within the lead hotspot was excavated and disposed off-site to approved facilities. The area of the lead hotspot was excavated to bedrock; no residual soils remained within this area.

4.5 END POINT SAMPLE RESULTS

Redevelopment construction required the removal of all soil/fill and excavation into bedrock in the majority of the western portion of the Site, including the lead hotspot area. Residual soil/fill remained predominantly in the eastern portion of the Site. A total of eight (8) representative post-excavation end point samples were collected from the site. Following the redevelopment/remedial excavations; eight (8) samples were collected from the bottom of the development excavation terminal depth in areas where residual soils remained. All samples were placed in pre-cleaned laboratory supplied sample bottles, cooled to 4°C in the field, and transported under chain-of-custody command to New York State ELAP certified lab (11148), Alpha Analytical Laboratories of Westborough, Massachusetts. The initial two (2) bottom of redevelopment excavation end point samples designated EP-1 and EP-2 were analyzed for full list NYCRR Part 375 VOCs, SVOCs, PCBs, Pesticides and Metals. Subsequent bottom of redevelopment excavation endpoint samples designated EP-3, EP-4, EP-5, EP-6, EP-7 and EP-8 were analyzed for trigger analytes (those for which Track 4 SCO exceedance was identified). Endpoint samples were analyzed utilizing the following methodology:

- Volatile Organic Compounds (VOCs) by EPA method 8260C;
- Semi-Volatile Organic Compounds (SVOCs) by method 8270D;
- Polychlorinated Biphenyls (PCBs) by method 8082A;
- Pesticides by methods 8081 and 8151, and;
- Metals by method 6010C, with Mercury by method 7471.

No light non-aqueous phase liquid (LNAPL) or dense non-aqueous phase liquid (DNAPL) was detected in any of the samples. The laboratory analysis found the following:

- No target VOCs were detected above Track 1 Unrestricted Use SCOs in any of the two (2) end point samples analyzed for VOCs.
- Five (5) SVOCs were detected in one (1) end point sample above Track 2 Restricted Residential SCOs, one (1) SVOC was detected above Track 2 SCOs in two (2) end point samples. Total SVOCs concentrations were below Track 4 SCOs in all eight (8) end point samples.
- Of the two end point samples analyzed for Pesticides; three (3) pesticides; 4,4-DDD; 4,4-DDT; and Dieldrin were detected in one (1) end point sample and one (1) pesticide, Dieldrin was detected in one (1) end point sample. All were below Track 2 Restricted Residential SCOs.
- No PCBs were detected above Track 1 SCOs in any of the two (2) end point samples analyzed for PCBs.
- Lead was below Track 2 RR SCOs in six (6) end point samples. Mercury was detected below Track 2 Restricted Residential SCOs detected in one (1) of the two (2) end point samples analyzed for mercury. Zinc was detected below Track 2 SCOs detected in one (1) of the two (2) samples analyzed for Zinc.

Track 4 Soil Cleanup Objectives (SCOs) were proposed for this project. These SCO's were:

<u>Contaminant</u>	<u>Track 4 SCOs</u>
Total SVOCs	250 ppm
Arsenic	24 ppm
Lead	1,200 ppm

The site was successfully remediated to Track 4 SCOs based on the analyzed target compounds in the post redevelopment excavation end point samples. The SCOs for this Site are also listed in **Table 1**. Soil and materials management on-Site and off-Site, including excavation, handling and disposal, was conducted in accordance with the Soil/Materials Management Plan in Appendix C of the RAWP.

Although residual soils remain beneath the development, the new building foundation, clean fill cap and concrete walkways protect future building residents and visitors from exposure to residual soils. Furthermore, an OER approved waterproofing/ vapor barrier membrane and parking area ventilation system have been installed to eliminate the possibility of migration of the remaining contamination into the building, therefore eliminating any exposure pathways to the buildings future residents. Groundwater does not exhibit exceedances of Groundwater Quality Standards for metals or SVOCs identified at the

Site, and there are no associated public health or environmental exposures. Finally, potential future exposures from soil excavation after the completion of the Remedial Action will be addressed by the development and implementation of the Site Management Plan in this RAR. On the basis of this evaluation, management of these soils in place was determined to be protective of public health and the environment.

A map of end-point sample locations is shown in **Figure 3**. A tabular summary of end-point sampling results compared to SCO's is included in **Table 1**. Laboratory data for the end point samples is included as **Appendix M**.

4.6 MATERIALS DISPOSAL

Impact Environmental conducted in-situ waste characterization of the soil/fill material throughout the Site in anticipation of the soil excavation required for construction of the building foundations. Sampling was conducted to identify and quantify the contaminants in the Site soil/fill. The characterization samples were collected from existing grade to the terminal excavation depths required for the construction of foundation structures. Samples were collected at a frequency of 1 sample per 1,000 cubic yards in accordance with disposal facility requirements. Each waste characterization sample comprised of one discrete grab sample and one five-point composite sample. The samples were properly containerized into jars for transport under active chain of custody and submitted for analysis at a certified laboratory.

Soil/fill, construction & demolition debris and rock were excavated and removed from the entire Site footprint from approximately 2 feet to at least 18.5 feet below grade to allow for the installation of the building foundation structures.

A total of 11,155.16 tons of soil/fill material and approximately 2,500 cubic yards of excavated rock were exported for off-site disposal to the approved facilities between January 29, 2014 and June 30, 2014. The material type, quantity and disposal location of the soil/fill materials removed and disposed off-site is presented below:

Disposal Location/Address	Type of Material	Quantity
Clean Earth of Carteret 24 Middlesex Avenue, Carteret, NJ	Non-Hazardous Soil	8,046.22 tons
Bayshore Soil Management 75 Crows Mill Road, Keasbey, NJ	Non-Hazardous Soil (Lead Hotspot)	988.98 tons
Morris Fairmount Associates Urban Renewal Former Fairmont Chemical Site	Non-Hazardous Soil	1,743.46 tons

Blanchard Avenue., Newark, NJ		
Phase III Environmental LLC 1120 Mauch Chunk Rd., Palmerton, PA	Non-Hazardous Soil	376.50 tons
Total Soil/Fill Disposed Off Site		11,155.16 tons

Disposal Location/Address	Type of Material	Quantity
Tilcon – Bronx Recycle 940 E 149 th Street, Bronx NY	Rock	~2,500 CY
Total Rock Disposed Off Site		~2,500 CY

Acceptance letters from disposal facility stating it is approved to accept above materials based on materials type, source, data and in accordance with facility permits are attached in **Appendix G**. Manifests are included in **Appendix H**.

4.7 SOIL REUSE ON-SITE

Approximately 500 CY of selected onsite soils were stockpiled separately and sampled for onsite reuse in accordance with the RAWP SMMP. A composite sample consisting of five (5) grab samples and one (1) VOC grab sample were collected from random locations throughout the stockpile on March 27, 2014. The samples, designated “SP-1”, were submitted for certified laboratory analysis of NYCRR Part 375 list VOCs, SVOCs, Pesticides, PCBs, and Metals. The sampled soils met Track 4 SCOs, meeting reuse criteria. Onsite soils were reused as backfill below foundation slabs, behind foundation walls and for grading of landscaped areas. An analytical comparison table of the reused soil is included in **Table 2**. Laboratory report for the reused soil is included as **Appendix I**. A plan showing the location of onsite soils reused as backfill is shown in **Figure 4**.

4.8 BACKFILL IMPORT

A total of 64.61 tons of imported clean soil was placed in the landscaped planting areas of the center courtyard. The imported fill originated from Stancills Inc. in Perryville, MD. Impact collected a composite sample consisting of five (5) grab samples and one (1) VOC grab sample from random locations throughout the stockpiled imported fill. The samples were submitted for certified laboratory analysis of NYCRR Part 375 list VOCs, SVOCs, Pesticides, PCBs, and Metals. The sampled soils met Track 1 SCOs. An analytical comparison table of the imported fill is included in **Table 3**. Laboratory report for the imported fill is included as **Appendix K**. Imported fill delivery tickets are included as **Appendix J**. A plan showing the location of the clean soil placement is shown in **Figure 4**.

A total of 859 cubic yards of ¾-inch clean recycled crushed stone was imported to the Site from Tilcon New York Inc. in West Nyack, NY. The clean recycled crushed stone was used as backfill behind foundation walls, below concrete foundation slabs and for grading purposes in the courtyard area. Imported fill delivery tickets are included as **Appendix J**.

4.9 DEMARACTION

Soil below the final cover is residual soil that will be addressed by site management under this remedial action.

5.0 ENGINEERING CONTROLS

Engineering Controls were employed in the Remedial Action to address residual soil remaining at the site. The Site has three (3) primary Engineering Control Systems. These are:

1. A Composite Cover System consisting of concrete building foundation slab, walls and clean fill cap;
2. A Waterproofing /Vapor Barrier Membrane System;
3. A Parking Ventilation System.

5.1 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 a 5-inch thick reinforced concrete slab installed throughout the extent of the building footprints; 12-inch thick reinforced concrete foundation walls; 4-inch thick concrete walkways; and a 2-foot imported clean soil cap installed in the landscaped planting areas over any reused backfill soil/fill. The contractor for the Composite Cover System construction was Eurocraft Contracting, LLC.

Appendix A shows the as-built design for each remedial cover type used on this Site. **Figure 4** shows the location of each cover type built at the Site. Photographs of construction of the Composite Cover System are included throughout the Daily Reports provided in **Appendix D**, and sections of the Photo Log provided in **Appendix F**.

5.2 VAPOR BARRIER SYSTEM

Exposure to soil vapor is prevented by a Waterproofing / Vapor Barrier System that has been built on the Site. This Waterproofing/ Vapor Barrier System consists of a 47 mil Grace PrePrufe 300R HDPE liner beneath the building slab; Sonneborne/Sonoshield HLM 5000 liquid membrane and 0.44-inch Grace Hydroduct 220 behind two side foundation walls and 32 mil Grace PrePrufe 160R HDPE waterproofing/vapor barrier behind one face foundation walls. The professional engineer for the vapor barrier properties of the Waterproofing/Vapor Barrier System was Joel Rogers of Impact Environmental. The contractor for the Waterproofing/Vapor Barrier System construction was Eurocraft Contracting, LLC.

Appendix B shows the as-built design and installation locations for the Waterproofing/Vapor Barrier System used on this Site. Photographs of installation of the Vapor Barrier System are included throughout the Daily Reports provided in **Appendix D**, and sections of the Photo Log provided in **Appendix F**.

5.3 PARKING VENTILATION SYSTEM

Exposure to potential accumulated soil vapors and migration of soil vapor into the occupied above-grade spaces of the buildings is prevented by a high-volume air exchange ventilation system in the basement parking structure of the Site buildings as required by the NYC Building Code. The parking structure ventilation system consists of two pairs of sidewall propeller fans, Greenheck model SBE-3L30-15. In each pair; one fan operates as an exhaust, drawing interior air out of the building, and the other as a supply of fresh air into the building. Each fan is capable of a maximum 9,600 CFM. One exhaust/supply pair is installed in the southeast corner of Building 1A, adjacent to West Farms Road, the second pair is installed in the northern side of Building 1B, adjacent to East 172nd Street. In addition, enclosed accessory and occupied spaces are serviced by the building HVAC system providing positive pressure within the spaces. The engineer responsible for the design of the parking ventilation system is Abraham Joselow Consulting Engineers.

Appendix C shows the as built design and specifications for the parking ventilation system used on this Site.

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 IC's define the program to operate, maintain, inspect and certify the performance of Engineering Controls and Institutional Controls on this property. Adherence to these Institutional Controls is required by a revised Restrictive Declaration (RD) assigned to the property by the title holder and will be implemented under a site specific Site Management Plan (SMP) included in this RAR.

Institutional Controls for this property are:

- (1) The property will continue to be flagged with a Restrictive Declaration by the NYC Department of Buildings;
- (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.

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 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.

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, EC's provide physical protective measures and IC's 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 EC's and IC's 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; (2) inspection of EC's and IC's; and (3) certification of performance of EC's and IC's.

7.1 ENGINEERING CONTROLS

Engineering Controls were employed in the remedial action to address residual materials remaining at the site. The Site has three (3) Engineering Control Systems. Engineering Controls for this property are:

1. A Composite Cover System consisting of concrete building foundation slab, walls and clean fill cap;
2. A Waterproofing /Vapor Barrier Membrane System;
3. A Parking Ventilation System.

7.1.1 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. The system will be inspected and its performance certified at specified intervals defined in this SMP. 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, 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).

The basement slab, foundation walls and landscaped areas soil cover will be routinely inspected by the property manager at specified intervals defined in this SMP. This inspection will look to identify any cracks, fissures, or damage to the composite cover that might compromise its integrity with regards to the exposure to residual soils beneath the structure.

7.1.2 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 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 existing barrier materials in accordance with manufacturer specifications.

7.1.3 Operation and Maintenance of Parking Structure Ventilation System

Chapter 5 describes the parking structure ventilation system utilized in this Remedial Action and provides as-built design details and the system location. The parking structure ventilation 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 and as per NYC Building Code.

The parking structure ventilation system is designed to provide high volume fresh air exchange into the basement parking building structure in accordance with NYC Building Code to ventilate vehicle exhaust fumes out of the interior structure and provide positive pressure to the basement level. The ventilation system also acts as a remedial engineering control by removing potential accumulated soil vapors and preventing migration of soil vapor into the occupied above-grade spaces of the buildings.

Operation and maintenance of the Parking Structure Ventilation System should be implemented in conformance with the building's HVAC O&M protocols.

7.2 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.

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

- (1) The property will continue to be flagged with a Restrictive Declaration by the NYC Department of Buildings;
- (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.

7.3 INSPECTIONS

Engineering Controls and Institutional Controls will be inspected on an annual basis. The 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 14 days to evaluate the Engineering Controls and a letter report of findings will be submitted to OER.

7.3.1 Inspection of Composite Cover System

Inspection of the composite cover will consist of a visual inspection of concrete slab and concrete foundation walls, and will include all accessible locations including the site perimeter and all internal access points on the ground floor. 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.

7.3.2 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 simultaneously 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 and remediated as appropriate.

7.3.3 Inspection of Parking Structure Ventilation System

The parking structure ventilation system will be inspected in accordance with the building's HVAC O&M protocols and NYC Building Code. System fans, controls and alarms should be inspected to ensure components are operating per manufacturer's specifications and system design. System vents, louvers and dampers should be inspected for obstructions or damage that may impede air flow to and from the system. Observed damage or non-conformance of the parking structure ventilation system components shall be recorded and remediated as appropriate by qualified contractors.

7.3.4 Site Use Prohibitions

Inspections to evaluate the status of site use prohibitions will include an evaluation of 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.

7.3.5 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. Inspections will be performed in 2025 and every ten (10) years thereafter. Inspection and Certification Letter Reports will be submitted by July 30, 2026 (for the reporting period calendar years 2016-2025) and every ten (10) years thereafter (for the reporting period consisting of the number prior calendar years). Inspection and Certification Reports will cover all calendar years since the prior reporting period. 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;
- A determination as to whether groundwater plume conditions, if any, have changed since the last reporting event; and

- Certification of the performance of Engineering Controls and Institutional Controls, as discussed below.

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 vegetable gardening and farming in residual soils has been prevented;
- If groundwater underlying the Site is being utilized without treatment rendering it safe for the intended purpose has been prevented;
- If activities on the Site that have disturbed residual soil/fill material have been in accordance with the Soil/Materials Management Plan in this SMP;
- 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 with a Restrictive Declaration by the NYC Department of Buildings.

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

7.4 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 unrestricted 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.

7.5 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.

7.5.1 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.

7.5.2 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.

7.5.3 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.

7.5.4 Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

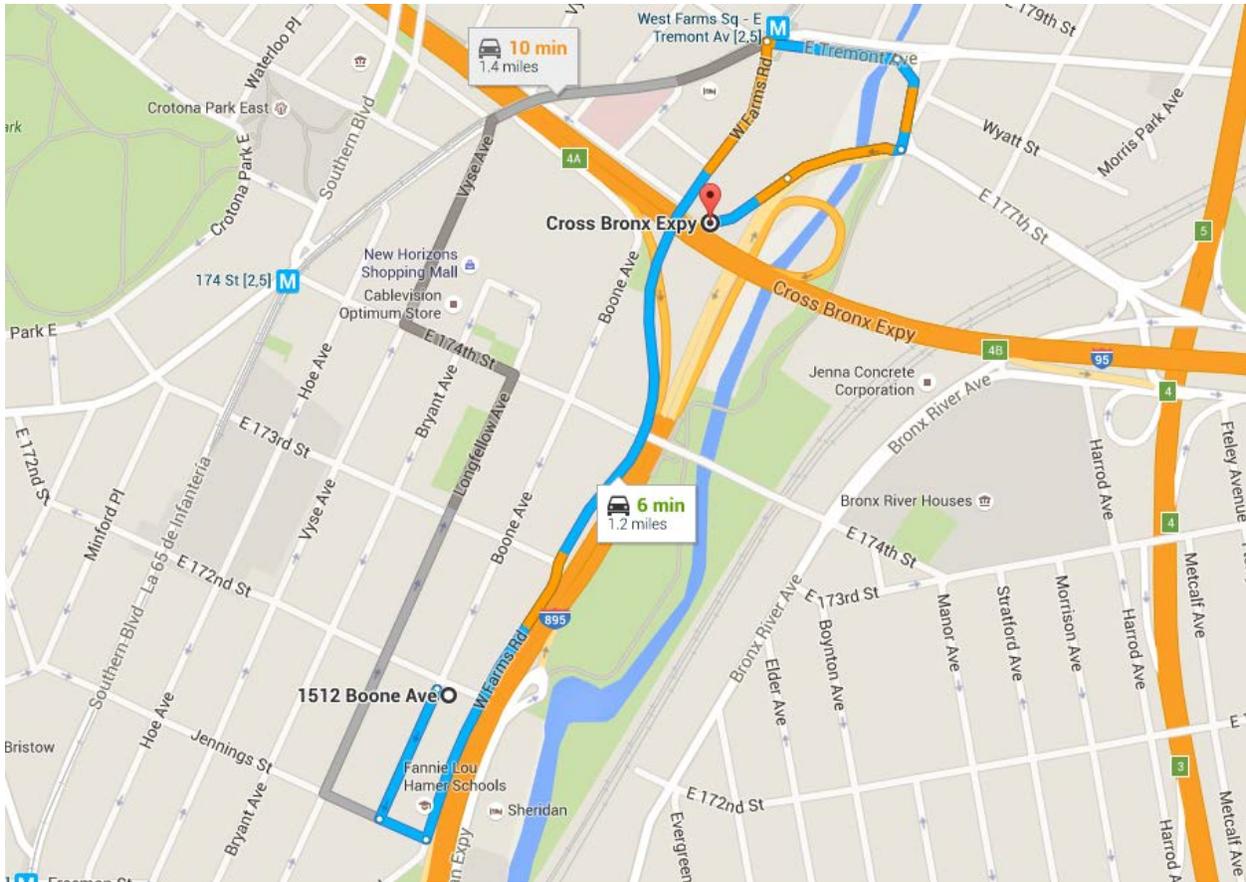
- oversee intrusive work and the excavation and load-out of excavated material;
- ensure that there is a party responsible for the safe execution of invasive and other work performed under this management plan;
- ensure that Site maintenance activities and maintenance-related grading cuts will not interfere 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 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.

7.5.5 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 the figure below. 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.



1512 Boone Ave

Bronx, NY 10460

- ↑ 1. Head southwest on Boone Ave toward Jennings St
- ↶ 2. Turn left onto Jennings St
- ↶ 3. Turn left onto W Farms Rd
- ↷ 4. Turn right onto E Tremont Ave
- ↷ 5. Turn right onto E 177th St
- ↷ 6. Use the right 2 lanes to turn right
- ↷ 7. Keep right at the fork, follow signs for I-95 S/Cross Bronx Expy/George Washington Bridge

Cross Bronx Expy

Bronx, NY 10460

7.5.6 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 Bronx, 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.

7.5.7 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.

7.5.8 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.

7.5.9 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.

7.5.10 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.

7.5.11 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 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.

7.5.12 Storm-water Pollution Prevention

Applicable laws and regulations pertaining to storm-water pollution prevention will be addressed during

the remedial program. All existing stormwater systems will be inspected to ensure proper operation.

7.5.13 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.

7.5.14 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 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.

7.5.15 Noise

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

7.6 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. Exceedences 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.

7.6.1 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 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.

7.6.2 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 (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 $150 \text{ mcg}/\text{m}^3$ 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 $150 \text{ mcg}/\text{m}^3$ 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 $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

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

7.7 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.

7.7.1 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 Benjamin Hernandez Salazar. 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

Benjamin Hernandez Salazar (Environmental Consultant)	631-269-8800
Office of Environmental Remediation	(212) 788-8841; 311

8.0 SUSTAINABILITY REPORT

This Remedial Action Work Plan provides for sustainable remediation and redevelopment through a variety of means that are defined in this Sustainability Report.

Conservation of Non-Renewable Resources. Reduced consumption of non-renewable resources such as soil and top-soil lowers the overall environmental impact of the project on the region by conserving these resources.

Conservation of non-renewable resources was achieved by reuse of clean onsite soil as backfill beneath foundation slabs, behind foundation walls and grading at landscaped areas. An estimate of the volume of non-renewable resources, the use of which will be avoided under this plan, is approximately 500 CY.

Reduced Energy Consumption and Promotion of Greater Energy Efficiency. Reduced energy consumption lowers greenhouse gas emissions, improves local air quality, lessens in-city power generation requirements, can lower traffic congestion, and provides substantial cost savings.

The following means were used to reduce energy consumption in this project:

- Reuse of onsite soils for backfill materials to avoid truck transport delivery of imported clean fill.
- Use of higher fuel efficiency late model diesel transport trucks on onsite equipment.
- Enforcement of engine idle regulations (heavy duty vehicles prohibited from idling for more than five minutes at a time).
- Use of most direct routes to interstate highways.

Conversion to Clean Fuels. Use of clean fuel improves NYC's air quality by reducing harmful emissions.

Ultra-low sulfur clean diesel fuels were utilized in this program.

Recontamination Control. Recontamination after cleanup and redevelopment is completed undermines the value of work performed, may result in a property that is less protective of public health or the environment, and may necessitate additional cleanup work later that could impede future redevelopment. Recontamination can arise from future releases that occur within the property or by influx of existing contamination from off-Site.

The following recontamination controls are implemented on this Site:

- Protection of migration of off-site soil vapors into the new building through the parking ventilation system and vapor barrier membrane system.

- Protection from offsite soils through the composite cover system comprised of the concrete foundation structure beneath the entire Site and throughout Site perimeter.
- Implementation of the Site Management Plan to address maintenance and protection of Engineering Controls, establishes Institutional Controls and addresses handling of onsite and imported materials.

The area of the Site that utilizes recontamination controls under this plan is 37,833 square feet.

Paperless Brownfield Cleanup Program. Allied West Farms (NY) LLC participated in OER's Paperless Brownfield Cleanup Program. Under this program, submission of electronic documents replaced submission of hard copies for the review of project documents, communications and milestone reports. A best estimate of the mass (pounds) of paper saved under this plan is 20 pounds.

Low-Energy Project Management Program. Allied West Farms (NY) LLC participated in OER's low-energy project management program. Under this program, whenever possible, meetings were held using remote communication technologies, such as videoconferencing and teleconferencing to reduce energy consumption and traffic congestion associated with personal transportation. A gross estimate of the number of miles of personal transportation that was conserved in this process is 500 miles.

TABLES

Table 1 - Soil End Point Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7	EP-8
						3/11/2014	3/11/2014	5/29/2014	5/29/2014	5/29/2014	12/9/2014	12/9/2014	12/9/2014
	Sample ID	Date	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
71-55-6	1,1,1-Trichloroethane (TCA)	VOC	680	100,000a	-	ND	ND	-	-	-	-	-	-
75-34-3	1,1-Dichloroethane	VOC	270	26,000	-	ND	ND	-	-	-	-	-	-
75-35-4	1,1-Dichloroethene	VOC	330	100,000a	-	ND	ND	-	-	-	-	-	-
95-63-6	1,2,4-Trimethylbenzene	VOC	3,600	52,000	-	1	8.8	-	-	-	-	-	-
95-50-1	1,2-Dichlorobenzene	VOC	1,100	100,000a	-	ND	ND	ND	ND	ND	-	-	-
107-06-2	1,2-Dichloroethane	VOC	20c	3,100	-	ND	ND	-	-	-	-	-	-
108-67-8	1,3,5-Trimethylbenzene	VOC	8,400	52,000	-	0.41	4.9	-	-	-	-	-	-
541-73-1	1,3-Dichlorobenzene	VOC	2,400	49,000	-	ND	ND	ND	ND	ND	-	-	-
106-46-7	1,4-Dichlorobenzene	VOC	1,800	13,000	-	ND	ND	ND	ND	ND	-	-	-
123-91-1	1,4-Dioxane	VOC	100b	13,000	-	ND	ND	-	-	-	-	-	-
78-93-3	2-Butanone	VOC	120	100,000a	-	ND	ND	-	-	-	-	-	-
67-64-1	Acetone	VOC	50	100,000b	-	50	27	-	-	-	-	-	-
71-43-2	Benzene	VOC	60	4,800	-	ND	ND	-	-	-	-	-	-
56-23-5	Carbon Tetrachloride	VOC	760	2,400	-	ND	ND	-	-	-	-	-	-
108-90-7	Chlorobenzene	VOC	1,100	100,000a	-	ND	ND	-	-	-	-	-	-
67-66-3	Chloroform	VOC	370	49,000	-	ND	ND	-	-	-	-	-	-
156-59-2	cis-1,2-Dichloroethene	VOC	250	100,000a	-	ND	ND	-	-	-	-	-	-
100-41-4	Ethylbenzene	VOC	1,000	41,000	-	ND	0.28	-	-	-	-	-	-
75-09-2	Methylene Chloride	VOC	50	100,000a	-	ND	ND	-	-	-	-	-	-
1634-04-4	Methyl Tert-Butyl Ether	VOC	930	100,000a	-	ND	ND	-	-	-	-	-	-
104-51-8	n-Butylbenzene	VOC	12,000	100,000a	-	ND	1.4	-	-	-	-	-	-
103-65-1	n-Propylbenzene	VOC	3,900	100,000a	-	ND	0.73	-	-	-	-	-	-
135-98-8	sec-Butylbenzene	VOC	11,000	100,000a	-	ND	1.3	-	-	-	-	-	-
98-06-6	tert-Butylbenzene	VOC	5,900	100,000a	-	ND	ND	-	-	-	-	-	-
127-18-4	Tetrachloroethene (PCE)	VOC	1,300	19,000	-	ND	ND	-	-	-	-	-	-
108-88-3	Toluene	VOC	700	100,000a	-	0.39	0.44	-	-	-	-	-	-
1330-20-7	Total Xylenes	VOC	260	100,000a	-	ND	1.82	-	-	-	-	-	-
156-60-5	trans-1,2-Dichloroethene	VOC	190	100,000a	-	ND	ND	-	-	-	-	-	-
79-01-6	Trichloroethene (TCE)	VOC	470	21,000	-	ND	ND	-	-	-	-	-	-
75-01-4	Vinyl Chloride	VOC	20	900	-	ND	ND	-	-	-	-	-	-
	Total BTEX				-	0.39	2.54	-	-	-	-	-	-
	Total VOCs				-	51.8	46.67	0	0	-	0	0	-



Table 1 - Soil End Point Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7	EP-8
						3/11/2014	3/11/2014	5/29/2014	5/29/2014	5/29/2014	12/9/2014	12/9/2014	12/9/2014
	Sample ID	Date	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
83-32-9	Acenaphthene	SVOC	20,000	100,000a	-	120	190	71	75	110	ND	47	240
208-96-8	Acenaphthylene	SVOC	100,000a	100,000a	-	78	210	40	36	50	68	75	91
120-12-7	Anthracene	SVOC	100,000a	100,000a	-	280	550	180	180	260	120	200	630
56-55-3	Benzo-a-Anthracene	SVOC	1,000c	1,000f	-	690	2100	520	440	520	350	520	1000
50-32-8	Benzo-a-Pyrene	SVOC	1,000c	1,000f	-	600	1500	470	400	450	280	380	710
205-99-2	Benzo-b-Fluoranthene	SVOC	1,000c	1,000f	-	750	2000	600	510	570	370	500	990
207-08-9	Benzo-k-Fluoranthene	SVOC	800c	3,900	-	270	820	250	210	230	120	160	330
191-24-2	Benzo-g,h,i-Perylene	SVOC	100,000	100,000a	-	440	1100	290	250	280	200	270	500
218-01-9	Chrysene	SVOC	1,000c	3,900	-	650	2000	560	460	520	290	450	810
132-64-9	Dibenzofuran	SVOC	7,000	59,000	-	76	120	ND	ND	ND	ND	ND	160
53-70-3	Dibenzo-a,h-Anthracene	SVOC	330b	330e	-	200	360	75	66	76	94	100	160
206-44-0	Fluoranthene	SVOC	100,000	100,000a	-	1600	4800	1200	980	1100	700	1000	2700
86-73-7	Fluorene	SVOC	30,000	100,000a	-	140	220	62	68	99	ND	61	260
118-74-1	Hexachlorobenzene	SVOC	330	1,200	-	ND							
193-39-5	Indeno(1,2,3-cd)Pyrene	SVOC	500c	500f	-	590	1400	310	260	300	280	340	660
85-01-8	Phenanthrene	SVOC	100,000	100,000a	-	1100	2700	710	710	810	370	630	1900
91-20-3	Naphthalene	SVOC	12,000	100,000a	-	1.6	ND	ND	ND	86	ND	ND	140
129-00-0	Pyrene	SVOC	100,000	100,000a	-	1400	3900	1000	860	1000	710	1000	2100
	Total cPAHs				-	3,750	10,180	2,785	2,346	2,666	1,784	2,450	4,660
	Total SVOCs				250,000	8,985.6	23,970	6,545	5,692	6,561	3,952	5,733	13381



Table 1 - Soil End Point Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	EP-1	EP-2	EP-3	EP-4	EP-5	EP-6	EP-7	EP-8
						3/11/2014	3/11/2014	5/29/2014	5/29/2014	5/29/2014	12/9/2014	12/9/2014	12/9/2014
	Sample ID	Date	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
93-72-1	2,4,5-TP Acid	PESTICIDE	3,800	100,000a	-	ND	ND	-	-	-	-	-	-
72-54-8	4,4-DDD	PESTICIDE	3.3b	13,000	-	ND	8.24	-	-	-	-	-	-
72-55-9	4,4-DDE	PESTICIDE	3.3b	8,900	-	ND	ND	-	-	-	-	-	-
50-29-3	4,4-DDT	PESTICIDE	3.3b	7,900	-	11.8	31.2	-	-	-	-	-	-
309-00-2	Aldrin	PESTICIDE	5c	97	-	ND	ND	-	-	-	-	-	-
319-84-6	alpha-BHC	PESTICIDE	20	480	-	ND	ND	-	-	-	-	-	-
5103-71-9	Alpha Chlordane	PESTICIDE	94	4,200	-	ND	ND	-	-	-	-	-	-
12674-11-2	Aroclor 1016	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
1104-28-2	Aroclor 1221	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
11141-16-5	Aroclor 1232	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
53469-21-9	Aroclor 1242	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
12672-29-6	Aroclor 1248	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
11097-69-1	Aroclor 1254	PCB	NA	NA	-	ND	ND	-	-	-	-	-	-
11096-82-5	Aroclor 1260	PCB	NA	NA	-	11.1	21.8	-	-	-	-	-	-
319-85-7	beta-BHC	PESTICIDE	36	360	-	ND	ND	-	-	-	-	-	-
319-86-8	delta-BHC	PESTICIDE	40	100,000a	-	ND	ND	-	-	-	-	-	-
60-57-1	Dieldrin	PESTICIDE	5	200	-	ND	14.8	-	-	-	-	-	-
959-98-8	Endosulfan I	PESTICIDE	2,400	24,000i	-	ND	ND	-	-	-	-	-	-
33213-65-9	Endosulfan II	PESTICIDE	2,400	24,000i	-	ND	ND	-	-	-	-	-	-
1031-07-8	Endosulfan Sulfate	PESTICIDE	2,400	24,000i	-	ND	ND	-	-	-	-	-	-
72-20-8	Endrin	PESTICIDE	14	11,000	-	ND	ND	-	-	-	-	-	-
58-89-9	gamma-BHC	PESTICIDE	100	1,300	-	ND	ND	-	-	-	-	-	-
76-44-8	Heptachlor	PESTICIDE	42	2,100	-	ND	ND	-	-	-	-	-	-
1336-36-3	Polychlorinated Biphenyls	PESTICIDE	100	1,000	-	11.1	21.8	-	-	-	-	-	-
	Unit		mg/kg	mg/kg	-								
7440-38-2	Arsenic, As	METAL	13c	16f	24	5.4	6.5	5.8	5.3	5.5	7.1	6.8	5.8
7440-39-3	Barium, Ba	METAL	350c	400	-	86	130	-	-	-	-	-	-
7440-41-7	Beryllium, Be	METAL	7.2	72	-	0.23	0.28	-	-	-	-	-	-
7440-43-9	Cadmium, Cd	METAL	2.5c	4.3	-	ND	ND	-	-	-	-	-	-
7440-47-3	Chromium, Cr	METAL	NA	110	-	17	20	-	-	-	-	-	-
18540-29-9	Chromium, hexavalent	METAL	1b	110	-	ND	ND	-	-	-	-	-	-
16065-83-1	Chromium, trivalent	METAL	30c	180	-	17	20	-	-	-	-	-	-
7440-50-8	Copper, Cu	METAL	50	270	-	24	35	-	-	-	-	-	-
57-12-5	Cyanide	METAL	27	27	-	ND	ND	-	-	-	-	-	-
7439-92-1	Lead, Pb	METAL	63c	400	1200	73	120	74	67	74	46	150	34
7439-96-5	Manganese, Mn	METAL	1,600c	2,000f	-	220	260	-	-	-	-	-	-
7439-97-6	Mercury, Hg	METAL	.18c	.81j	-	0.14	0.22	-	-	-	-	-	-
7440-02-0	Nickel, Ni	METAL	30	310	-	15	19	-	-	-	-	-	-
7782-49-2	Selenium, Se	METAL	3.9c	180	-	ND	ND	-	-	-	-	-	-
7440-22-4	Silver, Ag	METAL	2	180	-	ND	ND	-	-	-	-	-	-
7440-66-6	Zinc, Zn	METAL	109c	10,000d	-	97	170	-	-	-	-	-	-

Notes: Shaded values indicate an exceedance of NYCRR 375 Restricted Residential and NYCRR 375 Unrestricted Use values.

J = Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit



Table 2 - Soil Reuse Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	Compass SP-1 Grab	Compass SP-1 Comp
		Depth						
		Date					3/27/2014	3/27/2014
	Sample ID	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
71-55-6	1,1,1-Trichloroethane (TCA)	VOC	680	100,000a	100,000a	-	ND	-
75-34-3	1,1-Dichloroethane	VOC	270	19,000	26,000	-	ND	-
75-35-4	1,1-Dichloroethene	VOC	330	100,000a	100,000a	-	ND	-
95-63-6	1,2,4-Trimethylbenzene	VOC	3,600	47,000	52,000	-	0.79	-
95-50-1	1,2-Dichlorobenzene	VOC	1,100	100,000a	100,000a	-	ND	-
107-06-2	1,2-Dichloroethane	VOC	20c	2,300	3,100	-	ND	-
108-67-8	1,3,5-Trimethylbenzene	VOC	8,400	47,000	52,000	-	ND	-
541-73-1	1,3-Dichlorobenzene	VOC	2,400	17,000	49,000	-	ND	-
106-46-7	1,4-Dichlorobenzene	VOC	1,800	9,800	13,000	-	ND	-
123-91-1	1,4-Dioxane	VOC	100b	9,800	13,000	-	ND	-
78-93-3	2-Butanone	VOC	120	100,000a	100,000a	-	ND	-
67-64-1	Acetone	VOC	50	100,000a	100,000b	-	29	-
71-43-2	Benzene	VOC	60	2,900	4,800	-	ND	-
56-23-5	Carbon Tetrachloride	VOC	760	1,400	2,400	-	ND	-
108-90-7	Chlorobenzene	VOC	1,100	100,000a	100,000a	-	ND	-
67-66-3	Chloroform	VOC	370	10,000	49,000	-	ND	-
156-59-2	cis-1,2-Dichloroethene	VOC	250	59,000	100,000a	-	ND	-
100-41-4	Ethylbenzene	VOC	1,000	30,000	41,000	-	ND	-
75-09-2	Methylene Chloride	VOC	50	51,000	100,000a	-	ND	-
1634-04-4	Methyl Tert-Butyl Ether	VOC	930	62,000	100,000a	-	ND	-
91-20-3	Naphthalene	SVOC	12,000	100,000a	100,000a	-	1.2	-
104-51-8	n-Butylbenzene	VOC	12,000	100,000a	100,000a	-	ND	-
103-65-1	n-Propylbenzene	VOC	3,900	100,000a	100,000a	-	ND	-
135-98-8	sec-Butylbenzene	VOC	11,000	100,000a	100,000a	-	ND	-
98-06-6	tert-Butylbenzene	VOC	5,900	100,000a	100,000a	-	ND	-
127-18-4	Tetrachloroethene (PCE)	VOC	1,300	5,500	19,000	-	ND	-
108-88-3	Toluene	VOC	700	100,000a	100,000a	-	ND	-
1330-20-7	Total Xylenes	VOC	260	100,000a	100,000a	-	ND	-
156-60-5	trans-1,2-Dichloroethene	VOC	190	100,000a	100,000a	-	ND	-
79-01-6	Trichloroethene (TCE)	VOC	470	10,000	21,000	-	ND	-
75-01-4	Vinyl Chloride	VOC	20	210	900	-	ND	-
	Total BTEX					-	0	-
	Total VOCs					-	30.99	-



Table 2 - Soil Reuse Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	Compass SP-1 Grab	Compass SP-1 Comp
		Depth						
		Date					3/27/2014	3/27/2014
	Sample ID	Unit	<i>ug/kg</i>	<i>ug/kg</i>	<i>ug/kg</i>	<i>ug/kg</i>	<i>ug/kg</i>	<i>ug/kg</i>
83-32-9	Acenaphthene	SVOC	20,000	100,000a	100,000a	-	-	140
208-96-8	Acenaphthylene	SVOC	100,000a	100,000a	100,000a	-	-	75
120-12-7	Anthracene	SVOC	100,000a	100,000a	100,000a	-	-	350
56-55-3	Benzo-a-Anthracene	SVOC	1,000c	1,000f	1,000f	-	-	940
50-32-8	Benzo-a-Pyrene	SVOC	1,000c	1,000f	1,000f	-	-	880
205-99-2	Benzo-b-Fluoranthene	SVOC	1,000c	1,000f	1,000f	-	-	810
207-08-9	Benzo-k-Fluoranthene	SVOC	800c	1,000	3,900	-	-	660
191-24-2	Benzo-g,h,i-Perylene	SVOC	100,000	100,000a	100,000a	-	-	580
218-01-9	Chrysene	SVOC	1,000c	1,000f	3,900	-	-	950
132-64-9	Dibenzofuran	SVOC	7,000	14,000	59,000	-	-	81
53-70-3	Dibenzo-a,h-Anthracene	SVOC	330b	330e	330e	-	-	160
206-44-0	Fluoranthene	SVOC	100,000	100,000a	100,000a	-	-	2000
86-73-7	Fluorene	SVOC	30,000	100,000a	100,000a	-	-	150
118-74-1	Hexachlorobenzene	SVOC	330	410	1,200	-	-	ND
193-39-5	Indeno(1,2,3-cd)Pyrene	SVOC	500c	500f	500f	-	-	510
85-01-8	Phenanthrene	SVOC	100,000	100,000a	100,000a	-	-	1600
129-00-0	Pyrene	SVOC	100,000	100,000a	100,000a	-	-	1800
	Total cPAHs					-	-	4910
	Total SVOCs					250,000	-	11,927



Table 2 - Soil Reuse Analysis Summary
1512 Boone Avenue, Bronx NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Residential	NYCRR 375 Restricted-Residential	Track 4 Soil Cleanup Objectives	Compass SP-1 Grab	Compass SP-1 Comp
		Depth						
		Date					3/27/2014	3/27/2014
	Sample ID	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
93-72-1	2,4,5-TP Acid	PESTICIDE	3,800	58,000	100,000a	-	-	ND
72-54-8	4,4-DDD	PESTICIDE	3.3b	2,600	13,000	-	-	ND
72-55-9	4,4-DDE	PESTICIDE	3.3b	1,800	8,900	-	-	ND
50-29-3	4,4-DDT	PESTICIDE	3.3b	1,700	7,900	-	-	ND
309-00-2	Aldrin	PESTICIDE	5c	19	97	-	-	ND
319-84-6	alpha-BHC	PESTICIDE	20	97	480	-	-	ND
5103-71-9	Alpha Chlordane	PESTICIDE	94	910	4,200	-	-	ND
12674-11-2	Aroclor 1016	PCB	NA	NA	NA	-	-	ND
1104-28-2	Aroclor 1221	PCB	NA	NA	NA	-	-	ND
11141-16-5	Aroclor 1232	PCB	NA	NA	NA	-	-	ND
53469-21-9	Aroclor 1242	PCB	NA	NA	NA	-	-	ND
12672-29-6	Aroclor 1248	PCB	NA	NA	NA	-	-	ND
11097-69-1	Aroclor 1254	PCB	NA	NA	NA	-	-	ND
11096-82-5	Aroclor 1260	PCB	NA	NA	NA	-	-	ND
319-85-7	beta-BHC	PESTICIDE	36	72	360	-	-	ND
319-86-8	delta-BHC	PESTICIDE	40	100,000a	100,000a	-	-	ND
60-57-1	Dieldrin	PESTICIDE	5	39	200	-	-	ND
959-98-8	Endosulfan I	PESTICIDE	2,400	4,800i	24,000i	-	-	ND
33213-65-9	Endosulfan II	PESTICIDE	2,400	4,800i	24,000i	-	-	ND
1031-07-8	Endosulfan Sulfate	PESTICIDE	2,400	4,800i	24,000i	-	-	ND
72-20-8	Endrin	PESTICIDE	14	2,200	11,000	-	-	ND
58-89-9	gamma-BHC	PESTICIDE	100	280	1,300	-	-	ND
76-44-8	Heptachlor	PESTICIDE	42	420	2,100	-	-	ND
1336-36-3	Polychlorinated Biphenyls	PESTICIDE	100	1,000	1,000	-	-	ND
	Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
7440-38-2	Arsenic, As	METAL	13c	16f	16f	24	-	4.7
7440-39-3	Barium, Ba	METAL	350c	350f	400	-	-	120
7440-41-7	Beryllium, Be	METAL	7.2	14	72	-	-	0.35
7440-43-9	Cadmium, Cd	METAL	2.5c	2.5f	4.3	-	-	ND
7440-47-3	Chromium, Cr	METAL	NA	NA	110	-	-	27
18540-29-9	Chromium, hexavalent	METAL	1b	22	110	-	-	ND
16065-83-1	Chromium, trivalent	METAL	30c	36	180	-	-	27
7440-50-8	Copper, Cu	METAL	50	270	270	-	-	44
57-12-5	Cyanide	METAL	27	27	27	-	-	0.28
7439-92-1	Lead, Pb	METAL	63c	400	400	1200	-	96
7439-96-5	Manganese, Mn	METAL	1,600c	2,000f	2,000f	-	-	320
7439-97-6	Mercury, Hg	METAL	.18c	0.81j	.81j	-	-	ND
7440-02-0	Nickel, Ni	METAL	30	140	310	-	-	25
7782-49-2	Selenium, Se	METAL	3.9c	36	180	-	-	0.3
7440-22-4	Silver, Ag	METAL	2	36	180	-	-	ND
7440-66-6	Zinc, Zn	METAL	109c	2,200	10,000d	-	-	120

Notes: Shaded values indicate an exceedance of NYCRR 375 Restricted Residential and NYCRR 375 Unrestricted Use values.



Table 3 - Imported Clean Soil Analysis Summary
1512 Boone Avenue, Bronx, NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Restricted-Residential	Courtyard
		Date			1/21/2016
	Sample ID	Unit	ug/kg	ug/kg	ug/kg
71-55-6	1,1,1-Trichloroethane (TCA)	VOC	680	100,000a	ND
75-34-3	1,1-Dichloroethane	VOC	270	26,000	ND
75-35-4	1,1-Dichloroethene	VOC	330	100,000a	ND
95-63-6	1,2,4-Trimethylbenzene	VOC	3,600	52,000	ND
95-50-1	1,2-Dichlorobenzene	VOC	1,100	100,000a	ND
107-06-2	1,2-Dichloroethane	VOC	20c	3,100	ND
108-67-8	1,3,5-Trimethylbenzene	VOC	8,400	52,000	ND
541-73-1	1,3-Dichlorobenzene	VOC	2,400	49,000	ND
106-46-7	1,4-Dichlorobenzene	VOC	1,800	13,000	ND
123-91-1	1,4-Dioxane	VOC	100b	13,000	ND
78-93-3	2-Butanone	VOC	120	100,000a	ND
67-64-1	Acetone	VOC	50	100,000b	ND
71-43-2	Benzene	VOC	60	4,800	ND
56-23-5	Carbon Tetrachloride	VOC	760	2,400	ND
108-90-7	Chlorobenzene	VOC	1,100	100,000a	ND
67-66-3	Chloroform	VOC	370	49,000	ND
156-59-2	cis-1,2-Dichloroethene	VOC	250	100,000a	ND
100-41-4	Ethylbenzene	VOC	1,000	41,000	0.49
75-09-2	Methylene Chloride	VOC	50	100,000a	ND
1634-04-4	Methyl Tert-Butyl Ether	VOC	930	100,000a	ND
91-20-3	Naphthalene	SVOC	12,000	100,000a	ND
104-51-8	n-Butylbenzene	VOC	12,000	100,000a	ND
103-65-1	n-Propylbenzene	VOC	3,900	100,000a	ND
135-98-8	sec-Butylbenzene	VOC	11,000	100,000a	ND
98-06-6	tert-Butylbenzene	VOC	5,900	100,000a	ND
127-18-4	Tetrachloroethene (PCE)	VOC	1,300	19,000	ND
108-88-3	Toluene	VOC	700	100,000a	ND
1330-20-7	Total Xylenes	VOC	260	100,000a	ND
156-60-5	trans-1,2-Dichloroethene	VOC	190	100,000a	ND
79-01-6	Trichloroethene (TCE)	VOC	470	21,000	ND
75-01-4	Vinyl Chloride	VOC	20	900	ND
	Total BTEX				ND
	Total VOCs				ND
83-32-9	Acenaphthene	SVOC	20,000	100,000a	ND
208-96-8	Acenaphthylene	SVOC	100,000a	100,000a	ND
120-12-7	Anthracene	SVOC	100,000a	100,000a	ND
56-55-3	Benzo-a-Anthracene	SVOC	1,000c	1,000f	ND
50-32-8	Benzo-a-Pyrene	SVOC	1,000c	1,000f	ND
205-99-2	Benzo-b-Fluoranthene	SVOC	1,000c	1,000f	ND
207-08-9	Benzo-k-Fluoranthene	SVOC	800c	3,900	ND
191-24-2	Benzo-g,h,i-Perylene	SVOC	100,000	100,000a	ND
218-01-9	Chrysene	SVOC	1,000c	3,900	ND
132-64-9	Dibenzofuran	SVOC	7,000	59,000	ND
53-70-3	Dibenzo-a,h-Anthracene	SVOC	330b	330e	ND
206-44-0	Fluoranthene	SVOC	100,000	100,000a	ND
86-73-7	Fluorene	SVOC	30,000	100,000a	ND
118-74-1	Hexachlorobenzene	SVOC	330	1,200	ND
193-39-5	Indeno(1,2,3-cd)Pyrene	SVOC	500c	500f	ND
85-01-8	Phenanthrene	SVOC	100,000	100,000a	ND
129-00-0	Pyrene	SVOC	100,000	100,000a	ND
	Total cPAHs				ND
	Total SVOCs				ND



Table 3 - Imported Clean Soil Analysis Summary
1512 Boone Avenue, Bronx, NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use	NYCRR 375 Restricted-Residential	Courtyard
		Date			1/21/2016
	Sample ID	Unit	ug/kg	ug/kg	ug/kg
93-72-1	2,4,5-TP Acid	PESTICIDE	3,800	100,000a	ND
72-54-8	4,4-DDD	PESTICIDE	3.3b	13,000	ND
72-55-9	4,4-DDE	PESTICIDE	3.3b	8,900	ND
50-29-3	4,4-DDT	PESTICIDE	3.3b	7,900	ND
309-00-2	Aldrin	PESTICIDE	5c	97	ND
319-84-6	alpha-BHC	PESTICIDE	20	480	ND
5103-71-9	Alpha Chlordane	PESTICIDE	94	4,200	ND
12674-11-2	Aroclor 1016	PCB	NA	NA	ND
1104-28-2	Aroclor 1221	PCB	NA	NA	ND
11141-16-5	Aroclor 1232	PCB	NA	NA	ND
53469-21-9	Aroclor 1242	PCB	NA	NA	ND
12672-29-6	Aroclor 1248	PCB	NA	NA	ND
11097-69-1	Aroclor 1254	PCB	NA	NA	ND
11096-82-5	Aroclor 1260	PCB	NA	NA	ND
	Aroclor 1265	PCB	NA	NA	ND
	Aroclor 1268	PCB	NA	NA	ND
319-85-7	beta-BHC	PESTICIDE	36	360	ND
319-86-8	delta-BHC	PESTICIDE	40	100,000a	ND
60-57-1	Dieldrin	PESTICIDE	5	200	ND
959-98-8	Endosulfan I	PESTICIDE	2,400	24,000i	ND
33213-65-9	Endosulfan II	PESTICIDE	2,400	24,000i	ND
1031-07-8	Endosulfan Sulfate	PESTICIDE	2,400	24,000i	ND
72-20-8	Endrin	PESTICIDE	14	11,000	ND
58-89-9	gamma-BHC	PESTICIDE	100	1,300	ND
76-44-8	Heptachlor	PESTICIDE	42	2,100	ND
1336-36-3	Polychlorinated Biphenyls	PCB	100	1,000	ND
	Unit		mg/kg	mg/kg	mg/kg
7429-90-5	Aluminum, Al	METAL	NA	NA	4500
7440-36-0	Antimony, Sb	METAL	NA	NA	ND
7440-38-2	Arsenic, As	METAL	13c	16f	3.1
7440-39-3	Barium, Ba	METAL	350c	400	76
7440-41-7	Beryllium, Be	METAL	7.2	72	0.19
7440-43-9	Cadmium, Cd	METAL	2.5c	4.3	ND
7440-47-3	Chromium, Cr	METAL	NA	110	8.2
18540-29-9	Chromium, hexavalent	METAL	1b	110	0.33
16065-83-1	Chromium, trivalent	METAL	30c	180	7.9
7440-48-4	Cobalt, Co	METAL	NA	NA	2.6
7440-50-8	Copper, Cu	METAL	50	270	8.5
57-12-5	Cyanide	METAL	27	27	ND
7439-89-6	Iron, Fe	METAL	NA	NA	5100
7439-92-1	Lead, Pb	METAL	63c	400	8.3
7439-96-5	Manganese, Mn	METAL	1,600c	2,000f	290
7439-97-6	Mercury, Hg	METAL	.18c	.81j	ND
7440-02-0	Nickel, Ni	METAL	30	310	6.8
7782-49-2	Selenium, Se	METAL	3.9c	180	ND
7440-22-4	Silver, Ag	METAL	2	180	ND
7440-28-0	Thallium, Tl	METAL	NA	NA	ND
7440-62-2	Vanadium, V	METAL	NA	NA	9.4
7440-66-6	Zinc, Zn	METAL	109c	10,000d	17
Notes: Shaded values indicate an exceedance of NYCRR 375 Restricted Residential and NYCRR 375 Unrestricted Use values.					
J = Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit					

Notes
 ug/kg = micrograms per kilogram (ppb)
 mg/kg = milligrams per kilogram (ppm)
 ug/L = micrograms per liter
 mg/L = milligrams per liter



Table 4 - Soil/Fill Disposal Quantities Summary
1512 Boone Avenue, Bronx, NY

Month	Date Received	Manifest #	Material	Truck ID	Facility Ticket #	Tons	Dump Facility
January	1/29/2014	797952	Non-Hazardous Fill	DI 3	307000316719	32.11	Clean Earth Of Carteret
January	1/29/2014	797955	Non-Hazardous Fill	DI 4	307000316720	28.36	Clean Earth Of Carteret
January	1/29/2014	797953	Non-Hazardous Fill	DI 7	307000316721	30.67	Clean Earth Of Carteret
January	1/29/2014	797954	Non-Hazardous Fill	DI 1	307000316722	29.74	Clean Earth Of Carteret
January	1/29/2014	797956	Non-Hazardous Fill	DI 2	307000316723	30.33	Clean Earth Of Carteret
January	1/29/2014	797957	Non-Hazardous Fill	DI 3	307000316787	29.83	Clean Earth Of Carteret
January	1/29/2014	797958	Non-Hazardous Fill	DI 1	307000316789	34.31	Clean Earth Of Carteret
January	1/29/2014	797959	Non-Hazardous Fill	DI 7	307000316790	35.02	Clean Earth Of Carteret
January	1/29/2014	797960	Non-Hazardous Fill	DI 2	307000316813	35.40	Clean Earth Of Carteret
January	1/29/2014	797961	Non-Hazardous Fill	DI 4	307000316816	33.28	Clean Earth Of Carteret
January	1/29/2014	797962	Non-Hazardous Fill	DI 3	307000316873	33.23	Clean Earth Of Carteret
January	1/29/2014	797963	Non-Hazardous Fill	DI 7	307000316879	35.95	Clean Earth Of Carteret
January	1/29/2014	797964	Non-Hazardous Fill	DI 1	307000316880	36.42	Clean Earth Of Carteret
January	1/29/2014	797966	Non-Hazardous Fill	DI 4	307000316881	34.67	Clean Earth Of Carteret
January	1/29/2014	797965	Non-Hazardous Fill	DI 2	307000316882	34.64	Clean Earth Of Carteret
January	1/30/2014	798074	Non-Hazardous Fill	CFBROS9	307000316950	33.09	Clean Earth Of Carteret
January	1/30/2014	798073	Non-Hazardous Fill	MANOLOS2	307000316951	33.38	Clean Earth Of Carteret
January	1/30/2014	798075	Non-Hazardous Fill	OJEDA1	307000316953	32.13	Clean Earth Of Carteret
January	1/30/2014	798076	Non-Hazardous Fill	CP17	307000316976	35.55	Clean Earth Of Carteret
January	1/30/2014	798078	Non-Hazardous Fill	MELBEL6	307000316997	34.59	Clean Earth Of Carteret
January	1/30/2014	798077	Non-Hazardous Fill	MELBEL3	307000317005	32.78	Clean Earth Of Carteret
January	1/30/2014	798080	Non-Hazardous Fill	CP27	307000317015	35.07	Clean Earth Of Carteret
January	1/30/2014	798079	Non-Hazardous Fill	CP37	307000317016	30.29	Clean Earth Of Carteret
January	1/30/2014	798082	Non-Hazardous Fill	MANOLOS2	307000317025	33.00	Clean Earth Of Carteret
January	1/30/2014	798083	Non-Hazardous Fill	CFBROS9	307000317026	32.89	Clean Earth Of Carteret
January	1/30/2014	798084	Non-Hazardous Fill	OJEDA1	307000317032	31.15	Clean Earth Of Carteret
January	1/30/2014	798081	Non-Hazardous Fill	BELTRAN9	307000317035	35.09	Clean Earth Of Carteret
January	1/30/2014	798086	Non-Hazardous Fill	CP07	307000317054	34.63	Clean Earth Of Carteret
January	1/30/2014	798087	Non-Hazardous Fill	MELBEL3	307000317074	30.64	Clean Earth Of Carteret
January	1/30/2014	798088	Non-Hazardous Fill	MELBEL6	307000317084	28.76	Clean Earth Of Carteret
January	1/30/2014	798085	Non-Hazardous Fill	BELTRAN10	307000317086	31.96	Clean Earth Of Carteret
January	1/30/2014	798089	Non-Hazardous Fill	CP17	307000317093	33.16	Clean Earth Of Carteret
January	1/30/2014	798090	Non-Hazardous Fill	MANOLOS2	307000317111	32.78	Clean Earth Of Carteret
January	1/30/2014	798091	Non-Hazardous Fill	CFBROS9	307000317114	31.75	Clean Earth Of Carteret
January	1/30/2014	798092	Non-Hazardous Fill	OJEDA1	307000317115	34.29	Clean Earth Of Carteret
January	1/30/2014	798093	Non-Hazardous Fill	CP27	307000317125	33.17	Clean Earth Of Carteret
January	1/30/2014	798094	Non-Hazardous Fill	CP37	307000317137	31.78	Clean Earth Of Carteret
January	1/31/2014	916126	Non-Hazardous Fill	DI 4	307000317194	32.09	Clean Earth Of Carteret
January	1/31/2014	916127	Non-Hazardous Fill	DI 6	307000317195	34.16	Clean Earth Of Carteret
January	1/31/2014	916121	Non-Hazardous Fill	CFBROS8	307000317196	32.13	Clean Earth Of Carteret
January	1/31/2014	916128	Non-Hazardous Fill	DI 5	307000317198	32.96	Clean Earth Of Carteret
January	1/31/2014	916129	Non-Hazardous Fill	IDROVO2	307000317199	33.39	Clean Earth Of Carteret
January	1/31/2014	916118	Non-Hazardous Fill	IDROVO3	307000317200	31.77	Clean Earth Of Carteret
January	1/31/2014	916123	Non-Hazardous Fill	CP17	307000317208	35.43	Clean Earth Of Carteret
January	1/31/2014	916119	Non-Hazardous Fill	JC11	307000317209	29.24	Clean Earth Of Carteret
January	1/31/2014	916120	Non-Hazardous Fill	JC9	307000317214	30.98	Clean Earth Of Carteret
January	1/31/2014	916122	Non-Hazardous Fill	CFBROS9	307000317215	34.41	Clean Earth Of Carteret
January	1/31/2014	916124	Non-Hazardous Fill	CP07	307000317216	38.07	Clean Earth Of Carteret
January	1/31/2014	916125	Non-Hazardous Fill	CP37	307000317219	30.97	Clean Earth Of Carteret
January	1/31/2014	916105	Non-Hazardous Fill	CP27	307000317220	35.55	Clean Earth Of Carteret
January	1/31/2014	916106	Non-Hazardous Fill	DI 6	307000317265	33.87	Clean Earth Of Carteret
January	1/31/2014	916107	Non-Hazardous Fill	DI 4	307000317268	32.02	Clean Earth Of Carteret
January	1/31/2014	916108	Non-Hazardous Fill	CFBROS8	307000317270	32.42	Clean Earth Of Carteret
January	1/31/2014	916109	Non-Hazardous Fill	DI 5	307000317271	33.46	Clean Earth Of Carteret
January	1/31/2014	916110	Non-Hazardous Fill	IDROVO2	307000317275	34.79	Clean Earth Of Carteret
January	1/31/2014	916111	Non-Hazardous Fill	IDROVO3	307000317279	34.54	Clean Earth Of Carteret
January	1/31/2014	916112	Non-Hazardous Fill	JC11	307000317280	30.01	Clean Earth Of Carteret
January	1/31/2014	916114	Non-Hazardous Fill	CFBROS9	307000317286	33.69	Clean Earth Of Carteret
January	1/31/2014	916113	Non-Hazardous Fill	JC9	307000317291	31.58	Clean Earth Of Carteret
January	1/31/2014	916115	Non-Hazardous Fill	H&A1	307000317304	31.52	Clean Earth Of Carteret
January	1/31/2014	916117	Non-Hazardous Fill	ANDRADES1	307000317305	34.64	Clean Earth Of Carteret
January	1/31/2014	916116	Non-Hazardous Fill	ANDRADES2	307000317308	33.19	Clean Earth Of Carteret
January	1/31/2014	916104	Non-Hazardous Fill	CP17	307000317311	35.54	Clean Earth Of Carteret
January	1/31/2014	916103	Non-Hazardous Fill	CP07	307000317312	36.54	Clean Earth Of Carteret
January	1/31/2014	916101	Non-Hazardous Fill	CP27	307000317314	36.55	Clean Earth Of Carteret
January	1/31/2014	916102	Non-Hazardous Fill	DI 6	307000317315	35.17	Clean Earth Of Carteret
January	1/31/2014	916099	Non-Hazardous Fill	DI 4	307000317318	31.65	Clean Earth Of Carteret
January	1/31/2014	916098	Non-Hazardous Fill	CFBROS8	307000317321	33.49	Clean Earth Of Carteret
January	1/31/2014	916097	Non-Hazardous Fill	DI 5	307000317323	33.50	Clean Earth Of Carteret
January	1/31/2014	916100	Non-Hazardous Fill	CP37	307000317324	32.12	Clean Earth Of Carteret
January	1/31/2014	916096	Non-Hazardous Fill	IDROVO2	307000317327	32.83	Clean Earth Of Carteret
January	1/31/2014	916095	Non-Hazardous Fill	IDROVO3	307000317328	35.50	Clean Earth Of Carteret
January	1/31/2014	916094	Non-Hazardous Fill	JC11	307000317331	29.22	Clean Earth Of Carteret
January	1/31/2014	916093	Non-Hazardous Fill	CFBROS9	307000317334	35.06	Clean Earth Of Carteret
January	1/31/2014	916092	Non-Hazardous Fill	JC9	307000317335	30.79	Clean Earth Of Carteret
January	1/31/2014	916091	Non-Hazardous Fill	CFBROS10	307000317340	34.92	Clean Earth Of Carteret

Table 4 - Soil/Fill Disposal Quantities Summary
1512 Boone Avenue, Bronx, NY

Month	Date Received	Manifest #	Material	Truck ID	Facility Ticket #	Tons	Dump Facility
January	1/31/2014	916090	Non-Hazardous Fill	H&A1	307000317341	33.46	Clean Earth Of Carteret
January	1/31/2014	916089	Non-Hazardous Fill	ANDRADES2	307000317342	34.30	Clean Earth Of Carteret
January	1/31/2014	916088	Non-Hazardous Fill	ANDRADES1	307000317344	33.37	Clean Earth Of Carteret
January	1/31/2014	916087	Non-Hazardous Fill	JC11	307000317351	29.45	Clean Earth Of Carteret
February	2/3/2014	916080	Non-Hazardous Fill	OJEDA1	307000317379	34.51	Clean Earth Of Carteret
February	2/3/2014	916081	Non-Hazardous Fill	NICK23	307000317380	35.98	Clean Earth Of Carteret
February	2/3/2014	916082	Non-Hazardous Fill	OJEDA2	307000317381	31.94	Clean Earth Of Carteret
February	2/3/2014	916083	Non-Hazardous Fill	CP17	307000317382	38.98	Clean Earth Of Carteret
February	2/3/2014	916084	Non-Hazardous Fill	NICK22	307000317386	35.48	Clean Earth Of Carteret
February	2/3/2014	916085	Non-Hazardous Fill	NICK11	307000317396	34.50	Clean Earth Of Carteret
February	2/3/2014	916066	Non-Hazardous Fill	CP27	307000317404	38.93	Clean Earth Of Carteret
February	2/3/2014	916067	Non-Hazardous Fill	CP07	307000317414	37.80	Clean Earth Of Carteret
February	2/3/2014	916068	Non-Hazardous Fill	CP37	307000317415	33.15	Clean Earth Of Carteret
February	2/3/2014	916069	Non-Hazardous Fill	OJEDA3	307000317416	31.32	Clean Earth Of Carteret
February	2/3/2014	916070	Non-Hazardous Fill	OJEDA1	307000317420	33.83	Clean Earth Of Carteret
February	2/3/2014	916071	Non-Hazardous Fill	OJEDA2	307000317421	32.75	Clean Earth Of Carteret
February	2/3/2014	916065	Non-Hazardous Fill	OJEDA1	307000317450	33.87	Clean Earth Of Carteret
February	2/4/2014	916086	Non-Hazardous Fill	NICK30	307000317462	38.07	Clean Earth Of Carteret
February	2/4/2014	916054	Non-Hazardous Fill	NICK23	307000317464	35.96	Clean Earth Of Carteret
February	2/4/2014	916055	Non-Hazardous Fill	NICK32	307000317467	36.25	Clean Earth Of Carteret
February	2/4/2014	916056	Non-Hazardous Fill	MANOLOS3	307000317470	32.20	Clean Earth Of Carteret
February	2/4/2014	916057	Non-Hazardous Fill	NYC9	307000317471	33.33	Clean Earth Of Carteret
February	2/4/2014	916058	Non-Hazardous Fill	NICK22	307000317472	35.73	Clean Earth Of Carteret
February	2/4/2014	916059	Non-Hazardous Fill	GRNOUT28	307000317473	30.36	Clean Earth Of Carteret
February	2/4/2014	916060	Non-Hazardous Fill	GRNOUT39	307000317476	33.57	Clean Earth Of Carteret
February	2/4/2014	916062	Non-Hazardous Fill	NICK11	307000317480	34.55	Clean Earth Of Carteret
February	2/4/2014	916061	Non-Hazardous Fill	CP17	307000317487	36.75	Clean Earth Of Carteret
February	2/4/2014	916063	Non-Hazardous Fill	CP37	307000317489	32.52	Clean Earth Of Carteret
February	2/4/2014	916050	Non-Hazardous Fill	CP07	307000317502	39.36	Clean Earth Of Carteret
February	2/4/2014	916051	Non-Hazardous Fill	MANOLOS3	307000317516	33.59	Clean Earth Of Carteret
February	2/4/2014	916052	Non-Hazardous Fill	GRNOUT28	307000317520	32.08	Clean Earth Of Carteret
February	2/4/2014	916064	Non-Hazardous Fill	CP27	307000317527	35.38	Clean Earth Of Carteret
February	2/4/2014	916053	Non-Hazardous Fill	GRNOUT39	307000317528	35.07	Clean Earth Of Carteret
February	2/4/2014	916044	Non-Hazardous Fill	CP17	307000317539	35.12	Clean Earth Of Carteret
February	2/4/2014	916045	Non-Hazardous Fill	MANOLOS3	307000317541	32.29	Clean Earth Of Carteret
February	2/4/2014	916046	Non-Hazardous Fill	CP37	307000317544	31.71	Clean Earth Of Carteret
February	2/4/2014	916043	Non-Hazardous Fill	GRNOUT28	307000317546	31.45	Clean Earth Of Carteret
February	2/4/2014	916042	Non-Hazardous Fill	GRNOUT39	307000317554	34.08	Clean Earth Of Carteret
February	2/4/2014	916041	Non-Hazardous Fill	CP07	307000317557	34.50	Clean Earth Of Carteret
February	2/4/2014	916040	Non-Hazardous Fill	CP27	307000317559	33.55	Clean Earth Of Carteret
February	2/5/2014	916047	Non-Hazardous Fill	MANOLOS4	307000317561	29.23	Clean Earth Of Carteret
February	2/5/2014	916049	Non-Hazardous Fill	ANDRADES2	307000317562	32.43	Clean Earth Of Carteret
February	2/5/2014	916048	Non-Hazardous Fill	MANOLOS5	307000317563	32.48	Clean Earth Of Carteret
February	2/5/2014	916027	Non-Hazardous Fill	MANOLOS3	307000317564	35.16	Clean Earth Of Carteret
February	2/5/2014	916028	Non-Hazardous Fill	MANOLOS3	307000317565	33.58	Clean Earth Of Carteret
February	2/5/2014	916029	Non-Hazardous Fill	ANDRADES1	307000317566	35.87	Clean Earth Of Carteret
February	2/5/2014	916030	Non-Hazardous Fill	MANOLOS3	307000317567	33.74	Clean Earth Of Carteret
February	2/5/2014	916031	Non-Hazardous Fill	MANOLOS5	307000317568	34.21	Clean Earth Of Carteret
February	2/5/2014	916032	Non-Hazardous Fill	MANOLOS4	307000317569	30.28	Clean Earth Of Carteret
February	2/5/2014	916033	Non-Hazardous Fill	ANDRADES1	307000317570	34.27	Clean Earth Of Carteret
February	2/5/2014	916034	Non-Hazardous Fill	MANOLOS3	307000317571	35.78	Clean Earth Of Carteret
February	2/5/2014	916035	Non-Hazardous Fill	MANOLOS5	307000317572	34.95	Clean Earth Of Carteret
February	2/6/2014	916036	Non-Hazardous Fill	SHIRLEY20	307000317608	33.10	Clean Earth Of Carteret
February	2/6/2014	916037	Non-Hazardous Fill	RLS38	307000317609	31.86	Clean Earth Of Carteret
February	2/6/2014	916038	Non-Hazardous Fill	SHIRLEY14	307000317610	37.58	Clean Earth Of Carteret
February	2/6/2014	916039	Non-Hazardous Fill	MANOLOS1	307000317611	34.49	Clean Earth Of Carteret
February	2/6/2014	916183	Non-Hazardous Fill	SHIRLEY16	307000317612	32.60	Clean Earth Of Carteret
February	2/6/2014	916185	Non-Hazardous Fill	SHIRLEY12	307000317613	34.08	Clean Earth Of Carteret
February	2/6/2014	916186	Non-Hazardous Fill	SHIRLEY6	307000317614	33.87	Clean Earth Of Carteret
February	2/6/2014	916187	Non-Hazardous Fill	NICK23	307000317615	35.45	Clean Earth Of Carteret
February	2/6/2014	916188	Non-Hazardous Fill	NICK17	307000317619	32.66	Clean Earth Of Carteret
February	2/6/2014	916190	Non-Hazardous Fill	NICK22	307000317622	32.13	Clean Earth Of Carteret
February	2/6/2014	916189	Non-Hazardous Fill	NICK26	307000317623	36.89	Clean Earth Of Carteret
February	2/6/2014	916191	Non-Hazardous Fill	NICK32	307000317625	32.36	Clean Earth Of Carteret
February	2/6/2014	916192	Non-Hazardous Fill	CP27	307000317629	34.73	Clean Earth Of Carteret
February	2/6/2014	916193	Non-Hazardous Fill	CP37	307000617639	32.00	Clean Earth Of Carteret
February	2/6/2014	916194	Non-Hazardous Fill	CP17	307000317645	37.19	Clean Earth Of Carteret
February	2/6/2014	916195	Non-Hazardous Fill	RLS48	307000317646	34.29	Clean Earth Of Carteret
February	2/6/2014	916196	Non-Hazardous Fill	NICK7	307000317652	24.86	Clean Earth Of Carteret
February	2/6/2014	916198	Non-Hazardous Fill	NICK11	307000317654	31.83	Clean Earth Of Carteret
February	2/6/2014	916199	Non-Hazardous Fill	RLS38	307000317664	33.32	Clean Earth Of Carteret
February	2/6/2014	916200	Non-Hazardous Fill	SHIRLEY20	307000317665	32.61	Clean Earth Of Carteret
February	2/6/2014	916201	Non-Hazardous Fill	SHIRLEY14	307000317666	29.45	Clean Earth Of Carteret
February	2/6/2014	916202	Non-Hazardous Fill	SHIRLEY6	307000317671	33.84	Clean Earth Of Carteret
February	2/6/2014	916197	Non-Hazardous Fill	NYC9	307000317672	34.58	Clean Earth Of Carteret
February	2/6/2014	916203	Non-Hazardous Fill	SHIRLEY2	307000317680	32.79	Clean Earth Of Carteret
February	2/6/2014	916204	Non-Hazardous Fill	MANOLOS1	307000317682	31.51	Clean Earth Of Carteret

Table 4 - Soil/Fill Disposal Quantities Summary
1512 Boone Avenue, Bronx, NY

Month	Date Received	Manifest #	Material	Truck ID	Facility Ticket #	Tons	Dump Facility
February	2/6/2014	916206	Non-Hazardous Fill	RLS38	307000317693	35.60	Clean Earth Of Carteret
February	2/6/2014	916205	Non-Hazardous Fill	CP27	307000317695	36.12	Clean Earth Of Carteret
February	2/6/2014	916207	Non-Hazardous Fill	SHIRLEY6	307000317697	36.09	Clean Earth Of Carteret
February	2/6/2014	916208	Non-Hazardous Fill	SHIRLEY20	307000317698	36.65	Clean Earth Of Carteret
February	2/6/2014	916209	Non-Hazardous Fill	SHIRLEY14	307000317699	36.79	Clean Earth Of Carteret
February	2/6/2014	916210	Non-Hazardous Fill	CP17	307000317700	34.67	Clean Earth Of Carteret
February	2/6/2014	916211	Non-Hazardous Fill	RLS48	307000317702	35.44	Clean Earth Of Carteret
February	2/6/2014	916213	Non-Hazardous Fill	SHIRLEY2	307000317703	37.38	Clean Earth Of Carteret
February	2/6/2014	916214	Non-Hazardous Fill	MANOLOS1	307000317704	32.83	Clean Earth Of Carteret
February	2/6/2014	916212	Non-Hazardous Fill	CP37	307000317706	33.97	Clean Earth Of Carteret
February	2/11/2014	916215	Non-Hazardous Fill	OJEDA1	307000318209	28.76	Clean Earth Of Carteret
February	2/11/2014	916216	Non-Hazardous Fill	OJEDA2	307000318210	27.11	Clean Earth Of Carteret
February	2/11/2014	916218	Non-Hazardous Fill	CP17	307000318212	31.89	Clean Earth Of Carteret
February	2/11/2014	796841	Non-Hazardous Fill	V&E3	307000318216	33.34	Clean Earth Of Carteret
February	2/11/2014	796840	Non-Hazardous Fill	CP37	307000318218	30.37	Clean Earth Of Carteret
February	2/11/2014	796914	Non-Hazardous Fill	CP27	307000318219	33.17	Clean Earth Of Carteret
February	2/11/2014	796910	Non-Hazardous Fill	CP07	307000318220	29.21	Clean Earth Of Carteret
February	2/11/2014	796915	Non-Hazardous Fill	OJEDA2	307000318231	29.85	Clean Earth Of Carteret
February	2/11/2014	796916	Non-Hazardous Fill	OJEDA1	307000318232	33.43	Clean Earth Of Carteret
March	3/6/2014	916219	Non-Hazardous Fill	07ANDRADE2	700000007480	30.96	Clean Earth Of Carteret
March	3/6/2014	916221	Non-Hazardous Fill	07JC9	700000007483	29.92	Clean Earth Of Carteret
March	3/6/2014	916222	Non-Hazardous Fill	07IDROVO3	700000007499	34.40	Clean Earth Of Carteret
March	3/6/2014	916223	Non-Hazardous Fill	07CFBROS7	700000007508	32.53	Clean Earth Of Carteret
March	3/6/2014	916224	Non-Hazardous Fill	07JC12	700000007521	31.42	Clean Earth Of Carteret
March	3/6/2014	916225	Non-Hazardous Fill	07NICK11	700000007601	33.05	Clean Earth Of Carteret
March	3/6/2014	916226	Non-Hazardous Fill	07NICK23	700000007606	33.59	Clean Earth Of Carteret
March	3/6/2014	916227	Non-Hazardous Fill	07GRNOUT38	700000007616	32.63	Clean Earth Of Carteret
March	3/6/2014	916228	Non-Hazardous Fill	07GRNOUT39	700000007626	31.13	Clean Earth Of Carteret
March	3/6/2014	916220	Non-Hazardous Fill	07ANDRADE1	700000007681	33.47	Clean Earth Of Carteret
March	3/6/2014	916230	Non-Hazardous Fill	07MANOLOS2	700000007695	33.60	Clean Earth Of Carteret
March	3/6/2014	916231	Non-Hazardous Fill	07NICK5	700000007723	35.94	Clean Earth Of Carteret
March	3/6/2014	916233	Non-Hazardous Fill	07ANDRADE2	700000007834	34.86	Clean Earth Of Carteret
March	3/6/2014	916229	Non-Hazardous Fill	07JC9	700000007857	34.86	Clean Earth Of Carteret
March	3/6/2014	916232	Non-Hazardous Fill	07CFBROS7	700000007867	33.64	Clean Earth Of Carteret
March	3/6/2014	916133	Non-Hazardous Fill	07JC12	700000007879	32.49	Clean Earth Of Carteret
March	3/6/2014	916132	Non-Hazardous Fill	07NICK23	700000007908	32.82	Clean Earth Of Carteret
March	3/6/2014	916131	Non-Hazardous Fill	07GRNOUT38	700000007926	34.07	Clean Earth Of Carteret
March	3/6/2014	916130	Non-Hazardous Fill	07NYC9	700000007933	36.04	Clean Earth Of Carteret
March	3/6/2014	916134	Non-Hazardous Fill	07GRNOUT39	700000007937	34.23	Clean Earth Of Carteret
March	3/6/2014	916135	Non-Hazardous Fill	07MANOLOS2	700000007951	34.40	Clean Earth Of Carteret
March	3/6/2014	916136	Non-Hazardous Fill	07NICK26	700000007953	36.67	Clean Earth Of Carteret
March	3/6/2014	916137	Non-Hazardous Fill	07JC9	700000007980	28.01	Clean Earth Of Carteret
March	3/10/2014	916138	Non-Hazardous Fill	07JC9	700000008878	32.10	Clean Earth Of Carteret
March	3/10/2014	916182	Non-Hazardous Fill	07CFBROS8	700000008888	34.73	Clean Earth Of Carteret
March	3/10/2014	916234	Non-Hazardous Fill	07ANDRADE2	700000008905	34.36	Clean Earth Of Carteret
March	3/10/2014	916178	Non-Hazardous Fill	07CFBROS10	700000008931	37.30	Clean Earth Of Carteret
March	3/10/2014	916180	Non-Hazardous Fill	07IDROVO2	700000008944	33.35	Clean Earth Of Carteret
March	3/10/2014	916179	Non-Hazardous Fill	07CFBROS71	700000009014	34.68	Clean Earth Of Carteret
March	3/10/2014	916181	Non-Hazardous Fill	07GRNOUT39	700000009028	32.73	Clean Earth Of Carteret
March	3/10/2014	916175	Non-Hazardous Fill	07GRNOUT38	700000009036	33.05	Clean Earth Of Carteret
March	3/10/2014	916176	Non-Hazardous Fill	07GRNOUT40	700000009062	33.17	Clean Earth Of Carteret
March	3/10/2014	916177	Non-Hazardous Fill	07JC9	700000009169	30.18	Clean Earth Of Carteret
March	3/10/2014	916168	Non-Hazardous Fill	07CFBROS8	700000009214	30.08	Clean Earth Of Carteret
March	3/10/2014	916169	Non-Hazardous Fill	07ANDRADE2	700000009239	32.43	Clean Earth Of Carteret
March	3/10/2014	916167	Non-Hazardous Fill	07CFBROS10	700000009301	33.09	Clean Earth Of Carteret
March	3/10/2014	916166	Non-Hazardous Fill	07IDROVO2	700000009335	33.63	Clean Earth Of Carteret
March	3/10/2014	916165	Non-Hazardous Fill	07CFBROS71	700000009378	33.47	Clean Earth Of Carteret
March	3/10/2014	916164	Non-Hazardous Fill	07GRNOUT39	700000009398	34.23	Clean Earth Of Carteret
March	3/10/2014	916163	Non-Hazardous Fill	07GRNOUT38	700000009423	32.85	Clean Earth Of Carteret
March	3/10/2014	916174	Non-Hazardous Fill	07GRNOUT40	700000009445	35.19	Clean Earth Of Carteret
March	3/10/2014	916172	Non-Hazardous Fill	07CFBROS8	700000009497	31.01	Clean Earth Of Carteret
March	3/10/2014	916173	Non-Hazardous Fill	07JC9	700000009501	32.23	Clean Earth Of Carteret
March	3/10/2014	916170	Non-Hazardous Fill	07ANDRADE2	700000009509	32.52	Clean Earth Of Carteret
March	3/10/2014	916171	Non-Hazardous Fill	07CFBROS10	700000009521	32.05	Clean Earth Of Carteret
March	3/11/2014	916141	Non-Hazardous Fill	07SHIR9	700000009715	31.37	Clean Earth Of Carteret
March	3/11/2014	916140	Non-Hazardous Fill	07RLS38	700000009725	34.68	Clean Earth Of Carteret
March	3/11/2014	916143	Non-Hazardous Fill	07SHIR20	700000009742	34.23	Clean Earth Of Carteret
March	3/11/2014	916142	Non-Hazardous Fill	07SHIR5	700000009755	29.48	Clean Earth Of Carteret
March	3/11/2014	916153	Non-Hazardous Fill	07SHIR8	700000009777	32.78	Clean Earth Of Carteret
March	3/11/2014	916144	Non-Hazardous Fill	07RLS58	700000009785	35.64	Clean Earth Of Carteret
March	3/11/2014	916154	Non-Hazardous Fill	07CARS16	700000009790	31.15	Clean Earth Of Carteret
March	3/11/2014	916155	Non-Hazardous Fill	07CARS20	700000009815	33.17	Clean Earth Of Carteret
March	3/11/2014	916156	Non-Hazardous Fill	07NICK5	700000009817	36.77	Clean Earth Of Carteret
March	3/11/2014	916157	Non-Hazardous Fill	07GRNOUT42	700000009819	31.06	Clean Earth Of Carteret
March	3/11/2014	916158	Non-Hazardous Fill	07NICK32	700000009862	36.17	Clean Earth Of Carteret
March	3/11/2014	916159	Non-Hazardous Fill	07TMAK3	700000009944	35.75	Clean Earth Of Carteret
March	3/11/2014	916139	Non-Hazardous Fill	07SHIR9	700000009985	32.72	Clean Earth Of Carteret

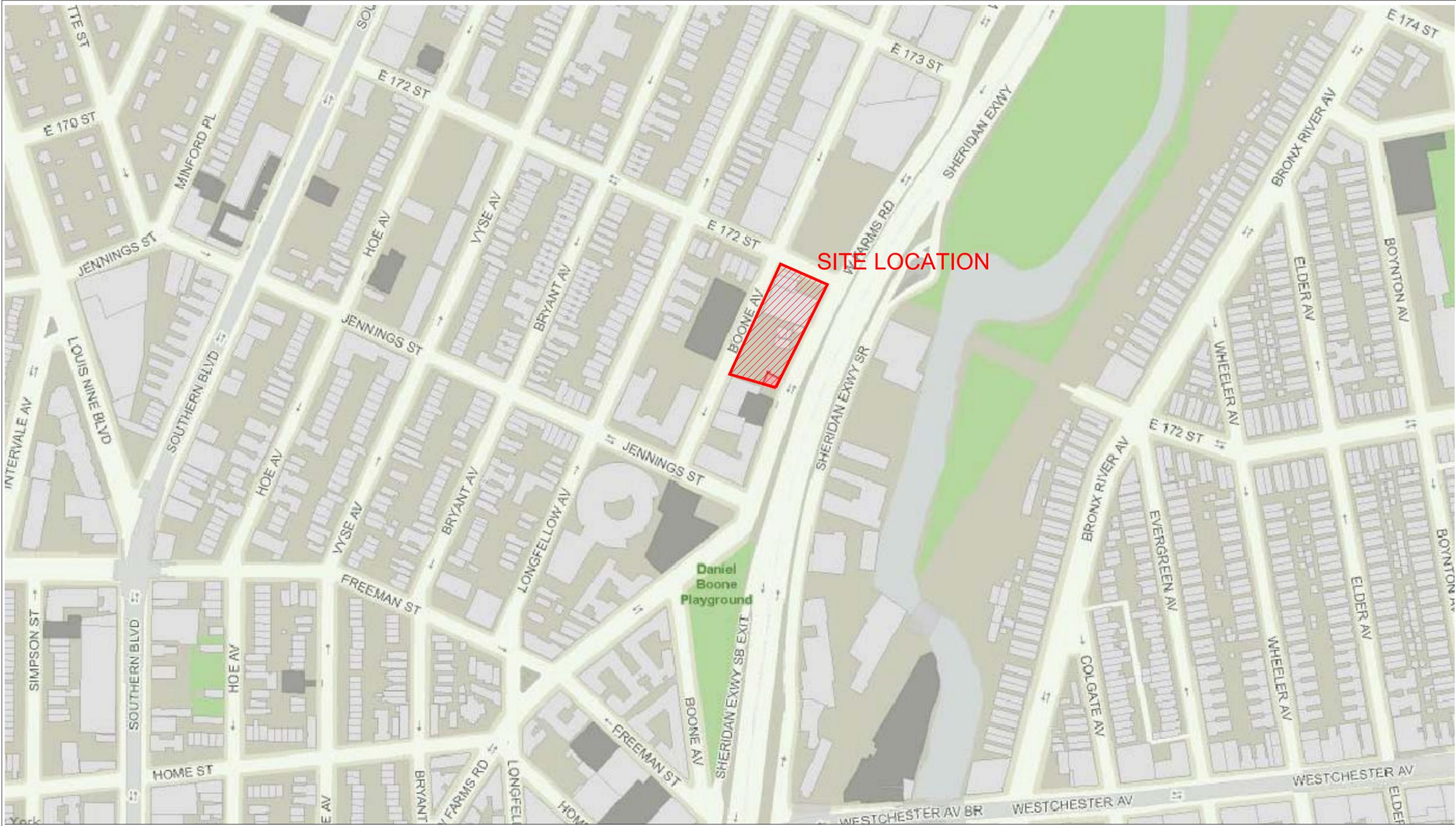
Table 4 - Soil/Fill Disposal Quantities Summary
1512 Boone Avenue, Bronx, NY

Month	Date Received	Manifest #	Material	Truck ID	Facility Ticket #	Tons	Dump Facility
March	3/11/2014	916161	Non-Hazardous Fill	07SHIR20	700000010024	34.44	Clean Earth Of Carteret
March	3/11/2014	916152	Non-Hazardous Fill	07TMAK2	700000010041	35.81	Clean Earth Of Carteret
March	3/11/2014	916162	Non-Hazardous Fill	07SHIR5	700000010046	31.78	Clean Earth Of Carteret
March	3/11/2014	916151	Non-Hazardous Fill	07SHIR8	700000010051	34.35	Clean Earth Of Carteret
March	3/11/2014	916150	Non-Hazardous Fill	07NICK5	700000010057	35.04	Clean Earth Of Carteret
March	3/11/2014	916148	Non-Hazardous Fill	07CARS16	700000010065	31.36	Clean Earth Of Carteret
March	3/11/2014	916147	Non-Hazardous Fill	07CARS20	700000010069	32.03	Clean Earth Of Carteret
March	3/11/2014	916146	Non-Hazardous Fill	07GRNOUT42	700000010089	33.57	Clean Earth Of Carteret
March	3/11/2014	916149	Non-Hazardous Fill	07RLSS58	700000010091	30.18	Clean Earth Of Carteret
March	3/11/2014	916145	Non-Hazardous Fill	07NYC9	700000010099	35.68	Clean Earth Of Carteret
March	3/11/2014	253592	Non-Hazardous Fill	07SHIR8	700000010213	32.39	Clean Earth Of Carteret
March	3/27/2014	E0162761	Non-Haz Non-TSCA Lead Impacted Soil	AK924W	325447	31.96	Bayshore Recycling
March	3/27/2014	E0162765	Non-Haz Non-TSCA Lead Impacted Soil	AP584U	325451	35.25	Bayshore Recycling
March	3/27/2014	E0162764	Non-Haz Non-TSCA Lead Impacted Soil	AL876T	325455	33.91	Bayshore Recycling
March	3/27/2014	E0162763	Non-Haz Non-TSCA Lead Impacted Soil	AP921W	325476	31.62	Bayshore Recycling
March	3/27/2014	E0162767	Non-Haz Non-TSCA Lead Impacted Soil	AK924W	325647	30.49	Bayshore Recycling
March	3/27/2014	E0162762	Non-Haz Non-TSCA Lead Impacted Soil	AP584U	325660	33.99	Bayshore Recycling
March	3/27/2014	E0162768	Non-Haz Non-TSCA Lead Impacted Soil	AP921W	325694	29.92	Bayshore Recycling
March	3/27/2014	E0162766	Non-Haz Non-TSCA Lead Impacted Soil	AL876T	325695	32.46	Bayshore Recycling
March	3/27/2014	E0162770	Non-Haz Non-TSCA Lead Impacted Soil	AK817R	325802	30.85	Bayshore Recycling
March	3/27/2014	E0162750	Non-Haz Non-TSCA Lead Impacted Soil	AK924W	325833	32.15	Bayshore Recycling
March	3/27/2014	E0162771	Non-Haz Non-TSCA Lead Impacted Soil	AP584U	325856	35.34	Bayshore Recycling
March	3/27/2014	E0162769	Non-Haz Non-TSCA Lead Impacted Soil	AL876T	325889	31.48	Bayshore Recycling
March	3/28/2014	E0169236	Non-Haz Non-TSCA Lead Impacted Soil	AP828N	326032	34.16	Bayshore Recycling
March	3/28/2014	E0169235	Non-Haz Non-TSCA Lead Impacted Soil	AM680T	326036	33.35	Bayshore Recycling
March	3/28/2014	E0169233	Non-Haz Non-TSCA Lead Impacted Soil	AN828W	326044	37.86	Bayshore Recycling
March	3/28/2014	E0169234	Non-Haz Non-TSCA Lead Impacted Soil	AK924W	326055	32.41	Bayshore Recycling
March	3/28/2014	E0169256	Non-Haz Non-TSCA Lead Impacted Soil	AP828N	326240	34.46	Bayshore Recycling
March	3/28/2014	E0169255	Non-Haz Non-TSCA Lead Impacted Soil	AM680T	326248	31.46	Bayshore Recycling
March	3/28/2014	E0169254	Non-Haz Non-TSCA Lead Impacted Soil	AN828W	326261	34.33	Bayshore Recycling
March	3/28/2014	E0169238	Non-Haz Non-TSCA Lead Impacted Soil	AL876T	326360	30.83	Bayshore Recycling
March	3/28/2014	E0169253	Non-Haz Non-TSCA Lead Impacted Soil	AP921W	326439	35.65	Bayshore Recycling
March	3/28/2014	E0169237	Non-Haz Non-TSCA Lead Impacted Soil	AK924W	326441	31.50	Bayshore Recycling
March	3/28/2014	E0169239	Non-Haz Non-TSCA Lead Impacted Soil	AP828N	326443	34.82	Bayshore Recycling
April	4/1/2014	E0162753	Non-Haz Non-TSCA Lead Impacted Soil	AN828W	327065	34.45	Bayshore Recycling
April	4/1/2014	E0162754	Non-Haz Non-TSCA Lead Impacted Soil	AP444Z	327071	39.07	Bayshore Recycling
April	4/1/2014	E0162756	Non-Haz Non-TSCA Lead Impacted Soil	AN828W	327195	36.58	Bayshore Recycling
April	4/1/2014	E0162755	Non-Haz Non-TSCA Lead Impacted Soil	AP444Z	327215	41.29	Bayshore Recycling
April	4/1/2014	E0162757	Non-Haz Non-TSCA Lead Impacted Soil	AN828W	327341	37.05	Bayshore Recycling
April	4/1/2014	E0162758	Non-Haz Non-TSCA Lead Impacted Soil	AP444Z	327374	40.29	Bayshore Recycling
May	5/6/2014	200323	Non-Hazardous Fill	AN719Y	6140	39.40	Blanchard
May	5/6/2014	200324	Non-Hazardous Fill	AN719Y	6179	34.69	Blanchard
May	5/6/2014	200326	Non-Hazardous Fill	AP194Z	6211	35.01	Blanchard
May	5/6/2014	200319	Non-Hazardous Fill	AP278K	6163	38.72	Blanchard
May	5/6/2014	200318	Non-Hazardous Fill	AP328G	6087	37.89	Blanchard
May	5/6/2014	200316	Non-Hazardous Fill	AP328G	6122	38.37	Blanchard
May	5/6/2014	200321	Non-Hazardous Fill	AP328G	6162	36.14	Blanchard
May	5/6/2014	200325	Non-Hazardous Fill	AP328G	6204	36.72	Blanchard
May	5/6/2014	200317	Non-Hazardous Fill	AP375P	6094	40.65	Blanchard
May	5/6/2014	200315	Non-Hazardous Fill	AP375P	6130	35.81	Blanchard
May	5/6/2014	200322	Non-Hazardous Fill	AP375P	6175	36.11	Blanchard
May	5/6/2014	200327	Non-Hazardous Fill	AP375P	6220	35.17	Blanchard
May	5/6/2014	200328	Non-Hazardous Fill	AP584U	6217	35.86	Blanchard
May	5/6/2014	200320	Non-Hazardous Fill	AP874P	6151	40.35	Blanchard
May	5/7/2014	200329	Non-Hazardous Fill	AN855J	6236	37.31	Blanchard
May	5/7/2014	200335	Non-Hazardous Fill	AP328G	6225	36.89	Blanchard
May	5/7/2014	200332	Non-Hazardous Fill	AP328G	6249	35.51	Blanchard
May	5/7/2014	200334	Non-Hazardous Fill	AP375P	6237	34.76	Blanchard
May	5/7/2014	200333	Non-Hazardous Fill	AP376P	6253	36.71	Blanchard
May	5/7/2014	200330	Non-Hazardous Fill	AP377P	6233	29.92	Blanchard
May	5/7/2014	200336	Non-Hazardous Fill	AP792H	6227	36.60	Blanchard
May	5/7/2014	200331	Non-Hazardous Fill	AP792H	6258	36.54	Blanchard
May	5/12/2014	200338	Non-Hazardous Fill	AP306X	2006335	34.76	Blanchard
May	5/12/2014	200340	Non-Hazardous Fill	AP306X	2006372	37.35	Blanchard
May	5/12/2014	200339	Non-Hazardous Fill	AP638R	2006323	33.56	Blanchard
May	5/12/2014	200341	Non-Hazardous Fill	AP638R	2006366	35.77	Blanchard
May	5/12/2014	200337	Non-Hazardous Fill	AP792H	2006334	37.55	Blanchard
May	5/12/2014	200342	Non-Hazardous Fill	AP792H	2006371	36.28	Blanchard
May	5/14/2014	200369	Non-Hazardous Fill	AN370M	2006653	35.96	Blanchard
May	5/14/2014	200388	Non-Hazardous Fill	AN370M	2006569	36.51	Blanchard
May	5/14/2014	200382	Non-Hazardous Fill	AN370M	2006601	35.71	Blanchard
May	5/14/2014	200374	Non-Hazardous Fill	AN370M	2006627	35.54	Blanchard
May	5/14/2014	200373	Non-Hazardous Fill	AN550M	2006669	34.00	Blanchard
May	5/14/2014	200387	Non-Hazardous Fill	AN550M	2006577	35.36	Blanchard
May	5/14/2014	200381	Non-Hazardous Fill	AN550M	2006609	35.42	Blanchard
May	5/14/2014	200376	Non-Hazardous Fill	AN550M	2006636	37.02	Blanchard
May	5/14/2014	200371	Non-Hazardous Fill	AN869W	2006662	36.40	Blanchard

Table 4 - Soil/Fill Disposal Quantities Summary
1512 Boone Avenue, Bronx, NY

Month	Date Received	Manifest #	Material	Truck ID	Facility Ticket #	Tons	Dump Facility
May	5/14/2014	200385	Non-Hazardous Fill	AN869W	2006568	33.89	Blanchard
May	5/14/2014	200380	Non-Hazardous Fill	AN869W	2006605	36.90	Blanchard
May	5/14/2014	200378	Non-Hazardous Fill	AN869W	2006633	36.51	Blanchard
May	5/14/2014	200370	Non-Hazardous Fill	AP279K	2006666	36.34	Blanchard
May	5/14/2014	200384	Non-Hazardous Fill	AP279K	2006567	35.37	Blanchard
May	5/14/2014	200383	Non-Hazardous Fill	AP279K	2006604	38.39	Blanchard
May	5/14/2014	200377	Non-Hazardous Fill	AP279K	2006632	35.94	Blanchard
May	5/14/2014	200372	Non-Hazardous Fill	AP306X	2006665	36.58	Blanchard
May	5/14/2014	200386	Non-Hazardous Fill	AP306X	2006572	36.51	Blanchard
May	5/14/2014	200379	Non-Hazardous Fill	AP306X	2006607	37.21	Blanchard
May	5/14/2014	200375	Non-Hazardous Fill	AP306X	2006629	37.50	Blanchard
June	6/30/2014	209919	Non-Hazardous Fill	AN550M	1025173	33.40	Palmerton
June	6/30/2014	209916	Non-Hazardous Fill	AP639R	1025174	35.32	Palmerton
June	6/30/2014	209917	Non-Hazardous Fill	AP328G	1025175	35.25	Palmerton
June	6/30/2014	209918	Non-Hazardous Fill	AP638R	1025176	35.01	Palmerton
June	6/30/2014	209911	Non-Hazardous Fill	AP865P	1025178	32.09	Palmerton
June	6/30/2014	209914	Non-Hazardous Fill	AP690W	1025183	34.76	Palmerton
June	6/30/2014	209915	Non-Hazardous Fill	AP874P	1025184	33.63	Palmerton
June	6/30/2014	209912	Non-Hazardous Fill	AN843J	1025185	32.58	Palmerton
June	6/30/2014	209913	Non-Hazardous Fill	AR904C	1025189	34.13	Palmerton
June	6/30/2014	209910	Non-Hazardous Fill	AR903C	1025194	35.16	Palmerton
June	6/30/2014	209920	Non-Hazardous Fill	AP791H	1025195	35.17	Palmerton
GRAND TOTAL						11155.16	TONS

FIGURES



SITE LOCATION

Daniel Boone Playground



IMPACT ENVIRONMENTAL

170 KEYLAND COURT
BOHEMIA, NEW YORK 11716
TEL (631) 269-8800 FAX (631) 269-1599

1000 PAGE AVENUE
LYNDHURST, NEW JERSEY 07071

TITLE:

**SITE LOCATION
MAP**

SITE:

COMPASS RESIDENCES PHASE I

1512 BOONE AVENUE
BRONX, NY

DRAWING NO:

Figure 1

PROJECT NO. 5197-01-03-3002

DESIGNED BY:

BH

CHECKED BY: JR

DATE: 1/20/16

SCALE: 1" = 30'

NO.	REVISIONS	
	DATE	

NOTES:

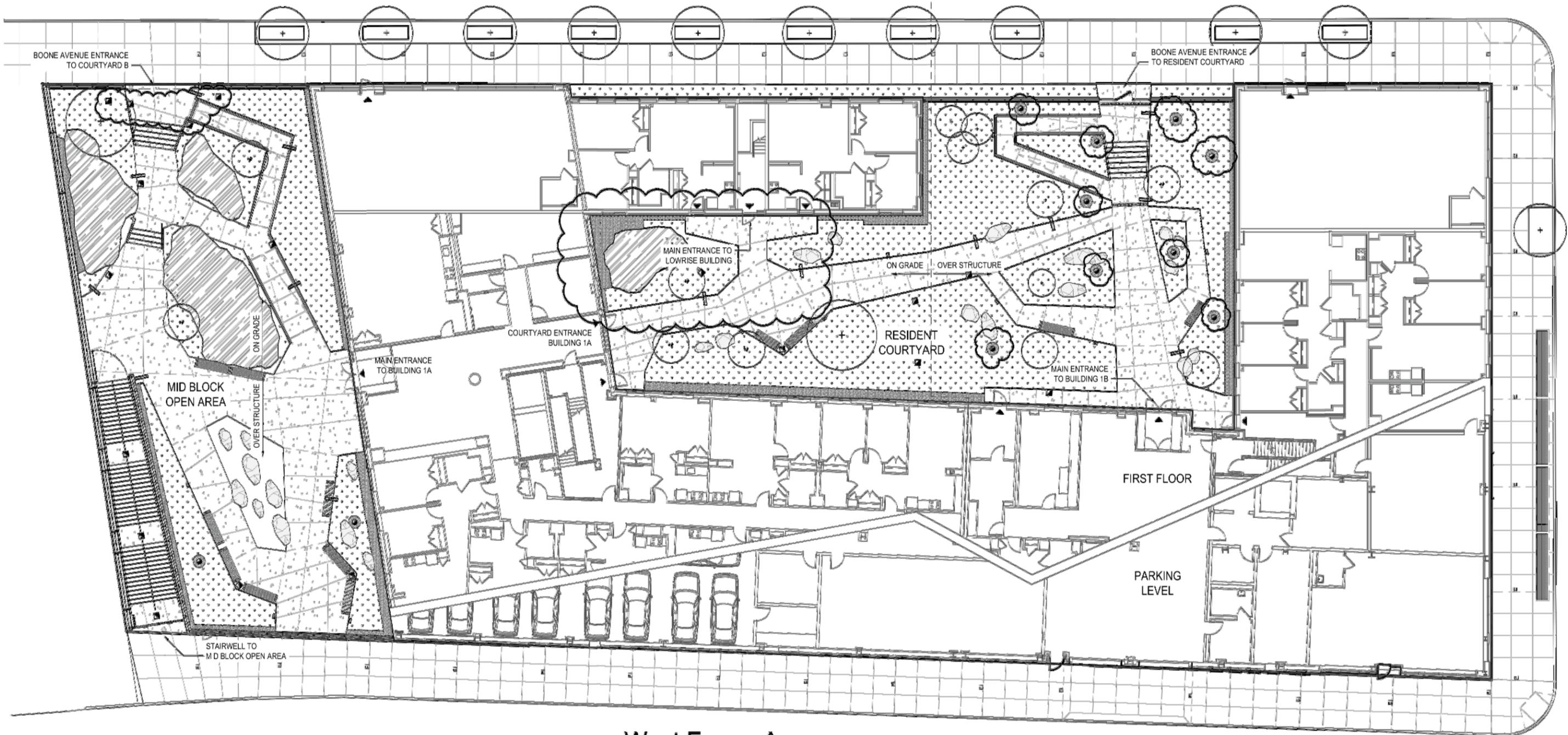
1. MAP PROVIDED BY THE NEW YORK CITY PLANNING ZONING AND LAND USE APPLICATION

LEGEND:



SITE LOCATION

Boone Avenue



West Farms Avenue

East 172nd Street



IMPACT ENVIRONMENTAL
 170 KEYLAND COURT
 BOHEMIA, NEW YORK 11716
 TEL (631) 269-8800 FAX (631) 269-1599
 1000 PAGE AVENUE
 LYNHURST, NEW JERSEY 07071

TITLE:
SITE MAP
(Redevelopment As-Built)

SITE:
 COMPASS RESIDENCES PHASE I
 1512 BOONE AVENUE
 BRONX, NY

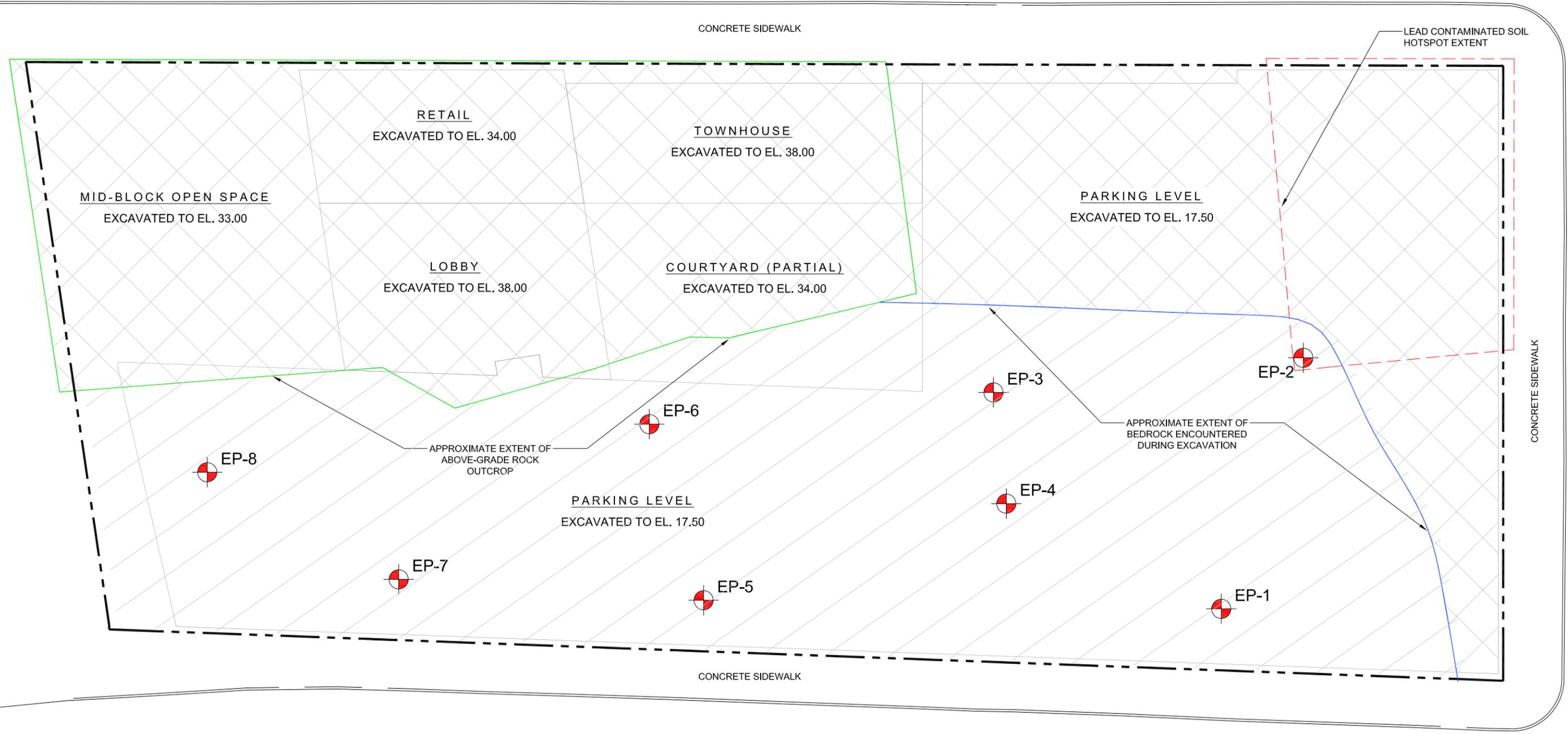
DRAWING NO:
Figure 2

PROJECT NO.	NO.	REVISIONS	
		DATE	
5197-01-03-3002			
DESIGNED BY:			
DRAWN BY: BH			
CHECKED BY: JR			
DATE: 1/20/16			
SCALE: 1" = 30'			

NOTES:
 1. Site map from DOB Plan Set, dated December 17, 2013.

LEGEND:

BOONE AVENUE



WEST FARMS ROAD



IMPACT ENVIRONMENTAL
 170 KEYLAND COURT
 BOHEMIA, NEW YORK 11716
 TEL (631) 269-8800 FAX (631) 269-1599
 1000 PAGE AVENUE
 LYNDHURST, NEW JERSEY 07071

TITLE:
**EXCAVATION
 &
 ENDPOINT SAMPLE
 LOCATION MAP**

SITE:
 COMPASS RESIDENCES PHASE I
 1512 BOONE AVENUE
 BRONX, NY

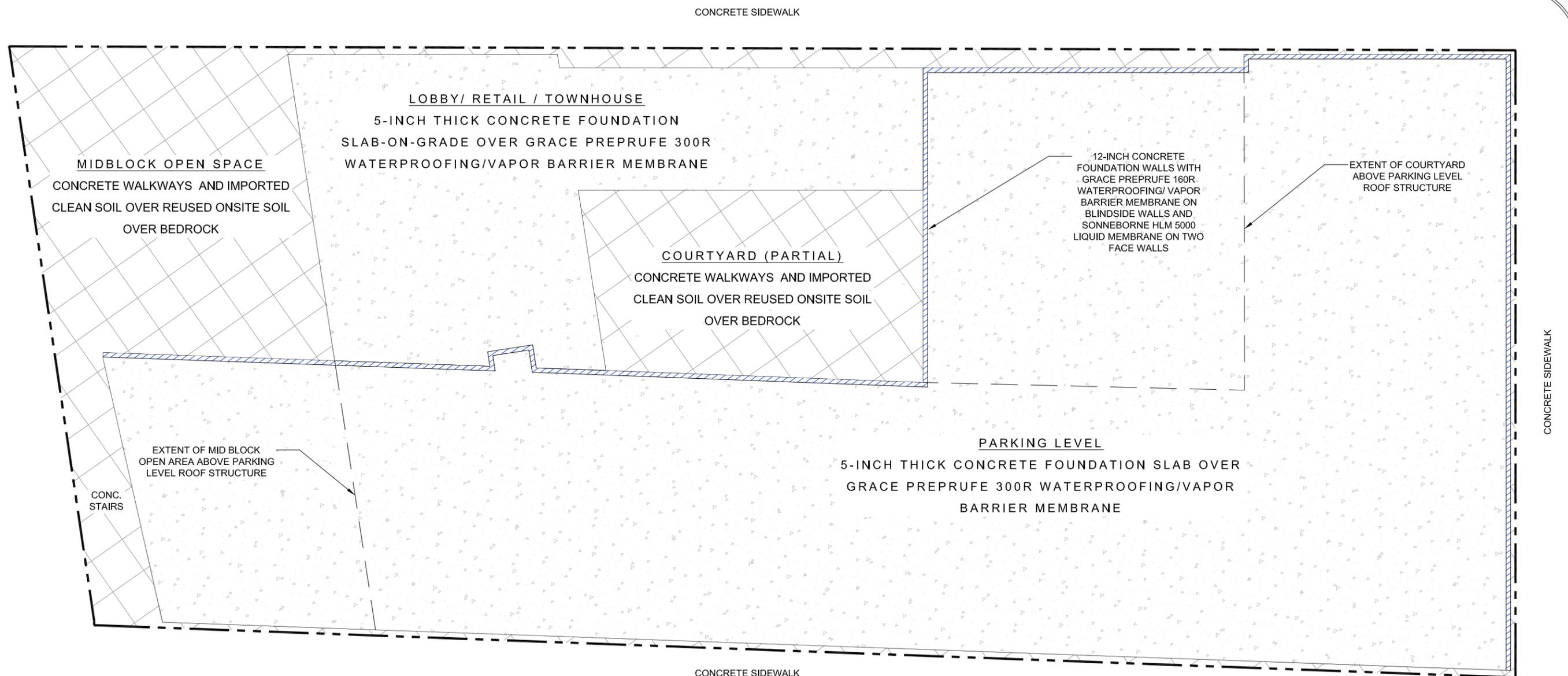
DRAWING NO: Figure 3		REVISIONS	
PROJECT NO:	5197-01-03-3002	NO:	DATE:
DESIGNED BY:			
DRAWN BY:	BH		
CHECKED BY:	JR		
DATE:	1/20/16		
SCALE:	NTS		

NOTES:
 1. Site map from DOB Plan Set, dated December 17, 2013.

LEGEND:	
	BOTTOM OF EXCAVATION TO BEDROCK. NO RESIDUAL SOILS REMAIN
	BOTTOM OF EXCAVATION TO SOIL. RESIDUAL SOILS REMAIN.
	EXTENT OF LEAD CONTAMINATED SOIL HOTSPOT
	EXTENT OF ABOVE GRADE ROCK OUTCROP
	APPROXIMATE EXTENT OF BEDROCK ENCOUNTERED DURING EXCAVATION
	BOTTOM OF EXCAVATION SOIL END POINT SAMPLE LOCATION



BOONE AVENUE



WEST FARMS ROAD



IMPACT ENVIRONMENTAL
 170 KEYLAND COURT
 BOHEMIA, NEW YORK 11716
 TEL (631) 269-8800 FAX (631) 269-1599
 1000 PAGE AVENUE
 LYNHURST, NEW JERSEY 07071

TITLE:
**EXCAVATION
 &
 ENDPOINT SAMPLE
 LOCATION MAP**

SITE:
 COMPASS RESIDENCES PHASE I
 1512 BOONE AVENUE
 BRONX, NY

DRAWING NO: Figure 3		REVISIONS	
PROJECT NO.	5197-01-03-3002	NO.	DATE:
DESIGNED BY:			
DRAWN BY:	BH		
CHECKED BY:	JR		
DATE:	1/20/16		
SCALE:	NTS		

NOTES:
 1. REFER TO RAR SECTION 5.0, APPENDIX A AND APPENDIX B FOR COMPOSITE COVER AND VAPOR BARRIER DETAILS.

LEGEND:	
	COURTYARD / OPEN AREA COVER CONSISTING OF CONCRETE WALKWAYS, ROCK OUTCROPS, IMPORTED CLEAN SOIL OVER REUSED SITE SOIL
	5-INCH BUILDING CONCRETE FOUNDATION SLAB OVER WATERPROOFING/ VAPOR BARRIER MEMBRANE
	12-INCH BUILDING CONCRETE FOUNDATION WALL SUB-GRADE SECTIONS WITH WATERPROOFING / VAPOR BARRIER MEMBRANE