235-237 KENT AVENUE

BROOKLYN, NEW YORK

Remedial Action Report

NYC VCP Number: 14CVCP231K

E-Designation Site Number: 14EHAZ314K

Prepared for:

112 Manhattan LLC

134 Broadway

Brooklyn, NY 11211

Prepared by:

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

1808 Middle Country Road

Ridge, NY 11961

SEPTEMBER 2015

REMEDIAL ACTION REPORT
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EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

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Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

LIST OF ACRONYMS

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

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CERTIFICATION

I, Ariel Czemerinski, certify:

- I am currently a registered professional engineer licensed by the State of New York.
- I performed professional engineering services and had primary direct responsibility for implementation of the remedial program for the redevelopment project located at 235-237 Kent Avenue, Brooklyn, NY, site number 14CVCP231K.
- 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; (2) are accurately reflected in the text and drawings for as-built design reported in this Remedial Action Report; and (3) will achieve the goal of the Remedial Action Work Plan to prevent soil vapor intrusion and provide protection of public health for the occupants of the building.
- The OER-approved Remedial Action Work Plan dated February 2014 and Stipulations in a letter dated January 15, 2014, were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

Name: Ariel Czemerinski

PE Licensee Number: 076508

Signature:

Date: 11/17/2015

I, Kevin Brussee, certify:

- I am a Qualified Environmental Professional.
- I had primary direct responsibility for implementation of the remedial program for the redevelopment project located at 235-237 Kent Avenue, Brooklyn, NY, site number 14CVCP231K.
- The OER-approved Remedial Action Work Plan dated February 2014 and Stipulations in a letter dated January 15, 2014, were implemented and that all requirements in those documents have been substantively complied with. I certify that contaminated soil, fill, liquids or other material from the property were taken to facilities licensed to accept this material in full compliance with applicable laws and regulations.

QEP Name: KEVIN BRUSSEE

QEP Signature:

Date: 11/18/2015

EXECUTIVE SUMMARY

Site Location and Prior Usage

The Site is located at 235-237 Kent Avenue in the Williamsburg section of Brooklyn, New York, and is identified as Block 2378 and Lots 1 and 2 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 4,856.6-square feet and is bounded by a new 4-story apartment building (Block 2378, Lot 3 - 233 Kent Avenue) to the north, a four story apartment building with 1st floor commercial space (Block 2378, Lot 44 - 245 Kent Avenue) to the south, Kent Avenue to the west, and a new 7-story apartment building (Block 2378 Lot 11 - 52 North 1st Street) and a three story multi-family walk up (Block 2378, Lot 38 - 45 Grand Street) to the east. A map of the site boundary is shown in Figure 2.

Lot 1 (237 Kent Avenue) is a slightly irregular shaped lot consisting of 25 feet of street frontage on Kent Avenue, a rear width of approximately 27.62 feet in the rear, and a length of approximately 101.5 feet on its longest side.

Lot 2 (235 Kent Avenue) is also slightly irregular, and consists of 25 feet of street frontage on Kent Avenue, a rear width of approximately 22.5 feet in the rear, and a length of approximately 95.5 feet.

Prior to redevelopment, the Site lots were developed with two one-story manufacturing buildings that had been converted to and utilized as residential space.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site consisted of a 4-story mixed use building (Lot 1) with a full cellar and a concrete capped rear yard, and 4-story mixed use building with a penthouse level, a cellar, and a concrete capped rear yard. The current zoning designation of Lot 1 is M1-2/R6B, and the current zoning designation of Lot 2 is M1-2/R6AM1-2/R6B. The proposed use is consistent with existing zoning for the property.

The frame of the prior one-story manufacturing buildings remains, but the rear 25 feet of each building's ceiling was removed to create at-grade rear court yards. Three additional levels (and

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Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

penthouse) were constructed above each building, and excavation below each building was conducted to expand the prior small cellars in the front of the lots to the rear of the buildings.

Lot 1 (237 Kent Avenue) has 954.57 ft^2 of retail space on the first floor, and an additional 694.55 ft^2 of retail storage space in the cellar. The cellar also consists of the utility/meter room, and open cellar space which has been connected to a small apartment space on the first floor by a spiral stair case. Two window wells on the rear facade of the building provide light to the cellar level residential space. The second, third and fourth floors each consist of two one-bedroom apartments.

Lot 2 (235 Kent Avenue) has 640.29 ft^2 of residential space and 951.04 ft^2 of retail space on the first floor, and an additional 694.55 ft^2 of retail storage space in the cellar. The cellar also consists of the utility/meter room, and open cellar space which is connected to a small apartment space on the first floor by a spiral stair case. Two window wells on the rear facade of the building provides light to the cellar level residential space. The second, third and fourth floors each consist of two one-bedroom apartments, and the penthouse provides additional space to one of the 4th floor apartments.

Soil was removed to a depth of approximately 2 feet below grade to construct the concrete capped rear courtyards behind both buildings.

The slab of the new cellars are installed at a depth of approximately 9 feet below grade which required excavation to approximately 10.5 feet for footings and installation of the SSD system. Assuming an average excavation depth of approximately 10.5 ft across the front 75% of the Lot (2,750-ft^2, taking into account the existing cellars), a total of approximately 1,000 yd^3 (1,500 tons) of soil required removal for the cellar expansions. Layout of the proposed site development is presented in Figure 3.

Summary of Past Uses of Site and Environmental Findings

EBC reviewed Sanborn maps and City Directory Listings, and established a history for both Lot 1 and Lot 2 dating back to 1888. From 1888 to at least 1918, both lots were used as retail stores. 235 Kent Avenue (Lot 2) continued to be used as a retail store through 1935, but 237 Kent Avenue (Lot 1) was vacant on the Sanborn Map. By 1965, 235 Kent Avenue (Lot 2) operated as

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Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

a waste company and printing press under the name "Jay Wool Waste Co." and 237 Kent Avenue (Lot 1) operated as a trucking company. The use of 235 Kent Avenue (Lot 2) changed by 1970 into a 55-gallon drum (plastic, steel, and fiber glass) recycling company and was listed in the City Directory as recently as 2012. 237 Kent Avenue (Lot 1) changed to an auto repair service company ("King Collision") by 1995 and continued until 2000. In the 2000's, the interior of both buildings were converted into use as apartments.

A Phase I was competed by Alpha-Hydro Environmental Services (AHES) in April 2013. AHES identified the following recognized environmental conditions:

- Historic site operation as a waste and printing press facility (235 Kent Avenue) and as an auto repair shop (237 Kent Avenue).

- The presence of NYSDEC VCP Site 150 feet northeast (230 Kent Avenue) of the Site. The NYSDEC VCP site was investigated and the results indicate that soil and groundwater contamination is present beneath the site and has migrated to adjoining properties.

The AOCs identified for this Site include:

1. Historic fill layer is present at the Site from grade to depths at least 10 feet below grade.

Summary of Environmental Findings

1. Elevation of the property is approximately 21 feet.
2. Depth to groundwater at the Site is approximately 20 feet.
3. Depth to bedrock is at the Site is greater than 100 feet.
4. The stratigraphy of the Site, from the surface down, consists of 8 to 10 feet of historic fill in front portion of property and 3 to 4 feet in rear portion of property, underlain by a native fine brown sand.
5. Analytical results were compared to NYSDEC 6NYCRR Part 375-6.8 Unrestricted Use Soil Cleanup Objectives (SCOs) and Restricted Residential Use SCOs. The RI showed no pesticides or PCBs at a detectable concentration. VOCs, including acetone (110 µg/Kg), naphthalene (400 µg/Kg), tetrachloroethylene (820 µg/Kg), and trichloroethylene (1,400 µg/Kg) were detected in one or more soil samples. Of these, acetone and

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Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

trichloroethylene exceeded Unrestricted Use SCOs in one soil sample each. No VOCs exceeded Restricted Residential Use SCOs. Several SVOCs were detected in soil and nine SVOCs including benz(a)anthracene (maximum of 55,000 µg/Kg), benzo(a)pyrene (maximum of 49,000 µg/Kg), benzo(b)-fluoranthene (maximum of 63,000 µg/Kg), benzo(k)fluoranthene (maximum of 14,000 µg/Kg), chrysene (maximum of 53,000 µg/Kg), dibenz(a,h)-anthracene (maximum of 10,000 µg/Kg), fluoranthene (maximum of 140,000 µg/Kg), indeno(1,2,3-cd)pyrene (maximum of 27,000 µg/Kg), phenanthrene (maximum of 140,000 µg/Kg), and pyrene (maximum of 120,000 µg/Kg) were detected above Restricted Residential Use SCOs within the soil samples collected from the urban fill layer. Six metals, including arsenic (maximum of 21.5 mg/Kg), barium (maximum of 2,830 mg/Kg), cadmium (maximum 30 mg/Kg), copper (maximum of 514 mg/Kg), lead (maximum of 4,430 mg/Kg, detected at 8 feet depths), and mercury (maximum of 1.99 mg/Kg) were detected above Restricted Residential Use SCOs within the soil samples collected from the urban fill layer. An additional two metals (chromium and zinc) were also detected above Unrestricted Use SCOs within soil samples collected from the urban fill layer. The maximum SVOC concentrations listed above were detected in the shallow soil samples collected at soil boring locations B3 and B6, and the highest lead concentration was identified in soil boring location B2, indicating hot-spot locations.

6. Groundwater samples were compared to the New York State 6NYCRR Part 703.5 Class GA Groundwater Quality Standards (GQS). Groundwater samples collected during the RI found no detectable concentrations of pesticides or PCBs. VOCs, including acetone (maximum of 2.8 µg/L), chloromethane (maximum of 1.2 µg/L), trichloroethylene (maximum of 0.76 µg/L), and tetrachloroethylene (maximum of 0.33 µg/L) were detected in both groundwater samples, well below their respective GQS. Two SVOCs were detected above GQS and include benzo(a)anthracene (maximum of 0.04 µg/L) and chrysene (0.02 µg/L). No other SVOCs were detected in the groundwater samples. Dissolved (filtered) metals present in groundwater at levels above GQS include iron and sodium.
7. Soil vapor samples collected during the RI indicated petroleum related compounds at low concentrations and chlorinated VOCs at relatively moderate concentrations. Most compounds were detected at concentrations less than 20 µg/m^3. Overall the highest

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reported concentrations were for ethanol (maximum of 86 µg/m^3). Petroleum-related VOCs (BTEX) were detected at a maximum concentration of 85 µg/m^3. Chlorinated VOCs, including trichloroethylene was detected at a concentration ranging from 5.96 to 213 µg/m^3, tetrachloroethylene ranged from 5.62 to 36.2 µg/m^3, carbon tetrachloride was detected at a maximum concentration of 1.36 µg/m^3, and 1,1,1-trichloethylene (TCA) was detected at a maximum concentration of 19.4 µg/m^3 in both sub-slab soil gas and two of the three soil vapor samples. The TCE concentrations were above the monitoring level ranges established within the NYSDOH Final Guidance on Soil Vapor Intrusion and recommend mitigation. The PCE, carbon tetrachloride and TCA concentrations were below the monitoring level ranges established within the NYSDOH Final Guidance on Soil Vapor Intrusion.

Summary of the Remedy

A Pre-Application Meeting was held on January 24, 2012. A Remedial Investigation (RI) was performed between November 2013 and January 2014 and a RI Report dated February 2014 was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established and a RAWP dated February 2014 was prepared and released with a Fact Sheet on February 12, 2014, for a 30-day public comment period. The RAWP with a Stipulation List dated January 15, 2014, was approved by the New York City Office of Environmental Remediation (OER) on April 4, 2014. A pre-construction meeting was held on April 24, 2014, and remedial action began in June of 2014 and completed in August of 2015.

The following remedial action activities were performed:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan;
2. Performed four delineation soil borings around Remedial Investigation soil sample B5(0-2) to collect horizontal and vertical delineation soil samples for laboratory analysis of VOCs;
3. Mobilized site security, equipment, utility mark outs and marking & staking excavation areas;

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4. Implemented of storm-water pollution prevention measures in compliance with applicable laws and regulations;
5. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds during soil disturbance activities;
6. Established Track 4 Site-Specific Soil Cleanup Objectives (SCOs). Collected and analyzed end-point samples to determine the performance of the remedy with respect to attainment of Track 4 Site-Specific SCOs. Excavated soil/fill in excess of Track 4 Site-Specific SCOs from within building footprint and rear yard. Excavated 1,354.10 tons for disposal at Cumberland County Landfill, and excavated 80.45 tons for disposal at Clean Earth of New Castle;
7. Screened excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;
8. Installed and operating an active sub-slab depressurization system equipped with a blower, a manometer to measure system pressure, and an alarm. The SSDS installed beneath the basement slab of each building (total of 1,625 sf) consists of a continuous loop of perforated 4-inch HDPE smooth interior pipe fitted with a filter sock and installed within the 4" layer of virgin mined stone installed below the concrete building slab. Both loops connect to a 6-inch schedule 40 pvc riser pipe that extends to the roof to discharge. A blower (Radonaway model No. RP265) is fitted to the top of the 6-inch PVC discharge pipe at the roof level. The system is hardwired to an electric source. The exhaust from the blower is located a minimum of 10 feet from windows and ventilation inlets. A Dwyer 0-5 inches of water manometer and a Radonaway alarm is installed immediately below the SSDS blower within the roof access stairwell. This active SSDS is a permanent engineering control and will be inspected at a defined frequency under an OER-approved long-term Site Management Plan by a QEP. QEP will submit Inspection and Certification Reports on system function to OER. In addition, monthly inspections will be performed by building superintendent staff of the operation of blowers, integrity of couplings and seals in the SSDS chase piping, and vacuum readings in the manometer. QEP will establish a checklist for monthly inspections by building superintendent staff. These checklists will be maintained in a file onsite for inspection by OER and QEP and will be reported in QEP's periodic Inspection and Certification Report.

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9. Installed a vapor barrier system beneath the building slab of each building. The vapor barrier consists of Raven Industries' VaporBlock Plus 20, a seven-layer co-extruded 20 mil vapor barrier made from polyethylene and EVOH resins. The vapor barrier extends throughout the area occupied by the footprint of the cellar. All vapor barrier seams, penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions. The vapor barrier system is a permanent engineering control.
10. Constructed an engineered composite cover consisting of each building's 6 inch concrete slab and 4 inch thick rear courtyard concrete slab to prevent human exposure to residual soil/fill remaining under the Site;
11. Imported of materials to be used for backfill in compliance with this plan and in accordance with applicable laws and regulations;
12. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
13. Submitted a RAR that: certifies that the remedial requirements have been achieved; defines the Site boundaries: describes all Engineering and Institutional Controls applicable to the Site; includes a Site Management Plan; and describes the remedial activities including any changes from the RAWP;
14. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of soil and soil vapor, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency; and
15. Continued registration of the property as an E-Designated property at the NYC Department of Buildings.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
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Fax 631.924.2870

REMEDIAL ACTION REPORT

1.0 SITE BACKGROUND

112 Manhattan LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a property located at 235-237 Kent Avenue in Williamsburg section of Brooklyn, New York. The boundary of the property subject to this Remedial Action is shown in Figure 1 and includes, in their entirety, Brooklyn, Block 2378 and Lots 1 and 2. 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 Prior Usage

The Site is located at 235-237 Kent Avenue in the Williamsburg section of Brooklyn, New York, and is identified as Block 2378 and Lots 1 and 2 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 4,856.6-square feet and is bounded by a new 4-story apartment building (Block 2378, Lot 3 - 233 Kent Avenue) to the north, a four story apartment building with 1st floor commercial space (Block 2378, Lot 44 - 245 Kent Avenue) to the south, Kent Avenue to the west, and a new 7-story apartment building (Block 2378 Lot 11 - 52 North 1st Street) and a three story multi-family walk up (Block 2378, Lot 38 - 45 Grand Street) to the east. A map of the site boundary is shown in Figure 2.

Lot 1 (237 Kent Avenue) is a slightly irregular shaped lot consisting of 25 feet of street frontage on Kent Avenue, a rear width of approximately 27.62 feet in the rear, and a length of approximately 101.5 feet on its longest side.

Lot 2 (235 Kent Avenue) is also slightly irregular, and consists of 25 feet of street frontage on Kent Avenue, a rear width of approximately 22.5 feet in the rear, and a length of approximately 95.5 feet.

Prior to redevelopment, the Site lots were developed with two one-story manufacturing buildings that had been converted to and utilized as residential space.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

1.2 Proposed Redevelopment Plan

The proposed future use of the Site consisted of a 4-story mixed use building (Lot 1) with a full cellar and a concrete capped rear yard, and 4-story mixed use building with a penthouse level, a cellar, and a concrete capped rear yard. The current zoning designation of Lot 1 is M1-2/R6B, and the current zoning designation of Lot 2 is M1-2/R6AM1-2/R6B. The proposed use is consistent with existing zoning for the property.

The frame of the prior one-story manufacturing buildings remains, but the rear 25 feet of each building's ceiling was removed to create at-grade rear court yards. Three additional levels (and penthouse) were constructed above each building, and excavation below each building was conducted to expand the prior small cellars in the front of the lots to the rear of the buildings.

Lot 1 (237 Kent Avenue) has 954.57 ft^2 of retail space on the first floor, and an additional 694.55 ft^2 of retail storage space in the cellar. The cellar also consists of the utility/meter room, and open cellar space which has been connected to a small apartment space on the first floor by a spiral stair case. Two window wells on the rear facade of the building provide light to the cellar level residential space. The second, third and fourth floors each consist of two one-bedroom apartments.

Lot 2 (235 Kent Avenue) has 640.29 ft^2 of residential space and 951.04 ft^2 of retail space on the first floor, and an additional 694.55 ft^2 of retail storage space in the cellar. The cellar also consists of the utility/meter room, and open cellar space which is connected to a small apartment space on the first floor by a spiral stair case. Two window wells on the rear facade of the building provides light to the cellar level residential space. The second, third and fourth floors each consist of two one-bedroom apartments, and the penthouse provides additional space to one of the 4th floor apartments.

Soil was removed to a depth of approximately 2 feet below grade to construct the concrete capped rear courtyards behind both buildings.

The slab of the new cellars are installed at a depth of approximately 9 feet below grade which required excavation to approximately 10.5 feet for footings and installation of the SSD system. Assuming an average excavation depth of approximately 10.5 ft across the front 75% of the Lot

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Fax 631.924.2870

(2,750-ft^2, taking into account the existing cellars), a total of approximately 1,000 yd^3 (1,500 tons) of soil required removal for the cellar expansions. Layout of the proposed site development is presented in Figure 3.

1.3 Description of Surrounding Property

The area surrounding the Site consists of a mix of residential, commercial and manufacturing buildings. Figure 4 shows the surrounding land usage of the adjacent properties listed below as well as additional properties located up to 500 feet away from the Site. No hospitals, schools or daycare facilities are located within a 250 ft radius of the Site.

Surrounding Property Usage

Direction	Property Description
North – Adjacent Property	Block 2378, Lot 3 233 Kent Avenue – Developed with a new four story condo building.
South – Adjacent Property	Block 2378, Lot 44 245 Kent Avenue – Developed with a 4-story mixed use building (1st floor commercial space and apartments above).
East – Adjacent Properties	Block 2378, Lot 11 52 North 1st Street – Developed with a 7-story apartment building. Block 2378, Lot 38 45 Grand Street – Developed with a 3-story multi-family walk-up.
West – Opposite side of Kent Ave	Block 2377, Lot 12 234 Kent Avenue – Recently renovated 4-story industrial manufacturing building.

1.4 Remedial Investigation

A remedial investigation was performed and the results are documented in a document called "*Remedial Investigation Report, 235-237 Kent Avenue*", dated February 2014 (RIR).

Summary of Past Uses of Site and Areas of Concern

EBC reviewed Sanborn maps and City Directory Listings, and established a history for both Lot 1 and Lot 2 dating back to 1888. From 1888 to at least 1918, both lots were used as retail stores. 235 Kent Avenue (Lot 2) continued to be used as a retail store through 1935, but 237 Kent Avenue (Lot 1) was vacant on the Sanborn Map. By 1965, 235 Kent Avenue (Lot 2) operated as a waste company and printing press under the name "Jay Wool Waste Co." and 237 Kent Avenue (Lot 1) operated as a trucking company. The use of 235 Kent Avenue (Lot 2) changed

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by 1970 into a 55-gallon drum (plastic, steel, and fiber glass) recycling company and was listed in the 'City Directory as recently as 2012. 237 Kent Avenue (Lot 1) changed to an auto repair service company ("King Collision") by 1995 and continued until 2000. In the 2000's, the interior of both buildings were converted into use as apartments.

A Phase I was competed by Alpha-Hydro Environmental Services (AHES) in April 2013. AHES identified the following recognized environmental conditions:

- Historic site operation as a waste and printing press facility (235 Kent Avenue) and as an auto repair shop (237 Kent Avenue).

- The presence of NYSDEC VCP Site 150 feet northeast (230 Kent Avenue) of the Site. The NYSDEC VCP site was investigated and the results indicate that soil and groundwater contamination is present beneath the site and has migrated to adjoining properties.

The AOCs identified for this Site include:

1. Historic fill layer is present at the Site from grade to depths at least 10 feet below grade.

Summary of the Work Performed under the Remedial Investigation

1. Conducted a Site inspection to identify AOCs and physical obstructions (i.e. structures, buildings, etc.);
2. Installed six soil borings across the entire project Site, and collected ten soil samples and one duplicate soil sample for chemical analysis from the soil borings to evaluate soil quality;
3. Installed two groundwater monitoring wells and collected two groundwater samples and one duplicate sample to evaluate groundwater quality; and
4. Installed five soil vapor probes across the Site and collected five samples for chemical analysis.

Summary of Environmental Findings

1. Elevation of the property is approximately 21 feet.
2. Depth to groundwater at the Site is approximately 20 feet.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

3. Depth to bedrock is at the Site is greater than 100 feet.
4. The stratigraphy of the Site, from the surface down, consists of 8 to 10 feet of historic fill in front portion of property and 3 to 4 feet in rear portion of property, underlain by a native fine brown sand.
5. Analytical results were compared to NYSDEC 6NYCRR Part 375-6.8 Unrestricted Use Soil Cleanup Objectives (SCOs) and Restricted Residential Use SCOs. The RI showed no pesticides or PCBs at a detectable concentration. VOCs, including acetone (110 µg/Kg), naphthalene (400 µg/Kg), tetrachloroethylene (820 µg/Kg), and trichloroethylene (1,400 µg/Kg) were detected in one or more soil samples. Of these, acetone and trichloroethylene exceeded Unrestricted Use SCOs in one soil sample each. No VOCs exceeded Restricted Residential Use SCOs. Several SVOCs were detected in soil and nine SVOCs including benz(a)anthracene (maximum of 55,000 µg/Kg), benzo(a)pyrene (maximum of 49,000 µg/Kg), benzo(b)-fluoranthene (maximum of 63,000 µg/Kg), benzo(k)fluoranthene (maximum of 14,000 µg/Kg), chrysene (maximum of 53,000 µg/Kg), dibenz(a,h)-anthracene (maximum of 10,000 µg/Kg), fluoranthene (maximum of 140,000 µg/Kg), indeno(1,2,3-cd)pyrene (maximum of 27,000 µg/Kg), phenanthrene (maximum of 140,000 µg/Kg), and pyrene (maximum of 120,000 µg/Kg) were detected above Restricted Residential Use SCOs within the soil samples collected from the urban fill layer. Six metals, including arsenic (maximum of 21.5 mg/Kg), barium (maximum of 2,830 mg/Kg), cadmium (maximum 30 mg/Kg), copper (maximum of 514 mg/Kg), lead (maximum of 4,430 mg/Kg, detected at 8 feet depths), and mercury (maximum of 1.99 mg/Kg) were detected above Restricted Residential Use SCOs within the soil samples collected from the urban fill layer. An additional two metals (chromium and zinc) were also detected above Unrestricted Use SCOs within soil samples collected from the urban fill layer. The maximum SVOC concentrations listed above were detected in the shallow soil samples collected at soil boring locations B3 and B6, and the highest lead concentration was identified in soil boring location B2, indicating hot-spot locations.
6. Groundwater samples were compared to the New York State 6NYCRR Part 703.5 Class GA Groundwater Quality Standards (GQS). Groundwater samples collected during the RI found no detectable concentrations of pesticides or PCBs. VOCs, including acetone (maximum of 2.8 µg/L), chloromethane (maximum of 1.2 µg/L), trichloroethylene

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(maximum of 0.76 µg/L), and tetrachloroethylene (maximum of 0.33 µg/L) were detected in both groundwater samples, well below their respective GQS. Two SVOCs were detected above GQS and include benzo(a)anthracene (maximum of 0.04 µg/L) and chrysene (0.02 µg/L). No other SVOCs were detected in the groundwater samples. Dissolved (filtered) metals present in groundwater at levels above GQS include iron and sodium.

7. Soil vapor samples collected during the RI indicated petroleum related compounds at low concentrations and chlorinated VOCs at relatively moderate concentrations. Most compounds were detected at concentrations less than 20 µg/m^3. Overall the highest reported concentrations were for ethanol (maximum of 86 µg/m^3). Petroleum-related VOCs (BTEX) were detected at a maximum concentration of 85 µg/m^3. Chlorinated VOCs, including trichloroethylene was detected at a concentration ranging from 5.96 to 213 µg/m^3, tetrachloroethylene ranged from 5.62 to 36.2 µg/m^3, carbon tetrachloride was detected at a maximum concentration of 1.36 µg/m^3, and 1,1,1-trichloethylene (TCA) was detected at a maximum concentration of 19.4 µg/m^3 in both sub-slab soil gas and two of the three soil vapor samples. The TCE concentrations were above the monitoring level ranges established within the NYSDOH Final Guidance on Soil Vapor Intrusion and recommend mitigation. The PCE, carbon tetrachloride and TCA concentrations were below the monitoring level ranges established within the NYSDOH Final Guidance on Soil Vapor Intrusion.

For more detailed results, consult the RIR. Based on an evaluation of the data and information from the RIR and this RAWP, disposal of significant amounts of hazardous waste is not suspected at this Site.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

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 Pre-Application Meeting was held on January 24, 2012. A Remedial Investigation (RI) was performed between November 2013 and January 2014 and a RI Report dated February 2014 was prepared to evaluate data and information necessary to develop a Remedial Action Work Plan (RAWP). A Site Contact List was established and a RAWP dated February 2014 was prepared and released with a Fact Sheet on February 12, 2014, for a 30-day public comment period. The RAWP with a Stipulation List dated January 15, 2014, was approved by the New York City Office of Environmental Remediation (OER) on April 4, 2014. A pre-construction meeting was held on April 24, 2014, and remedial action began in June of 2014 and completed in August of 2015.

The following remedial action activities were performed:

1. Prepared a Community Protection Statement and implemented a Citizen Participation Plan;
2. Performed four delineation soil borings around Remedial Investigation soil sample B5(0-2) to collect horizontal and vertical delineation soil samples for laboratory analysis of VOCs;
3. Mobilized site security, equipment, utility mark outs and marking & staking excavation areas;
4. Implemented of storm-water pollution prevention measures in compliance with applicable laws and regulations;
5. Performed a Community Air Monitoring Program for particulates and volatile organic carbon compounds during soil disturbance activities;

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6. Established Track 4 Site-Specific Soil Cleanup Objectives (SCOs). Collected and analyzed end-point samples to determine the performance of the remedy with respect to attainment of Track 4 Site-Specific SCOs. Excavated soil/fill in excess of Track 4 Site-Specific SCOs from within building footprint and rear yard. Excavated 1,354.10 tons for disposal at –Cumberland County Landfill, and excavated 80.45 tons for disposal at Clean Earth of New Castle;
7. Screened excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID;
8. Installed and operating an active sub-slab depressurization system equipped with a blower, a manometer to measure system pressure, and an alarm. The SSDS installed beneath the basement slab of each building (total of 1,625 sf) consists of a continuous loop of perforated 4-inch HDPE smooth interior pipe fitted with a filter sock and installed within the 4" layer of virgin mined stone installed below the concrete building slab. Both loops connect to a 6-inch schedule 40 pvc riser pipe that extends to the roof to discharge. A blower (Radonaway model No. RP265) is fitted to the top of the 6-inch PVC discharge pipe at the roof level. The system is hardwired to an electric source. The exhaust from the blower is located a minimum of 10 feet from windows and ventilation inlets. A Dwyer 0-5 inches of water manometer and a Radonaway alarm is installed immediately below the SSDS blower within the roof access stairwell. This active SSDS is a permanent engineering control and will be inspected at a defined frequency under an OER-approved long-term Site Management Plan by a QEP. QEP will submit Inspection and Certification Reports on system function to OER. In addition, monthly inspections will be performed by building superintendent staff of the operation of blowers, integrity of couplings and seals in the SSDS chase piping, and vacuum readings in the manometer. QEP will establish a checklist for monthly inspections by building superintendent staff. These checklists will be maintained in a file onsite for inspection by OER and QEP and will be reported in QEP's periodic Inspection and Certification Report.
9. Installed a vapor barrier system beneath the building slab of each building. The vapor barrier consists of Raven Industries' VaporBlock Plus 20, a seven-layer co-extruded 20 mil vapor barrier made from polyethylene and EVOH resins. The vapor barrier extends throughout the area occupied by the footprint of the cellar. All vapor barrier seams,

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Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions.The vapor barrier system is a permanent engineering control.

10. Constructed an engineered composite cover consisting of each building's 6 inch concrete slab and 4 inch thick rear courtyard concrete slab to prevent human exposure to residual soil/fill remaining under the Site;
11. Imported of materials to be used for backfill in compliance with this plan and in accordance with applicable laws and regulations;
12. Performed all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
13. Submitted a RAR that: certifies that the remedial requirements have been achieved; defines the Site boundaries: describes all Engineering and Institutional Controls applicable to the Site; includes a Site Management Plan; and describes the remedial activities including any changes from the RAWP;
14. Submission of an approved Site Management Plan (SMP) in the RAR for long-term management of soil and soil vapor, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency; and
15. Continued registration of the property as an E-Designated property at the NYC Department of Buildings.

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

Contaminant	**Track 4 Site Specific SCOs**
Total SVOCs	250 ppm
Lead	1,200 ppm
Mercury	2.5 ppm
Barium	800 ppm

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

3.0 COMPLIANCE WITH REMEDIAL ACTION WORK PLAN

3.1 Construction Health & Safety Plan (CHASP)

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

3.2 Community Air Monitoring Plan (CAMP)

CAMP was not provided. The excavation work was conducted within the existing buildings.

3.3 Soil/Materials Management Plan

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

3.4 Storm-Water Pollution Prevention

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

3.5 Deviations From the Remedial Action Work Plan

- Due to the type of construction (underpinning of existing walls), the vapor barrier could not be installed behind the foundation walls. However, the vapor barrier was installed below the cellar slab of both buildings, and an active sub-slab depressurization system was installed below the vapor barrier to vent any accumulated vapors to the roof.
- Work was performed within the building. Therefore, community air monitoring was not performed.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

4.0 REMEDIAL PROGRAM

4.1 Project Organization

The PE responsible for implementation of the remedial action for this project was Ariel Czemerinski P.E., AMC Engineering. On-Site air monitoring in accordance with the CHASP and CAMP, soil screening and soil sampling was performed by either Kevin Waters, Sunny Chen, or Patrick Recio of EBC. The Qualified Environmental Professional which implemented the remedial action was Kevin Brussee, Project Manager-EBC.

The excavation and foundation contractor was A&L Construction Corp., and the developer was CNS Builders, LLC.

4.2 Site Controls

Site Preparation

Plans for the building alteration for 237 Kent Avenue (NYC DOB Job number A1-320880640) were approved on April 7, 2014, and plans for the building alteration for 235 Kent Avenue (NYC DOB Job number A1-320880622) were approved in May 15, 2014. Waste characterization soil sampling was performed on April 8, 2014, prior to mobilization to obtain soil disposal approval and to minimize the need for on-Site soil stockpiles. On June 2, 2014, equipment was mobilized to the Site to begin excavation of on-Site soil.

Soil Screening

All intrusive soil excavation activities were overseen by an EBC qualified environmental professional (QEP). In addition to extensive sampling and chemical testing of soils on the Site, excavated soil was screened continuously using hand-held instruments, by sight, and by smell to ensure proper material handling and management, and community protection. Work at the Site commenced with the removal of the at-grade building slab of both the 235 Kent Avenue and 237 Kent Avenue building slabs. Soil consisting of historic fill was then excavated for the first 70 feet of the Site to a depth of approximately 9 feet below grade. Clean native soil was encountered just at the bottom of the excavation of both buildings. No physical or olfactory evidence of a spill was observed during Site excavation.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

Stockpile Management

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

Truck Inspection

Due to the small size of the Site, trucks or 20 cubic yard roll-off containers were staged on the concrete sidewalk or in the street and directly loaded with soil. Before exiting the Site, trucks were examined for evidence of contaminated soil on the undercarriage, body, and wheels. All soil/debris that fell on the sidewalk during loading was removed utilizing brooms or shovels.

Site Security

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

Nuisance Controls

No petroleum or other odors were detected during soil screening and no complaints were reported. Dust was minimized by excavating and live-loading directly into trucks, and covering stockpiles with 6-mil poly sheeting overnight during off-work hours.

Reporting

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

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

4.3 VOC Delineation Soil Sampling

In accordance with the Stipulation List (EBC, January 15, 2014), EBC performed four soil borings around Remedial Investigation soil boring B5(0-2) to collect horizontal and vertical soil delineation soil samples. One soil boring was performed approximately 4 feet north of B5, one soil boring was performed approximately 4 feet south of B5, one soil boring was performed

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

approximately 4 feet east of B5, and one soil boring was performed in the same approximate area of B5. Each of the soil borings were performed utilizing an AMS dual purpose soil recovery probe with disposable plastic liners. From the north, south and east soil boring locations, the probe was driven to a depth of 2 feet below grade utilizing a slap hammer. A soil sample was collected from each of the locations from the interval 0-1 feet below the cellar floor. The soil boring performed in the same approximate location of B5 was performed to a depth of approximately 4 feet to retain a soil sample from the interval 2 to 4 feet below the cellar floor. The location of each of the delineation soil samples is shown on Figure 6. Dedicated disposable sampling equipment was utilized to collect each delineation soil sample, eliminating the need for field equipment (rinsate) blanks.

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

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

- Volatile organic compounds by EPA Method 8260

A copy of the laboratory report is attached in Appendix F. A tabular summary of the delineation soil sample results is included on Table 1 (VOCs). No VOCs were detected above Unrestricted Use SCOs, but the chlorinated VOCs tetrachloroethylene (maximum of 9.2 ppb) and trichloroethylene (maximum of 11 ppb) were detected at low concentrations. Based on the low concentrations detected within the soil samples, the area was not designated as a hot-spot that required excavation and off-Site disposal.

4.4 Materials Excavation and Removal

Historic Fill was encountered across the Site from grade to a depth of at approximately 9 feet. Excavation and removal of the soil to a depth of approximately 9 feet across the first 75 feet of

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

the Site was completed from July to September of 2014. Additional excavation of the rear yard area was performed in April 2015 to remove an SVOC and metals hot-spot noted during the Remedial Investigation in soil sample B6(0-2). Excavation of 6 inches to 1 foot was performed in the rear yard areas and portions of the cellar areas in May of 2015 to address Track 4 Site-Specific SCO exceedances detected within several of the endpoint soil samples. A total of 1,354.1 tons of soil was removed and transported to Cumberland County Landfill from the two areas excavated for cellars, and approximately 80.45 tons of soil was removed and transported to Clean Earth of New Castle from the rear yards and portions of the cellar areas. A map showing the location where excavations were performed is shown in Figure 5. No material was reused on-Site.

End Point Sample Results

Following excavation for each building's cellar, EBC collected endpoint soil samples EP1 through EP5. An additional two endpoint soil samples were collected from the rear courtyard areas (EP6 and EP7) after removal of approximately 2 feet was conducted. The location of each of the endpoint soil samples is shown on Figure 6. Dedicated disposable sampling equipment was utilized to collect each endpoint sample, eliminating the need for field equipment (rinsate) blanks.

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

Endpoint samples EP1 through EP7 were submitted to Phoenix Environmental Laboratories, Inc. located at 587 East Middle Turnpike, in Manchester, CT 06040 (NYS ELAP Certification No. 11301). Each of the endpoint samples were submitted for laboratory analysis utilizing the following methodology:

- Volatile organic compounds by EPA Method 8260 (EP1 only);
- Semi-volatile organic compounds by EPA Method 8270; and
- Target Analyte List or RCRA metals.

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Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

A copy of each of the laboratory reports for the endpoint soil samples is attached in Appendix F. A tabular summary of the end-point soil sample results is included on Table 1 (VOCs), Table 2 (SVOCs) and Table 3 (metals). As depicted on Tables 1 through 3, Track 4 Site-Specific SCO exceedances were reported within EP-2, EP4 and EP6. The total SVOC concentration within EP-6 (962,100 ppb) was above the Track 4 Site-Specific SCO of 250,000 ppb, and the metals arsenic, cadmium, lead and mercury were detected at elevated concentrations within EP-2, EP-4 and EP-6.

To address the Track 4 exceedances, additional excavation of approximately 6 inches to 1 foot was performed in the rear yard areas and within the cellar areas in May 2015. Endpoint soil samples EP-2, EP-4, and EP-6 were recollected and labeled as EP-2A, EP-4A, and EP-6A. Endpoint soil sample EP-6A was submitted to Phoenix for laboratory analysis of SVOCs by EPA Method 8270 and RCRA metals, and endpoint soil samples EP-2A and EP-4A were submitted to Phoenix for laboratory analysis of RCRA metals. A copy of the laboratory report is attached in Appendix F. A tabular summary of the end-point soil sample results is included on Table 2 (SVOCs) and Table 3 (metals). As shown on Tables 2 and 3, no Track 4 Site-Specific SCO exceedances were reported within the follow-up endpoint soil samples.

4.5 Materials Disposal

Waste characterization soil sampling was performed on April 8, 2014. Historic fill (light brown silty sand with brick and concrete) was encountered from grade to a depth of approximately 9 feet below grade. EBC formed one 5-pt composite soil sample from 5 test pits excavated at the Site. The laboratory results, profile form and a formal letter describing the sampling process and material type, was forwarded to Soil Safe to obtain soil disposal approval at Cumberland County Landfill. A copy of the soil disposal request letter with the sampling plan and laboratory results is attached in Appendix G. A copy of the soil disposal acceptance letter issued by Cumberland County Landfill is attached in Appendix H.

From July 29, 2014 to September 18, 2014, a total 1,354.1 tons of historic fill was excavated and loaded into 10-wheel dump trucks or 20 cubic yard roll-off containers for transport to Cumberland County Landfill. Cumberland County Solid Waste Complex is located at 2 North High Street in Millville, New Jersey 08332. The facility is a landfill operated by the New Jersey,

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

Cumberland County Improvement Authority. Copies of each of the non-hazardous manifests and associated scale tickets are included in Appendix I.

Cumberland County Landfill temporarily closed prior to project completion, so a different soil disposal facility was arranged for the remainder of the soil that required excavation from the rear courtyard areas. A 5-point composite waste characterization soil sample was collected by EBC on March 19, 2015. Soil in the rear courtyard area consisted of historic fill (light brown silty sand with brick and concrete). EBC formed one 5-pt composite soil sample from 5 small hand excavated pits. The laboratory results, profile form and a formal letter describing the sampling process and material type, was forwarded to Clean Earth, Inc. to obtain soil disposal approval at Clean Earth of New Castle (CENC). A copy of the soil disposal request letter with the sampling plan and laboratory results is attached in Appendix G. A copy of the soil disposal acceptance letter issued by Cumberland County Landfill is attached in Appendix H.

In April and May of 2015, a total 80.45 tons of historic fill was hand excavated from the rear yards and loaded into 10-wheel dump trucks or 20 cubic yard roll-off containers for transport to CENC. CENC is located at 94 Pyles Lane, New Castle, DE 19720. The CENC facility is a thermal treatment facility operating under DNREC Resource Recovery Facility Permit No. SW02b16. Copies of each of the non-hazardous manifests and associated scale tickets are included in Appendix J.

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

Table 6 - Disposal Quantities and Disposal Facilities

Destination	Type of Material	Quantity
Cumberland County Landfill Millville, New Jersey	Historic Fill	1,354.1 tons
Clean Earth of New Castle 94 Pyles Lane, New Castle, DE 19720	Historic Fill	80.45 tons

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Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

4.6 Backfill Import

In July of 2013, 3 truck loads (approximately 27 cubic yards) of 1 inch virgin mined stone was imported for use beneath both cellar slab's and around the SSD system piping from Kings Building Material, LLC. located at 2079 Utica Avenue, Brooklyn, NY. The stone was spread across both basement area to a depth of approximately 4 inches. An additional 2 loads of 1 inch virgin mined stone was imported from Kings Building Material, LLC in September 2015 for use as a 1.5 inch thick sub-base below the 4 inch thick concrete slabs in the rear courtyards. No other backfill was imported to the Site. A copy of the delivery receipt from Kings Building Material LLC for each truck load of stone is attached in Appendix K.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

5.0 ENGINEERING CONTROLS

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

Composite Cover System

Exposure to residual soil/fill is prevented by an engineered Composite Cover System that has been built on the Site. This Composite Cover System is comprised of the following:

- 6-inch thick concrete cellar slab underlain by the 20 mil vapor barrier and SSDS piping within a 4 inch layer of virgin-mined 1" stone subgrade; and
- 4-inch thick concrete slab and 1" stone subgrade within the rear yard.

The Composite Cover System was installed by the foundation contractor, A&L Construction. Figure 6 shows the location of each cover type built at the Site. Photographs of construction of the Composite Cover System are included in Appendix D.

Vapor Barrier System

Migration of soil vapor is mitigated with a combination of building slab and vapor barrier. A vapor barrier was installed over the SSDS prior to pouring each building's concrete slab. The vapor barrier consists of Raven Industries' VaporBlock Plus 20, which is a seven-layer co-extruded 20 mil vapor barrier made from polyethylene and EVOH resins. The vapor barrier extends throughout the area occupied by the footprint of the cellar. All vapor barrier seams, penetrations, and repairs were sealed utilizing the tape method, in accordance with to the manufacturer's installation instructions. Photos of the vapor barrier being installed are included in Appendix D and the approximate layout is shown on Figure 7. The vapor barrier was installed by the foundation contractor, A&L Construction.

Active Sub-Slab Depressurization System

Migration of soil vapor is mitigated with an active sub-slab depressurization system. The SSDS installed beneath the basement slab of each building (total of 1,625 sf) consists of a single venting zone (loop) in accordance with USEPA sub-slab depressurization design specifications which recommend a separate vent loop for every 4,000 sf of slab area. The venting zone is constructed of a continuous loop of perforated 4-inch HDPE smooth interior pipe fitted with a

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1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

filter sock and installed within the 4" layer of virgin mined stone installed below the concrete building slab. Each loop connect to a 6-inch schedule 40 pvc riser pipe that extends to the roof to discharge. A blower (Radonaway model No. RP265) is fitted to the top of each 6-inch PVC discharge pipe at the roof level. The system is hardwired to an electric source. The exhaust from the blowers is located a minimum of 10 feet from windows and ventilation inlets.

A Dwyer 0-5 inches of water manometer and a Radonaway alarm is installed immediately below the SSDS blower within the roof access stairwell. Following initial start up of the active SSDS, an initial vacuum gauge reading using a Portable Digital Manometer was recorded. The system is designed to establish a vacuum of 0.4 inches of water or higher.

The approximate layout of the SSDS piping is shown on Figure 7 and photos of the SSDS piping being installed are included in Appendix D. Inspection details and inspection frequency are specified below in Section 7.0. The active SSDS was installed by A&L Construction.

Ariel Czemerinski, P.E. performed evaluated the effectiveness of the sub-slab depressurization system on October 15, 2015, by collecting to sub-slab vacuum readings. The sub-slab vacuum readings were collected from ½" diameter holes drilled through the concrete slab and vapor barrier. Rigid tubing was inserted into each hole and connected to a Dwyer Series 476A Single Pressure Digital Manometer that reads from -20.0 to +20.0 inches H_2O. One sub-slab vacuum reading was obtained from the front and rear of cellar of both buildings. A minimum vacuum reading of -0.05 inches H_2O was recorded. A copy of the completed October 15, 2015, SSDS inspection report is included in Appendix L. The vacuum readings obtained below the slab indicate the sub-slab depressurization system operates as designed.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

6.0 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required under this Remedial Action to implement, maintain, inspect and certify Engineering Controls and prevent future exposure to residual contamination by controlling disturbances of the subsurface soil. Adherence to these Institutional Controls is required under this remedial action and will be implemented under the Site Management Plan included in this RAR. These Institutional Controls for the Site are:

(1) The property will continue to be registered with an E-Designation with the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;
(2) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;
(3) Engineering Controls will not be discontinued without prior OER approval;
(4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;
(5) The Site will be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.
(6) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;
(7) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;
(8) 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;
(9) 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.

EBC
Environmental Business Consultants
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

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 (112 Manhattan LLC) to ensure that all Site management responsibilities are performed. The penalty for failure to implement the SMP includes revocation of the Notice of Completion and all associated certifications and liability protections. If the building is sold, the new owners will be notified of the SMP requirements.

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

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

ENGINEERING AND INSTITUTIONAL CONTROLS

Engineering Controls

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

- Soil Vapor Barrier System;
- Composite Cover System; and
- Active Sub-Slab Depressurization System.

Operation and Maintenance of the Composite Cover System

The composite cover system is comprised of the both building's 6-inch thick concrete cellar slab and sub-base materials, and the rear yard's 4-inch thick concrete slab. The composite cover system is a permanent engineering control for the Site. The composite cover system does not require any special operation or maintenance in order to perform as designed in the RAWP. A

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Soil/Materials Management Plan is included in this Site Management Plan to outline the procedures to be followed in the event that the composite cover system and underlying residual soil/material must be disturbed after the remedial action is complete.

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

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 equivalent barrier materials in accordance with manufacturer specifications.

Operation and Maintenance of Active Sub-Slab Depressurization System

Chapter 5 describes the Active SSDS utilized in this Remedial Action. The system will be inspected and its performance certified at specified intervals defined in this SMP. The Active SSDS will be operated and maintained as prescribed below. SSD system components to be evaluated include, but are not limited to, the following:

- Radonaway blower (Model No. RP265);
- Joints between the piping and blower
- Exposed system piping;
- Radonaway Alarm; and
- Dwyer 0-5 inches of water manometers.

The manometer and alarm are installed immediately below the SSDS blower within the roof access stairwell. Following initial start up of the active SSDS, an initial vacuum gauge reading using a Magnahelic Manometer was recorded on the Inspection Checklist. The system is

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designed to establish a vacuum of 0.4 inches of water or higher. If the blower is found to be non-operational by the building superintendent during a monthly inspection, or if the blower is operating, but no vacuum reading is observed on the vacuum gauge, the blower must be replaced or repaired. The Owner's representative(s) shall immediately contact the appropriate parties from the contact list provided below. These emergency contact lists will be maintained by the building superintendent and in a package secured to the SSDS discharge pipe.

A complete list of components to be checked is provided in the Inspection Checklist, presented in Appendix L.

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 for this property are:

(1) The property will continue to be registered with an E-Designation with the NYC Department of Buildings. Property owner and property owner's successors and assigns are required to comply with the approved SMP;

(2) Compliance with an OER-approved Site Management Plan including procedures for appropriate operation, maintenance, inspection, and certification of performance of EC's and IC's. The property owner and property owner's successors and assigns will inspect EC's and IC's and submit to OER a written certification that evaluates their performance in a manner and at a frequency to be determined by OER;

(3) Engineering Controls will not be discontinued without prior OER approval;

(4) OER has the right to enter the Site upon notice for the purpose of evaluating the performance of EC's and IC's;

(5) The Site will be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

(6) Vegetable gardens and farming in residual soil/fill on the Site are prohibited;

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(7) Use of groundwater underlying the Site without treatment rendering it safe for its intended use is prohibited;

(8) 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;

(9) The Site is intended to be used for restricted residential use and will not be used for a higher level of use without prior approval by OER.

INSPECTIONS

Engineering Controls and Institutional Controls will be inspected by a qualified environmental professional and certification of inspection shall be submitted by July 31, 2017 (for calendar year 2016), July 31, 2020 (for calendar years 2017 through 2019) and every three years thereafter. In addition to these inspections, the building owner will inspect condition of the operation of the blower and the vacuum gauges on a monthly basis. The building owner will fill out a log established by the QEP for the active SSDS operational inspections. EBC will provide training for building superintendent staff on the methods for proper monthly inspection of the operation of the blower and the vacuum gauges and proper contacts in case a malfunction is identified.

The QEP inspections will evaluate the following:

- If Engineering Controls or Institutional Controls employed at the Site continue to perform as designed and continue to be protective of human health and the environment;
- If anything has occurred that impairs the ability of the Engineering Controls or Institutional Controls to protect public health and the environment;
- If changes are needed to the remedial systems or controls;
- If compliance with this SMP has been maintained;
- If site records are complete and up to date; and
- General Site conditions at the time of inspection.

In an addition, if an emergency occurs, such as a natural disaster, or if an unforeseen failure of any of the Engineering Controls occurs, an inspection of the Site will be performed within 30

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days to evaluate the Engineering Controls and a letter report of findings will be submitted to OER.

Engineering Control Inspection

Inspection of Composite Cover System

The Site consists of two buildings with full cellar levels and rear courtyards. Inspection of the composite cover will consist of a visual inspection of the concrete cellar slab of both buildings, and the concrete capped rear yards. The inspection will include all accessible locations including the site perimeter and all internal access points on the cellar level. The inspector will document any faulty or defective conditions observed during the inspection, broken or damaged concrete, or any failure in the integrity of the floor that would compromise the ability of the composite cover to perform as an engineering control. Cracks, holes, perforations or slab disturbances shall be recorded on the Inspection Checklist (Appendix L). Inspections by building superintendent will identify any obvious damage to the composite cover system.

Inspection of Vapor Barrier System

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

Active SSDS

The components of the Active SSDS will be inspected by a qualified environmental professional to assure that the Active SSDS is functioning properly. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSD system has been reported or an emergency occurs that is deemed likely to affect the operation of the system.

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A visual inspection of the complete system will be conducted by a QEP at the intervals specified and by a building superintendent on a monthly basis. SSD system components to be monitored include, but are not limited to, the following:

- Radonaway blower (Model No. RP265);
- Joints between the piping and blower;
- Exposed system piping;
- Radonaway Alarm; and
- Dwyer 0-5 inches of water manometer.

The vacuum gauge should have a minimum vacuum of 0.4 inches of water. If any equipment readings are not above this minimum range, maintenance and repair will be performed to reestablish required vacuum levels in the system. A complete list of components to be checked is provided in the Inspection Checklist, presented in Appendix L. Inspection frequency is subject to change by NYC OER. In addition to inspections by a QEP, monthly inspections will be performed by building superintendent staff. These staff will be trained by the QEP on the systems to be evaluated and a checklist will be established by the QEP to be filled out by the building superintendent each month. These checklists will be maintained on-Site for inspection by OER and the QEP and will be reported in QEP's periodic Inspection and Certification Report. These inspections by building superintendent staff will include observation of the pressure reading in the manometer, active operation of the blower, and integrity of couplings and seals in SSDS chase piping with special attention in the vicinity of the blower to system leakage.

Site Use Prohibitions

Inspections to evaluate the status of site use prohibitions will include an evaluation of whether the Site has been used for a higher level of use other than the restricted residential use addressed by the Remedial Action.

INSPECTION AND CERTIFICATION LETTER REPORT

Results of inspections performed during a reporting period and certification of performance of all Engineering Controls and Institutional Controls will be included in an Inspection and Certification Letter Report to be submitted by July 31, 2017 (for calendar year 2016), July 31, 2020 (for calendar years 2017 through 2019) and by July 31 every third year thereafter.

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Inspection and Certification Letter Reports will be submitted to OER in digital format. The letter report will include, at a minimum:

- Date of inspections;
- Personnel conducting inspections;
- Description of the inspection activities performed;
- Any observations, conclusions, or recommendations;
- Copy of any inspection forms;
- Certification of the performance of Engineering Controls and Institutional Controls, as discussed below; and
- Confirmation of regular periodic inspection of engineering controls by building superintendent.

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

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

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

NOTIFICATIONS

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

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- 60-day advance notice of any proposed changes in Site use to Unrestricted Use that is not contemplated is the Remedial Action.
- Notice within 10 days of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site.

SOIL/MATERIALS MANAGEMENT PLAN

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

Soil Screening Methods

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

Stockpile Methods

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

All stockpile activities will be compliant with applicable laws and regulations. Soil stockpile areas will be appropriately graded to control run-off in accordance with applicable laws and regulations. Stockpiles of excavated soils and other materials shall be located at least of 50 feet

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from the property boundaries, where possible. Hay bales or equivalent will surround soil stockpiles except for areas where access by equipment is required. Silt fencing and hay bales will be used as needed near catch basins, surface waters, and other discharge points.

Characterization of Excavated Materials

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

Materials Excavation, Load-Out and Departure

The PE/QEP overseeing the remedial action will:

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

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

Off-Site Materials Transport

Loaded vehicles leaving the Site will comply with all applicable materials transportation requirements (including appropriate covering, manifests, and placards) in accordance with

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applicable laws and regulations, including use of licensed haulers in accordance with 6 NYCRR Part 364. If loads contain wet material capable of causing leakage from trucks, truck liners will be used. Queuing of trucks will be performed on-Site, when possible in order to minimize off Site disturbance.

Outbound truck transport routes are shown on Figure 8. This routing takes into account the following factors: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) minimizing off-Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. To the extent possible, all trucks loaded with Site materials will travel from the Site using these truck routes. Trucks will not stop or idle in the neighborhood after leaving the project Site.

Materials Disposal Off-Site

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

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

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

Materials Reuse On-Site

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

Repair of Remedial Systems

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

Import of Backfill Soil from Off-Site Sources

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

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

- Clean soil from construction projects at non-industrial sites in compliance with applicable laws and regulations;

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- 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.

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 form 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

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360 registration and permitting requirements for the period of acquisition of RCA. RCA imported from compliant facilities will not require additional testing, unless required by NYSDEC under its terms for operation of the facility. RCA imported to the Site must be derived from recognizable and uncontaminated concrete. RCA will not be used as cover material.

Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported, and disposed in accordance with applicable laws and regulations. Liquids discharged into the New York City sewer system will receive prior approval by New York City Department of Environmental Protection (NYC DEP). The NYC DEP regulates discharges to the New York City sewers under Title 15, Rules of the City of New York Chapter 19. If discharge to the City sewer system is not appropriate, the dewatering fluids will be managed by transportation and disposal at an off-Site treatment facility. Discharge of water generated during remedial construction to surface waters (i.e. a stream or river) is prohibited without a SPDES permit issued by NYSDEC.

Storm-water Pollution Prevention

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

Odor Control

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

This odor control plan is capable of controlling emissions of nuisance odors. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. OER will be notified of all odor

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complaint events. Implementation of all odor controls, including halt of work, will be the responsibility of the PE/QEPs.

Dust Control

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

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

If nuisance dust emissions are identified, work will be halted and the source of dusts will be identified and corrected. Work will not resume until all nuisance dust emissions have been abated. OER will be notified of all dust complaint events. Implementation of all dust controls, including halt of work, will be the responsibility of the PE/QEPs.

Noise

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

COMMUNITY AIR MONITORING PLAN

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

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a

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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.

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 continuousbasis 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.

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

Particulate Monitoring, Response Levels, and Actions

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

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

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

CONTINGENCY PLAN

Emergency Telephone Numbers

In the event of any emergency condition pertaining to this remedial system, or if the building slab is disturbed, removed or altered, the Owner's representative(s) should contact the appropriate parties from the contact list below. Prompt contact should also be made to

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Environmental Business Consultants. These emergency contact lists must be maintained in an easily accessible location at the Site.

Emergency Contact Numbers

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

Contact Numbers

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

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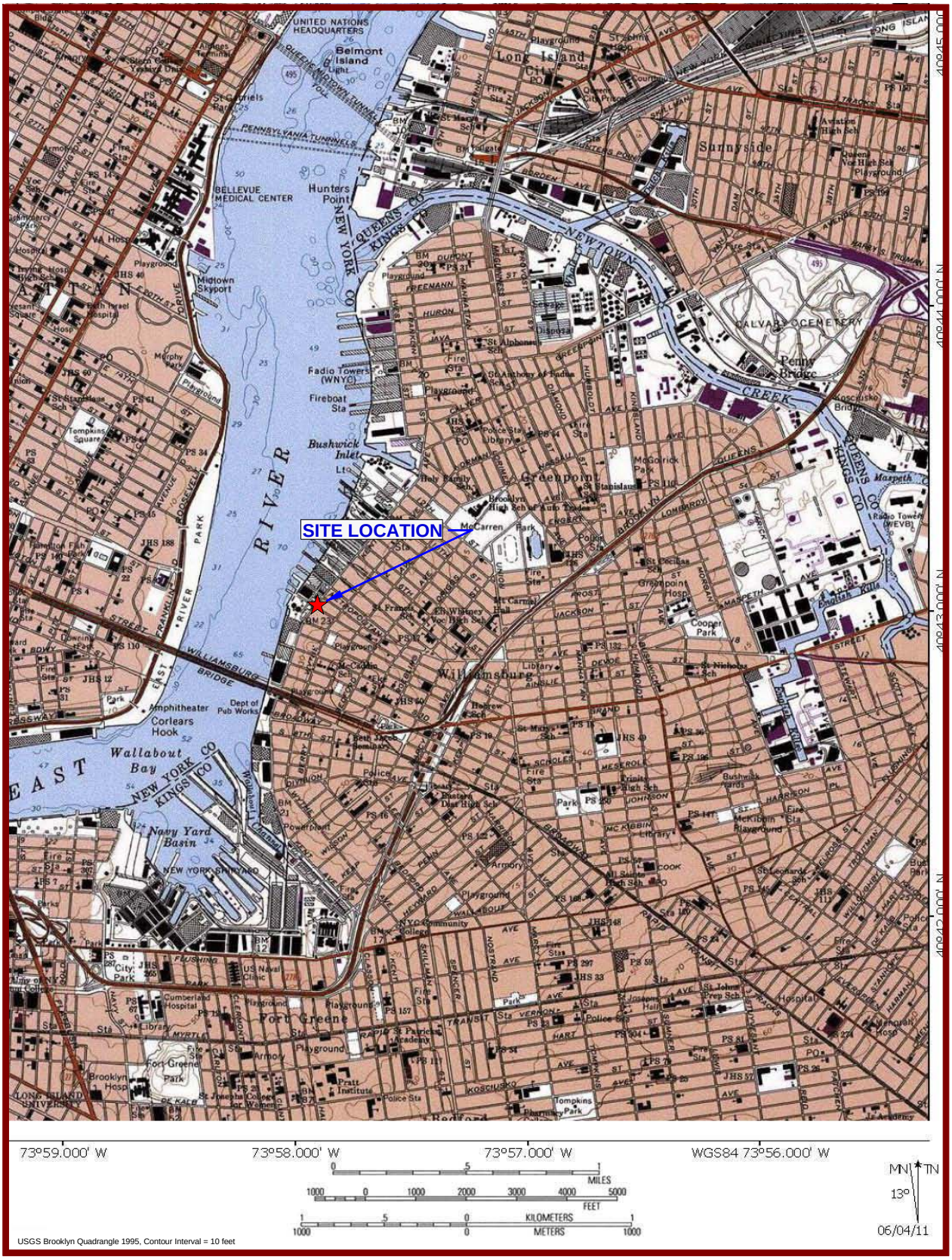
FIGURES



USGS Brooklyn Quadrangle 1995, Contour Interval = 10 feet

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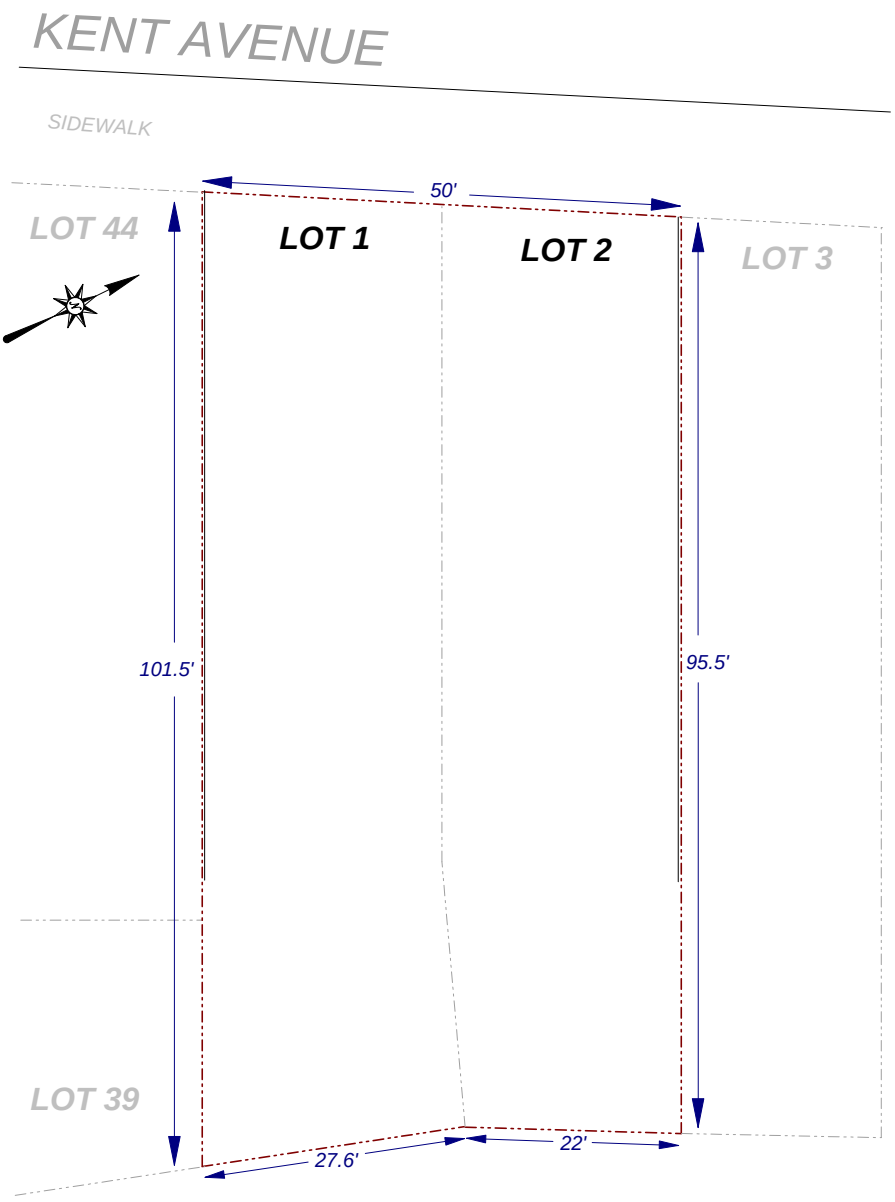
235-237 KENT AVENUE, BROOKLYN NY
BLOCK 2378 LOTS 1 & 2

FIGURE 1 SITE LOCATION MAP



KEY:

Property Boundary

SCALE:

0 10 20

1 Inch = 20 feet

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FIGURE 2 SITE BOUNDARY MAP

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

FIGURE 4
SURROUNDING LAND USE MAP

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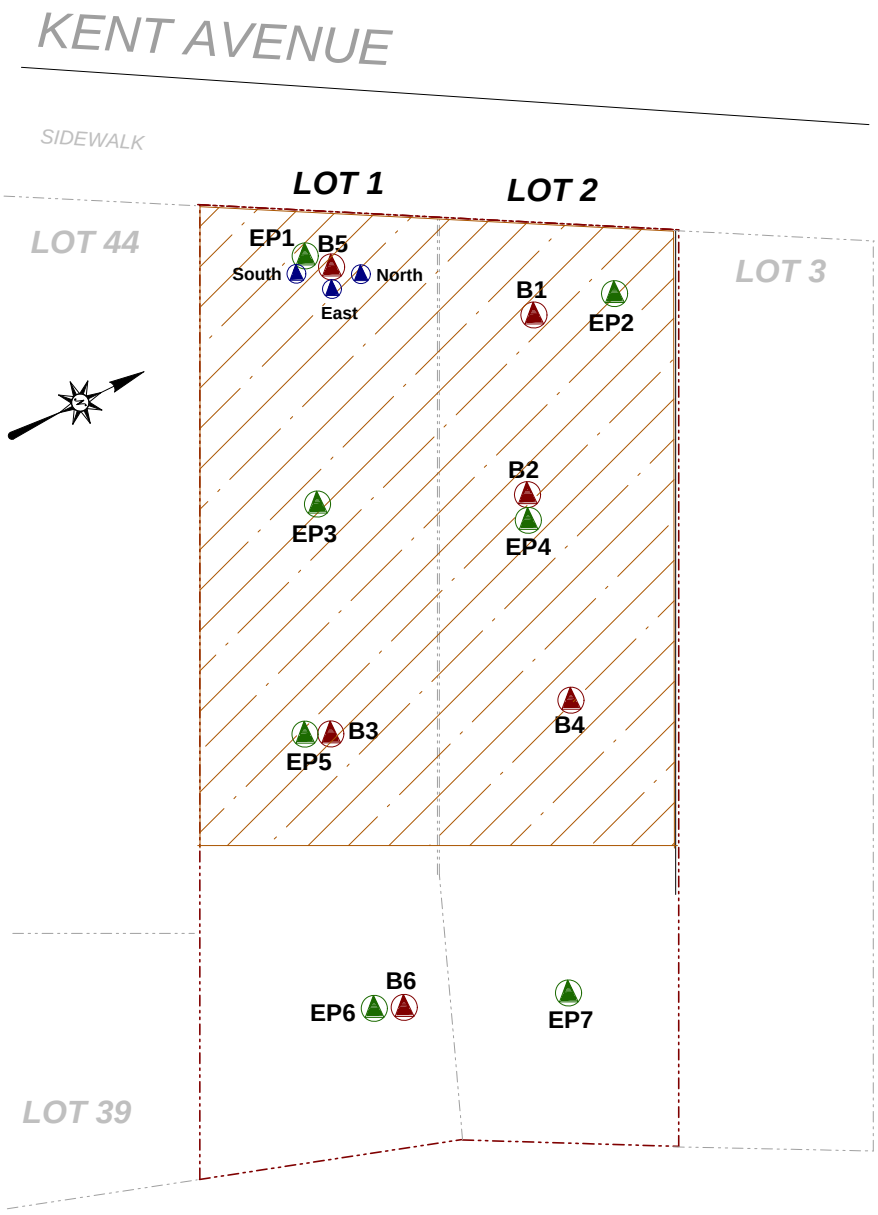

KEY:

- Property Boundary
- Endpoint Sample Location
- RI Soil Boring Location
- VOC Delineation Soil Boring

SCALE:

0 10 20

1 Inch = 20 feet

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BROOKLYN, NY

FIGURE 6 ENDPOINT SAMPLING PLAN

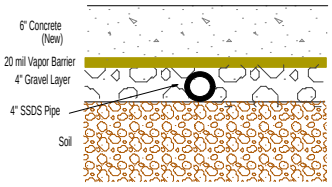
KENT AVENUE

SIDEWALK

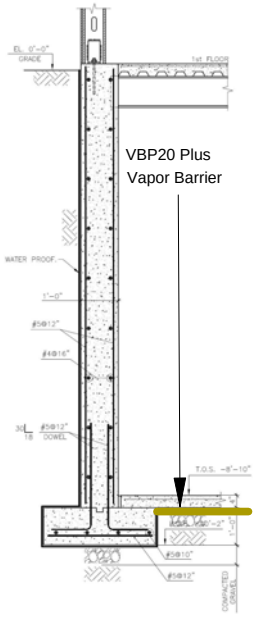
LOT 1

LOT 2

Cellar Slab Capping Detail



Foundation Wall Detail



RAVEN INDUSTRIES

VAPOR BLOCK VBP20 Plus

BELOW CELLAR SLAB

OF BOTH BUILDINGS

70'

LOT 3

KEY:

Property Boundary

Raven Industries VBP 20 Plus Vapor Barrier

SCALE:

0 10 20

1 Inch = 20 feet

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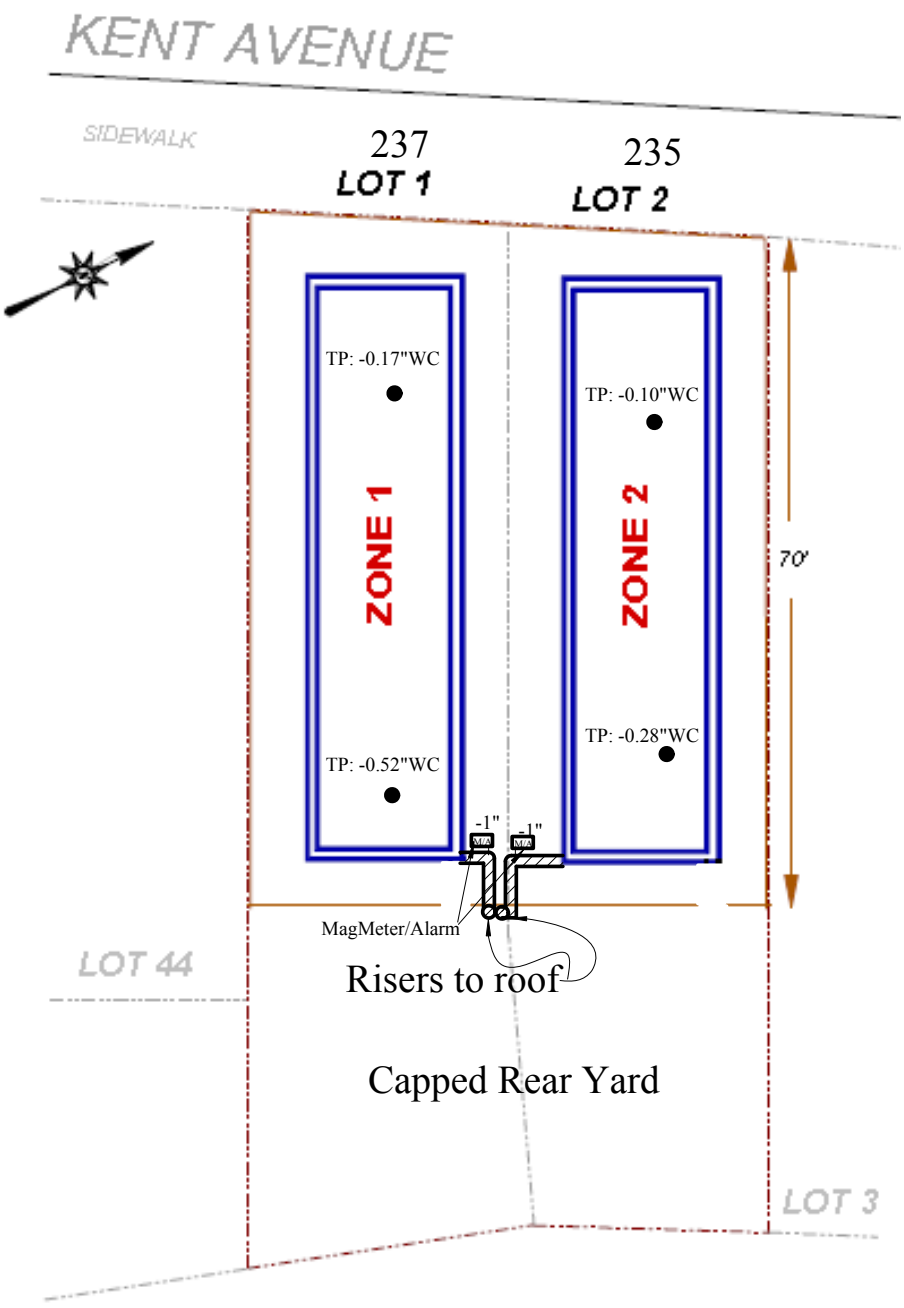
BROOKLYN, NY

FIGURE 7 VAPOR BARRIER PLAN



Key

Property Boundary

4-inch HDPE Perforated Vent Line (smooth interior)

SCALE:

0 10 20

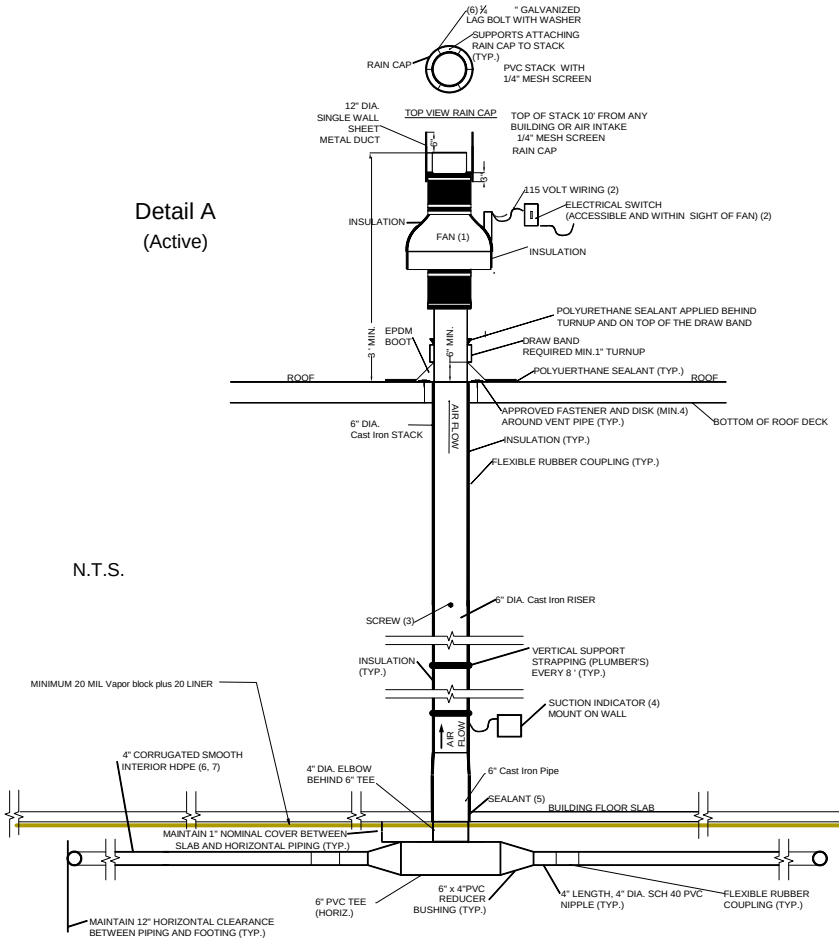
1 Inch = 20 feet

STATE OF NEW YORK ARIEL CZEMERINSKI LICENSED PROFESSIONAL ENGINEER 076508

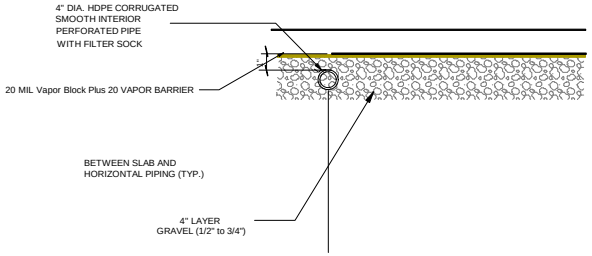
AMC Engineering PLLC 99 Jericho Turnpike, Suite 300J Jericho, NY 11753	*Figure No.* **8**	PROJECT	235-237 KENT AVENUE BROOKLYN, NY
		DRAWING	*LOCATION OF ALARMS, MAGNEHELIC METERS AND TEST PORTS*

10/15/2015

Detail A
(Active)



Detail B



NOTES:

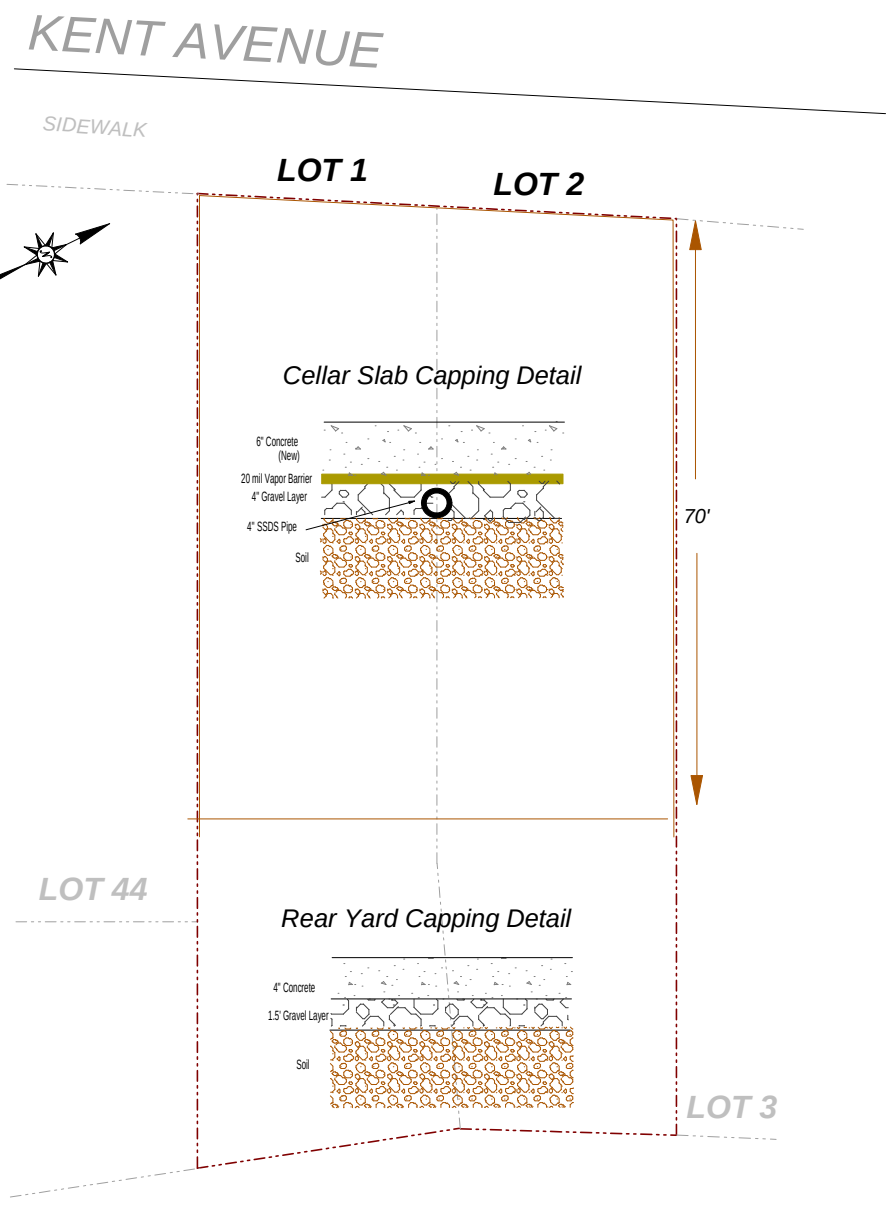
1. FAN TO BE RADONAWAY HIGH-FLOW IN-LINE FAN, MODEL RP 265, OR APPROVED EQUAL.
2. FAN AND ON/OFF SWITCH TO BE HARD-WIRED TOGETHER TO 115 VOLT CIRCUIT.
3. SECURE RUBBER COUPLING WITH SCREW TO PREVENT FAN ASSEMBLY FROM SLIPPING DOWN VERTICAL PIPE.
4. DWYER MAGNAHELIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
5. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
6. HIGH DENSITY POLYETHYLENE CORRUGATED PERFORATED PIPE ADS N-12 OR APPROVED EQUAL.
7. WRAP 4' HDPE PIPE WITH GEOTEXTILE FABRIC, GSE NW4 OR APPROVED EQUAL.
8. EBC MUST PRE-APPROVE ALL FILLMATERIAL BEFORE DELIVERY TO SITE.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631.924.2870

FIGURE NO. 9

235-237 KENT AVENUE, BROOKLYN, NEW YORK

SUBSLAB DEPRESSURIZATION SYSTEM DETAILS



KEY:

Property Boundary

SCALE:

0 10 20

1 Inch = 20 feet

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

235-237 KENT AVENUE
BROOKLYN, NY

FIGURE 10 COMPOSITE COVER DRAWING

TABLES

TABLE 1
235-237 Kent Avenue,
Brooklyn, New York
Soil Analytical Results
Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	VOC Delineation Soil Borings								Endpoint	
			B5 2-4		North 0-1		South 0-1		East 0-1		EP-1	
			6/9/2014 µg/Kg		6/9/2014 µg/Kg		6/9/2014 µg/Kg		6/9/2014 µg/Kg		9/18/2014 µg/Kg	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachlorothane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1,1-Trichloroethane	680	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1,2,2-Tetrachloroethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1,2-Trichloroethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1-Dichloroethane	270	26,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1-Dichloroethene	330	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,1-Dichloropropene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,2,3-Trichlorobenzene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2,3-Trichloropropane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2,4-Trichlorobenzene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2,4-Trimethylbenzene	3,600	52,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2-Dibromo-3-chloropropane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2-Dibromoethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,2-Dichlorobenzene	1,100	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,2-Dichloroethane	20	3,100	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,2-Dichloropropane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,3,5-Trimethylbenzene	8,400	52,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,3-Dichlorobenzene	2,400	4,900	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
1,3-Dichloropropane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
1,4-Dichlorobenzene	1,800	13,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
2,2-Dichloropropane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
2-Chlorotoluene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
2-Hexanone (Methyl Butyl Ketone)			< 26	26	< 27	27	< 29	29	< 31	31	< 27	27
2-Isopropyltoluene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
4-Chlorotoluene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
4-Methyl-2-Pentanone			< 26	26	< 27	27	< 29	29	< 31	31	< 27	27
Acetone	50	100,000	< 50	50	< 50	50	< 50	50	**80**	62	< 50	50
Acrylonitrile			< 10	10	< 11	11	< 12	12	< 12	12	< 11	11
Benzene	60	4,800	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Bromobenzene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
Bromochloromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Bromodichloromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Bromoform			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Bromomethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Carbon Disulfide			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Carbon tetrachloride	760	2,400	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Chlorobenzene	1,100	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Chloroethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Chloroform	370	49,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Chloromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
cis-1,2-Dichloroethene	250	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
cis-1,3-Dichloropropene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Dibromochloromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Dibromomethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Dichlorodifluoromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Ethylbenzene	1,000	41,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Hexachlorobutadiene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
Isopropylbenzene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
m&p-Xylenes	260	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Methyl Ethyl Ketone (2-Butanone)	120	100,000	< 31	31	< 32	32	< 35	35	**12**	37	< 32	32
Methyl t-butyl ether (MTBE)	930	100,000	< 10	10	< 11	11	< 12	12	< 12	12	< 11	11
Methylene chloride	50	100,000	**2.1**	5.1	**2.3**	5.3	**2.6**	5.9	**4.9**	6.2	**2.1**	5.3
Naphthalene	12,000	100,000	< 5.1	5.1	**3.4**	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
n-Butylbenzene	12,000	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
n-Propylbenzene	3,900	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
o-Xylene	260	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
p-Isopropyltoluene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
sec-Butylbenzene	11,000	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
Styrene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
tert-Butylbenzene	5,900	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 310	310	< 5.3	5.3
Tetrachloroethene	1,300	19,000	< 5.1	5.1	< 5.3	5.3	**6.2**	5.9	**9.2**	6.2	< 5.3	5.3
Tetrahydrofuran (THF)			< 10	10	< 11	11	< 12	12	< 12	12	< 11	11
Toluene	700	100,000	< 5.1	5.1	< 5.3	5.3	**5.3**	5.9	< 6.2	6.2	< 5.3	5.3
trans-1,2-Dichloroethene	190	100,000	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
trans-1,3-Dichloropropene			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
trans-1,4-dichloro-2-butene			< 10	10	< 11	11	< 12	12	< 620	620	< 11	11
Trichloroethene	470	21,000	< 5.1	5.1	**1.3**	5.3	**9.5**	5.9	**11**	6.2	< 5.3	5.3
Trichlorofluoromethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Trichlorotrifluoroethane			< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3
Vinyl Chloride	20	900	< 5.1	5.1	< 5.3	5.3	< 5.9	5.9	< 6.2	6.2	< 5.3	5.3

Notes:

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

ND - Not-detected

RL - Reporting Limit

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

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

TABLE 2
235-237 Kent Avenue,
Brooklyn, New York
Soil Analytical Results
Semi-Volatile Organic Compounds

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Track 4 Site Specific SCO	EP-1		EP-2		EP-3		EP-4		EP-5		EP-6		EP-6A		EP-7	
				9/18/2014		4/17/2015		4/17/2015		4/17/2015		4/17/2015		4/17/2015		8/27/2015		4/17/2015	
				µg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,2,4,5-Tetrachlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
1,2,4-Trichlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
1,2-Dichlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
1,2-Diphenylhydrazine				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
1,3-Dichlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
1,4-Dichlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,4,5-Trichlorophenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,4,6-Trichlorophenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,4-Dichlorophenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,4-Dimethylphenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,4-Dinitrophenol				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 700	700	< 1800	1,800
2,4-Dinitrotoluene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2,6-Dinitrotoluene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2-Chloronaphthalene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2-Chlorophenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2-Methylnaphthalene				< 240	240	**220**	260	**470**	240	< 260	260	**390**	240	**11,000**	7,000	< 240	240	< 250	250
2-Methylphenol (o-cresol)	330	100,000		< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
2-Nitroaniline				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 700	700	< 1800	1,800
2-Nitrophenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
3&4-Methylphenol (m&p-cresol)				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
3,3'-Dichlorobenzidine				< 680	680	< 760	760	< 690	690	< 750	750	< 690	690	< 20000	20,000	< 700	700	< 720	720
3-Nitroaniline				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 700	700	< 1800	1,800
4,6-Dinitro-2-methylphenol				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 1700	1,700	< 1800	1,800
4-Bromophenyl phenyl ether				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
4-Chloro-3-methylphenol				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
4-Chloroaniline				< 680	680	< 760	760	< 690	690	< 750	750	< 690	690	< 20000	20,000	< 280	280	< 720	720
4-Chlorophenyl phenyl ether				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
4-Nitroaniline				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 700	700	< 1800	1,800
4-Nitrophenol				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 350	350	< 1800	1,800
Acenaphthene	20,000	100,000		< 240	240	**810**	260	**950**	240	**190**	260	**690**	240	**18,000**	7,000	< 240	240	< 250	250
Acenaphthylene	100,000	100,000		< 240	240	**350**	260	**520**	240	**170**	260	**200**	240	**2,800**	7,000	< 240	240	< 250	250
Acetophenone				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Aniline				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 280	280	< 1800	1,800
Anthracene	100,000	100,000		< 240	240	**1,700**	260	**2,700**	240	**470**	260	**1,300**	240	**44,000**	7,000	**190**	240	< 250	250
Benz(a)anthracene	1,000	1,000		< 240	240	**5,300**	1,300	**7,000**	2,400	**2,000**	260	**3,600**	240	**86,000**	7,000	**680**	240	< 250	250
Benzidine				< 680	680	< 760	760	< 690	690	< 750	750	< 690	690	< 20000	20,000	< 700	700	< 720	720
Benzo(a)pyrene	1,000	1,000		< 240	240	**4,300**	1,300	**5,100**	2,400	**1,700**	260	**3,000**	240	**54,000**	7,000	**650**	240	< 250	250
Benzo(b)fluoranthene	1,000	1,000		< 240	240	**5,100**	1,300	**6,000**	2,400	**2,200**	260	**4,100**	240	**68,000**	7,000	**550**	240	< 250	250
Benzo(ghi)perylene	100,000	100,000		< 240	240	**1,300**	260	**2,500**	240	**530**	260	**800**	240	**12,000**	7,000	**450**	240	< 250	250
Benzo(k)fluoranthene	800	3,900		< 240	240	**2,500**	260	**2,500**	240	**890**	260	**1,500**	240	**24,000**	7,000	**550**	240	< 250	250
Benzoic acid				< 1700	1,700	< 1900	1,900	< 1700	1,700	< 1900	1,900	< 1700	1,700	< 50000	50,000	< 1700	1,700	< 1800	1,800
Benzyl butyl phthalate				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Bis(2-chloroethoxy)methane				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Bis(2-chloroethyl)ether				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Bis(2-chloroisopropyl)ether				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Bis(2-ethylhexyl)phthalate				< 240	240	**210**	260	< 240	240	**170**	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Carbazole				< 1700	1,700	**690**	1,900	**840**	1,700	< 1900	1,900	**610**	1,700	< 50000	50,000	< 1700	1,700	< 1800	1,800
Chrysene	1,000	3,900		< 240	240	**4,800**	1,300	**6,400**	2,400	**2,200**	260	**3,700**	240	**91,000**	7,000	**810**	240	< 250	250
Dibenz(a,h)anthracene	330	330		< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	**110**	240	< 250	250
Dibenzofuran	7,000	59,000		< 240	240	**410**	260	**690**	240	**140**	260	**600**	240	**5,300**	7,000	< 240	240	< 250	250
Diethyl phthalate				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Dimethylphthalate				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Di-n-butylphthalate				< 240	240	**150**	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Di-n-octylphthalate				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Fluoranthene	100,000	100,000		**120**	240	**7,600**	1,300	**11,000**	2,400	**2,600**	260	**5,900**	1,200	**110,000**	7,000	**1,300**	240	< 250	250
Fluorene	30,000	100,000		< 240	240	**670**	260	**1,300**	240	**230**	260	**880**	240	**22,000**	7,000	< 240	240	< 250	250
Hexachlorobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Hexachlorobutadiene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Hexachlorocyclopentadiene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Hexachloroethane				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Indeno(1,2,3-cd)pyrene	500	500		< 240	240	**1,300**	260	**2,600**	240	**510**	260	**840**	240	**12,000**	7,000	**420**	240	< 250	250
Isophorone				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Naphthalene	12,000	100,000		< 240	240	< 260	260	**1,200**	240	< 260	260	**1,300**	240	< 7000	7,000	< 240	240	< 250	250
Nitrobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
N-Nitrosodimethylamine				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
N-Nitrosodi-n-propylamine				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
N-Nitrosodiphenylamine				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Pentachloronitrobenzene				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Pentachlorophenol	800	6,700		< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Phenanthrene	100,000	100,000		< 240	240	**9,600**	1,300	**14,000**	2,400	**3,600**	260	**8,500**	1,200	**290,000**	35,000	**1,200**	240	< 250	250
Phenol	330	100,000		< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Pyrene	100,000	100,000		**120**	240	**6,500**	1,300	**9,800**	2,400	**2,500**	260	**5,100**	1,200	**130,000**	7,000	**1,200**	240	< 250	250
Pyridine				< 240	240	< 260	260	< 240	240	< 260	260	< 240	240	< 7000	7,000	< 240	240	< 250	250
Total SVOCs			250,000	**240**		**53,510**		**75,570**		**20,100**		**42,400**		**962,100**		**8,110**		ND	

Notes:

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

ND - Not-detected

RL - Reporting Limit

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

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

Bold/highlighted- Indicated exceedance of the Track 4 SCO

TABLE 3
235-237 Kent Avenue,
Brooklyn, New York
Soil Analytical Results
Metals

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	Track 4 Soil Cleanup Objectives	EP-1		EP-2		EP-2A		EP-3		EP-4		EP-4A		EP-5		EP-6		EP-6A		EP-7	
				9/18/2014 mg/Kg		4/17/2015 mg/Kg		7/9/2015 mg/Kg		4/17/2015 mg/Kg		4/17/2015 mg/Kg		7/9/2015 mg/Kg		4/17/2015 mg/Kg		4/17/2015 mg/Kg		8/27/2015 mg/Kg		4/17/2015 mg/Kg	
				Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
Aluminum				2,680	33	5,130	41	-		4,340	34	4,440	36	-		3,120	32	6,830	43			3,310	37
Antimony				< 1.6	1.6	4.4	2.0	-		< 1.7	1.7	< 1.8	1.8	-		< 1.6	1.6	3.9	2.1			< 1.9	1.9
Arsenic	13	16		1.2	0.7	11.1	0.8	1.6		6.7	0.7	5.2	0.7	1.5		1.8	0.6	25	0.9	2.4	0.6	1.7	0.7
Barium	350	400	800	33.4	0.7	1,170	0.8	18.9		584	0.7	951	0.7	43.3		111	0.6	2,380	8.6	118	0.6	29.1	0.7
Beryllium	7.2	72		< 0.26	0.26	0.35	0.33	-		0.3	0.27	0.26	0.29	-		0.2	0.25	0.48	0.34			0.21	0.30
Cadmium	2.5	4.3		< 0.33	0.33	7.83	0.41	0.34		1.52	0.34	7.06	0.36	2.17		0.26	0.32	7.05	0.43	0.46	0.32	< 0.37	0.37
Calcium				870	3.3	36,400	41	-		9,980	3.4	29,000	36	-		6,730	3.2	10,700	4.3			1,020	3.7
Chromium	30	180		7.06	0.33	24.4	0.41	13.5		13.1	0.34	17.6	0.36	9.75		7.89	0.32	31.9	0.43	10.2	0.32	10.2	0.37
Cobalt				2.63	0.33	7.17	0.41	-		5.8	0.34	6.14	0.36	-		4.36	0.32	8.52	0.43			4.91	0.37
Copper	50	270		11	0.33	119	0.41	-		86.2	0.34	57.1	0.36	-		43.3	0.32	269	4.3			9.98	0.37
Iron				5,650	3.3	31,200	41	-		22,100	34	13,500	36	-		8,230	32	42,100	43			13,100	37
Lead	63	400	1,200	10.4	0.7	1,700	82	5.8		934	6.7	824	7.2	29.4		145	6.3	3,320	86	146	6.4	11.3	0.7
Magnesium				1,370	3.3	2,760	4.1	-		2,740	3.4	2,640	3.6	-		2,810	3.2	2,410	4.3			1,180	3.7
Manganese	1,600	2,000		95.4	0.33	451	4.1	-		288	3.4	244	3.6	-		210	3.2	493	4.3			298	3.7
Mercury	0.18	0.81	2.5	< 0.07	0.07	3	0.29	0.05		0.63	0.03	4.26	0.27	0.17		0.18	0.03	10.5	0.29	0.18	0.03	0.04	0.03
Nickel	30	310		8.26	0.33	23.7	0.41	-		24.4	0.34	17.8	0.36	-		14.7	0.32	29.7	0.43			8.13	0.37
Potassium				731	7	1,060	82	-		934	67	1,110	72	-		814	63	1,150	86			918	74
Selenium	3.9	180		< 1.3	1.3	< 1.6	1.6	<1.3		2.3	1.3	< 1.4	1.4	<1.2		< 1.3	1.3	2.6	1.7	< 1.3	1.3	< 1.5	1.5
Silver	2	180		< 0.33	0.33	6.64	0.41	<0.32		< 0.34	0.34	1.8	0.36	<0.31		< 0.32	0.32	3.42	0.43	< 0.32	0.32	< 0.37	0.37
Sodium				81	7	261	8	-		220	7	329	7	-		136	6	854	9			465	7
Thallium				< 1.3	1.3	< 1.6	1.6	-		< 1.3	1.3	< 1.4	1.4	-		< 1.3	1.3	< 1.7	1.7			< 1.5	1.5
Vanadium				8.6	0.3	23.4	0.4	-		15.1	0.3	16.9	0.4	-		11.7	0.3	35.1	0.4			21.5	0.4
Zinc	109	10,000		24.1	0.7	903	8.2	-		371	6.7	641	7.2	-		92	0.6	3,220	86			17	0.7

Notes:

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

BRL - Below Reporting Limit

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

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

Bold/highlighted- Indicated exceedance of the Track 4 SCO