853 LEXINGTON AVENUE

BROOKLYN, NEW YORK

Remedial Action Work Plan

& STIP List (6/15/2016)

NYC VCP Project Number 16CVCP080K

OER Project Number 13EHAN562K

Prepared For:

853 Lexington LLC
116 Nostrand Avenue
Brooklyn, NY 11205

Prepared By:

BSD Environmental Group
6008 16th Avenue, 3rd Floor
Brooklyn, NY 11204
info@bsdenvironmental.com

June 2016

June 15, 2016

New York City Office of Environmental Remediation
City Voluntary Cleanup Program
c/o Shaminder Chawla
100 Gold Street, 2nd Floor
New York, NY 10038

Re: VCP # 16CVCP080K
E-Designation # 13EHAN562K
853 Lexington Avenue, Brooklyn, New York
Remedial Action Work Plan (RAWP) *Revised* Stipulation List

Dear Mr. Chawla:

BSD Environmental Group (BSD) hereby submits a Remedial Action Plan (RAWP) Stipulation List for the Site to the New York City Office of Environmental Remediation (OER) on behalf of 853 Lexington LLC. This letter serves as an addendum to the May 2014 RAWP prepared by AMC Engineering (AMC) and approved by New York State Department of Environmental Conservation (DEC) under the Brownfield Cleanup Program (BCP) on September 2014 to stipulate additional content, requirements, and procedures that will be followed during the site remediation. The contents of this list are added to the RAWP and will supersede the content in the RAWP where there is a conflict in purpose or intent.

In addition to the remedial elements outlined in the DEC approved RAWP, the proposed remedial action will further consist of:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Track 4 Site-Specific Soil Cleanup Objectives (SCOs). Site-Specific SCOs for this project are: Total SVOCs=200 ppm; PCE=5.5 ppm; Barium=650 ppm and Mercury=2.0 ppm. Based upon post excavation confirmation sampling data, OER will determine achievement of a Track 2 Restricted Residential or Track 4 Site-Specific remedy.

4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
6. Excavation and removal of soil/fill exceeding Track 4 Site-Specific SCOs. Minor excavation will be required in portions of the Site for installation of 16 footers and perimeter grade beams. A small portion of within the existing cellar will be excavated to a depth of 5 feet for an elevator pit. Additional excavation will occur at three hotspots identified during Remedial Investigation including a CVOC hotspot at boring B4 to 8 feet below grade and SVOC and metal hotspots at boring B1 and B3 to 2 feet below grade. Approximately 285 tons of soil/fill will be removed from the Site and properly disposed at an appropriately licensed or permitted facility. The location of planned excavations is shown in **Appendix 1.**
7. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.
8. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
9. Removal of all UST's that are encountered during soil/fill removal actions. Registration of tanks and reporting of any petroleum spills associated with UST's and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
10. Transportation and off-Site disposal of all soil/fill material at licensed or permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-Site.
11. Collection and analysis of 18 post excavation confirmation and hotspot end-point samples to determine the performance of the remedy with respect to attainment of SCOs. A map indicating end-point sampling locations is attached in **Appendix 2**.
12. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
13. Construction of an engineered composite cover for the proposed site work will consist typically of a new 6-inch thick concrete building slab with a 6-inch clean 3/4-inch stone base and then a compacted subgrade. A slab on grade plan is attached in **Appendix 3** shows the typical design for each remedial cover type used on this Site and location of each cover type built at the Site.

14. Installation of a vapor barrier system consisting of a vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building. The vapor barrier system will consist of a Raven Industries' VaporBlock 20 Plus which is a 20-mil, seven-layer co-extruded barrier made from state-of-the-art polyethylene and EVOH resins, or equivalent. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. The vapor barrier system is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building. A plan view showing the location of the proposed vapor barrier system is provided in **Appendix 4**. Typical design sections for the vapor barrier on slab and sidewalls are provided in **Appendix 4**. Product specification sheets are provided in **Appendix 4.**

15. Installation of an active sub-slab depressurization system (SSDS) consisting of two separate venting zones. Combined these two zones will provide coverage of approximately 7,358 sf of slab area. This is consistent with USEPA sub-slab depressurization design specifications which recommend a separate vent loop for every 4,000 sf of slab area. The horizontal vent line is constructed of a continuous loop of perforated 4-inch HDPE pipe. Fill material around the extraction line will consist of virgin-mined 3/4-inch gravel. The horizontal pipe will extend to an adjacent utility chase-way where it will be piped individually to the roof via a 2-inch cast iron line and will terminate a minimum of 10 feet from windows and ventilation inlets and a minimum of 3 feet above the roof line. The active SSDS is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the active SSDS was designed and properly installed to establish a vacuum in the gas permeable layer and a negative (decreasing outward) pressure gradient across the building slab to prevent vapor migration into the building. The location and layout of the SSDS is shown in **Appendix 5**. A typical section of the system is shown in **Appendix 5.**

16. Construction and operation of a grade-level parking garage with a continuous high volume air exchange in conformance with NYC Building Code.

17. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.

18. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.

19. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

20. Submission of a RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.

21. Submission of an approved Site Management Plan (SMP) in the Remedial Action Plan (RAR) for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

22. The property will continue to be registered with an E-Designation or Restrictive Declaration at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

The additional requirements/procedures include the following Stipulation List below:

1. The criterion attached in **Appendix 6** will be utilized if additional petroleum containing tank or vessel is identified during the remedial action or subsequent redevelopment excavation activities. All petroleum spills will be reported to the NYSDEC hotline as required by applicable laws and regulations. This contingency plan is designed for heating oil tanks and other small or moderately sized storage vessels. If larger tanks, such as gasoline storage tanks are identified, OER will be notified before this criterion is utilized.

2. A pre-construction meeting is required prior to start of remedial excavation work at the site. A pre-construction meeting will be held at the site and will be attended by OER, the developer or developer representative, the consultant, excavation/general contractor, and if applicable, the soil broker.

3. A Historic Fill Transfer and Disposal Notification Form to each disposal facility and a pre-approval letter from all disposal facilities will be provided to OER prior to any soil/fill material removal from the site. The Historic Fill Transfer and Disposal Notification Form template is attached in **Appendix 7**. Documentation specified in the RAWP - Appendix 3 - Section 1.6 “Materials Disposal Off-Site” will be provided to OER. If a different disposal facility for the soil/fill material is selected, OER will be notified immediately.

4. Signage for the project will include a sturdy placard mounted in a publically accessible right of way to building and other permits signage will consist of the NYC VCP Information Sheet (attached **Appendix 8**) announcing the remedial action. The Information sheet will be laminated and permanently affixed to the placard.

5. If your site contains hazardous waste that will be excavated and disposed of offsite, OER can work with your development team to seek an exemption for your property from the $130/ton state Hazardous Waste Program Fee. To qualify for an exemption, your site must be enrolled in the city Voluntary Cleanup Program; hazardous waste must result from

remedial action set forth in a cleanup plan approved by OER; and OER must oversee the cleanup. It is the applicant's responsibility to notify your OER Project Manager, copying supervising Project Manager and Shaminder Chawla, before hazardous waste is shipped from your site. Unless the Department of Environmental Conservation is notified before waste is shipped from your site, you may not receive an exemption from the fee. The exemption does not cover, and you remain liable for, the Special Assessment on Hazardous Waste (established by ECL§ 27-0923) which charges a fee of up to $27 per ton for hazardous waste generated that is due at the State Department of Taxation and Finance 30 days after the end of the quarter in which the waste was generated. **Appendix 9** includes additional information about the Exemption for Hazardous Waste Program Fee.

6. OER requires parties seeking City Brownfield Incentive Grants to carry insurance. For a cleanup grant, both the excavator and the trucking firm(s) that handle removal of soil must carry or be covered under a commercial general liability (CGL) policy that provides $1 million per claim in coverage. OER recommends that excavators and truckers also carry contractors pollution liability (CPL) coverage, also providing $1 million per claim in coverage. The CGL policy, and the CPL policy if obtained, must name the City of New York, the NYC Economic Development Corporation, and Brownfield Redevelopment Solutions as additional insured. For an investigation grant, an environmental consultant must be a qualified vendor in the BIG program and carry $1 million of professional liability (PL) coverage. A fact sheet regarding insurance is attached as **Appendix 10**.

7. Daily reports will be provided during active excavation work. If no work is performed for extended time period, daily report frequency will be reduced to weekly basis. Daily report template is attached in **Appendix 11.**

8. Monthly reports will be provided by the owner/developer after excavation work is completed for the duration of the construction period. Monthly report template is attached in **Appendix 12**.

9. Trucking log sheets will be utilized as trucks are transported from sites, and completed logs should be attached to the Remedial Action Report (RAR) as an appendix. The goal of this log is to clearly document the destination of material leaving the site, the parties responsible for its transfer, and other pertinent details. The trucking log template is provided in **Appendix 13**.

10. The new Remedial P.E. stamped/signed RAWP certification page is included in **Appendix 13.**

11. The Site is to be repurposed through renovations and additions to the existing two-story vacant commercial building into a six-story residential apartment building. The renovated building will cover 100% of the lot, with the current cellar, encompassing approximately 35% of the lot, remaining. The existing foundation will require minimal excavation; due to the use of the original structure, with only excavation for the elevator pit taking place in the current cellar. Excavation and soil disturbance will occur on the west and southeastern portions of the lot for installation of support footing and beams, and the southern portion of the cellar for the elevator pit. Perimeter footing excavation dimensions will range from

building will cover 100% of the lot, with the current cellar, encompassing approximately 35% of the lot, remaining. The existing foundation will require minimal excavation; due to the use of the original structure, with only excavation for the elevator pit taking place in the current cellar. Excavation and soil disturbance will occur on the west and southeastern portions of the lot for installation of support footing and beams, and the southern portion of the cellar for the elevator pit. Perimeter footing excavation dimensions will range from 3-feet to 5-feet. BSD was retained by the property owner to perform the site management in compliance with and implementation of the approved RAWP.

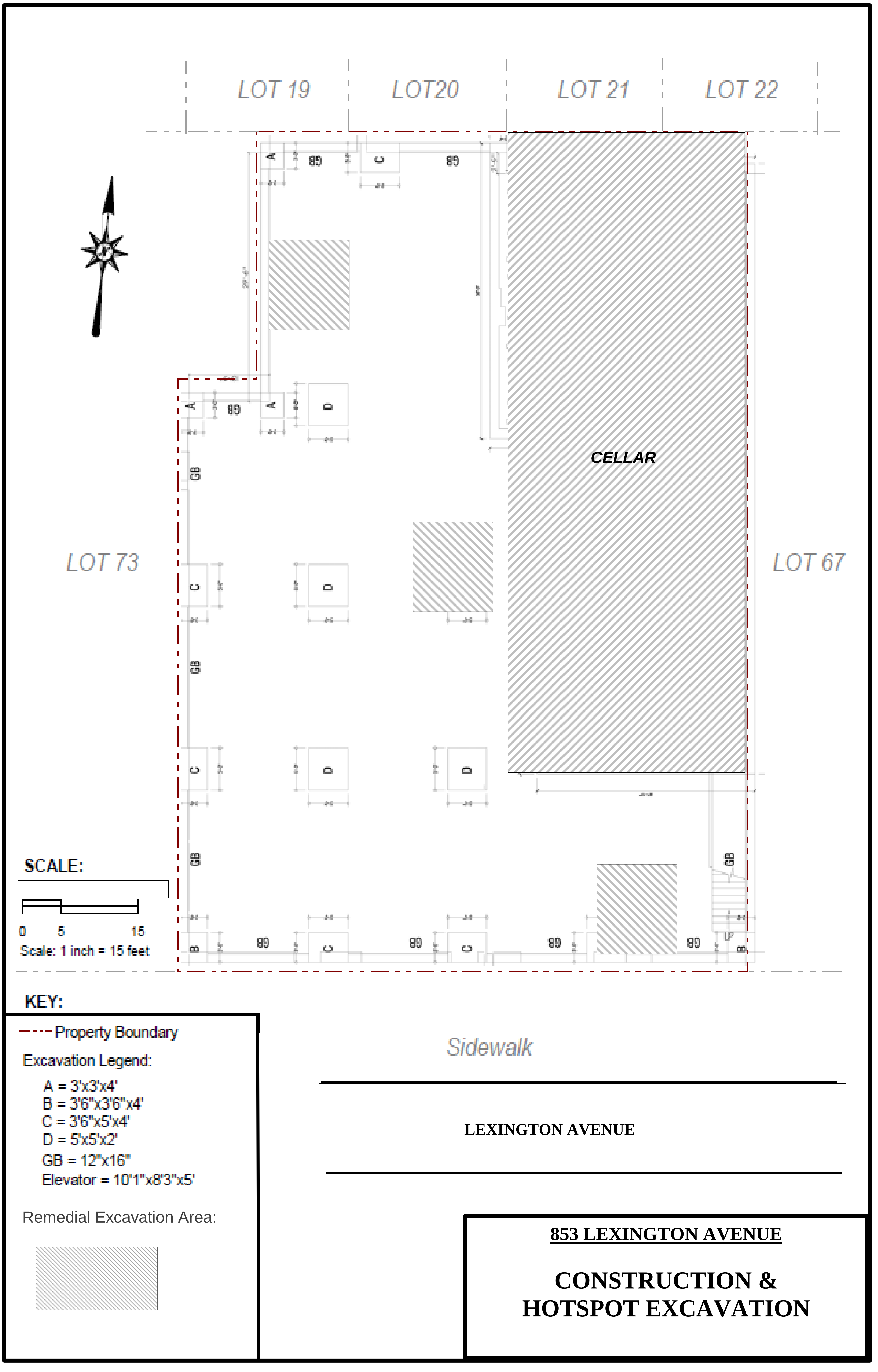
Sincerely,

....

Danny Singh, QEP, CES

Cc: Sarah Pong, NYCOER

Appendix 1
Planned Excavation Location



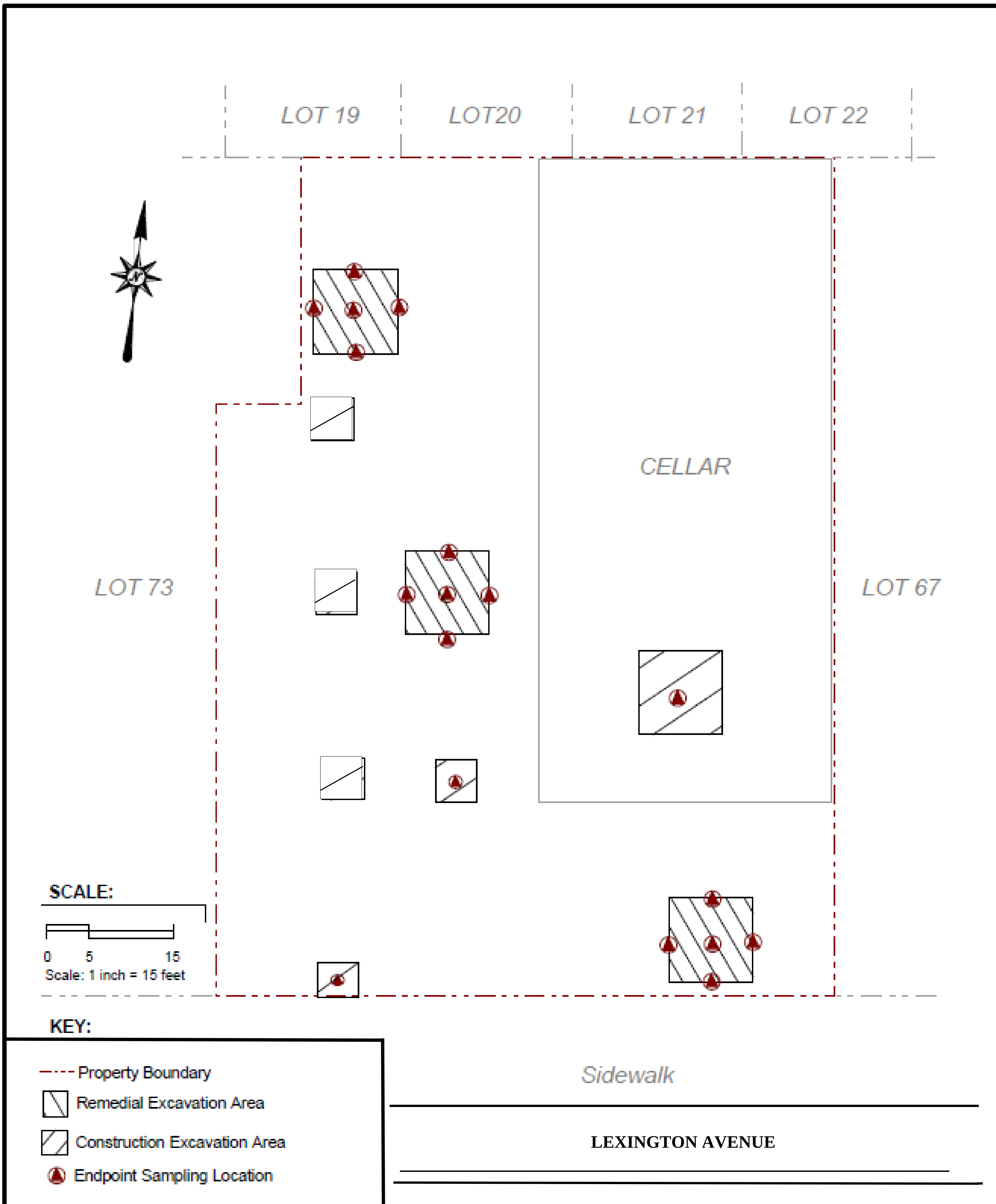
853 LEXINGTON AVENUE

CONSTRUCTION & HOTSPOT EXCAVATION

Appendix 2

Endpoint Location Plan

Environmental Group



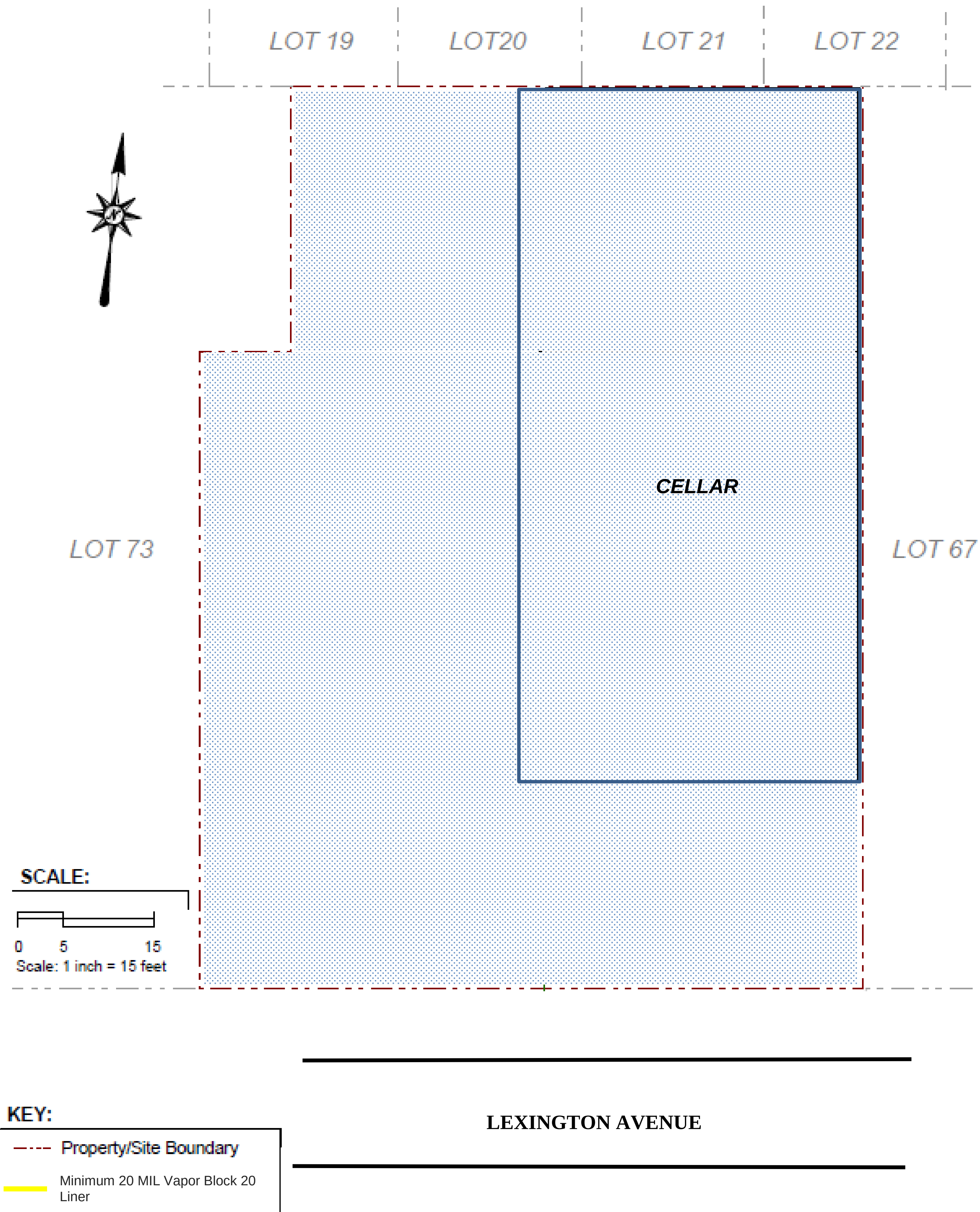
853 LEXINGTON AVENUE

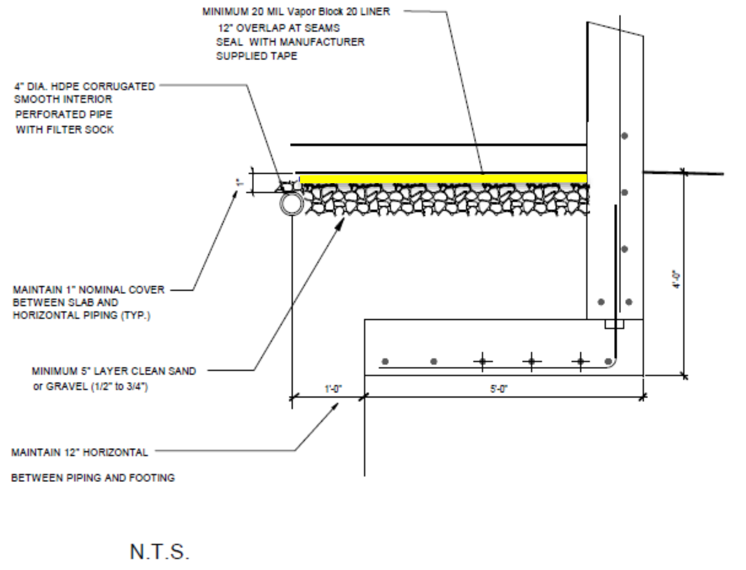
ENDPOINT SAMPLING LOCATIONS

Appendix 3

Composite Cover Design

BSD Environmental Group





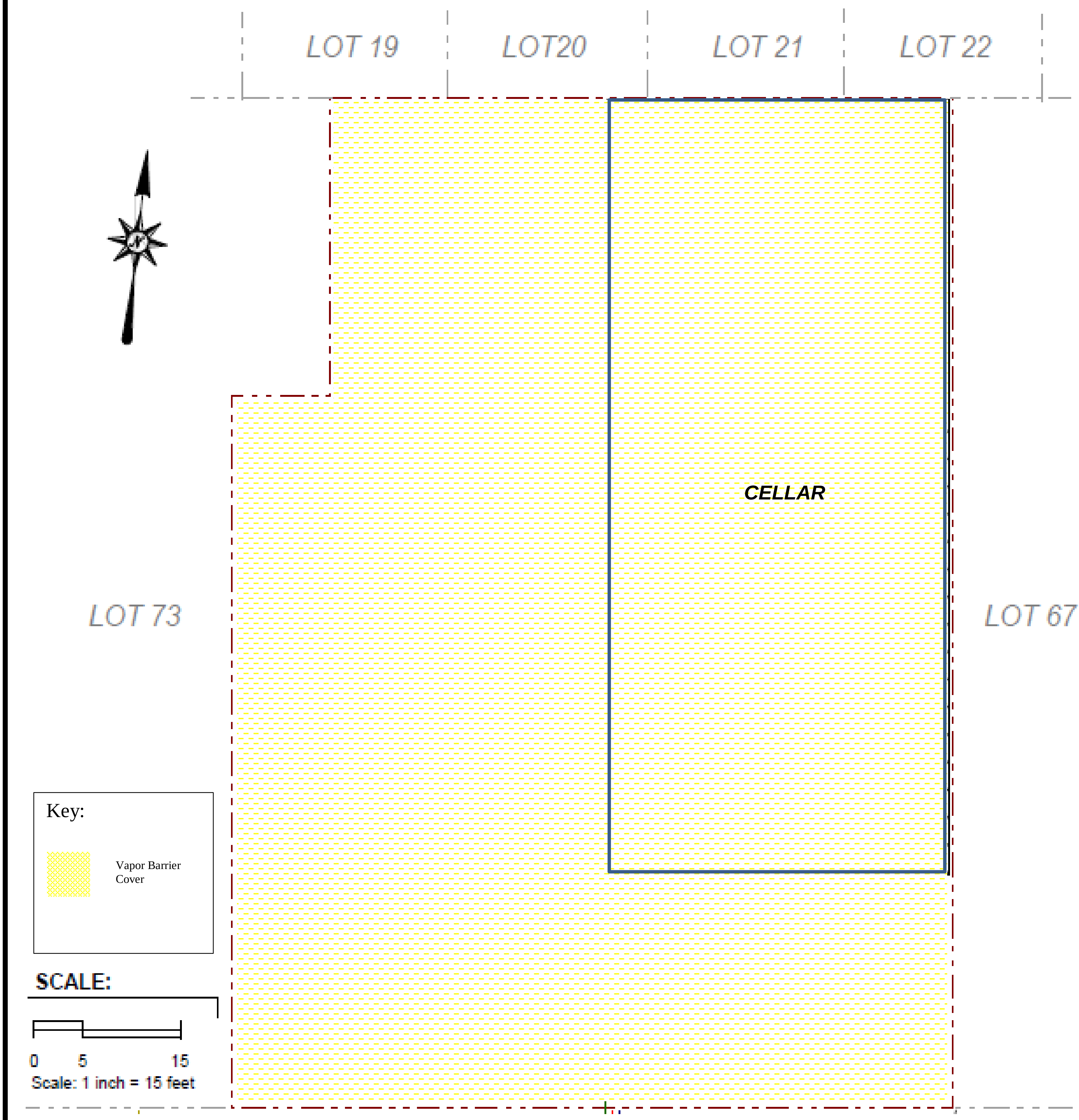
853 LEXINGTON AVENUE

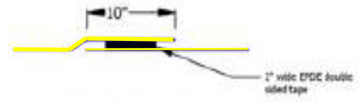
COMPOSITE COVER DESIGN AND DETAIL

Appendix 4
Vapor Barrier Design and Specification

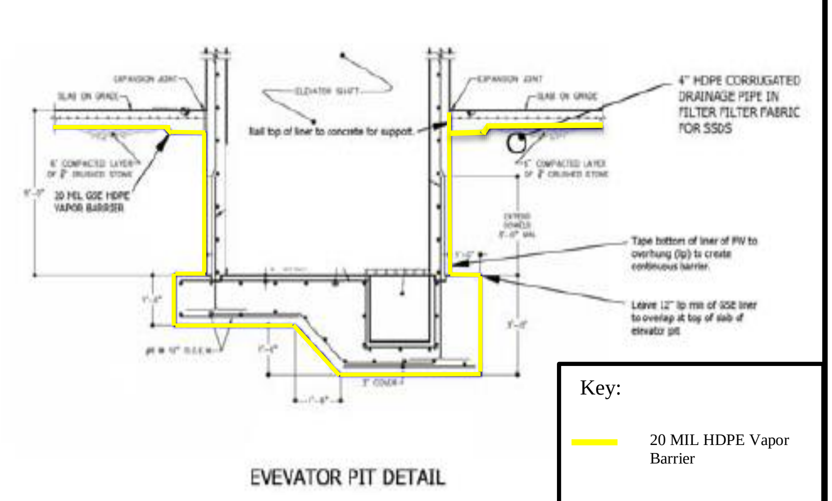
OFFICE: 6007 16th Avenue 3rd Floor Brooklyn New York 11204 **MAILING ADDRESS:** PO Box 159 Brooklyn NY 11204
T. 718-438-2200 **E.** info@bsdenvironmental.com **W.** www.bsdenvironmental.com

BSD Environmental Group





20 mil HDPE liner Overlap Detail



EVEVATOR PIT DETAIL

LEXINGTON AVENUE

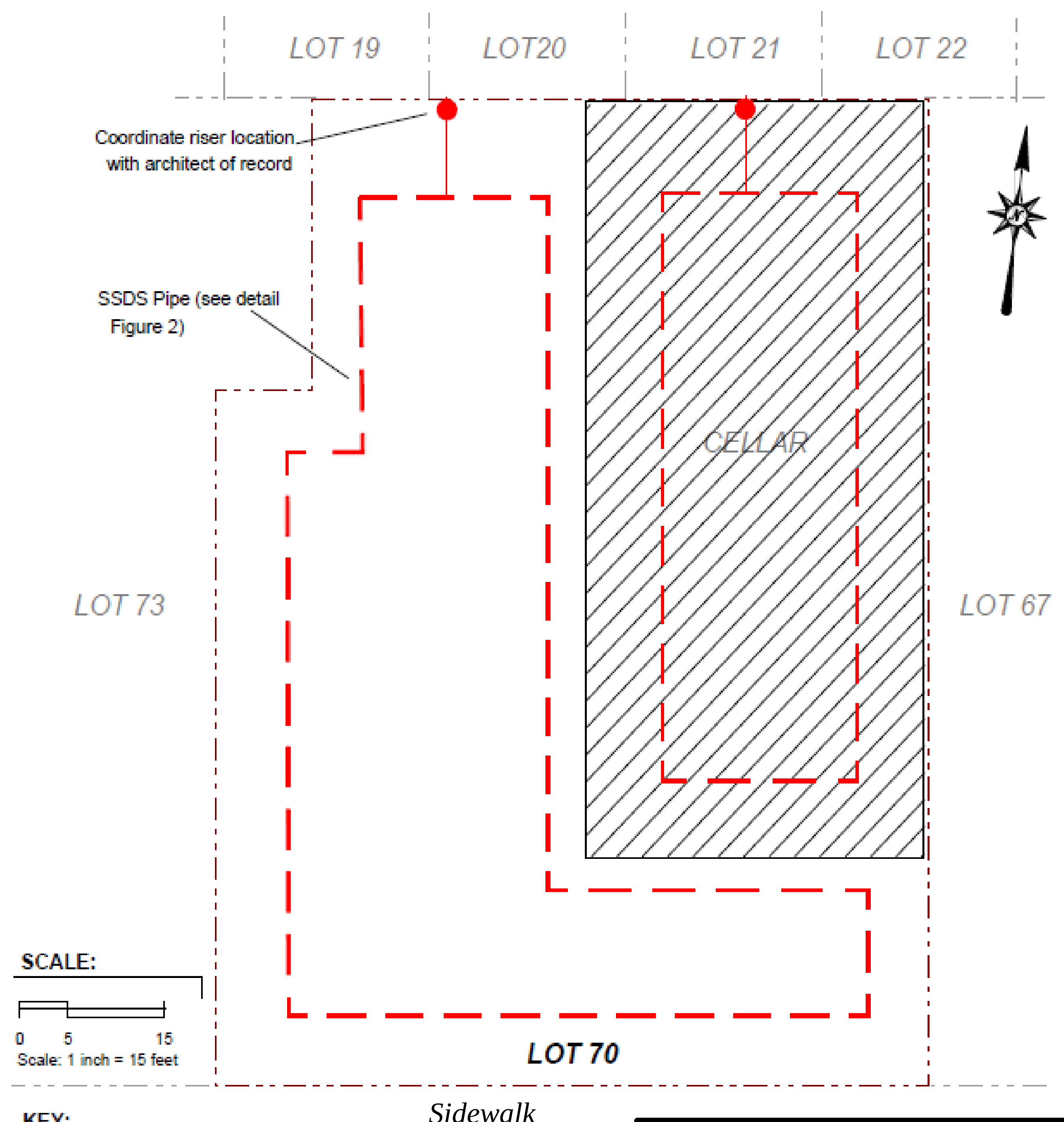
853 LEXINGTON AVENUE
VAPOR BARRIER DESIGN AND DETAIL

OFFICE: 6007 16th Avenue 3rd Floor Brooklyn New York 11204 MAILING ADDRESS: PO Box 159 Brooklyn NY 11204
T. 718-438-2200 E. info@bsdenvironmental.com W. www.bsdenvironmental.com

Appendix 5
Active SSDS Design

OFFICE: 6007 16th Avenue 3rd Floor Brooklyn New York 11204 MAILING ADDRESS: PO Box 159 Brooklyn NY 11204
T. 718-438-2200 E. info@bsdenvironmental.com W. www.bsdenvironmental.com

Environmental Group



SCALE:

0 5 15

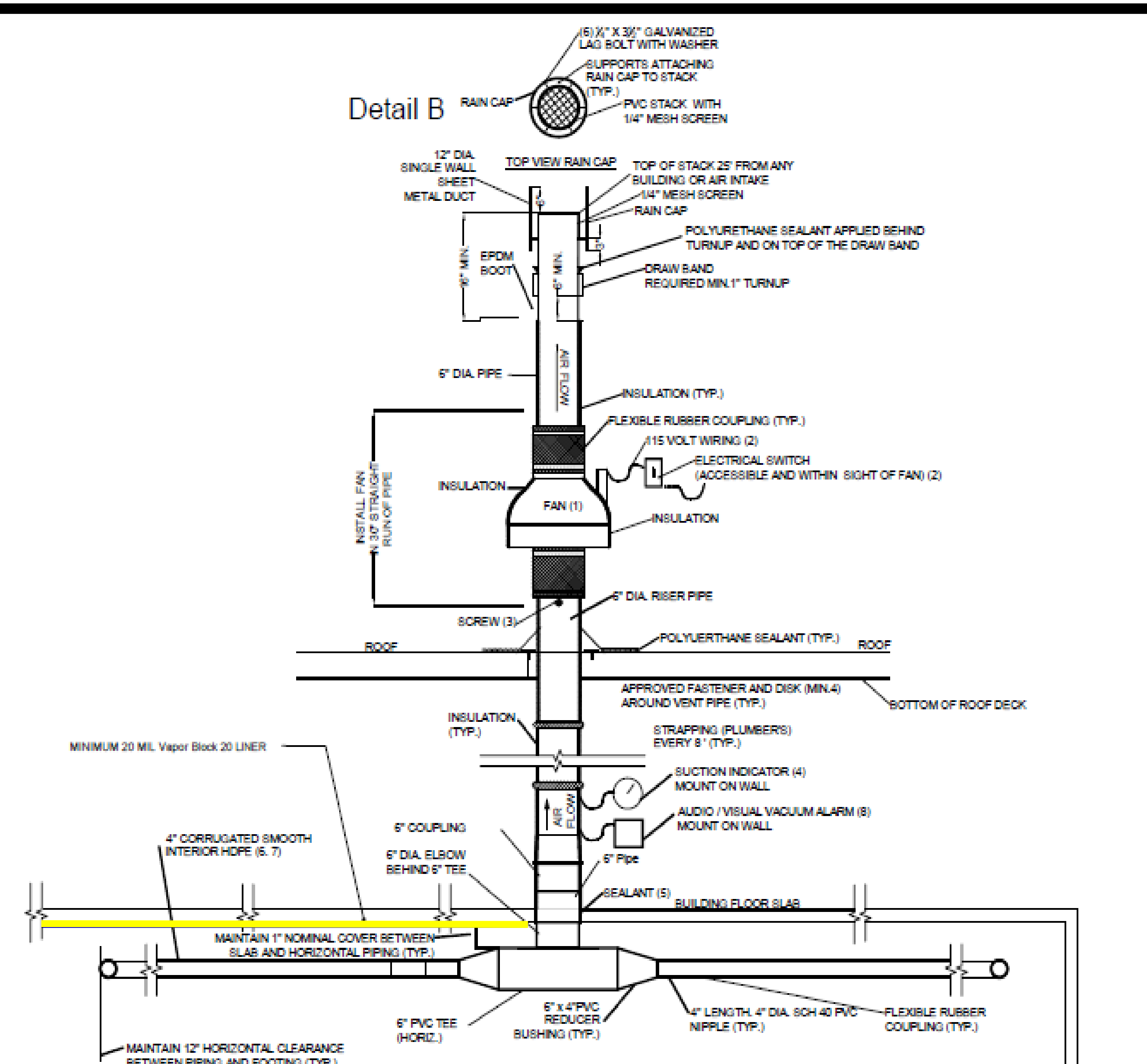
Scale: 1 inch = 15 feet

KEY:

Property Boundary

853 LEXINGTON AVENUE

SSDS LAYOUT



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 assemble 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 with smooth interior waterway. Ads N-12 or approved equal.
7. Wrap 4" HDPE pipe with geotextile fabric, GSE NW4 or approved equal.

853 LEXINGTON AVENUE

SSDS DETAIL

Appendix 6
Generic Procedures for Management of Underground Storage Tanks
Identified under the NYC VCP

Prior to Tank removal, the following procedures should be followed:

- Remove all fluid to its lowest draw-off point.
- Drain and flush piping into the tank.
- Vacuum out the “tank bottom” consisting of water product and sludge.
- Dig down to the top of the tank and expose the upper half.
- Remove the fill tube and disconnect the fill, gauge, product, vent lines and pumps. Cap and plug open ends of lines.
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location.
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank.
- Clean tank or remove to storage yard for cleaning.
- If the tank is to be moved, it must be transported by licensed waste transporter. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport.
- After cleaning, the tank must be made acceptable for disposal at a scrap yard, cleaning the tanks interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal, the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.).
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with a calibrated photoionization detector (PID).

Impacted Soil Excavation Methods

The excavation of the impacted soil will be performed following the removal of the existing tanks. Soil excavation will be performed in accordance with the procedures described under Section 5.5 of Draft DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with calibrated photoionization detector (PID).

Final excavation depth, length, and width will be determined in the field, and will depend on the horizontal and vertical extent of contaminated soils as indentified through physical examination (PID response, odor, staining, etc.). Collection of verification samples will be performed to evaluate the success of the removal action as specified in this document.
The following procedure will be used for the excavation of impacted soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan.
- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated.
- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile, or dispose of, separate from the impacted soil.
- If additional UST's are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued trenching around the perimeter to minimize its disturbance.
- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc.) an attempt will be made to remove it, to the extent not limited by the site boundaries or the bedrock surface. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separated dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present.
- Excavated soils which are temporarily stockpiled on-site will be covered with tarp material while disposal options are determined. Tarp will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property.

Once the site representative and regulatory personnel are satisfied with the removal effort, verification of confirmatory samples will be collected from the excavation in accordance with DER-10.

Appendix 7

Historic Fill Transfer and Disposal Notification Form

Historic Fill & Soil Disposal Notification Form
New York City Office of Environmental Remediation

Date: _____

To operators and representatives of disposal facilities and government regulators:

The New York City Office of Environmental Remediation (OER) operates several environmental remediation regulatory programs in New York City that manage light to moderately contaminated properties that are planned for redevelopment. These projects commonly involve the removal of historical fill and soil from properties for development and other purposes. As with any environmental regulatory program, lawful transport and disposal of historic fill and soil is mandatory. It is also our highest priority.

Disposal facilities, recycling facilities and clean fill facilities (collectively, "receiving facilities") for historic fill and soil may be located in New York or neighboring states. Our research has indicated that a wide range of facility types and a complex set of regulatory requirements and obligations for a receiving facility operation exist within each jurisdiction. Receiving facilities are required to comply with applicable laws and regulations and may operate under state and local authority via permits, licenses, registrations, agreements and other legal instruments that dictate requirements for the material they can receive. Operating requirements may include adherence to applicable chemical standards, guidance levels, criteria, policy or other bases to determine the suitability for receipt of historical fill or soil at a receiving facility. Such requirements may also specify sample frequency, location, sampling method, chemical analytes, or analytical methods. Receiving facility soil/fill sampling requirements often differ from standard remedial investigation protocol performed in the original environmental study of the property.

Given the variability of data requirements for receiving facilities, the wide range of receiving facility types, and the complexity of regulatory requirements and obligations, OER is seeking to assist government regulators and facility operators and their technical representatives to achieve compliance with regulatory requirements for disposal of historic fill and soil at receiving facilities for projects we administer. Further, we seek to ensure that all of the data and information that is developed in OER's regulatory programs (for instance, site environmental history and soil chemistry) is available to government regulators and to facility managers when making decisions on suitability for disposal to a receiving facility.

This document provides formal notification from OER of the availability of environmental information regarding the physical and chemical content of historical fill and soil that is proposed for transfer to a disposal, recycling or clean fill facility from a property located at:

853 Lexington Avenue, Brooklyn, New York
OER Site # 16CVCP080K

The above referenced property has undergone regulated environmental investigation and is the subject of remedial action work plan under the authority of OER. All environmental data and information generated during this regulatory process is available online in OER's Document Repository listed below. Be advised that many properties are also regulated under state environmental law, and additional data may be available from state agencies. OER reserves the right to share this information with applicable state regulators.

http://www.nyc.gov/html/oer/html/document-repository/document-repository.shtml

Note: when logged on to above URL, select the borough for the site (listed in the address above) and scroll through the list and select the address for the site (listed above). All documents are available in PDF format.

According to New York State DER-10 Technical Guidance for Site Investigation and Remediation, historical fill is non-indigenous fill material deposited on a property to raise its topographic elevation. The origin of historical fill is unknown but it is commonly known to contain ash from wood and coal combustion, slag, clinker, construction debris, dredge spoils, incinerator residue, and demolition debris. Historic fill is a regulated solid waste in the State of New York. Prior to making a determination regarding the suitability of historic fill and/or soil from this property for disposal at this receiving facility, **we strongly recommend that you review all of the data and information available for this property in our Document Repository** listed above. The repository includes:

- A Phase 1 history of use of the property;
- A Remedial Investigation Report for the property which includes:
    - Boring logs that describe physical observations of the historical fill material made by a trained environmental professional;
    - Chemical data for grab samples of historical fill collected during the remedial investigation;
- A Remedial Action Work Plan for the property.

If you have any questions, please contact Horace Zhang at (212) 788-8484 or Hzhang@dep.nyc.gov for more information.

Appendix 8

NYC VCP Signage

NYC Voluntary Cleanup Program

853 Lexington Avenue
Site #: 16CVCP080K

This property is enrolled in the New York City Voluntary Cleanup Program for environmental remediation. This is a voluntary program administered by the NYC Office of Environmental Remediation.

For more information,
log on to: www.nyc.gov/oer

Or scan with smart phone:

If you have questions or would like more information, please contact:

Shaminder Chawla at (212) 442-3007
or email us at brownfields@cityhall.nyc.gov

Appendix 9

Hazardous Waste Fee Exemption Fact Sheet planYC

NYC Office of Environmental Remediation

Exemption from the Hazardous Waste Program Fee

If your site is enrolled in the city Voluntary Cleanup Program and contains hazardous waste that will be excavated and disposed of offsite, OER can work with your development team to exempt your property from the $130/ton state Hazardous Waste Program fee. This exemption does not cover, and you remain liable for, the Special Assessment on Hazardous Waste (established by ECL§ 27-0923).

To qualify for an exemption from the Hazardous Waste Program Fee:

1. A site must be enrolled in the city Voluntary Cleanup Program;
2. Hazardous waste must result from remedial action set forth in a cleanup plan approved by OER; and
3. OER must oversee the cleanup.

Process for obtaining a Hazardous Waste Program Fee exemption:

For each VCP site, OER will submit three certifications to the New York State Department of Environmental Conservation (DEC):

1. OER will prepare a Notice of Potential Generation after a soil test shows a site contains hazardous waste. To prepare this Notice, you must provide your OER project manager with:

   - the site's EPA generator ID number;
   - the date of the soil test confirming hazardous waste;
   - the amount of hazardous waste in tons that you anticipate shipping offsite; and
   - the anticipated dates for the start and completion of remediation.

   DEC must receive this form **before** hazardous waste is shipped from your site. Otherwise your claim for an exemption may be denied.

2. After hazardous waste has been removed from the site, OER will distribute a Certification of Hazardous Waste Generation to your project team which when filled out documents how the hazardous waste was managed. Once completed, it must be signed by the generator (or site owner) and the site's Qualified Environmental Professional and returned to your OER project manager with a copy to Shana Holberston sholbertson@dep.nyc.gov and Mark McIntyre mmcintyre@cityhall.nyc.gov.

3. OER will then issue a Certification of Remedial Action that Generated Hazardous Waste to DEC representing OER's approval of how a site managed its hazardous waste.

Upon OER's submission of the last two certifications to DEC, the agency will issue a written statement exempting an individual site from the Hazardous Waste Program Fee. OER will then notify the project of the exemption.

For further information, please contact:

Shana Holberton
Program Manager
(212) 788-3220
SHolberton@dep.nyc.gov

or

Mark McIntyre
General Counsel
(212) 788-3015
MMcintyre@cityhall.nyc.gov

Ongoing Obligations:

Regardless of the Hazardous Waste Program Fee exemption, parties must:

- File a Hazardous Waste Annual Report with DEC by March 1 of each year if your site generated 15 tons of hazardous waste or more in the relevant calendar year. For details, see http://www.dec.ny.gov/chemical/8770.html To set forth the basis for an exemption from the Hazardous Waste Program Fee, put an X in the Exempt Remedial box in Box H of Section 1 of the Waste Generation and Management (GM) form and in the Comments Box (at the bottom of the form) include "New York City Voluntary Cleanup Program, VCP Site Number_______)"; and

- Make quarterly payments of the Special Assessment on Hazardous Waste to the state Department of Taxation and Finance. For details see: http://www.tax.ny.gov/bus/haz/hzrdwste.htm

Appendix 10

BIG Program Insurance Fact Sheet

planNYC
NYC Office of Environmental Remediation
NYC BIG Brownfield Incentive Grant Program

FACT SHEET – BIG PROGRAM INSURANCE REQUIREMENTS

Investigation Grants – for a developer or site owner to be eligible for a BIG investigation grant, its environmental consultant(s) must be:

- a Qualified Vendor in the BIG Program; and
- maintain Professional Liability (PL) insurance of $1M per claim and annual aggregate.

Cleanup Grants – for a developer or site owner to be eligible for a BIG cleanup grant:

- Its general contractor or excavation/foundation contractor hired to perform remedial work must maintain Commercial General Liability (CGL) insurance of at least $1M per occurrence and $2M in the general aggregate. It is recommended that the general contractor or excavation/foundation contractor also maintain a Contractors Pollution Liability policy (CPL) of at least $1M per occurrence.

- Its subcontractors who are hired by the general contractor etc. to perform remedial work at a site, including soil brokers and truckers, must also maintain a CGL policy in the amount and with the terms set forth above. It is recommended that subcontractors also maintain a CPL policy in the amount and with the terms set forth above.

  The CGL policy, and the CPL policy if in force, must list the city, EDC and BRS as additional insureds, include completed operations coverage and be primary and non-contributory to any other insurance the additional insureds may have.

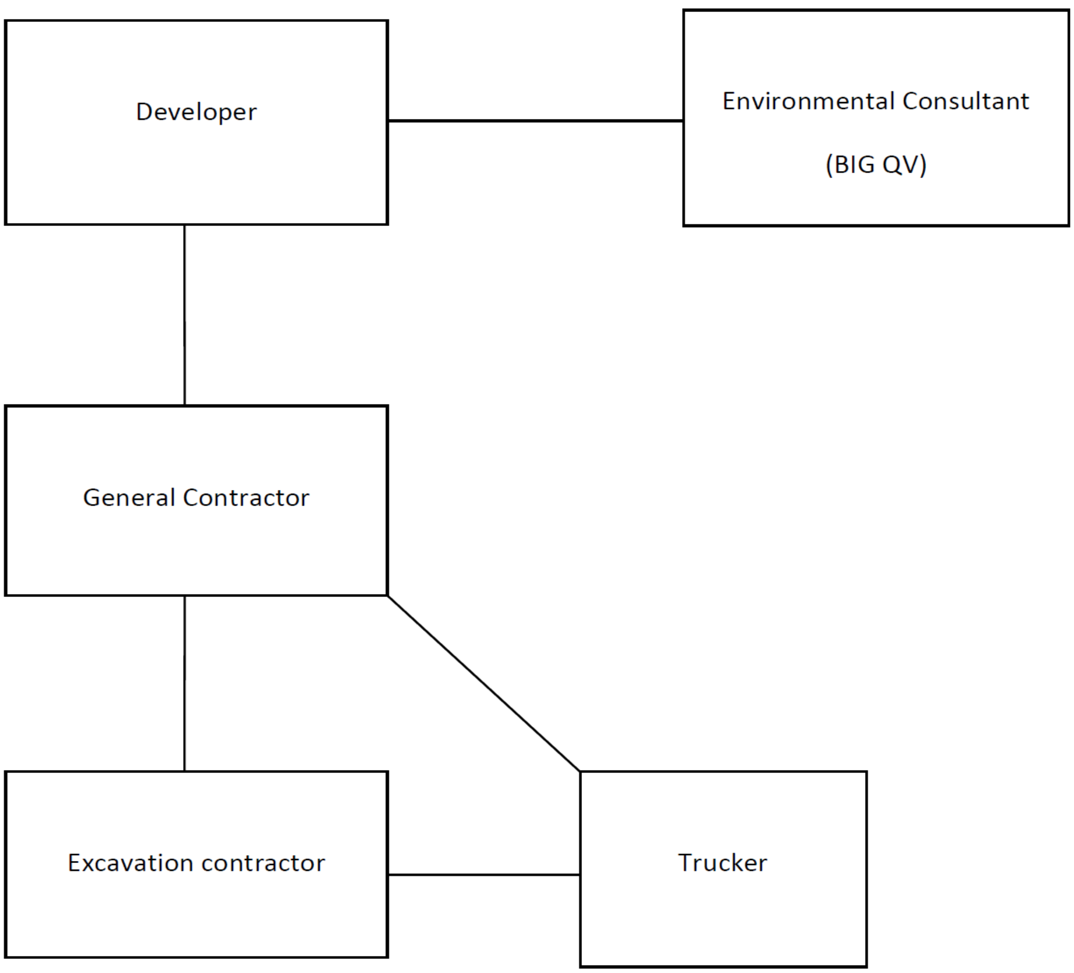
- Its environmental consultant(s) hired to oversee the cleanup must be:
  a. a BIG Qualifed Vendor; and
  b. maintain Professional Liability (PL) insurance of $1M per claim and annual aggregate.

If, in the alternative, the developer hires its environmental consultant to perform the cleanup, the environmental consultant must maintain CGL insurance in the amount and with the terms set forth above. It is recommended that the environmental consultant also maintain CPL coverage in the amount and with the terms set forth in the first two bulleted items listed above.

A schematic presenting the contractual relationships described above appears on page 2. Parties who must be named as Additional Insureds on Cleanup Grant insurance policies (CGL and CPL) are presented on page 3.

Example of Contractual Relationships for Cleanup Work

The Office of Environmental Remediation's Voluntary Cleanup Plan program requires applicants to identify the parties who are engaged in active remediation of their sites including: the General Contractor hired to remediate and/or the excavation contractor hired to excavate soil from the site and the trucking firm(s) that remove soil from the site for disposal at approved facilit(ies).



The chart above shows contractual relationships that typically exist for projects that are enrolled in the Voluntary Cleanup Program.

BIG Program Additional Insureds

The full names and addresses of the additional insureds required under the Required CGL Policy and recommended CPL Policy are as follows:

<u>"City and its officials and employees"</u>
New York City Mayor's Office of Environmental Remediation
253 Broadway, 14th Floor
New York, NY 10007

<u>"NYC EDC and its officials and employees"</u>
New York City Economic Development Corporation
110 William Street
New York, NY 10038

<u>"BIG Grant Administrator and its officials and employees"</u>
Brownfield Redevelopment Solutions, Inc.
739 Stokes Road, Units A & B
Medford, NJ 08055

Appendix 11

Daily Report Template

planNYC
NYC Office of Environmental Remediation

Daily Status Report Template
Version 1.3

Generic Template for Daily Status Report

Instructions

The Daily Status Report submitted to OER should adhere to the following conventions:

- Remove this cover sheet prior to editing.
- Remove all the red text and replace with site-specific information.
- Submit the final version as a Word or PDF file.

Daily Status Reports

Daily status reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

DAILY STATUS REPORT

WEATHER	Snow		Rain		Overcast		Partly Cloudy	X	Bright Sun	
TEMP.	< 32		32-50		50-70	X	70-85		>85	

Prepared By: Enter Your Name Here

VCP Project No.:	14CVCP000M	E-Number Project No.:	14EHAN000M	Date:	01/01/2014
Project Name:	Name or Address				

Consultant: Person(s) Name and Company Name	Safety Officer: Person(s) Name and Company Name
General Contractor: Person(s) Name and Company Name	Site Manager/ Supervisor: Person(s) Name and Company Name

Work Activities Performed (Since Last Report):
Provide details about the work activities performed.

Working In Grid #: A1, B1, C1

Samples Collected (Since Last Report):
No samples collected or provide details

Air Monitoring (Since Last Report):
No air monitoring performed or provide details
Prestart Conditions – PID = 0.0 ppm, Dust = 0.000
High Conditions – PID = 0.0 ppm, Dust = 0.000

Problems Encountered:
No problems encountered or provide details

Planned Activities for the Next Day/ Week:

Provide details about the work activities planned for the next day/ week.

Facility # Name/ Location Type of Waste Solid *Or* Liquid	Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		Facility # Name Location Type of Waste Solid *Or* Liquid		# # # # # # # Clean Earth Carteret, NJ petroleum soils Solid	
(Trucks, Cu.Yds. *Or* Gallons)	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds. *Or* Gallons	Trucks	Cu. Yds.
Today									5	120
Total									25	600

NYC Clean Soil Bank		Receiving Facility: Name/ Address (Approved by OER)
Tracking No.:	13CCSB000	

Today	Trucks 5	Cu. Yds. 25	Total	Trucks 120	Cu. Yds. 600

Site Grid Map

Insert the site grid map here

<u>Photo Log</u>

Photo 1 – provide a caption	Insert Photo Here – Photo of the entire site
Photo 2 – provide a caption	Insert Photo Here – Photo of the work activities performed
Photo 3 – provide a caption	Insert Photo Here – Photo of the work activities performed

Appendix 12
Monthly Report Template

WEEKLY/MONTHLY STATUS REPORT

Prepared By: Enter Your Name Here

VCP Project No.:	14CVCP000M	E-Number Project No.:	14EHAN000M	Date:	01/01/2014

Project Name:	Name or Address
Project Updates (Since Last Report): Provide details about the work activities performed.	

Problems Encountered: No problems encountered or provide details
Planned Activities for the Next three months: Provide details about the future work activities.

Photo Log

Photo 1 – provide a caption	Insert Photo Here – Photo of the entire site
Photo 2 – provide a caption	Insert Photo Here – Photo of the work activities performed

Photo 3 – provide a caption	Insert Photo Here – Photo of the work activities performed

Appendix 13

Soil Disposal and Trucking Log Sheet

Shipment Date	Manifest Number	Transporter Name/Truck Name	License Plate	On-Site Location (approx. depth)	Off-Site Disposal Facility	Tonnage
8/25/2013	66357	ABC Trucking/201	NJ-AP458	WC-1(0-8')	Jones Landfill	32.90

Appendix 14
Signed/Stamped RAWP Certification Page by New Remedial P.E.

CERTIFICATION

I, [name], am currently a registered professional engineer licensed by the State of New York. I have reviewed the RAWP prepared for the 853 Lexington Avenue site (VCP Site No. 16CVCP080K) by EBC and approved by NYSDEC in September 2014. I certify to the following:

- I have reviewed the RAWP and the Stipulation List, to which my signature and seal are affixed.
- Engineering Controls developed for this remedial action are designed to achieve the goals established in the Remedial Action Work Plan for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the text and drawings of the Remedial Action Work Plan and are of sufficient detail to enable proper construction.
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Name

PE License Number

Signature

Date

PE Stamp

I, Danny Singh, am a qualified Environmental Professional. I will have primary direct responsibility for implementation of the remedial program for the 853 Lexington Avenue site, site number 16CVCP080K. I certify to the following:

- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Danny Singh
QEP Name

QEP Signature

6-15-16
Date

FORMER LEXINGTON LAUNDRY SERVICE
BCP No. C224180

853 LEXINGTON AVENUE
BROOKLYN NEW YORK
Block 1643 Lot 70

REMEDIALWORK PLAN

MAY 2014

Prepared for:
853 Lexington LLC
116 Nostrand Avenue
Brooklyn, NY 11205

AMC Engineering
99 Jericho Turnpike, Suite 300J
Jericho, NY 11753
Phone: (516) 417-8588

CERTIFICATIONS

I Ariel Czemerinski certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

076508 — NYS Professional Engineer #

11/5/2014 — Date

Signature

STATE OF NEW YORK
ARIEL CZEMERINSKI
076508
LICENSED PROFESSIONAL ENGINEER

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

TABLE OF CONTENTS
REMEDIAL ACTION WORK PLAN
Former Lexington Laundry Service

TABLE OF CONTENTS
REMEDIAL ACTION WORK PLAN
Former Lexington Laundry Service

TABLE OF CONTENTS
REMEDIAL ACTION WORK PLAN
Former Lexington Laundry Service

LIST OF TABLES

LIST OF FIGURES

ATTACHMENTS

LIST OF ACRONYMS

Acronym	Definition
AMC	AMC Engineering
AWQS	Ambient Water Quality Standards
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CQMP	Construction Quality Management Plan
DUSR	Data Usability Statement Report
EBC	Environmental Business Consultants
FER	Final Engineering Report
HDPE	High Density Polyethylene
IRM	Interim Remedial Measure
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PS	Public School
PVC	Polyvinyl Chloride
RAO	Remedial Action Objectives
RAWP	Remedial Action Work Plan
RI	Remedial Investigation
RSCOs	Recommended Site Cleanup Objectives
SCG	Standards, Criteria, and Guidelines
SMMP	Soil/Materials Management Plan
SMP	Site Management Plan
SSDS	Sub-slab Depressurization System
SWPPP	Stormwater Pollution Prevention Plan
SVOCs	Semi-Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

Site Description/Physical Setting/Site History

This Remedial Action Work Plan has been prepared for a commercial property located at 853 Lexington Avenue in the Bedford-Stuyvesant section of Brooklyn (**Figure 1**). The Site was formally accepted into to the New York State Brownfields Cleanup Program (BCP) through a Brownfield Cleanup Agreement (BCA) executed by the NYS Department of Environmental Conservation (DEC) on November 15, 2013. The applicant was accepted into the program as a Volunteer.

The Site address is 853 Lexington Avenue, Brooklyn, New York 11211. It is located on the north side of Lexington Avenue between Patchen Avenue and Broadway in Brooklyn, New York. The site is designated as Block 1623 Lot 70 on the Brooklyn Tax Map. The Site consists of a single tax parcel with 73.62 feet of street frontage on Lexington Avenue and is approximately 100 feet deep for a total of 7,358 square feet (0.17 acres). The lot is currently developed with a vacant two story commercial warehouse occupying the entire Lot.

The property has an elevation of approximately 39 feet above the National Geodetic Vertical Datum (NGVD) feet. The depth to groundwater beneath the site, as determined from field measurements, is approximately 43 feet below grade and flows northwest.

The environmental history of the Site was previously reported by Singer Environmental Group, LTD in a 2012 Phase I Assessment. Historical records show the current building being built in 1931. A review of Sanborn maps showed occupancy by HC Bohack CO, in 1908, followed by a commercial laundry facility in 1932 through sometime prior to 1951. From 1951 to at least 2007, several furniture manufacturers occupied the building.

Chlorinated solvent contamination was observed in shallow soil and soil gas and relatively low levels of PCE and / or TCE was observed in groundwater during the Remedial Investigation.

Summary of the Remedial Investigation

The initial remedial investigation was performed from May 22, 2013 through May 31, 2013 under the New York City Voluntary Cleanup Program (VCP) in accordance with the NYC

Office of Environmental Remediation (OER) approved Remedial Investigation (RI) Work Plan. Based on the results of the initial investigation the project was referred to the NYSDEC and a supplemental RI was completed from January 6 through January 8, 2014 in accordance with the protocols and methods as established in the NYSDEC approved Remedial Investigation Work Plan. The goals of the Remedial Investigation were to define the nature and extent of contamination in soil, groundwater and any other impacted media; to identify the source(s) of the contamination; to assess the impact of the contamination on public health and/or the environment; and to provide information to support the development of a Remedial Work Plan to address the contamination.

Activities completed under the RI:

- Soil sampling and analysis for volatile and semi-volatile organic compounds (VOCs, SVOCs), pesticides / PCBs and metals in 31 soil samples from 13 soil boring locations.
- The installation of four groundwater monitoring wells;
- The collection and analysis of a groundwater samples for volatile and semi-volatile organic compounds, pesticides / PCBs and metals; and,
- The collection of analysis of subslab soil gas, indoor air and outdoor ambient air samples for VOCs.

The field work portion of the RI was conducted by Environmental Business Consultants (EBC) from May 22, 2013 through May 31, 2013 and January 6, 2014 through January 8, 2014 in accordance with the protocols and methods as established in the approved Remedial Investigation Work Plan.

The results of sampling performed during this RI, identified elevated levels of CVOCs in shallow soil in the central portion of the Site above Restricted Residential Soil Cleanup Objectives (SCOs) as well as in soil gas above mitigation levels established within the State DOH soil vapor guidance matrix. PCE in shallow soil, to depths of up to 6 feet below grade in the central portion of the property, was detected at a maximum concentration of 12,000 µg/kg. Both PCE and TCE were detected in several other area across the Site, however, at concentrations below Unrestricted Use SCOs. CVOC concentrations in soil gas ranged from 3.44

μg/m^3 to a high of 971.44 μg/m^3. CVOC concentrations in indoor and outdoor air were 77.44 μg/m^3 and 1.80 μg/m^3, respectively.

Groundwater was encountered at a depth of approximately 45 feet below grade. Detections of PCE ranged from 15 ug/L to 110 ug/L in all of the monitoring wells during the May 2013 sampling, however, was non-detect during the January 2014 sampling event. TCE was detected above NYSDEC GQS in all wells during both the May 2013 and January 2014 sampling events, though an average concentration reduction of 58% was seen in the January 2014 sampling results.

SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were reported above restricted soil cleanup objectives (SCOs) in soil from the 0-2ft interval at boring locations B1 and B3 as well as the 4-6ft interval at boring location B3.

Two metals, barium and mercury, were reported above restricted residential SCOs in the 0-2ft sampling interval at two boring locations. One or more of the metals nickel, lead and zinc were reported above unrestricted SCOs at boring locations B2, B3, B7, B8 and b13. Elevated levels of SVOCs and metals that were reported in shallow soil throughout the Site, are characteristic of the historic fill materials present at the Site and throughout the area.

Qualitative Human Health Exposure Assessment

The qualitative exposure assessment identified potential completed routes of exposure to construction workers and remediation workers through inhalation, ingestion and dermal contact during excavation activities. The Health and Safety Plan prepared for the site identifies such exposures and provides instructions for on-site workers to minimize potential exposure. Occupants in the proposed building conversion to residential use may be exposed to VOCs through the vapor intrusion pathway if VOCs in source area soil and slab areas are not remediated, or if preventive measures such as vapor barriers or sub-slab ventilation are not employed.

Potential environmental impacts through the groundwater to surface water discharge were not expected based on the low levels of site related contamination in groundwater and the distance to the nearest surface water receptor.

Summary of the Remedy

The remedy recommended for the site is a Track 2 alternative (Alternative 2) which consists of remediation of all soils to restricted residential criteria to a depth of 15 feet below grade through the excavation of the CVOC hotspot adjacent to boring B4 to a depth of 8 feet below grade, hotspot excavation of SVOCs and metals at location B1 and B3 to a depth of approximately 2 feet below grade, in addition to excavation for 16 footers and perimeter grade beams and installation of an active sub-slab depressurization system (SSDS). A vapor barrier would also be installed within the elevator shaft pit, all footer and grade beams excavations, SSDS trenches and utility/plumbing conduits, and an epoxy sealant would be applied across the slab. The remedy will include the following items:

1. Removal of CVOC impacted soil from the central portion of the property, adjacent to boring B4, to a depth of approximately 8 feet below grade;
2. Hotspot excavation of soil/fill exceeding Track 2 restricted residential SCOs as listed in **Table 1,** at boring locations B1 and B3. If Track 2 is not achieved, a site cover will be required to allow for restricted residential use of the Site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs) ;
3. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 2 SCOs;
4. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
5. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in **Table 1**, (2) all Federal, State and local rules and regulations for handling and transport of material;

6. Installation of sub-slab depressurization (SSDS) beneath the entire Site. A Sub-slab Depressurization System (SSDS) will be designed to mitigate the elevated levels of PCE and TCE detected in the sub-slab soil vapor. SSDS design will include design calculations and provide a map showing the radius of influence (ROI) of the SSDS system. Once the approved SSDS is installed and operational, verification of its effectiveness will be conducted;
7. Implementation of a Site Management Plan (SMP) for long term maintenance of the Engineering Controls;
8. An Environmental Easement will be filed against the Site to ensure implementation of the SMP.

All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP. All deviations from the RAWP will be promptly reported to NYSDEC before implementation for approval and fully explained in the FER.

REMEDIAL ACTION WORK PLAN

1.0 INTRODUCTION

In July 2013, 853 Lexington LLC filed an application with the New York State Department of Environmental Conservation (NYSDEC) to investigate and remediate a 0.17-acre property located at 853 Lexington Avenue in Kings County, New York (**Figure 1**)as a Volunteer in the New York State Brownfield Cleanup Program (BCP). The Site was formally accepted into to the New York State Brownfields Cleanup Program (BCP) through a Brownfield Cleanup Agreement (BCA) which was executed by the DEC on November 15 2013. The Volunteer proposes a residential use for the property. When completed, the Site will be renovated with a six story residential apartment building. Refer to the BCP application for additional details.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed between May 22, 2013 and May 31, 2013 as well as January 6, 2014 and January 8, 2014. It provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10 and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have not yet determined whether this Site poses a significant threat to human health and the environment. The RI for this Site did not identify fish and wildlife resources.

1.1 SITE LOCATION AND DESCRIPTION

The Site address is 853 Lexington Avenue, Brooklyn, New York 11211. It is located on the north side of Lexington Avenue between Patchen Avenue and Broadway in Brooklyn, New York. The site is designated as Block 1623 Lot 70 on the Brooklyn Tax Map. The Site consists of a single tax parcel with 73.62 feet of street frontage on Lexington Avenue and is approximately 100 feet deep for a total of 7,358 square feet (0.17 acres). The lot is currently developed with a vacant two story commercial warehouse occupying the entire Lot.

A boundary map is provided as **Figure 2** and will be attached to the Brownfield Cleanup Agreement as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419.

1.2 CONTEMPLATED REDEVELOPMENT PLAN

The Remedial Action to be performed under the RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described here to provide the basis for this assessment. However, the Remedial Action contemplated under this RAWP may be implemented independent of the proposed redevelopment plan.

The Site is to be repurposed through renovations and additions to the existing two-story vacant commercial building into a six-story residential apartment building. The renovated building will cover 100% of the lot, with the current cellar, encompassing approximately 35% of the lot, remaining. The existing foundation will require minimal excavation; due to the use of the original structure, with only excavation for the elevator pit taking place in the current cellar.. Excavation and soil disturbance will occur on the west and southeastern portions of the lot for installation of support footing and beams, and the southern portion of the cellar for the elevator pit. Perimeter footing excavation dimensions will range from 3ft x 3ft x 4ft to 3.5ft x 5ft x 4ft. Each interior footing excavation will measure approximately 5ft x 5ft and will be excavated to a depth of 2 feet below grade. Additional structural excavation will take place around the perimeter of the lot as well as a 10ftx8ftx5ft excavation in the cellar for the elevator pit.

1.3 DESCRIPTION OF SURROUNDING PROPERTY

The surrounding land use includes underutilized, or vacant, commercial properties to the west, single family residential homes, a vacant lot and an adult day care center for Alzheimer patients to the south, a vacant commercial building and a church to the east and single family residential homes to the north.(see **Figure 3**).

The area surrounding the property is highly urbanized and predominantly consists of multi-family residential buildings with mixed-use buildings (residential w/ first floor retail) along main corridors such as Broadway located just 500 feet to the northeast. Commercial / industrial properties, equipment yards and warehouses are interspersed with the residential properties as are institutions such as parks, schools, churches and playgrounds within a quarter mile of the Site in all directions.

The property is located in what has historically been economically depressed area of Central Brooklyn. Bedford-Stuyvesant is predominantly residential, characterized by late 19th and early 20th century rowhouses, small and medium-sized apartment buildings, and prominent NYC housing Authority housing projects. Recent years have seen an increase in commercial and residential development in Bedford-Stuyvesant, spurred on by the development - transformation taking place in the adjacent Williamsburg area to the north. The proposed project is compatible with the surrounding land use and will be in compliance with the current zoning.

2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The field work portion of the RI was conducted by EBC during several mobilizations to the site: the initial RI mobilization in May 2013 and a supplemental mobilization concluding on January 8, 2014. The field investigation consisted of the environmental sampling, field observations and measurements to determine:

- Local geologic/hydrogeologic conditions
- Definition of source areas
- Potential migration of contaminants from the site to surrounding areas
- Overall characterization of site-related contamination in all media

The field effort included the collection and analysis of soil, groundwater and soil vapor samples. Drilling services were provided by Eastern Environmental Services (Eastern) of Manorville, NY and laboratory services were provided by Phoenix Environmental Laboratories of Manchester, CT. A sample matrix showing the number, type and analysis of samples collected during the Remedial Investigation is provided as **Table 2**.

2.1 SUMMARY OF REMEDIAL INVESTIGATIONS PERFORMED

2.1.1 Borings

A total of 5 soil borings, B1 through B5, were advanced during the initial site mobilization in May 2013. An additional 8 soil borings (B6 through B13) were installed January 6 and January7, 2014.

For boring locations B1 through B10, soil samples were collected continuously in 5-foot intervals from grade to final depths ranging from 10 feet to 45 feet below existing grade using a Geoprobe™ 6620DT, probe drilling machine. The Geoprobe™ system uses a direct push hydraulic percussion system to drive and retrieve core samples. Soil samples were retrieved using a 1.5-inch diameter, 5-foot long dual-tube sampler with disposable acetate liners.

Soil borings (B11-B13) located within the cellar level of the existing building, were completed utilizing a 2-foot long AMS Dual-Purpose Soil Recovery Probe with disposable plastic liners and a slide hammer. Soil was collected continuously from cellar slab grade to final depths of 8 feet below slab grade.

Two soil samples were retained from boring B1 through B5, from the 0 to 2 foot and 4 to 6 foot intervals. Three soil samples were retained from borings B6 through B10, from the 0 to 2 foot, 10 to 12 foot and 43 to 45 foot intervals. Two soil samples were collected from boring B11 through B13, from the 0 to 2 foot and 6 to 8 foot intervals.

Each soil sample recovered from the soil borings was characterized by an experienced geologist and field screened for the presence of VOCs using a photo-ionization detector (PID). The geologist's field observations and PID readings were recorded for each boring in a soil boring log. The location of soil borings are shown on **Figure 4**.

2.1.2 Monitoring Wells

Three groundwater monitoring wells, MW1 through M3, were installed in May 2013 and with a fourth well, MW4, installed in January 2014. The monitoring wells were installed at a depth of 50 feet below grade with 10 feet of 0.010 PVC well screen and 40 feet of PVC riser.

A No. 00 morie filter sand was placed in the borehole to within 2 feet above the top of the screen. A 1-foot hydrated bentonite seal was then placed on top of the filter sand the remainder of the borehole was backfilled to grade. EBC collected groundwater samples from monitoring wells MW1 through MW3 in May 2013 and from MW1 through MW4 in January 2014 to evaluate groundwater quality across the Site. The locations of monitoring wells are shown in **Figure 5**.

2.1.3 Samples Collected

A summary of the sampling performed during the RI is provided in **Table 2**.

2.1.3.1 Soil Samples

Soil samples were collected from grade to a depth of 45 ft below grade using a combination of Geoprobe™ direct-push technology and manually operated AMS Dual-Purpose Soil Recovery Probe. As per the approved Remedial Investigation Workplan: two soil samples were retained from boring B1 through B5, from the 0 to 2 foot and 4 to 6 foot intervals; three soil samples were retained from borings B6 through B10, from the 0 to 2 foot, 10 to 12 foot and 43 to 45 foot intervals and two soil samples were collected from boring B11 through B13, from the 0 to 2 foot and 6 to 8 foot intervals. Each soil sample recovered from the soil borings was characterized by a qualified geologist and field screened for the presence of VOCs using a photo-ionization detector (PID). Retained samples were submitted for laboratory analysis of volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, TAL Metals, pesticides and PCBs by EPA Methods 8081/8082.

2.1.3.2 Groundwater Samples

A groundwater sample was obtained from each of the three monitoring wells installed in May 2013 and again from the three existing and one newly installed monitoring well in January 2014.

A peristaltic pump and polyethylene sample tubing fitted with a stainless steel check valve was used to purge and collect samples from the well. The samples were collected directly into pre-cleaned laboratory supplied glassware, stored in a cooler with ice and submitted to Phoenix Environmental Laboratories of Manchester, CT, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11301).

The groundwater samples was analyzed for VOCs / SVOCs by EPA method 8260 / 8270, target analyte list (TAL) metals (total and dissolved) and pesticides/PCBs by Method 8081/8082.

2.1.3.3 Soil Gas Samples

To assess the presence of VOCs in soil vapor beneath the site, four sub-slab samples (SG1 through SG4) were collected across the Site on May 31, 2013. On January 8, 2014 three sub-slab soil vapor samples (SG5 through SG7) were collected from the perimeter of the Site on the ground level and three sub-slab soil vapor samples (SG8 through SG10) were collected from the cellar level. In addition to the sub-slab samples, one indoor air sample (IA1) and one outdoor ambient air sample (OA1) were also collected. Soil vapor, indoor and outdoor sampling locations are shown on **Figure 6**. All samples were collected over a 2 hr sampling period.

Soil vapor samples were collected in accordance with the procedures as described in the *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH 10/06).*

2.1.4 Chemical Analytical Work Performed

Each soil and groundwater sample was placed in pre-cleaned laboratory supplied glassware, and placed in a cooler packed with ice for transport to the laboratory. Sample analysis was provided by Phoenix Environmental Laboratories of Manchester, CT, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11301).

Soil samples were analyzed for the following parameters: VOCs / SVOCs by EPA method 8260 / 8270, target analyte list (TAL) metals and pesticides/PCBs by Method 8081/8082. The groundwater sample was analyzed for VOCs / SVOCs by EPA method 8260 / 8270, target analyte list (TAL) metals (total, dissolved) and pesticides/PCBs by Method 8081/8082.
Soil gas, indoor and outdoor samples were analyzed for VOCs by EPA method TO-15.

2.1.5 Documentation

Maps showing the locations of the soil borings, monitoring wells and soil gas/air sample collection points are provided in **Figures 4**, **5** and **6**. The results of soil, groundwater and soil gas/air samples collected during the RI are summarized in **Tables 3** through **12**. Below is a summary of RI findings.

The results of sampling performed during this RI, identified CVOC contamination, consisting mainly of PCE in shallow soil to a depth of 6 feet below grade in the central portion of the property. This contamination is likely related to intermittent surface spills which occurred during the historic use of the property as a commercial laundry facility and which then migrated through cracks or other voids in the concrete floor. The timing and scenario of the release(s) are unknown but could have occurred at any time between 1932 and 1951 during the operation of the laundry facility through releases associated with daily activities or the storage of chlorinated solvents

Groundwater samples obtained from on-site monitoring wells indicated relatively low levels of PCE and / or TCE present across the Site. Based on the shallow extent of soil impact and the generally low concentrations reported in groundwater, PCE was likely transported to the water table as a dissolved component. This is a fairly common scenario at such facilities where water used in laundry operations spills and puddles on the floor enter the ground through cracks and gaps in the floor. The water then passes through a shallow one of impacted soil where it picks up contaminants and transports them to the water table.

Off-gassing is occurring from impacted shallow soils resulting in elevated concentrations of PCE and TCE in soil gas. The highest concentrations of both PCE and TCE in soil vapor were located in the central and northern portions of the property, consistent with the areas of CVOC detections in shallow soil.

No other source areas were identified or indicated during this RI. Elevated levels of SVOCs and metals reported in shallow soil are characteristic of the historic fill materials present at the site and throughout the area.

2.2 SIGNIFICANT THREAT

The NYSDEC and NYSDOH are currently evaluating the RI and will make a determination as to whether or not the site poses a significant threat to human health and the environmental. Notice of this determination will be provided during the 45 day public comment period and the Proposed Decision Document.

2.3 SITE HISTORY

2.3.1 Past Uses and Ownership

Previous owners and operators of the property are shown in Tables 1 and 2 below. Information regarding ownership of the property was obtained from online property records maintained by the NYC Department of Finance Office of the City Register under its Automated City Register Information System (ACRIS). Information regarding past operators was obtained from lease agreements, Sanborn Fire Insurance Maps, and from a City Directory Search and internet search of the property address.

853 Lexington LLC (the Requestor) is the current owner of the property and has owned it since December 2012. The building was in derelict condition and vacant at the time of purchase and remains so at the present time. The building was originally occupied by H.C. Bohack Co., a grocery store chain, which operated a bakery in the building in the early 1900's. A commercial

laundry was known to occupy the property in the 1930's through sometime prior to 1951. From 1951 to at least 2007 several furniture manufacturers occupied the building.

Table 1 – Previous Owners

Dates	Name	Comments	Contact Info
From to 9/3/43 to 4/6/84	Faruth Realty Co. Inc	Deed	2525 Palmer Avenue, New Rochelle, NY 10801
From 4/6/84 to 10/26/84	John Caseak	Deed	869 Lexington Avenue, Brooklyn, NY 11221
From 10/26/84 to 8/17/87	Carlos Ortiz	Deed	221 Schemerhorn, Brooklyn, NY 11217
From 8/17/87 to 9/1/87	Radan Realty Corp.	Deed	120 Duane Street, New York, NY 10007
From 9/1/87 to 2/19/92	David Shiffer	Deed	1442 50th Street, Brooklyn, NY 11219
From 2/19/92 to 1/9/01	Beth Tov Li, Inc.	Deed	447 E. 16th Street, Brooklyn, NY 11226
From 1/9/01 to 7/1/05	116-16 Realty Corp.	Deed	847 Lexington Avenue, Brooklyn NY 11221
From 7/1/05 to 12/27/12	853 Lexington Realty Management LLC	Deed	551 Flushing Avenue #1L, Brooklyn, NY 11206
From 12/27/2012 to present	853 Lexington LLC	Deed	116 Nostrand Avenue, Brooklyn, NY 11205

Note: 853 Lexington LLC is in no way affiliated with any of the prior owners the property.

Table 2 – Previous Operators

Dates	Name	Comments	Contact Info
From sometime after 1888 to sometime prior to 1932	H.C. Bohack	1908 Sanborn Map	853 Lexington Avenue, Brooklyn NY 11221
From sometime after 1908 to sometime prior to 1951	Lexington Laundry Service Wallabout Wet Wash Laundry Co.	1928 City Directory Listing, 1932 Sanborn Map	853 Lexington Avenue, Brooklyn NY 11221
From sometime after 1932 to sometime prior to 1962	Alexander Irwin Unpainted Furniture, Real Art Woodworking Co.	1951 - 1982 Sanborn Map 1960 City Directory Listings	853 Lexington Avenue, Brooklyn NY 11221
From sometime after 1960 to sometime prior to 2007	Royal Factory Direct Furniture	1987 - 2007 Sanborn Maps	853 Lexington Avenue, Brooklyn NY 11221

Note: 853 Lexington LLC in no way affiliated with any of the prior operators at the property.

The following resources were employed in obtaining historical information with respect to ownership:

- NYC ACRIS Database
- Interviews with Current Owners

The following resources were employed in obtaining historical information with respect to operators:

- Interviews with Current / Previous Operators / Owners
- Certificate of Occupancy Records as Maintained by the Department of Buildings
- Internet Address Search

2.3.2 Phase I Report

November 2012 – Phase I Environmental Site Assessment Report (SEG)

A Phase I Environmental Site Assessment (ESA) report was prepared by Singer Environmental Group (SEG) in November 2012.

A phase I was completed by Singer Environmental Group, LTD. in 2012. A history dating back to 1908 was established. According to NYC Oasis information the current building was constructed in 1931. A review of Sanborn maps showed occupancy by HC Bohack Co. in 1908, a laundry facility in 1932, followed by a commercial laundry facility in 1932 through sometime prior to 1951. From 1951 to at least 2007 several furniture manufacturers occupied the building.

Based upon reconnaissance of the subject and surrounding properties, interviews and review of historical records and regulatory agency databases, Singer Environmental Group, LTD identified the following recognized environmental conditions:

The subject property is listed as an "E" designated site with the NYC department of City Planning for "Hazmat/Noise/Air".

2.4 GEOLOGICAL CONDITIONS

The geologic setting of Long Island is well documented and consists of crystalline bedrock overlain by layers of unconsolidated deposits. According to geologic maps of the area created by the United States Geologic Survey (USGS), the bedrock in this area of Brooklyn is an igneous intrusive classified as the Ravenswood grano-diorite of middle Ordovician to middle Cambrian age. Unconsolidated sediments overlie the bedrock and consist of Pleistocene aged sand, gravel and silty clays, deposited by glacial-fluvial activity. Non-native fill materials consisting of dredge spoils, rubble and / or other materials have historically been used to raise and improve the drainage of low lying areas.

Subsurface soils at the Site consists of a mixture of a silty non-native fill with bricks, wood and other rubble to a depth of approximately 5 feet below grade. native fine brown silty-sands are present immediately below the fill material to a depth of at least 45 feet below grade. Groundwater is present under water table conditions at a depth of approximately 43 feet below the surface and flows west-northwest.

According to the USGS topographic map for the area (Brooklyn Quadrangle), the elevation of the property 55 feet above the National Geodetic Vertical Datum (NGVD). The area topography gradually slopes to the northeast.

2.5 CONTAMINATION CONDITIONS

2.5.1 Conceptual Model of Site Contamination

Contaminants of concern at the Site include CVOCs (PCE and TCE) in soil, soil gas and groundwater. CVOC contamination at the Site consists of PCE in shallow soil at boring location B4 to a depth of 6 feet below grade in the central portion of the property above unrestricted use SCOs, PCE and TCE, in soil gas across the Site, and TCE and / or in groundwater above their respective NYSDEC standards and NYSDOH guidance values.

Sanborn fire insurance maps identify a laundry facility operating at the Site in 1932 and potentially operating through 1951. At this time, the release scenario is unknown but could have occurred at any time between 1932 and 1951 during the operation of the laundry facility through releases associated with daily activities or storage of chlorinated solvents.

Under this scenario chlorinated compounds may have entered the subsurface through cracks or other voids in the concrete floor. Based upon the relatively low concentrations of PCE and TCE reported in groundwater, 41 feet below grade, and their absence in deep soils, it is unlikely that affected soil is or has come into contact with the groundwater. This suggests that PCE contamination in groundwater occurred through the vertical transport of dissolved components to the water table. This is a fairly common scenario at such facilities where water used in laundry operations spills and puddles onto the floor enters the ground through cracks and gaps in the floor. The water then passes through a shallow zone of impacted soil where it picks up contaminants and transports them to the water table.

The elevated concentrations detected in soil gas are associated with off-gassing from the impacted soil at the B4 source area. It is unlikely that dissolved components in groundwater would be contributing to soil gas concentrations due to the low levels in groundwater and the depth to the water table below the building slab.

2.5.2 Description of Areas of Concern

The historic use of the Site as a commercial laundry facility combined with the site-wide PCE/TCE detections in soil and soil gas is evidence that CVOC contamination at the Site is related to an on-site release and historic use. TCE was also reported above NYSDEC groundwater standards in all monitoring wells. The most likely release scenario would include surface spills from the use and or storage of spent or new solvent.

With the exception of a common laboratory associated contaminant, acetone, only one VOC, PCE, was identified above Unrestricted Use SCOs in one soil boring, B4. Both TCE and PCE were detected in several other soil samples obtained across the site, however, at concentrations below unrestricted use SCOs. PCE at the B4 location was reported at a concentration of 12,000 µg/kg at the 0-2 ft interval and at a concentration of 9,100 µg/kg at the 4-6 ft interval.

Chlorinated VOCs (CVOCs) were reported in all soil gas samples at concentrations ranging from 3.44 µg/m^3 in SG10 located on the southern portion of the cellar to 971.44 µg/m^3 in SG located on the northwestern portion of the property. Tetrachloroethene (PCE) was reported above the maximum sub-slab value of 100 µg/m^3 (above which monitoring is recommended) in four of the 6 sub-slab soil gas locations and ranged from 187 µg/m^3 in SG5 to 874 µg/m^3 in SG8. Trichloroethene (TCE) was reported above the maximum sub-slab value of 5 µg/m^3 (above which monitoring is recommended) in five of the six soil gas samples.

No other source areas were identified during this RI. Slightly elevated levels of SVOCs and metals reported in shallow soil throughout the site are characteristic of the historic fill materials present at the Site and throughout the area.

Contaminated media documented at the site includes soil and soil gas which was found to be contaminated with CVOCs during the RI.

2.5.3 Soil/Fill Contamination

SVOCs including benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were reported above restricted soil cleanup objectives (SCOs) in the 0-2ft interval at boring locations B1 and B3 as well as the 4-6ft interval at boring location B3.

Two metals, barium and mercury, were reported above restricted residential SCOs in the 0-2ft sampling interval at two boring locations. One or more of the metals nickel, lead and zinc were reported above unrestricted SCOs at boring locations B2, B3, B7, B8 and B13. Elevated levels of SVOCs and metals that were reported in shallow soil throughout the Site, are characteristic of the historic fill materials present at the Site and throughout the area.

2.5.3.1 Summary of Soil/Fill Data

Soil sample results from the RI are summarized in **Tables 3-6**. Further information on soil sample collection, handling and analysis can be found in the RI Report (EBC 4/14).

2.5.3.2 Comparison of Soil/Fill with SCGs

Table 13 shows soil sample results above Track 1 Unrestricted SCOs for all overburden soil at the Site. Sample results above Track 1 Unrestricted SCOs for all overburden soil are posted on **Figure 7**.

2.5.4 On-Site Groundwater Contamination

The groundwater samples obtained from the monitoring wells located on site indicate low levels of PCE and TCE. No other VOCs, with the exception of common laboratory contaminants were detected in the groundwater sample. Several SVOCs, including benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected above standards in the parts per trillion range as well as two dissolved metals, manganese and sodium. The concentrations and parameters reported are consistent with general background conditions documented in the area and are not related to a contaminant source.

2.5.4.1 Summary of Groundwater Data

The results of groundwater sample collected during the RI are summarized in **Tables 7-11**. Further information on groundwater sample collection, handling and analysis can be found in the RI Report (EBC 4/14).

2.5.4.2 Comparison of Groundwater with SCGs

Sample results above GA groundwater standards in the monitoring wells are shown in **Table 14**. A spider map which shows the groundwater sampling location and summarizes results above GA groundwater standards prior to the remedy are shown in **Figure 8**.

2.5.5 On-Site Soil Vapor Contamination

Multiple VOCs were detected above the laboratory method detection limit in each of the 10 soil gas samples as well as indoor and outdoor samples collected. Total petroleum related volatile organic compounds (BTEX) were generally low throughout the Site and the cellar ranging from 5.24 $\mu g/m^3$ in SG1 located south of the cellar to 48.35 $\mu g/m^3$ in SG2 located on the southwestern portion of the property. Total BTEX concentrations for indoor and outdoor air samples were 9.57 $\mu g/m^3$ and 4.08 $\mu g/m^3$, respectively.

Chlorinated VOCs (CVOCs) were reported in all soil gas samples at concentrations ranging from 3.44 $\mu g/m^3$ in SG10 located on the southern portion of the cellar to 12,582 $\mu g/m^3$ in SG2 located on the southwestern portion of the property. CVOC concentrations for indoor and outdoor air samples were 77.44 $\mu g/m^3$ and 1.80 $\mu g/m^3$, respectively. Tetrachloroethene (PCE) was reported above the maximum sub-slab value of 100 $\mu g/m^3$ (above which monitoring is recommended) in 7 of the 10 sub-slab soil gas locations and ranged from 187 $\mu g/m^3$ in SG5to 10,400 $\mu g/m^3$ in SG3. Trichloroethene (TCE) was reported above the maximum sub-slab value of 5 $\mu g/m^3$ (above which monitoring is recommended) in 9 of the 10 soil gas samples as well as the indoor air samples at concentrations ranging from 17 $\mu g/m^3$ in IA1 to 3,290 $\mu g/m^3$ in SG2. Carbon tetrachloride was detected in all samples at concentrations below its maximum sub-slab value. 1,1,1-Trichloroethen was not detected in any of the samples collected.

Figure 9 shows posted soil gas results from the RI.

2.5.5.1 Summary of Soil Vapor Data

A table of soil vapor data collected prior to the remedy is shown in **Table 12**. Further information on soil gas sample collection, handling and analysis can be found in the RI Report (EBC 4/14).

2.6 ENVIRONMENTAL AND PUBLIC HEALTH ASSESSMENTS

2.6.1 Qualitative Human Health Exposure Assessment

The objective of the qualitative exposure assessment under the BCP is to identify potential receptors to the contaminants of concern (COC) that are present at, or migrating from, the site. The identification of exposure pathways describes the route that the COC takes to travel from the source to the receptor. An identified pathway indicates that the potential for exposure exists; it does not imply that exposures actually occur. An exposure pathway has five elements; a contaminant source, release and transport mechanisms, point of exposure, route of exposure and a receptor population.

The potential exposure pathways identified below, represent both current and future exposure scenarios.

Contaminant Source

The source of CVOCs detected in soil at the site is indicative of surface spills of PCE dry cleaning solvent associated with historic use of the property as a commercial laundry service facility, which migrated through cracks or other voids in the concrete floor.

Elevated levels of SVOCs and metals are also present in fill materials throughout the Site.

Contaminant Release and Transport Mechanism

CVOCs present in on-site shallow soils are volatilizing to air contributing to elevated levels of contamination in soil gas, as seen in analytical results from sub-slab soil gas samples SG1 through SG9. There does not appear to be a correlation between CVOC contamination in shallow soil and that in groundwater, based upon the relatively low concentrations of PCE and TCE reported in groundwater, 41 feet below grade, and deep soils it is unlikely that affected soil is or has come into contact with the groundwater. This suggests that PCE contamination is groundwater occurred through the vertical transport of dissolved components to the water table. This is a fairly common scenario at such facilities where water used in laundry operations spills and puddles onto the floor enters the ground through cracks and gaps in the floor. The water then passes through a shallow zone of impacted soil where it picks up contaminants and transports them to the water table.

A correlation can be seen between the highest CVOC levels in shallow soil and the highest CVOC levels in soil gas samples at some of the locations.

Point of Exposure, Route of Exposure and Potentially Exposed Populations

Potential On-Site Exposures: Remediation workers and construction workers engaged in the excavation of impacted and non-impacted soil at the site may be exposed to SVOCs, CVOCs and heavy metals through several routes. Workers excavating impacted soil may be exposed to SVOCs, and heavy metals through inhalation, ingestion and dermal contact. Workers excavating non-impacted soil may be exposed to CVOCs in soil gas through inhalation. A site specific Health and Safety Plan has been developed to identify and minimize the potential hazards to on-site workers.

Under a future scenario, residents within the proposed buildings may be exposed to vapor intrusion if remediation of the source area is not completed, and if preventive measures are not incorporated into the new building design to protect against contaminated soil vapor intrusion. This potential route of exposure will be reduced in response to the degree and success of source area remediation.

Potential Off-Site Exposures: The entire area is serviced by the New York City Water System which distributes water from the Croton Reservoir system. Since there are no public or private potable supply wells in the area, exposure from contact with tap water is not a concern. Off-site exposure is therefore limited to vapor intrusion from CVOCs off-gassing from impacted groundwater migrating beneath the Site. The potentially exposed population in this case would include residents and commercial workers in adjacent buildings.

Potential Off-Site Environmental Impacts: Since CVOCs in groundwater may be migrating beneath the site at low concentrations in a northwesterly direction, the groundwater to surface water discharge pathway was evaluated. Wallabout Channel is located approximately 2.3 miles northwest. Based upon the concentrations of CVOC contaminants currently in groundwater beneath the Site and the distance and position of the Site relative to Wallabout Channel, there are no expected impacts to surface water environments from contaminants migrating beneath the Site.

2.6.2 Fish & Wildlife Remedial Impact Analysis

Since CVOCs in groundwater may be migrating beneath the site at low concentrations in a northwesterly direction, the groundwater to surface water discharge pathway was evaluated. Wallabout Channel is located approximately 2.3 miles feet northwest (downgradient of the Site). Based upon the concentrations of CVOC contaminants in groundwater beneath the Site and the distance and position of the Site relative to Wallabout Channel, there are no expected impacts to surface water environments from contaminants migrating beneath the Site.

2.7 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

2.7.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

- Remove the source of ground or surface water contamination.

2.7.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.7.3 Soil Vapor

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into building at the Site.

3.0 ALTERNATIVES ANALYSIS

The goal of the remedy selection process under the BCP is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of NYSDEC standards, criteria and guidance values (SCGs). A remedy is then developed based on the following nine criteria:

- Protection of human health and the environment;
- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance; and
- Land use.

The following is a detailed description of the alternatives analysis and remedy selection to address impacted media at the Site. This analysis was prepared in accordance with 6 NYCRR Part 375-1.8(f) and Part 375-3.8(f) and Section 4.3(c) of NYSDEC DER-10. As required, a minimum of two remedial alternatives (including a Track 1 scenario) are evaluated, as follows:

- Alternative 1 - Track 1, remediation of all soils above bedrock to unrestricted use criteria, installation of a sub-slab depressurization system beneath the basement and ground floor foundation and installation of a vapor barrier beneath the foundation and behind the foundation sidewall. Track 1 remediation would require excavation to a depth of 2 feet below grade across the Site, excavation of the CVOC source area adjacent to boring B4, and additional excavations to depths ranging from 6ft to 12ft below grade in the vicinity of boring locations B1, B3 and B7 to remove soil with SVOCs, pesticides and / or metals above unrestricted SCOs. This would require demolition of the existing building or some other extraordinary measure to allow full excavation of the Site while supporting the existing building. This alternative does not allow the use of long-term institutional /engineering controls such as a subslab depressurization system to address impacted media or prevent exposures which may be required beneath the proposed building.

- Alternative 2 - Track 2, remediation of all soils to restricted residential criteria to a depth of 15 feet if soils below 15 feet do not represent a source of contamination. This would include CVOC source removal adjacent to boring B4 to a depth of approximately 8 feet below grade, excavation of SVOCs and metals above restricted residential criteris in the vicinity of borings B1 and B3 to a depth of approximately 2 feet below grade and installation of an active sub-slab depressurization system (SSDS). A vapor barrier would also be installed within the new elevator shaft pit. This alternative does not allow the use of long-term institutional / engineering controls to meet soil cleanup objectives. Long-term institutional / engineering controls are allowed to address or prevent exposures from other impacted media.

Alternative 3 - Track 4, would include excavation of soil from the CVOC source area adjacent to boring B4 to a depth of approximately 8 feet below grade and proper handling and disposal of any additional soil excavated for the installation of footings and structural components and the new elevator pit.. The Track 4 alternative will allow the use of site specific SCOs for remaining soil / fill material to avoid over-excavation and the excavation of soils from portions of the lot not being disturbed for structural work. This will result in some SVOCs and metals above restricted residential SCOs remaining in soil. Alternative 3 would include an engineered cap consisting of the building slab. This alternative also includes the installation of an SSDS system and vapor barrier beneath the new elevator shaft

3.1 REMEDIAL ALTERNATIVE 1

The following sections provide an evaluation of Alternative 1 based on the nine evaluation criteria as previously discussed.

3.1.1 Overall Protection of Human Health and the Environment

Alternative 1 would be protective of human health and the environment by eliminating the CVOC concentrations present in all subsurface affected soils at the site and by eliminating constituents in soil related to historic fill. The potential for human and environmental exposure to these constituents on-site would be eliminated by excavation of all historic fill soils with parameters in excess of unrestricted criteria, disposing of excavated materials off-site and backfilling as needed with certified clean fill, virgin mined materials or recycled concrete materials from a NYSDEC permitted recycling facility.

Potential post-remediation exposures to on-site residents from soil vapors are not expected to require the long-term (>5 years) operation of SSDS systems, though groundwater use will be restricted at the Site until groundwater quality recovers.

During remedial and construction activity workers and area residents may be exposed to impacted soil and vapors. Worker exposure to soil and vapors will be minimized through implementation of a Health and Safety Plan. Exposures to area residents from dust and/or vapors will be minimized through the use of engineering controls and through implementation of a Community Air Monitoring Plan (CAMP).

3.1.2 Compliance with Remedial Goals, SCGs and RAOs

Alternative 1 would achieve compliance with the remedial goals, SCGs and RAOs for soil through source removal to Track 1 unrestricted cleanup levels. SCGs for groundwater should be achieved over time as groundwater quality improves in response to the removal of CVOC impacted soil and the elimination transport water. Compliance with SCGs for soil vapor is expected following completion of the remedial work.

3.1.3 Long-Term Effectiveness and Permanence

Alternative 1 achieves long term effectiveness and permanence by permanently removing and/or remediating all soils affected by Site contaminants and / or historic fill materials. Under this Alternative, risk from soil and soil gas impacts is eliminated. Alternative 1 will continue to meet RAOs for soil in the future, providing a permanent long-term solution for the Site.

3.1.4 Reduction in Toxicity, Mobility or Volume Through Treatment

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by meeting unrestricted objectives. The removal/remediation of on-site soil would also reduce the toxicity, mobility, and volume of contaminants within on-site soil vapor.

3.1.5 Short-Term Effectiveness

The potential for short-term adverse impacts and risks to the workers, the community, and the environment during the implementation of Alternative 1 is minimal.

Short-term exposure to on-site workers during excavation and loading activities will be addressed with a HASP and mitigated through the use of personal protective equipment, monitoring and engineering controls. Potential short-term exposure to the surrounding community will be addressed through the use of odor and dust-suppression techniques and through the implementation of a CAMP which will require air monitoring activities during all excavation and soil disturbance activities.

Other potential impacts to the community such as construction-related noise, vibrations and traffic, would be controlled and regulated under the terms of the NYS Department of Buildings issued building permit which can place a Stop Work Order on the property for unsafe conditions, community impacts or violation of the terms and conditions of the permit. Decontamination procedures of equipment, including trucks transporting soil to off-site disposal facilities, would minimize the potential for impacted soil to be dispersed beyond the Site boundary. A truck traffic plan has also been prepared to minimize disturbance to the local roads and community.

3.1.6 Implementability

The techniques, materials and equipment to implement Alternative 1 are readily available and have been proven effective in remediating the contaminants associated with the Site. Excavation for the remediation of soils is both a "low tech" and reliable method which has a long and proven track record on the remediation of hazardous waste and petroleum spill sites. However, since the redevelopment plan for this project calls for renovation of the existing structure, this Alternative, which requires demolition of the existing building or other extraordinary measures to facilitate excavation to meet Unrestricted Use SCOs, implementation is not feasible under the planned redevelopment scenario.

3.1.7 Cost

Costs associated with Alternative 1 are estimated at approximately $1,450,000. This cost estimate includes the following elements and assumptions:

- Demolition of existing structure;
- Replacement of existing structure;
- Sheeting and shoring to allow excavation to a minimum depth of 5 ft to the lot line.
- Excavation to a depth of 5 feet across the entire site to removal all historic fill material and CVOC hotspot excavation to depths ranging from 6-12ftbg to meet Track 1 Unrestricted Use SCOs;
- Disposal of approximately 50 cy of PCE impacted soil as non-hazardous;
- Disposal of approximately 1,307 cy of historic fill soil as non-hazardous;
- Installation of a vapor barrier beneath the new structure;
- HASP and CAMP monitoring for the duration of the remedial activities.

3.1.8 Compatibility with Land Use

The proposed redevelopment of the Site is compatible with its current R6A residential with a C2-4 commerical overlay. Following remediation, the Site will meet unrestricted use objectives which will exceed the objectives for its planned multi-tenant residential use. A groundwater use restriction will be required to prevent future exposure to affected groundwater.

3.1.9 Community Acceptance

No questions regarding the Site have been raised regarding remedial options to date. This RAWP will be subject to a 45-day public comment period to determine if the community has comments on the presented remedial alternatives and selected remedy. If no comments are received regarding Alternative 1, it will be considered to be acceptable to the community. However, as the redevelopment plan for this project calls for renovation of the existing structure, this Alternative, which includes demolition of the existing building to facilitate excavation to meet Unrestricted Use SCOs, is not a feasible option.

3.2 REMEDIAL ALTERNATIVE 2

The following sections provide an evaluation of Alternative 2 based on the nine evaluation criteria as previously discussed.

3.2.1 Overall Protection of Human Health and the Environment

Alternative 2 will be protective of human health and the environment by eliminating the CVOC contamination present in shallow subsurface soil and soil gas at the Site via excavation of the source area adjacent to boring B4 as well as installation of an active SSDS system by eliminating constituents related to historic fill above restricted residential criteria at depths of 2 feet to below grade at boring locations B1 and B3. The potential for human and environmental exposure to these constituents on-site will be eliminated by excavation of soils to a minimum depth of 2 feet below grade for these hotspot locations as well as 5 feet below grade for the elevator pit and 4ft-5ft below grade for footing installation across the Site, disposing of excavated materials off-site and backfilling as needed with certified clean fill, virgin mined materials or recycled concrete materials from a NYSDEC permitted recycling facility.

Potential post-remediation exposures to on-site residents from soil vapors would be addressed through the use of a vapor barrier, SSDS beneath the footprint of the building, and application of an epoxy sealant across the foundation slab. Groundwater use will be restricted at the Site until groundwater quality recovers.

During remedial and construction activity, workers and area residents may be exposed to impacted soil and vapors. Worker exposure to soil and vapors will be minimized through implementation of a HASP. Exposures to area residents from dust and or vapors will be minimized through the use of engineering controls and through implementation of a CAMP.

3.2.2 Compliance with Remedial Goals, SCGs and RAOs

Alternative 2 will achieve compliance with the remedial goals, SCGs and RAOs for soil through source removal to restricted residential and site specific cleanup levels. SCGs for groundwater should be achieved over time as groundwater quality improves in response to the removal of CVOC impacted soil and the elimination transport water. Compliance with SCGs for soil vapor is expected following completion of the remedial action, and will be determined through vapor sampling.

3.2.3 Long-term Effectiveness and Permanence

Alternative 2 achieves long term effectiveness and permanence by permanently removing all soils affected by Site contaminants above restricted residential objectives to a depth of 15 feet. Under this Alternative, risk from soil and soil gas impacts is eliminated for on-site residents. Alternative 2 will continue to meet RAOs for soil in the future, providing a permanent long-term solution for the Site.

3.2.4 Reduction in Toxicity, Mobility or Volume through Treatment

Alternative 2 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by meeting restricted residential objectives to a depth of 15 feet. The removal/remediation of on-site soil and operation of the SSD system will also reduce the toxicity, mobility, and volume of contaminants within on-site soil vapor.

3.2.5 Short-term Effectiveness

The potential for short-term adverse impacts and risks to the workers, the community, and the environment during the implementation of Alternative 2 is minimal. Short-term exposure to on-site workers during excavation and loading activities will be addressed with a HASP and mitigated through the use of personal protective equipment, monitoring and engineering controls. Potential short-term exposure to the surrounding community will be addressed through the use of odor and dust-suppression techniques and through the implementation of a CAMP which will require air monitoring activities during all excavation and soil disturbance activities.

Other potential impacts to the community such as construction-related noise, vibrations and traffic will be controlled and regulated under the terms of the NYS Department of Buildings issued building permit which can place a Stop Work Order on the property for unsafe conditions, community impacts or violation of the terms and conditions of the permit. Decontamination procedures of equipment, including trucks transporting soil to off-site disposal facilities will minimize the potential for impacted soil to be dispersed beyond the Site boundary. A truck traffic plan will also be prepared to minimize disturbance to the local roads and community.

3.2.6 Implementability

The techniques, materials and equipment to implement Alternative 2 are readily available and have been proven effective in remediating the contaminants associated with the Site. Excavation for the remediation of soils is both a "low tech" and reliable method which has a long and proven track record on the remediation of hazardous waste and petroleum spill sites. Excavation to a maximum depth of 8 feet in a limited area will not require dewatering or extensive shoring.

3.2.7 Cost

Costs associated with Alternative 2 are estimated at approximately $522,495. This cost estimate includes the following elements and assumptions:

- Limited excavation for the elevator pit, foundation footings, and hotspot excavation for CVOCs, SVOCs, and metals;
- Disposal of approximately 250 cy of historic fill soil as non-hazardous;
- Disposal of approximately 50 cy of CVOC impacted soil as non-hazardous;
- Installation and operation of a Sub Slab Depressurization System (SSDS) beneath the renovated building;
- Installation of a vapor barrier beneath all excavated areas;
- HASP and CAMP monitoring for the duration of the remedial activities;

3.2.8 Compatibility with Land Use

The proposed redevelopment of the Site is compatible with its current R6A residential with a C2-4 commerical overlay. Following remediation, the Site will meet restricted residential use objectives which is appropriate for its planned multi-tenant residential use. A groundwater use restriction will be required to prevent future exposure to affected groundwater.

3.2.9 Community Acceptance

No questions regarding the Site have been raised regarding remedial options to date. This RAWP will be subject to a 45-day public comment period to determine if the community has any comments on the presented remedial alternatives and selected remedy. If no comments are received, Alternative 2 will be considered to be acceptable to the community.

3.3 REMEDIAL ALTERNATIVE 3

The following sections provide an evaluation of Alternative 3 based on the nine evaluation criteria as previously discussed.

3.3.1 Overall Protection of Human Health and the Environment

Alternative 3 will be protective of human health and the environment by eliminating contaminants present in subsurface soils above restricted residential criteria by excavation in accordance with the planned construction of the Site and by capping the remainder of the Site. The potential for human and environmental exposure to these constituents on-site will be eliminated by the excavation and / or capping of all soils with parameters above restricted residential criteria. Residual fill with parameters above restricted residential criteria which remain following construction excavation, will be effectively capped with the concrete foundation slab.

Potential post-remediation exposures to on-site residents from soil vapors would be addressed through the use of a vapor barrier, Soil Vapor Extraction system which will later be converted into an active SSDS system beneath the footprint of the building, and application of an epoxy sealant across the basement slab. Groundwater use will be restricted at the Site until groundwater quality recovers.

During remedial and construction activity, workers and area residents may be exposed to impacted soil and vapors. Worker exposure to soil and vapors will be minimized through implementation of a HASP. Exposures to area residents from dust and or vapors will be minimized through the use of engineering controls and through implementation of a CAMP.

3.3.2 Compliance with Remedial Goals, SCGs and RAOs

Alternative 3 will achieve compliance with the remedial goals, SCGs and RAOs for soil through source removal to restricted residential and site specific cleanup levels. SCGs for groundwater should be achieved over time as groundwater quality improves in response to the removal of CVOC impacted soil and the elimination transport water. Compliance with SCGs for soil vapor is expected following completion of the remedial action.

3.3.3 Long-term Effectiveness and Permanence

Alternative 3 achieves long term effectiveness and permanence by permanently removing and/or remediating all soils affected by Site contaminants above restricted residential cleanup objectives to a depth required fro redevelopment. Under this Alternative, risk from soil impacts is eliminated for on-site residents. Alternative 3 will continue to meet RAOs for soil in the future, providing a permanent long-term solution for the Site.

3.3.4 Reduction in Toxicity, Mobility or Volume through Treatment

Alternative 3 will permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by meeting restricted residential objectives to a depth required for redevelopment. The removal/remediation of on-site soil and operation of the SVE and SSD systems will also reduce the toxicity, mobility, and volume of contaminants within on-site soil vapor.

3.3.5 Short-term Effectiveness

The potential for short-term adverse impacts and risks to the workers, the community, and the environment during the implementation of Alternative 3 is minimal.

Short-term exposure to on-site workers during excavation and loading activities will be addressed with a HASP and mitigated through the use of personal protective equipment, monitoring and engineering controls. Potential short-term exposure to the surrounding community will be addressed through the use of odor and dust-suppression techniques and through the implementation of a CAMP which will require air monitoring activities during all excavation and soil disturbance activities.

Other potential impacts to the community such as construction-related noise, vibrations and traffic will be controlled and regulated under the terms of the NYS Department of Buildings issued building permit which can place a Stop Work Order on the property for unsafe conditions, community impacts or violation of the terms and conditions of the permit. Decontamination procedures of equipment, including trucks transporting soil to off-site disposal facilities will minimize the potential for impacted soil to be dispersed beyond the Site boundary. A truck traffic plan will also be prepared to minimize disturbance to the local roads and community.

3.3.6 Implementability

The techniques, materials and equipment to implement Alternative 3 are readily available and have been proven effective in remediating the contaminants associated with the Site. Excavation for the remediation of soils is both a "low tech" and reliable method which has a long and proven track record on the remediation of hazardous waste and petroleum spill sites. Excavation to a maximum depth of 5 feet will not require dewatering.

3.3.7 Cost

Costs associated with Alternative 3 are estimated at approximately $175,000. This cost estimate includes the following elements and assumptions:

- Limited excavation for the elevator pit and foundation footings;
- Disposal of approximately 100 cy of historic fill soil as non-hazardous;
- Installation and operation of a Soil Vapor Extraction system and Sub-Slab Depressurization System beneath the renovated building;
- Installation of a vapor barrier beneath all excavated areas;
- IHASP and CAMP monitoring for the duration of the remedial activities;

3.3.8 Compatibility with Land Use

The proposed redevelopment of the Site is compatible with its current R7A residential with a C2-4 commerical overlay. Following remediation, the Site will meet unrestricted use objectives which is appropriate for its planned multi-tenant residential use. A groundwater use restriction will be required to prevent future exposure to affected groundwater.

3.3.9 Community Acceptance

No questions regarding the Site have been raised regarding remedial options to date. This RAWP will be subject to a 45-day public comment period to determine if the community has any comments on the presented remedial alternatives and selected remedy. If no comments are received, Alternative 3 will be considered to be acceptable to the community.

4.0 DESCRIPTION OF REMEDIAL ACTION PLAN

4.1 EVALUATION OF REMEDIAL ALTERNATIVES

The goal of the remedy selection process under the BCP is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing remedial action objectives (RAOs) for media in which chemical constituents were found in exceedance of NYSDEC standards, criteria and guidance values (SCGs). A remedy is then developed based on the following nine criteria:

- Protection of human health and the environment;
- Compliance with standards, criteria, and guidelines (SCGs);
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance; and
- Land use.

4.2 STANDARDS, CRITERIA AND GUIDANCE (SCG)

A criterion for remedy selection is evaluation for conformance with SCGs that are applicable, relevant and appropriate. Principal SCGs that are applicable, relevant and appropriate for evaluating the alternatives for remediation of this BCP site include the following:

- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 10 NYCRR Part 67 – Lead
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes (November 1998)
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (November 1998)
- 6 NYCRR Subpart 374-1 - Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (November 1998)

- 6 NYCRR Part 375 - 6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1, 375-3 and 375-6 (December 2006)
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998)
- 6 NYCRR Part 750 through 758 - Implementation of NPDES Program in NYS ("SPDES Regulations")
- 6 NYCRR Part 375-6 Soil Cleanup Objectives
- New York State Groundwater Quality Standards – 6 NYCRR Part 703;
- NYSDEC Ambient Water Quality Standards and Guidance Values – TOGS 1.1.1;
- NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation - May 2010;
- NYSDEC Draft Brownfield Cleanup Program Guide – May 2004;
- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan
- NYS Waste Transporter Permits – 6 NYCRR Part 364;
- NYS Solid Waste Management Requirements – 6 NYCRR Part 360 and Part 364.
- TAGM 4059 - Making Changes To Selected Remedies (May 1998)
- STARS #1 - Petroleum-Contaminated Soil Guidance Policy
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- DER-10, Technical Guidance for Site Investigation and Remediation, May 2010
- DER-23 / Citizen Participation Handbook for Remedial Programs, January 2010
- OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (November 1997)

Additional regulations and guidance are applicable, relevant, and appropriate to the remedial alternatives and will be complied in connection with implementation of the remedial program; however, the list above is intended to represent the principal SCGs which should be considered in evaluating the remedial alternatives for the BCP site.

Conformance with the appropriate standards for remediation of contaminated soil is an important criterion in evaluating the remedial alternatives for the BCP site. Presently, in New York State 6 NYCRR Part 375 establishes the primary SCGs associated with remediation of contaminated soil at sites which are in the BCP. If proposing remediation pursuant to a Track other than Track 1 (Unrestricted Use), 6 NYCRR Part 375 requires evaluation of at least one remedial alternative pursuant to Track I (Unrestricted Use) and one other alternative developed by the applicant for the proposed use of the BCP site. The remedial alternatives presented in Section 3.0 of this work plan have been prepared in conformance with this requirement.

4.3 SELECTION OF THE PREFERRED REMEDY

The remedy recommended for the site is a Track 2 alternative (Alternative 2) which consists of remediation of all soils to restricted residential criteria to a depth of 15 feet below grade. This will be achieved through the excavation of the CVOC hotspot adjacent to boring B4 to a depth of approximately 8 feet below grade, with additional excavation of areas with elevated SVOCs and / or metals in the vicinity of borings B1 and B3 to a depth of approximately 2 feet below grade. Additional excavation will be required as part of construction to install footers and perimeter grade beams and to install an active sub-slab depressurization system (SSDS). A vapor barrier would also be installed within the elevator shaft pit.

Overall Protection of Public Health and the Environment

The recommended remedial action achieves protection of the public health and the environment by eliminating the identified source area with elevated concentrations of CVOCs in soil which will eliminate or significantly reduce the potential for vapor intrusion in the renovated building and prevent the potential for migration of soil vapor offsite. The recommended action further achieves protection of the public health and the environment by eliminating the potential for human and environmental exposure to surficial soils related to historic fill by excavation of the soils with parameters in excess of restricted residential objectives in the limited excavation areas disposing of excavated materials off-site and backfilling as needed with certified clean fill. Although the potential for soil vapor intrusion is expected to be significantly reduced following the excavation of CVOC impacted soil, an SSD system will be installed and operated until NYSDEC and NYSDOH approve the decommissioning of the SSDS system. Although affected groundwater would not directly affect human health, groundwater use as a source of potable or process water will be restricted at the site until it is sufficiently demonstrated to the NYSDEC and NYSDOH that it meets Ambient Water Quality Standards and Guidance Values.

During remedial and construction activity workers and area residents may be exposed to impacted soil and vapors. Worker exposure to soil and vapors will be minimized through implementation of a Health and Safety Plan. Exposures to area residents from dust and/or vapors will be minimized through the use of engineering controls and through implementation of a Community Air Monitoring Plan (CAMP).

The remedy will meet all of the RAOs established for soil and soil gas at the site.

Compliance with Standards, Criteria and Guidance

The recommended remedial action meets the objectives of the RAOs by removing the potential for human and environmental exposures to chemical constituents above SCGs in soil and soil gas. The proposed action will effectively remove the source area and areas of historic fill soils above the restricted residential criteria.

Long-term Effectiveness and Permanence

The remedial action achieves long term effectiveness and permanence by permanently removing and/or remediating all soils affected by Site contaminants above restricted residential objectives to a depth of 15 feet. Under this remedy, risk from soil and soil vapor impacts are eliminated. The selected remedy will continue to meet RAOs for soil and soil gas in the future, providing a permanent long-term solution for the Site.

Reduction of Toxicity, Mobility and Volume

The recommended action will reduce the toxicity, mobility and volume of the chemical constituents by removing the source area of contamination and meeting restricted residential objectives to a depth of 15 feet. The removal / remediation of on-site soil will also reduce the toxicity, mobility, and volume of contaminants within on-site soil vapor.

Short-term Effectiveness

The potential for short-term adverse impacts and risks to the workers, the community, and the environment during the implementation of Alternative 2 is minimal.

Short-term exposure to on-site workers during excavation and loading activities will be addressed with a HASP and mitigated through the use of personal protective equipment, monitoring and engineering controls. Potential short-term exposure to the surrounding community will be addressed through the use of odor and dust-suppression techniques and through the implementation of a CAMP which will require air monitoring activities during all excavation and soil disturbance activities.

Other potential impacts to the community such as construction-related noise, vibrations and traffic, will be controlled and regulated under the terms of the NYS Department of Buildings issued building permit which can place a Stop Work Order on the property for unsafe conditions, community impacts or violation of the terms and conditions of the permit. Decontamination procedures of equipment, including trucks transporting soil to off-site disposal facilities, will minimize the potential for impacted soil to be dispersed beyond the Site boundary. A truck traffic plan will also be prepared to minimize disturbance to the local roads and community.

Implementability

The techniques, materials and equipment to implement Alternative 2 are readily available and have been proven effective in remediating the contaminants associated with the Site. Excavation for the remediation of soils is both a "low tech" and reliable method which has a long and proven track record on the remediation of hazardous waste and petroleum spill sites. No issues related to the design, availability or implementation of the selected remedy are anticipated.

Cost

Costs associated with Alternative 2 are estimated at approximately $522,495. This cost estimate includes the following elements and assumptions:

- Limited excavation for the elevator pit, foundation footings, and hotspot excavation for CVOCs, SVOCs, and metals;
- Disposal of approximately 250 cy of historic fill soil as non-hazardous;

- Disposal of approximately 50 cy of CVOC impacted soil as non-hazardous;
- Installation and operation of a Sub Slab Depressurization System (SSDS) beneath renovated building;
- Installation / renovation of an engineered concrete cap consisting of the buildings basement slab;
- HASP and CAMP monitoring for the duration of the remedial activities;

Community Acceptance

Public participation plays a large role in the BCP process. A fact sheet will be prepared and sent out to all interested parties as identified in the site contact list. A draft version of this document will be placed in a local repository (NYSDEC Region 2 office and the Macon Branch of the Brooklyn Public Library,) and made available for public review and comment for a period of 45 days. The RAWP is subject to a 45-day public comment period to determine if the community has comments on the selected remedy.

Compatibility with Land Use

The proposed remedy will not prevent or otherwise interfere with the intended and planned future use of the site. The proposed redevelopment of the Site is compatible with its current R6A residential zoning with C2-4 commercial overlay. Following remediation, the Site will meet restricted residential use objectives which will meet the objectives for its planned multi-tenant residential use. A groundwater use restriction will be required to prevent future exposure to affected groundwater.

4.3.1 Preferred Remedy Land Use Factor Evaluation

As required by Article 27, Title 14 of the Environmental Conservation Law 27-1415, the following land use factor evaluation examines whether the preferred alternative is acceptable based on the 14 criteria presented in the following subsections.

Zoning

The proposed redevelopment project, which includes the construction of a new residential apartment building is in compliance with the R6A/C2-4 residential zoning. Therefore the project will be constructed as-of-right regardless of the remedy implemented. The preferred remedy will comply with current zoning.

Applicable Comprehensive Community Master Plans or Land Use Plans

The proposed redevelopment project and selected remedy are consistent with comprehensive master and land use plans, specifically the Bedford Stuyvesant North rezoning action. This area-wide comprehensive re-zoning, completed by the New York City Department of City Planning and adopted by the City Council in November 2012. The preferred remedy will comply with applicable land use plans.

Surrounding Property Uses

The area surrounding the property is highly urbanized and predominantly consists of multi-family residential buildings with mixed-use buildings (residential w/first floor retail) along main corridors such as Broadway located just 500 feet to the northeast. Commercial / industrial properties, equipment yards and warehouses are interspersed with the residential properties as are institutions such as parks, schools, churches and playgrounds within a quarter mile of the Site in all directions. The area is marked by late 19th and early 20th century rowhouses, small and medium sized apartment buildings, and prominent NYC Housing Authority housing projects.

Recent years have seen an increase in commercial and residential development in Bedford-Stuyvesant, spurred on by the development - transformation taking place in the adjacent Williamsburg area to the north. The proposed project is compatible with the surrounding land use and will be in compliance with the current zoning.

Citizen Participation

Citizen participation for implementation of the preferred alternative will be performed in accordance with DER 23 and NYCRR Part 375-1.10 and Part 375-3.10. A Citizen Participation Plan will be prepared and available for public review at the identified document repositories (NYSDEC Region 2 Office, Macon Branch of the Brooklyn Public Library).

Environmental Justice Concerns

The Site is located within a potential environmental justice area. The NYSDEC defines a potential environmental justice area as a "minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies".

Environmental justice means the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Land use designations

The proposed remedy is consistent with land-use designations.

Population growth patterns

Population growth patterns support the proposed use for the Site. The preferred remedy will not negatively affect on population growth patterns.

Accessibility to existing infrastructure

The Site is accessible to existing infrastructure. The close proximity of the Site to the Brooklyn-Queens Expressway will assist soil transportation and contractor access to the Site. The Site is also accessible to mass transit and is within walking distance to bus and elevated train stops on Broadway. The preferred remedy will not alter accessibility to existing infrastructure.

Proximity to cultural resources

The proposed remedy will not negatively impact cultural resources

Proximity to natural resources

The proposed remedy will improve the local environment and will not negatively impact affect natural resources.

Off-Site groundwater impacts

The proposed remedy will improve off-site groundwater impacts by removing a potential source of groundwater contamination at the site.

Proximity to floodplains

No portion of the Site is located within a designated flood zone area. The nearest moderate risk and high risk flood zones are located approximately 1-mile to the north along the English Kills Channel.

Geography and geology of the Site

The selected remedy will excavate limited soil from the Site to depths ranging from 2 feet to 8 feet. The selected alternative and development of the site have considered the geography and geology of the Site.

Current Institutional Controls

The Site was assigned an E-designation for hazardous materials as part of the rezoning action completed by the City. The compliance with the E-designation for hazardous materials will require the approval of the NYC Office of Environmental Remediation (NYCOER) of this RAWP. NYCOER must approve this RAWP in the form of a Notice to Proceed (NTP) letter before building permits will be released by the NYC Department of Buildings (DOB). Documentation in the form of a Final Engineering Report (FER) for site remediation must be approved by NYCOER in the form of a Notice of Satisfaction (NOS) before the NYCDOB will issue permanent Certificates of Occupancy for the new buildings.

4.4 SUMMARY OF SELECTED REMEDIAL ACTIONS

The remedy recommended for the site is a Track 2 alternative (Alternative 2) which consists of remediation of all soils to restricted residential criteria to a depth of 15 feet below grade through the excavation of the CVOC hotspot in the vicinity of boring B4 to a depth of 8 feet below grade, excavation of historic fill soils with SVOCs and metals above restricted residential SCOs at location B1 and B3 to a depth of approximately 2 feet below grade. Additional soil excavated for footers and perimeter grade beams and construction purposes would also be properly handled and disposed of. Although the potential for soil vapor intrusion is expected to be significantly reduced or eliminated following the removal of CVOC impacted soil of the remedy includes the installation and operation of an active sub-slab depressurization system (SSDS) until it can be demonstrated that vapor intrusion is no longer a concern. The remedy will include the following items:

1. Removal of CVOC impacted soil from the central portion of the property, in the vicinity of boring B4, to a depth of approximately 8 feet below grade;
2. Excavation of soil/fill exceeding Track 2 restricted residential SCOs as listed in **Table 1,** at boring locations B1 and B3. If Track 2 is not achieved, a site cover will be required to allow for restricted residential use of the Site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs);
3. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 2 SCOs;
4. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
5. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in **Table 1**, (2) all Federal, State and local rules and regulations for handling and transport of material;
6. Installation of sub-slab depressurization (SSDS) beneath the entire Site. A Sub-slab Depressurization System (SSDS) will be designed to mitigate the elevated levels of PCE and TCE detected in the sub-slab soil vapor. SSDS design will include design calculations and provide a map showing the radius of influence (ROI) of the SSDS system. Once the approved SSDS is installed and operational, verification of its effectiveness will be conducted;
7. Implementation of a Site Management Plan (SMP) for long term maintenance of the Engineering Controls;
8. An Environmental Easement will be filed against the Site to ensure implementation of the SMP.

All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP. All deviations from the RAWP will be promptly reported to NYSDEC for approval and fully explained in the FER.

5.0 REMEDIAL ACTION PROGRAM

The objective of this section of the Remedial Action Work Plan, is to present a scope of work which will be approved by NYSDEC and when completely implemented will ready the BCP site for development under the Contemplated Use, which is restricted residential use, consistent with the requirements of the Brownfield Cleanup Program. Additionally, following completion of the remedial activities, it is an objective of this remedy that Clean Zones will be prepared beneath buildings, courtyards, and utility corridors so that construction can be implemented without the need for OSHA Hazardous Waste Operations and Emergency Response ("HAZWOPER") training for construction workers.

5.1 GOVERNING DOCUMENTS

Governing documents and procedures included in the Remedial Work Plan include a Site-specific Health and Safety Plan (HASP), a Community Air Monitoring Plan (CAMP), a Citizen Participation Plan, a Soil Management Plan (SoMP) analytical quality assurance/quality control (QA/QC), fluid management procedures, and contractors' site operations and quality control procedures. Highlights of these documents and procedures are provided in the following sections.

5.1.1 Health & Safety Plan (HASP)

Contractors and subcontractors will have the option of adopting this HASP or developing their own site-specific document. If a contractor or subcontractor chooses to prepare their own HASP, the Project Remedial Engineer will insure that it meets the minimum requirements as detailed in the site HASP prepared by EBC and must be made submitted to and approved by the NYSDEC.

Activities performed under the HASP will comply with applicable parts of OSHA Regulations, primarily 29 CFR Parts 1910 and 1926. Modifications to the HASP may be made with the approval of the Project Remedial Engineer (RE), Site Safety Manager (SSM) and/or Project Manager (PM).

All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan and applicable laws.

The Health and Safety Plan (HASP) and requirements defined in this Remedial Action Work Plan pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion.

The Site Safety Coordinator will be Mr. Kevin Waters. A resume will be provided to NYSDEC prior to the start of remedial construction. Confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gasses. A copy of the Site Specific Health and Safety Plan is provided in **Attachment A.**

5.1.2 Quality Assurance Project Plan (QAPP)

The fundamental QA objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the QC acceptance of the analytical protocol. The accuracy, precision and completeness requirements will be addressed by the laboratory for all data generated.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice or a cold-pak(s) to maintain a temperature of 4^{o}C.

Dedicated disposable sampling materials will be used for both soil and groundwater samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every eight samples collected.

Decontamination of non-dedicated sampling equipment will consist of the following:

- Gently tap or scrape to remove adhered soil
- Rinse with tap water
- Wash with alconox® detergent solution and scrub
- Rinse with tap water
- Rinse with distilled or deionized water

Prepare field blanks by poring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers. Trip blanks will accompany samples each time they are transported to the laboratory. Matrix spike and matrix spike duplicates (MS/MSD) will be collected at the rate of one per 20 samples submitted to the laboratory. Laboratory reports will be upgradeable to ASP category B deliverables for use in the preparation of a data usability report (DUSR). The QAPP for the Site is provided in **Attachment B**.

5.1.3 Construction Quality Assurance Plan (CQAP)

All construction work related to the remedy (i.e. soil excavation) will be monitored by EBC field personnel under the direct supervision of the Remedial Engineer. Monitoring during soil excavation will be performed to protect the health of site workers and the surrounding community. A Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) have been specifically developed for this project. These plans specify the monitoring procedures, action levels, and contingency measures that are required to protect public health.

All intrusive and soil disturbance activities will be monitored by a qualified environmental professional (QEP) under the direct supervision of the Remedial Engineer who will record observations in the site field book and complete a photographic log of the daily activities. The QEP will provide daily updates to the Project Manager and Remedial Engineer who will both make periodic visits to the site as needed to assure construction quality.

5.1.4 Soil/Materials Management Plan (SoMP)

An SMP was prepared for excavation, handling, storage, transport and disposal of all soils/materials that are disturbed / excavated at the Site. The SMP includes all of the controls that will be applied to these efforts to assure effective, nuisance-free performance in compliance with all applicable Federal, State and local laws and regulations. The SMP developed for this site is presented in **Section 4.5** of this RAWP.

5.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

Erosion and sediment controls will be performed in conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. Typical measures that will be utilized at various stages of the project to limit the potential for erosion and migration of soil include the use of hay bales, temporary stabilized construction entrances / exits, placement of silt fencing and/or hay bales around soil stockpiles, and dust control measures.

5.1.6 Community Air Monitoring Plan (CAMP)

The CAMP provides measures for protection for on-site workers and the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in the remedial work) from potential airborne contaminant releases resulting from remedial activities.

The action levels specified require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that the remedial work did not spread contamination off-site through the air.

The primary concerns for this site are vapors, nuisance odors and dust particulates. A CAMP was previously prepared for implementation of the RAWP and is provided in **Attachment C**.

5.1.7 Contractors Site Operations Plan (SOP)

The Remedial Engineer has reviewed all plans and submittals for this remedial project (including those listed above and contractor and sub-contractor document submittals) and confirms that they are in compliance with this RAWP. The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, are in compliance with this RAWP. All remedial documents will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

5.1.8 Citizen Participation Plan (CPP)

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (specific date) and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing. The Citizen Participation Plan for this project is provided in **Attachment D**.

Document repositories have been established at the following locations and contain all applicable project documents:

Brooklyn Public Library
Macon Branch
361 Lewis Avenue
Brooklyn, NY 11233
(718) 573-5606

Hours:

Mon 10:00 AM - 6:00 PM
Tue 1:00 PM - 8:00 PM
Wed 10:00 AM - 6:00 PM
Thu 10:00 AM - 6:00 PM
Fri 10:00 AM - 6:00 PM
Sat 10:00 AM - 5:00 PM
Sun closed

5.2 GENERAL REMEDIAL ACTION INFORMATION

5.2.1 Project Organization

The Project Manager for the Remedial Activity will be Ms. Kristen DiScenza. Overall responsibility for the BCP project will be Mr. Charles B. Sosik, P.G., P.HG. The Remedial

Engineer for this project is Mr. Ariel Czemerinski, P.E.. Resumes of key personnel involved in the Remedial Action are included in **Attachment E**.

5.2.2 Remedial Engineer

The Remedial Engineer for this project will be Mr. Ariel Czemerinski, P.E. The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for the Site. The Remedial Engineer will certify in the Final Engineering Report that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this Remedial Action Work Plan and will certify compliance in the Final Remediation Report. The Remedial Engineer will provide the certifications listed in Section 10.1 in the Final Engineering Report.

5.2.3 Remedial Action Schedule

The remedial action will begin with mobilization of equipment and material to the Site which will begin approximately 2 weeks following RAWP approval and within 10 days of the distribution of the Construction Fact Sheet. Mobilization will be followed by excavation and disposal of historic fill materials within designated excavation areas and is expected to continue for 2 weeks as part of the construction excavation and foundation installation. Installation of the SSDS will be completed following all excavation activities and is anticipated to continue for 3 weeks followed by epoxy sealant application.

5.2.4 Work Hours

The hours for operation of remedial construction will conform to the New York City Department of Buildings construction code requirements or according to specific variances issued by that agency. DEC will be notified by the Applicant of any variances issued by the Department of Buildings. NYSDEC reserves the right to deny alternate remedial construction hours.

5.2.5 Site Security

A construction fence will be erected along the front of the property as required by the NYC Department of Buildings. The fence will be maintained as required and secured at the end of each work day.

5.2.6 Traffic Control

Trucks will back into the Site through gates to be installed in a construction fence along Lexington Avenue. The Volunteer's construction management personnel will direct the arrival or departure of construction vehicles, and provide flag services as needed to maintain safe travel exiting and entering the Site from Lexington Avenue. Traffic related to on-going remedial activity will require the limited staging of 10-wheel dump trucks along Lexington Avenue during soil excavation activity. The soil disposal transport route will be as follows: ENTERING SITE - from the Brooklyn Queens Expressway take the Flushing Avenue Exit (Exit 30). Turn right, heading east on Flushing Avenue. Continue east on Flushing Avenue to Broadway. Turn Right on Broadway, heading south, and continue to Lexington Avenue. Turn Right on Lexington and the Site entrance on the right. EXITING SITE – Continue west on Lexington Avenue 8 blocks to Nostrand Avenue. Turn Right on Nostrand Avenue, heading north, and continue to Flushing Avenue. Turn Left on Flushing Avenue, heading west, and continue to the Brooklyn Queens Expressway. A map showing the truck routes is included as **Figure 10**.

5.2.7 Worker Training and Monitoring

All field personnel involved in handling or removing potentially hazardous materials will participate in training, if required, under 29 CFR 1910.120, including 24 and 40-hour hazardous waste operator training and annual 8-hour refresher training. The Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering any exclusion zone will be trained in the provisions of the HASP and be required to sign an HASP acknowledgment.

All on-site personnel engaged in remedial or sampling activities must receive adequate site-specific training in the form of an on-site Health and Safety briefing prior to participating in field work with emphasis on the following:

- Protection of the adjacent community from hazardous vapors and / or dust which may be released during intrusive activities.
- Identification of chemicals known or suspected to be present on-site and the health effects and hazards of those substances.
- The need for vigilance in personnel protection, and the importance of attention to proper use, fit and care of personnel protective equipment.
- Decontamination procedures.
- Site control including work zones, access and security.
- Hazards and protection against heat or cold.
- The proper observance of daily health and safety practices, such as entry and exit of work zones and site. Proper hygiene during lunch, break, etc.
- Emergency procedures to be followed in case of fire, explosion and sudden release of hazardous gases.

5.2.8 Agency Approvals

The Applicant has addressed all SEQRA requirements for this Site. All permits or government approvals required for remedial construction have been, obtained prior to the start of remedial construction.

The planned end use for the Site is in conformance with the current zoning for the property as determined by New York City Department of Planning. A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

A complete list of all local, regional and national governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work is attached in **Table 15**. This list includes a citation of the law, statute or code to be complied with, the originating agency, and a contact name and phone number in that agency. This list will be updated in the Final Remediation Report.

All planned remedial or construction work in regulated wetlands and adjacent areas will be specifically approved by the NYSDEC Division of Natural Resources to ensure that it meets the requirements for substantive compliance with those regulations prior to the start of construction. Nothing in the approved Remedial Action Work Plan or its approval by NYSDEC should be construed as an approval for this purpose.

5.2.9 NYSDEC BCP Signage

A project sign will be erected at the main entrance to the Site prior to the start of any remedial activities. The sign will indicate that the project is being performed under the New York State Brownfield Cleanup Program. The sign will meet the detailed specifications provided by the NYSDEC Project Manager and contained in **Attachment F**.

5.2.10 Pre-Construction Meeting with NYSDEC

A pre-construction meeting with the Project Manager, Remedial Engineer, Construction Manager, Owner’s Representative and the NYSDEC will take place prior to the start of major construction activities.

5.2.11 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in **Table 16**. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

5.2.12 Remedial Action Costs

The total estimated cost of the Remedial Action is $ 522,495. A summary of estimated costs for all remedial activity is attached as **Attachment G**. This will be revised based on actual costs and submitted as an Appendix to the Final Remediation Report.

5.3 SITE PREPARATION

5.3.1 Mobilization

Mobilization will include the delivery of construction equipment and materials to the site. All construction personnel will receive site orientation and training in accordance with the site specific HASP, CAMP and established policies and procedures to be followed during the implementation of the RAWP. The remediation contractor, construction manager and all associated subcontractors will each receive a copy of the RAWP and the site specific HASP and will be briefed on their contents.

5.3.2 Erosion and Sedimentation Controls

Soil erosion and sediment control measures for management of storm water will not be necessary since the project consists of the renovation of an existing building with no soil exposure on-site.

5.3.3 Stabilized Construction Entrance(s)

Since the project consists of the renovation of an existing building trucks will not be accessing the Site and a stabilized construction entrance will not be needed. The loading of trucks or roll-off containers will be performed in the street in front of the building.

5.3.4 Utility Marker and Easements Layout

The Applicant and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Applicant and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Applicant and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the Site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

5.3.5 Sheeting and Shoring

Appropriate management of structural stability of on-Site or off-Site structures during on-Site activities including excavation is the sole responsibility of the Applicant and its contractors. The Applicant and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan. The Applicant and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this Plan. Further, the Applicant and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved Plan.

5.3.6 Equipment and Material Staging

All equipment and work materials will be staged on-Site in areas as designated by the General Contractor, and / or Construction Site Superintendant.

5.3.7 Decontamination Area

Since the project consists of the renovation of an existing building trucks will not be accessing the Site and a decontamination area will not be needed. The loading of trucks or roll-off containers will be performed in the street in front of the building. The street will be kept clean by sweeping as needed.

5.3.8 Site Fencing

An 8-foot high temporary construction fence will be installed along the front of the Site with entrance gates located on Lexington Avenue. This fence will be properly secured at the end of the day and supplemented, as needed, by installing orange safety fencing around open excavations to ensure on-site worker safety.

5.3.9 Demobilization

Demobilization will consist of the restoration of material staging areas and the disposal of materials and/or general refuse in accordance with acceptable rules and regulations. Materials used in remedial activities will be removed and disposed properly. All equipment will be decontaminated prior to leaving the Site.

5.4 REPORTING

All daily and monthly Reports will be included in the Final Engineering Report.

5.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by the end of each day in which remedial activity takes place. Daily reports will include:

- An update of progress made during the reporting day;

- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP finding, including excursions;
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

5.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers within two weeks following the end of the month of the reporting period and will include:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e. tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

5.4.3 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital (JPEG) format. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any Remedial Actions will be provided. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. Photos will be submitted to NYSDEC on CD or other acceptable electronic media and will be sent to NYSDEC's Project Manager (2 copies) and to NYSDOH's Project Manager (1 copy). CD's will have a label and a general file inventory structure that separates photos into directories and sub-directories according to logical Remedial Action components. A photo log keyed to photo file ID numbers will be prepared to provide explanation for all representative photos. For larger and longer projects, photos should be submitted on a monthly basis or another agreed upon time interval.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

5.4.4 Complaint Management Plan

Complaints from the public regarding nuisance or other Site conditions including noise, odor, truck traffic etc., will be recorded in the Site field book and reported to the NYSDEC in the daily status report.

5.4.5 Deviations from the Remedial Action Work Plan

Minor deviations from the RAWP will be identified in the daily update report and will be noted in the Final Engineering Report. When deviations are reported a brief discussion will be provided which will state the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy.

Major changes to the scope of work must be discussed with the NYSDEC and the NYSDOH prior to implementation. If the changes are considered to be significant enough, an addendum to the RAWP Work Plan will be prepared and submitted to NYSDEC / NYSDOH for review.

6.0 REMEDIAL ACTION: MATERIAL REMOVAL FROM SITE

Excavation work includes the removal of CVOC impacted soil and historic fill materials present within hotspot locations across the site, as well as soil removal from excavation areas for the elevator pit, footers and grade beams, at depths ranging from 2 feet to 6 feet below grade. Soil excavation will be performed using conventional equipment such as track-mounted excavators, backhoes and loaders.

All excavation work will be performed in accordance with the Site-specific HASP and CAMP. If an underground storage tank (UST) is discovered during excavation the NYSDEC Project Manager will be immediately notified and the UST removed and closed in accordance with DER-10, NYSDEC PBS regulations and NYC Fire Department regulations. It is anticipated that the excavation of historic fill materials and /or native soils will be performed by the excavation contractor for the construction project.

The selected remedial action includes the excavation of soil within the identified CVOC "hotspot" area to a depth of approximately 8 feet and the excavation of historic fill materials from several "hotspot" areas across the Site, to a depth of 2 feet, or as needed to achieve restricted residential SCOs within the top 15 feet of the Site. Additional soil throughout the ground floor level will be excavated to allow for the installation of footers and grade beams as required for renovation as well as the elevator pit in the existing cellar.

Dewatering is not anticipated for the excavation of contaminated areas or for foundation installation. Proposed construction excavation areas are depicted in **Figure 11** and remedial excavation areas are depicted in **Figure 12**.

6.1 CONTINGENCY - UST REMOVAL METHODS

USTs, if encountered during excavation activities at the Site, will be removed in accordance with the procedures described under the NYSDEC Memorandum for the Permanent Abandonment of Petroleum Storage Tanks and Section 5.5 of Draft DER-10 as follows:

- Remove all product to its lowest draw-off point
- Drain and flush piping into the tank

- Vacuum out the tank bottom consisting of water product and sludge
- Dig down to the top of the tank and expose the upper half of the tank
- Remove the fill tube and disconnect the fill, gauge, product and vent lines and pumps. Cap and plug open ends of lines
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank
- Clean tank or remove to a storage yard for cleaning
- If the tank is to be moved it must be transported by licensed waste transported. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport
- After cleaning the tank must be made acceptable for disposal at a scrap yard cleaning the tank interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.)
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.)
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation with a calibrated photoionization detector (PID).

6.2 SOIL CLEANUP OBJECTIVES

The Soil Cleanup Objectives for this Site are listed in **Table 1**. **Table 13** summarizes all soil samples that exceed the unrestricted SCOs . A spider map that shows all soil samples that exceed the unrestricted SCOs proposed are shown in **Figure 7**.

6.3 REMEDIAL PERFORMANCE EVALUATION (POST EXCAVATION END-POINT SAMPLING)

Post excavation soil samples will be collected from the site to verify that remedial goals have been achieved. Construction excavation samples will be taken following the excavation of all fill materials and additional soil as needed for renovation. Site-wide samples will be analyzed for those parameters that exceeded restricted residential SCOs in fill materials during the RI (SVOCs and metals). Endpoint samples collected from the CVOC source area will be analyzed for VOCs. Approximate endpoint sampling locations are depicted in **Figure 13**.

6.3.1 End-Point Sampling Frequency

Endpoint sampling frequency will be in accordance with DER-10 section 5.4 which recommends the collection of one bottom sample per 900 sf of bottom area and one sidewall sample per 30 liner feet. Sidewall samples will not be collected where sheeting or shoring is present. Approximate endpoint sampling locations are depicted in **Figure 13**. In the event that end-point samples do not meet Track 2 SCOs, additional soil will be excavated from the area(s) which exhibited exceedences and the location(s) will be re-sampled.

6.3.2 Methodology

Collected samples be placed in glass jars supplied by the analytical laboratory and stored in a cooler with ice to maintain a temperature of 4 degrees C. Samples will either be picked up at the Site by a laboratory dispatched courier at the end of the day or transported back to the EBC office where they will be picked up the following day by the laboratory courier. All samples will be analyzed by a NYSDOH ELAP certified environmental laboratory

All Verification samples will be analyzed for SVOCs according to EPA method 8270BN and TAL metals. Samples collected from the CVOC source area will be analyzed for VOCs by EPA method 8260 and TAL metals.

6.3.3 Reporting of Results

Sample analysis will be provided by a New York State certified environmental laboratory. Laboratory reports will include ASP category B deliverables for use in the preparation of a data usability summary report (DUSR). All results will be provided in accordance with the NYSDEC

Environmental Information Management System (EIMS) electronic data deliverable (EDD) format.

6.3.4 QA/QC

The fundamental QA objective with respect to accuracy, precision, and sensitivity of analysis for laboratory analytical data is to achieve the QC acceptance of the analytical protocol. The accuracy, precision and completeness requirements will be addressed by the laboratory for all data generated.

Collected samples will be appropriately packaged, placed in coolers and shipped via overnight courier or delivered directly to the analytical laboratory by field personnel. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice or cold-pak(s) to maintain a temperature of 4^oC. Dedicated disposable sampling materials will be used for both soil samples, eliminating the need to prepare field equipment (rinsate) blanks. However, if non-disposable equipment is used, (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of 1 for every eight samples collected. Field blanks will be prepared by pouring distilled or deionized water over decontaminated equipment and collecting the water in laboratory provided containers.

Trip blanks will accompany samples each time they are transported to the laboratory. Matrix spike and matrix spike duplicates (MS/MSD) will be collected at the rate of one per 20 samples submitted to the laboratory.

6.3.5 DUSR

The DUSR provides a thorough evaluation of analytical data with third party data validation. The primary objective of a DUSR is to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use. Verification and/or performance monitoring samples collected under this RAWP will be reviewed and evaluated in accordance with the Guidance for the Development of Data Usability Summary Reports as presented in Appendix 2B of DER-10. The completed DUSR for verification/performance samples collected during implementation of this RAWP will be included in the final Engineering Report.

6.3.6 Reporting of End-Point Data in FER

All endpoint data collected as part of this remedial action will be summarized and presented in the Final Engineering Report. The summary tables will include comparison of results to restricted residential SCOs to verify attainment of Track 2. Laboratory reports and the DUSR will be included as an appendix in the FER.

6.4 ESTIMATED MATERIAL REMOVAL QUANTITIES

CVOC impacted soil has been documented at one hotspot area in the central portion of the property, adjacent to boring B4, to a depth of approximately 8 feet below grade. It is expected that approximately 50 cubic yards (75 tons) of CVOC impacted soil classified as non-hazardous will be excavated from the site for off-site disposal.

Historic fill materials were documented at three hotspot locations, B1, B3 and B4, above restricted residential SCOs to a depth of approximately 2 feet below grade. It is expected that approximately 10 cubic yards (5 tons) of historic fill/soil classified as non-hazardous will be excavated from the site for off-site disposal from the three "hotspot" areas adjacent to boring B1, B3 and B4.

Additional excavation for the elevator pit, footings and grade beams will be required for renovation. Renovations plans include the installation of 16 footers, requiring excavation to depths ranging from 2 feet to 4 feet below grade throughout the ground level. Grade beams will be installed around the perimeter of the site to a depth of approximately 16 inches and the elevator pit will be excavated in the existing cellar to a depth of 5 feet below grade. It is expected that approximately 190 cubic yards (285 tons) of soil classified as non-hazardous will be excavated from the site for offsite disposal for renovation purposes.

6.5 SOIL/MATERIALS MANAGEMENT PLAN

6.5.1 Excavation of CVOC Contaminated Soil

CVOC impacted soil has been documented within one hotspot area in the central portion of the property, adjacent to boring B4. The vertical extent is limited to approximately 6 feet below existing grade.

Excavated soil will be secured and temporarily stored on-site until arrangements can be made for off-site disposal. As an alternative, pre-characterization samples may be collected to allow the soil to be loaded directly on to trucks for transport to the disposal facility.
The final determination on classification will be based on the results of waste characterization analysis and the NYSDEC.

Soil excavation will be performed in accordance with the procedures described under Section 5.5 of DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation with a calibrated photoionization detector (PID).

Final excavation depth, length, and width will be determined by the Remedial Engineer or his designee, and will depend on the horizontal and vertical extent of contaminated soils as identified through physical examination (PID response, odor, staining, etc.). Expansion of the excavation beyond the planned hotspot area is anticipated and can easily be accommodated.

The following procedure will be used for the excavation of impacted soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the HASP;

- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated;

- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile or dispose of separate from the impacted soil;

- If USTs are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued removal of overburden to access the top of the structure or continued trenching around the perimeter to minimize its disturbance;

- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc), an attempt will be made to remove it to the extent not limited by the site boundaries. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separate dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present;

- Excavated soils which are temporarily stockpiled on-site will be covered with 6-mil polyethylene sheeting while disposal options are determined. Sheeting will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property;

- Once the Remedial Engineer is satisfied with the removal effort, verification or confirmatory samples will be collected from the excavation as described in **Section 6.3** of this document.

The excavation of the CVOC contaminated area will be performed by a qualified remedial contractor and fully trained personnel (40HR OSHA HAZWOPER).

6.5.2 Excavation of Historic Fill Materials

Historic fill has been identified in isolated areas across the Site at a depth of 2 feet below grade. The fill material contains several SVOCs and metals above restricted residential objectives. Historic fill will be segregated from non-contaminated native soils and disposed of off-site at a permitted disposal facility. Excavated historic fill materials will be secured and temporarily stored on-site until arrangements can be made for off-site disposal. As an alternative, pre-characterization samples may be collected to allow the soil to be loaded directly on to trucks for transport to the disposal facility. It is anticipated that historic fill materials will be classified as a non-hazardous material. It is anticipated that the excavation of historic fill materials will be performed by the excavation contractor for the construction project.

6.5.3 Excavation of Native Soils

Native soils are present directly below the fill materials and will require some limited excavation for the elevator shaft, foundation components and SSDS trenching. It is expected that native soils will not be contaminated. However, if evidence of contamination is discovered beneath the existing building's foundation following demolition, or during the excavation, the contamination will be removed to the extent possible and segregated from clean native soils for proper disposal. Clean native soils will be stockpiled on-site and characterized for reuse on-site in areas over excavated to remove historic fill. Any excess soil will be disposed of off-site as a beneficial re-use material upon approval by the NYSDEC Region 2’s Division of Materials Management. Clean native soils utilized on-site will be subject to a testing program to verify that they meet restricted residential SCOs prior to use. It is anticipated that the excavation of native soil materials will be performed by the excavation contractor for the construction project.

6.5.4 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (Residual Contamination Zone). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the Final Engineering Report.

Screening will be performed by qualified environmental professionals. Resumes will be provided for all personnel responsible for field screening (i.e. those representing the Remedial Engineer) of invasive work for unknown contaminant sources during remediation and development work.

6.5.5 Stockpile Methods

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced. Hay bales will be used as needed near catch basins, surface waters and other discharge points. Water will be available on-site at suitable supply and pressure for use in dust control.

6.5.6 Materials Excavation and Load Out

The Remedial Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

Where effective, the equipment will be “dry” decontaminated using a broom and/or brushes. If significant amounts of soil or other contaminants remain after the dry decontamination, the equipment will also be pressure washed before leaving the Site. The QEP will be responsible for ensuring that all outbound trucks are dry-brushed or washed on the truck wash/equipment pad before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking. The QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site derived materials.

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.

Each area and structure to be remediated will be removed and end-point remedial performance sampling completed before excavations related to Site development commence proximal to the structure.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited. All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be located and shown on maps to be reported in the Final Engineering Report.

6.5.7 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

ENTERING SITE - from the Brooklyn Queens Expressway take the Flushing Avenue Exit (Exit 30). Turn right, heading east on Flushing Avenue. Continue east on Flushing Avenue to Broadway. Turn Right on Broadway, heading south, and continue to Lexington Avenue. Turn Right on Lexington and the Site entrance on the right. EXITING SITE – Continue west on Lexington Avenue 8 blocks to Nostrand Avenue. Turn Right on Nostrand Avenue, heading north, and continue to Flushing Avenue. Turn Left on Flushing Avenue, heading west, and continue to the Brooklyn Queens Expressway. A map showing the truck routes is included as **Figure 10**.

These are the most appropriate routes to and from the Site and take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting 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.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site. Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development. Material transported by trucks exiting the Site will be secured with tight-fitting covers. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be inspected, dry-brushed and / or, as needed, before leaving the site.

6.5.8 Materials Disposal Off-Site

Multiple disposal facility designations may be employed for the materials removed from the Site. Once final arrangements have been made the disposal location(s) will be reported to the NYSDEC Project Manager.

The total quantity of material expected to be disposed off-Site is 144 cubic yards of historic fill/soil.

All historic fill material excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval. It is anticipated that historic fill will be disposed of as a non-hazardous material. Final classification of excavated materials will be dependant upon the results of waste characterization sampling. Waste characterization will be performed for off-Site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

Non-hazardous historic fill taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the Division of Materials Management (DMM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 2 DSHM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-Site or off-Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

Clean native soil removed from the site for development purposes (i.e. foundation, footings, etc.) will be handled as unregulated or beneficial use disposal. This soil will undergo a testing program to confirm that it meets Track 1 unrestricted SCOs prior to unregulated disposal or reuse on-site. Confirmation testing of clean soils will be in Accordance with NYSDEC CP-51 Guidance as follows:

Contaminant	**VOCs**	**SVOCs, Inorganics & PCBs/Pesticides**	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	Each composite sample for analysis is created from 3-5 discrete samples from
50-100	2	1	
100-200	3	1	
200-300	4	1	

300-400	4	2	representative locations in the fill.
400-500	5	2	
500-800	6	2	
800-1000	7	2	
1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

Uncontaminated native soil confirmed by the above testing program and removed from the site, will be disposed of as unregulated C&D material or sent to a beneficial re-use facility. The final destination of soils whether classified as contaminated or uncontaminated must be approved by the NYSDEC.

Concrete demolition material generated on the Site from building slabs and other structures will be segregated, sized and shipped to a concrete recycling facility upon approval by the NYSDEC's Division of Materials Management for Region 2. Concrete crushing or processing on-Site is prohibited.

Additionally, it is common to encounter scrap metals and large boulders (greater than one foot in diameter) during excavation which may not be accepted by either the licensed disposal facility or the C&D facility. These materials will be segregated and subsequently recycled at local facilities. Uncontaminated metal objects will be taken to a local scrap metal facility.

Bricks and other C&D material are also not accepted by most soil disposal facilities if present at greater then 5% by volume. This material, if encountered, will be sent to a C&D landfill or other C&D processing facility if approved by the DEC. C&D material of this type is most often encountered on sites in which former basement structures have been filled in with material from demolishing a former building. There was no evidence of former basement areas identified during previous investigations performed at the Site.

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Applicant to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the Final Engineering Report. Documentation for materials disposed of at recycling facilities (such as metal, concrete, asphalt) and as non-regulated C&D will include transport tickets for each load stating the origin of the material, the destination of the material and the quantity transported.

The Final Engineering Report will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

6.5.9 Materials Reuse On-Site

Re-use of on-Site clean native soil will only be allowed if the material is found to meet restricted residential criteria through the verification testing program detailed in Section 5.4.5 above. The Remedial Engineer will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-Site.

Chemical criteria for on-Site reuse of material has been approved by NYSDEC. This criteria is the Track 2 Restricted Residential SCOs as presented in **Table 1**. The Remedial Engineer will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-Site.

Acceptable demolition material proposed for reuse on-Site, if any, will be sampled for asbestos. Concrete crushing or processing on-Site is prohibited. Contaminated on-Site material, including historic fill removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

6.5.10 Fluids Management

As the depth to groundwater at the site is approximately 43 feet below grade depth, dewatering operations will not be employed during construction. However, if dewatering from the accumulation of precipitation or surface runoff becomes necessary, dewatering fluids will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site. Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a SPDES permit.

6.5.11 Backfill from Off-Site Sources

Off-site fill material may be needed to stabilize the entrance - exit areas of the Site, for temporary driveways for loading trucks and as an underlayment to structural components of the new buildings including slabs and footings. Recycled Concrete Aggregate (RCA) derived from recognizable and uncontaminated concrete and supplied by facilities permitted by, and in full compliance with Part 360-16 and DSNY regulations, is an acceptable form of backfill material. The Remedial Engineer is responsible for ensuring that the facility is compliant with the registration and permitting requirements of 6 NYCRR Part 360 and DSNY regulations at the time the RCA is acquired. RCA imported from compliant facilities does not require additional testing unless required by NYS DEC and DSNY under its terms of operations for the facility. Documentation of part 360-16 and DSNY compliance must be provided to the Remedial Engineer before the RCA is transported to the Site.

Fill material may also consist of virgin mined sand, gravel or stone products. Materials from a virgin mined source may be imported to the Site without testing provided that that the material meets the specifications of the geotechnical engineer, Remedial Engineer, and Redevelopment

Construction Documents and that the source of the material is approved by the Remediation Engineer and the NYSDEC Project Manager.

The source approval process will require a review of the following information:

- The origin of the material;
- The address of the facility which mines/processes the material;
- A letter from the facility stating that the material to be delivered to the site is a virgin mined material and that it has not been co-mingled with other materials during processing or stockpiling.

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this RAWP prior to receipt at the Site. Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site.

The Final Engineering Report will include the following certification by the Remedial Engineer: "I certify that all import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".

Under no circumstances will fill materials be imported to the site without prior approval from the NYSDEC Project Manager. If sufficient documentation is not obtained, fill materials will be tested at a frequency consistent with that as specified in Table 4 of NYSDEC CP-51 Soil Cleanup Guidance Policy. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

6.5.12 Stormwater Pollution Prevention

Soil erosion and sediment control measures for management of storm water will not be necessary since the project consists of the renovation of an existing building with no soil exposure on-site.

6.5.13 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. Chemical analytical work will be limited to STARS parameters where tanks are identified. Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

6.5.14 Community Air Monitoring Plan

The Community Air Monitoring Plan (CAMP) provides measures for protection for on-site workers and the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in the remedial work) from potential airborne contaminant releases resulting from remedial activities at construction sites.

The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that the remedial work did not spread contamination off-site through the air. The primary concerns for this site are odors associated with groundwater purging and sampling.

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report. The CAMP developed for this site is included in **Attachment F** or this Work Plan.

6.5.15 Odor, Dust and Nuisance Control Plan

The Final Engineering Report will include the following certification by the Remedial Engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

6.5.15.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-Site and on-Site. 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. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Applicant's Remediation Engineer, who is responsible for certifying the Final Engineering Report.

All necessary means will be employed to prevent on- and off-Site 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) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

6.5.15.2 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-Site work, will include, at a minimum, the items listed below:

- Dust suppression will be achieved though spraying water directly onto off-road areas including excavations and stockpiles.
- Gravel will be used on roadways to provide a clean and dust-free road surface.

- On-Site roads will be limited in total area to minimize the area required for water application.

6.5.15.3 Nuisance Control Plan

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work. A plan has been developed and utilized by the contractor for all remedial work and conforms, to NYCDEP noise control standards.

7.0 RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Since contaminated soil is expected to exist beneath the Site after the remedy is complete, an Institutional Control (IC) is required to protect human health and the environment. The ICs, Environmental Easement and Site Management Plan, are described hereafter. Long-term management of the IC will be executed under a deed restriction recorded with the NYC Department of Finance, Office of the City Register.

Engineering Controls (ECs) will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have the following EC systems:

1. An active sub-slab depressurization system and vapor barrier beneath all excavated areas of the renovated building.

The FER will report residual contamination on the Site in tabular and map form.

8.0 ENGINEERING CONTROLS

8.1 SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS)

An active SSDS and vapor barrier were designed for installation beneath the current cellar and ground floor slabs and will consist of two separate venting zones. Combined these two zones will provide coverage of approximately 7,358 sf of slab area. This is consistent with USEPA sub-slab depressurization design specifications which recommend a separate vent loop for every 4,000 sf of slab area.

The horizontal vent line is constructed of a continuous loop of perforated 4-inch HDPE pipe. Fill material around the extraction line will consist of virgin-mined 3/4 inch gravel. The horizontal pipe will extend to an adjacent utility chase-way where it will be piped individually to the roof via a 2-inch cast iron line and will terminate a minimum of 10 feet from windows and ventilation inlets and a minimum of 3 feet above the roof line.

A high density polyethylene vapor barrier liner (HPDE) will be installed within the elevator shaft pit prior to pouring the slab. The vapor barrier will consist of Raven Industries' VaporBlock 20 Plus, which is a seven layer co-extruded barrier made from state-of-the-art polyethylene and EVOH resins, or equivalent. The specifications for installation will be provided to the construction management company and the foundation contractor or installer of the liner. The specifications state that all vapor barrier seams, penetrations, and repairs will be sealed either by the tape method or weld method, according to the manufacturer’s recommendations and instructions. Product specifications for the vapor barrier are included in **Appendix H**.

A field inspector under the direct supervision of a professional engineer will inspect and photograph the vapor barrier at several critical stages before during and after the installation is complete, to assure compliance with design specifications. Detailed specifications of the SSD system are provided in **Appendix H**.

Upon completion of concrete slab restoration activities, all foundation cracks/voids, utility inlets, drains, etc. within the cellar level of the building will be sealed using an industry standard commercial grade 50-year rated caulking sealant as a standard construction practice.

8.1.1 Criteria for Termination

The active SSDS will not be discontinued without written approval by the NYSDEC and NYSDOH. A proposal to discontinue use of the SSDS may be submitted by the property owner based on confirmatory data that justifies such a request. The confirmatory sample will not be collected until all other remedial efforts outlined in this Remedial Action Workplan have been completed. Results of this confirmatory sample will be compared to pre-remediation data collected during the Phase II investigation to determine if a request for termination is appropriate. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH.

9.0 INSTITUTIONAL CONTROLS

After the remedy is complete, the Site will have residual contamination remaining in place. Engineering Controls (ECs) will be incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and an SMP.

A Site-Specific Environmental Easement will be recorded with Kings County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all Engineering and Institutional Controls (ECs/ICs) placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs.

The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

9.1 ENVIRONMENTAL EASEMENT

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. If the Site will have residual contamination after completion of all Remedial Actions than an Environmental Easement is required. If an Environmental Easement is needed following completion of the remedy an Environmental Easement approved by NYSDEC will be filed and recorded with the City of New York. The Environmental Easement (if needed) will be submitted as part of the Final Remediation Report.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with the City of New York before the Certificate of Completion can be issued by NYSDEC. These Institutional Controls are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. Institutional Controls can, generally, be subdivided between controls that support Engineering Controls, and those that place general restrictions on Site usage or other requirements. Institutional Controls in both of these groups are closely integrated with the Site Management Plan (SMP), which provides all of the methods and procedures to be followed to comply with this remedy.

The Institutional Controls which will be needed to support Engineering Controls are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;

- All Engineering Controls must be operated and maintained as specified in this SMP;

- A soil vapor mitigation system consisting of a sub slab depressurization system under the entire Lot must be inspected, certified, operated and maintained as required by the SMP;

- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;

- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in the SMP;

- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

- On-Site environmental monitoring devices, including but not limited to, groundwater monitor wells and soil vapor probes, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP;

- Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these ICs for the Site is mandated by the Environmental Easement and will be implemented under the SMP. The Controlled Property (Site) may also have a series of ICs in the form of Site restrictions and requirements. The Site restrictions that may apply to the Controlled Property are:

- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for its intended purpose;
- The Controlled Property may be used for restricted residential use provided that the EC/ICs included in this SMP are employed.
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

9.2 SITE MANAGEMENT PLAN

Site Management is the last phase of remediation and begins with the approval of the Final Engineering Report and issuance of the Certificate of Completion (COC) for the Remedial Action. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the Site Management Plan are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated [month, year], and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The initial certification period will be 15 months after the COC is issued. Subsequent periods will be determined thereafter. The Site Management Plan will be based on a calendar year and will be due for submission to NYSDEC by March 1 of the year following the reporting period.

No exclusions for handling of residual contaminated soils will be provided in the Site Management Plan (SMP). All handling of residual contaminated material will be subject to provisions contained in the SMP.

10.0 FINAL ENGINEERING REPORT

A Final Engineering Report (FER) and Certificate Of Completion (COC) will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The Final Engineering Report will include as-built drawings for all constructed elements, certifications, manifests, bills of lading as well as the complete Site Management Plan (formerly the Operation and Maintenance Plan). The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the Site Management Plan and Environmental Easement. This determination will be made by NYSDEC in the context of the Final Engineering Report review.

The Final Engineering Report will include written and photographic documentation of all remedial work performed under this remedy. The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows exceedances from SCOs defined for the Site and a map that shows the location and summarizes exceedances for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.

The Final Engineering Report will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

Before approval of a FER and issuance of a Certificate of Completion, all project reports must be submitted in digital form on electronic media (PDF).

10.1 CERTIFICATIONS

The following certification will appear in front of the Executive Summary of the Final Engineering Report. The certification will be signed by the Remedial Engineer [name] who is a Professional Engineer registered in New York State This certification will be appropriately signed and stamped. The certification will follow the requirements of DER-10 and will include the following statements:

I ___________certify that I am currently a NYS registered professional engineer and that this Final Engineering Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

NYS Professional Engineer # ______________ Date ______________ Signature

11.0 SCHEDULE

The remedial action will begin with mobilization of equipment and material to the Site which will begin approximately 2 weeks following RAWP approval and within 10 days of the distribution of the Construction Fact Sheet. A detailed project schedule will be submitted 2 weeks prior to the beginning of field work. Equipment will be mobilized to site and is expected to continue for 2 weeks. Building renovations will be conducted next and are anticipated continue for 10 weeks. Installation of the SSDS and vapor barrier will be completed following all excavation activities and is anticipated to continue for 3 weeks. The schedule of tasks completed under this RAWP is as follows:

Conduct pre-construction meeting with NYSDEC	Within 2 weeks of RAWP approval
Mobilize equipment to the site	Within 2 weeks following pre-construction meeting
Mobilize Remediation Contractor and equipment on the Site	Within 1 week following Site prep
Begin hotspot excavation and historic fill material excavation	Immediately following mobilization
Complete excavation and disposal of all soils	4 week following mobilization
Perform endpoint verification of entire Site	Performed in sequence as final depth of each excavated area is complete.
Begin installation of SSDS and vapor barrier	10 weeks following mobilization.

TABLES

Table 1
Soil Cleanup Objectives

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Metals					
Arsenic	13	16	16	16	13
Barium	350	350	400	400	433
Beryllium	7.2	14	47	47	10
Cadmium	2.5	2.5	4.3	7.5	4
Chromium, Hexavalent[1]	1 [3]	19	19	19	1 [3]
Chromium, Trivalent[1]	30	36	180	1500	41
Copper	50	270	270	270	50
Cyanide	27	27	27	27	NS
Lead	63	400	400	450	63
Manganese	1600	2000	2000	2000	1600
Mercury (total)	0.18	0.73	0.73	0.73	0.18
Nickel	30	130	130	130	30
Selenium	3.9	4	4	4	3.9
Silver	2	8.3	8.3	8.3	2
Zinc	109	2200	2480	2480	109
PCBs/Pesticides					
2,4,5-TP Acid (Silvex)	3.8	3.8	3.8	3.8	NS
4,4'-DDE	0.0033 [3]	1.8	8.9	17	0.0033 [3]
4,4'-DDT	0.0033 [3]	1.7	7.9	47	0.0033 [3]
4,4'-DDD	0.0033 [3]	2.6	13	14	0.0033 [3]
Aldrin	0.005	0.019	0.097	0.19	0.14
Alpha-BHC	0.02	0.02	0.02	0.02	0.04 [4]
Beta-BHC	0.036	0.072	0.09	0.09	0.6
Chlordane (alpha)	0.094	0.91	2.9	2.9	1.3
Delta-BHC	0.04	0.25	0.25	0.25	0.04 [4]
Dibenzofuran	7	14	59	210	NS
Dieldrin	0.005	0.039	0.1	0.1	0.006
Endosulfan I	2.4[2]	4.8	24	102	NS
Endosulfan II	2.4[2]	4.8	24	102	NS
Endosulfan sulfate	2.4[2]	4.8	24	200	NS
Endrin	0.014	0.06	0.06	0.06	0.014
Heptachlor	0.042	0.38	0.38	0.38	0.14
Lindane	0.1	0.1	0.1	0.1	6
Polychlorinated biphenyls	0.1	1	1	1	1

Table 1
Soil Cleanup Objectives

Constituent	Unrestricted Use	Residential Use	Restricted Residential Use	Commercial or Industrial Use	If Ecological Resources are Present
Semi-volatile Organic Compounds					
Acenaphthene	20	98	98	98	20
Acenaphthylene	100	100	100	107	NS
Anthracene	100	100	100	500	NS
Benzo(a)anthracene	1	1	1	1	NS
Benzo(a)pyrene	1	1	1	1	2.6
Benzo(b)fluoranthene	1	1	1	1.7	NS
Benzo(g,h,i)perylene	100	100	100	500	NS
Benzo(k)fluoranthene	0.8	1	1.7	1.7	NS
Chrysene	1	1	1	1	NS
Dibenz(a,h)anthracene	0.33[3]	0.33[3]	0.33[3]	0.56	NS
Fluoranthene	100	100	100	500	NS
Fluorene	30	100	100	386	30
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	NS
m-Cresol(s)	0.33[3]	0.33[3]	0.33[3]	0.33[3]	NS
Naphthalene	12	12	12	12	NS
o-Cresol(s)	0.33[3]	0.33[3]	0.33[3]	0.33[3]	NS
p-Cresol(s)	0.33	0.33	0.33	0.33	NS
Pentachlorophenol	0.8[3]	0.8[3]	0.8[3]	0.8[3]	0.8[3]
Phenanthrene	100	100	100	500	NS
Phenol	0.33[3]	0.33[3]	0.33[3]	0.33[3]	30
Pyrene	100	100	100	500	NS
Volatile Organic Compounds					
1,1,1-Trichloroethane	0.68	0.68	0.68	0.68	NS
1,1-Dichloroethane	0.27	0.27	0.27	0.27	NS
1,1-Dichloroethene	0.33	0.33	0.33	0.33	NS
1,2-Dichlorobenzene	1.1	1.1	1.1	1.1	NS
1,2-Dichloroethane	0.02	0.02	0.02	0.02	10
1,2-Dichloroethene(cis)	0.25	0.25	0.25	0.25	NS
1,2-Dichloroethene(trans)	0.19	0.19	0.19	0.19	NS
1,3-Dichlorobenzene	2.4	2.4	2.4	2.4	NS
1,4-Dichlorobenzene	1.8	1.8	1.8	1.8	20
1,4-Dioxane	0.1[3]	0.1[3]	0.1[3]	0.1[3]	0.1
Acetone	0.05	0.05	0.05	0.05	2.2
Benzene	0.06	0.06	0.06	0.06	70
Butylbenzene	12	12	12	12	NS
Carbon tetrachloride	0.76	0.76	0.76	0.76	NS
Chlorobenzene	1.1	1.1	1.1	1.1	40
Chloroform	0.37	0.37	0.37	0.37	12
Ethylbenzene	1	1	1	1	NS
Hexachlorobenzene	0.33[3]	0.33[3]	1.2	3.2	NS
Methyl ethyl ketone	0.12	0.12	0.12	0.12	100
Methyl tert-butyl ether	0.93	0.93	0.93	0.93	NS
Methylene chloride	0.05	0.05	0.05	0.05	12

Table 1
Soil Cleanup Objectives

Volatile Organic Compounds (continued)					
Propylbenzene-n	3.9	3.9	3.9	3.9	NS
Sec-Butylbenzene	11	11	11	11	NS
Tert-Butylbenzene	5.9	5.9	5.9	5.9	NS
Tetrachloroethene	1.3	1.3	1.3	1.3	2
Toluene	0.7	0.7	0.7	0.7	36
Trichloroethene	0.47	0.47	0.47	0.47	2
Trimethylbenzene-1,2,4	3.6	3.6	3.6	3.6	NS
Trimethylbenzene-1,3,5	8.4	8.4	8.4	8.4	NS
Vinyl chloride	0.02	0.02	0.02	0.02	NS
Xylene (mixed)	0.26	1.6	1.6	1.6	0.26

All concentrations are in parts per million (ppm)
NS = Not Specified

Footnotes:
[1] The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminant is below the specific SCO for Hexavalent Chromium.
[2] The SCO is the sum of endosulfan I, endosulfan II and endosulfan sulfate.
[3] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the Track 1 SCO value.
[4] This SCO is derived from data on mixed isomers of BHC.

TABLE 2
SUMMARY OF
SAMPLING PROGRAM RATIONALE AND ANALYSIS

Matrix	Location	Approximate Number of Samples	Rationale for Sampling	Laboratory Analysis
Subsurface soil (May 2013) (0 to 10 feet bgs)	5 borings throughout the first floor as per Figure 3	10	To characterize the sub-surface soil across the site from 0-10 feet below grade.	VOCs EPA Method 8260B, SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Subsurface soil (January 2014) (0 to 50 feet bgs)	5 delineation borings throughout the first floor as per Figure 3	15	To characterize the sub-surface soil across the site from 0-50 feet below grade.	VOCs EPA Method 8260B, SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Subsurface soil (January 2014) (0 to 8 feet bgs)	3 borings in the cellar area located on the northwestern portion of the property.	6	To evaluate soil quality of CVOCs, urban fill materials and native soil below exisiting cellar level.	VOCs EPA Method 8260B, SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Total (Soils)		31		
Groundwater (May 2013)	4 groundwater samples from monitoring wells installed throughout the first floor as per Figure 4	4	Evaluate groundwater quality across the Site.	VOCs EPA Method 8260B, SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Groundwater (January 2014)	5 groundwater samples from 4 existing monitoring wells and one newly installed monitoring well throughout the first floor as per Figure 4.	5	Evaluate groundwater quality across the Site.	VOCs EPA Method 8260B, SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Total (Soils)		9		
Soil Gas (sub-slab) (May 2013)	4 sub-slab soil gas implants installed across the Site as per Figure 5.	4	Evaluate soil gas at perimeter and across Site.	VOCs EPA Method TO15
Soil Gas (sub-slab) (January 2014)	3 sub-slab soil gas implants to be installed at the Site perimeter on the ground level and 3 sub-slab soil gas implants will be installed across cellar level as per Figure 5.	6	Evaluate soil gas at perimeter and beneath the cellar slab of the Site.	VOCs EPA Method TO15
Soil Gas (sub-slab) (January 2014)	One indoor and one outdoor sample collected from the ground level as per Figure 5.	2	Evaluate indoor and ambient air quality.	VOCs EPA Method TO15
Total (Soil Gas)		12		
MS/MSD	Matrix spike and Matrix spike duplicates at the rate 5%	2	To meet requirements of QA / QC program	1 MS/MSD for VOCs EPA Method 8260B and 1 MS/MSD for SVOCs EPA Method 8270 BN, pesticide / PCBs EPA Method 8081/8082, TAL metals.
Trip Blanks	One laboratory prepared trip blank to accompany samples each time they are delivered to the laboratory.	4	To meet requirements of QA / QC program	VOCs EPA Method 8260B
Total (QA / QC Samples)		6		

TABLE 3
853 Lexington Ave,
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*	B1				B2				B3				B4				B5				Duplicate B3		B6											
			(0-2')		(4-6')		(0-2')		(4-6')		(0-2')		(4-6')		(0-2')		(4-6')		(0-2')		(4-6')		(0-2')		(0-2')				(10-12')				(43-45')			
			5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		5/22/2013		1/7/2014				1/7/2014				1/7/2014			
			µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg		µg/Kg				µg/Kg				µg/Kg			
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,1,1,2-Tetrachlorothane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.98	< 6.3	6.3	U	1	< 6.1	6.1	U	1
1,1,1-Trichloroethane	680	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.2
1,1,2,2-Tetrachloroethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.85	< 6.3	6.3	U	0.89	< 6.1	6.1	U	0.87
1,1,2-Trichloroethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.59	< 6.3	6.3	U	0.61	< 6.1	6.1	U	0.6
1,1-Dichloroethane	270	26,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.2	< 6.1	6.1	U	1.2
1,1-Dichloroethene	330	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.3	< 6.3	6.3	U	1.4	< 6.1	6.1	U	1.3
1,1-Dichloropropene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.2	< 6.1	6.1	U	1.2
1,2,3-Trichlorobenzene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.2
1,2,3-Trichloropropane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.85	< 6.3	6.3	U	0.89	< 6.1	6.1	U	0.87
1,2,4-Trichlorobenzene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.2
1,2,4-Trimethylbenzene	3,600	52,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	**1.4**	6.5	**1.7**	5.5	ND	290	ND	4.9	ND	5	ND	4.1	**1.5**	5.1	< 6.0	6	U	0.86	< 6.3	6.3	U	0.9	< 6.1	6.1	U	0.88
1,2-Dibromo-3-chloropropane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.6	< 6.3	6.3	U	1.7	< 6.1	6.1	U	1.6
1,2-Dibromoethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.6	< 6.3	6.3	U	1.7	< 6.1	6.1	U	1.6
1,2-Dichlorobenzene	1,100	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.66	< 6.3	6.3	U	0.69	< 6.1	6.1	U	0.67
1,2-Dichloroethane	20	3,100	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.53	< 6.3	6.3	U	0.55	< 6.1	6.1	U	0.54
1,2-Dichloropropane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.85	< 6.3	6.3	U	0.89	< 6.1	6.1	U	0.87
1,3,5-Trimethylbenzene	8,400	52,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	**0.79**	5.5	ND	290	ND	4.9	ND	5	ND	4.1	**0.72**	5.1	< 6.0	6	U	0.79	< 6.3	6.3	U	0.83	< 6.1	6.1	U	0.81
1,3-Dichlorobenzene	2,400	4,900	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.88	< 6.3	6.3	U	0.93	< 6.1	6.1	U	0.91
1,3-Dichloropropane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.63	< 6.3	6.3	U	0.66	< 6.1	6.1	U	0.65
1,4-Dichlorobenzene	1,800	13,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.94	< 6.3	6.3	U	0.99	< 6.1	6.1	U	0.97
2,2-Dichloropropane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1	< 6.3	6.3	U	1.1	< 6.1	6.1	U	1
2-Chlorotoluene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.96	< 6.3	6.3	U	1	< 6.1	6.1	U	0.98
2-Hexanone (Methyl Butyl Ketone)			ND	32	ND	20	ND	34	ND	33	ND	32	ND	27	ND	1500	ND	24	ND	25	ND	21	ND	25	< 30	30	U	2.7	< 31	31	U	2.8	< 31	31	U	2.8
2-Isopropyltoluene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	**1.3**	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.83	< 6.3	6.3	U	0.86	< 6.1	6.1	U	0.85
4-Chlorotoluene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.69	< 6.3	6.3	U	0.73	< 6.1	6.1	U	0.71
4-Methyl-2-Pentanone			ND	32	ND	20	ND	34	ND	33	ND	32	ND	27	ND	1500	ND	24	ND	25	ND	21	ND	25	< 30	30	U	1.4	< 31	31	U	1.5	< 31	31	U	1.5
Acetone	50	100,000	**130**	64	**77**	41	ND	68	**17**	67	**25**	65	**76**	55	ND	2900	**43**	49	**29**	50	ND	41	**16**	51	< 50	50	U	5.9	< 50	50	U	6.2	**86**	50		6.1
Acrylonitrile			ND	13	ND	8.2	ND	14	ND	13	ND	13	ND	11	ND	580	ND	9.8	ND	10	ND	8.2	ND	10	< 12	12	U	3.4	< 13	13	U	3.5	< 12	12	U	3.4
Benzene	60	4,800	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.2	< 6.1	6.1	U	1.2
Bromobenzene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.78	< 6.3	6.3	U	0.81	< 6.1	6.1	U	0.8
Bromochloromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.87	< 6.3	6.3	U	0.91	< 6.1	6.1	U	0.89
Bromodichloromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.74	< 6.3	6.3	U	0.78	< 6.1	6.1	U	0.76
Bromoform			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.84	< 6.3	6.3	U	0.88	< 6.1	6.1	U	0.86
Bromomethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	4.6	< 6.3	6.3	U	4.8	< 6.1	6.1	U	4.7
Carbon Disulfide			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.97	< 6.3	6.3	U	1	< 6.1	6.1	U	0.99
Carbon tetrachloride	760	2,400	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.69	< 6.3	6.3	U	0.73	< 6.1	6.1	U	0.71
Chlorobenzene	1,100	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.88	< 6.3	6.3	U	0.93	< 6.1	6.1	U	0.91
Chloroethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.4	< 6.3	6.3	U	1.5	< 6.1	6.1	U	1.4
Chloroform	370	49,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.1	< 6.1	6.1	U	1.1
Chloromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	3.1	< 6.3	6.3	U	3.3	< 6.1	6.1	U	3.2
cis-1,2-Dichloroethene	250	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.3	< 6.3	6.3	U	1.4	< 6.1	6.1	U	1.3
cis-1,3-Dichloropropene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.65	< 6.3	6.3	U	0.68	< 6.1	6.1	U	0.66
Dibromochloromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.67	< 6.3	6.3	U	0.7	< 6.1	6.1	U	0.69
Dibromomethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.75	< 6.3	6.3	U	0.79	< 6.1	6.1	U	0.77
Dichlorodifluoromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.6	< 6.3	6.3	U	1.7	< 6.1	6.1	U	1.6
Ethylbenzene	1,000	41,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.1	< 6.1	6.1	U	1.1
Hexachlorobutadiene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.3	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.3
Isopropylbenzene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.2	< 6.1	6.1	U	1.2
m&p-Xylenes	260	100,000	ND	6.4	ND	4.1	**4.4**	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	2.4	< 6.3	6.3	U	2.5	< 6.1	6.1	U	2.4
Methyl Ethyl Ketone (2-Butanone)	120	100,000	ND	39	ND	25	ND	41	ND	40	ND	39	ND	33	ND	1800	ND	29	ND	30	ND	25	ND	30	< 36	36	U	5.2	< 38	38	U	5.4	< 37	37	U	5.3
Methyl t-butyl ether (MTBE)	930	100,000	ND	13	ND	8.2	ND	14	ND	13	ND	13	ND	11	ND	580	ND	9.8	ND	10	ND	8.2	ND	10	< 12	12	U	1.7	< 13	13	U	1.7	< 12	12	U	1.7
Methylene chloride	50	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.98	< 6.3	6.3	U	1	< 6.1	6.1	U	1
Naphthalene	12,000	100,000	ND	6.4	ND	4.1	ND	6.8	**5.5**	6.7	**70**	6.5	**450**	270	ND	290	**2.4**	4.9	ND	5	ND	4.1	**1,000**	300	< 6.0	6	U	1.6	< 6.3	6.3	U	1.7	< 6.1	6.1	U	1.6
n-Butylbenzene	12,000	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.1	< 6.1	6.1	U	1.1
n-Propylbenzene	3,900	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.1	< 6.1	6.1	U	1.1
o-Xylene	260	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	2.3	< 6.3	6.3	U	2.4	< 6.1	6.1	U	2.3
p-Isopropyltoluene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.86	< 6.3	6.3	U	0.9	< 6.1	6.1	U	0.88
sec-Butylbenzene	11,000	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.1	< 6.3	6.3	U	1.2	< 6.1	6.1	U	1.2
Styrene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.7	< 6.3	6.3	U	1.8	< 6.1	6.1	U	1.8
tert-Butylbenzene	5,900	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.96	< 6.3	6.3	U	1	< 6.1	6.1	U	0.98
Tetrachloroethene	1,300	19,000	ND	6.4	ND	4.1	**14**	6.8	**6.2**	6.7	**930**	300	**43**	5.5	**12,000**	1500	**9,100**	1400	**1.6**	5	ND	4.1	**3,000**	315	< 6.0	6	U	1.3	**2.3**	6.3	J	1.3	**2.6**	6.1	J	1.3
Tetrahydrofuran (THF)			ND	13	ND	8.2	ND	14	ND	13	ND	13	ND	11	ND	580	ND	9.8	ND	10	ND	8.2	ND	10	**11**	12	J	5.4	**10**	13	J	5.6	**15**	12		5.5
Toluene	700	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	**2.2**	6.5	**3.2**	5.5	ND	290	ND	4.9	ND	5	ND	4.1	**2**	5.1	< 6.0	6	U	0.94	< 6.3	6.3	U	0.99	< 6.1	6.1	U	0.97
trans-1,2-Dichloroethene	190	100,000	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.2
trans-1,3-Dichloropropene			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.2	< 6.3	6.3	U	1.3	< 6.1	6.1	U	1.2
trabs-1,4-dichloro-2-butene			ND	13	ND	8.2	ND	14	ND	13	ND	13	ND	11	ND	580	ND	9.8	ND	10	ND	8.2	ND	10	< 12	12	U	11	< 13	13	U	12	< 12	12	U	11
Trichloroethene	470	21,000	ND	6.4	ND	4.1	**6.5**	6.8	**5.6**	6.7	**23**	6.5	**5.8**	5.5	**68**	290	ND	4.9	ND	5	ND	4.1	**490**	315	< 6.0	6	U	1.3	< 6.3	6.3	U	1.3	**1.3**	6.1	J	1.3
Trichlorofluoromethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.3	< 6.3	6.3	U	1.4	< 6.1	6.1	U	1.4
Trichlorotrifluoroethane			ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	0.93	< 6.3	6.3	U	0.98	< 6.1	6.1	U	0.96
Vinyl Chloride	20	900	ND	6.4	ND	4.1	ND	6.8	ND	6.7	ND	6.5	ND	5.5	ND	290	ND	4.9	ND	5	ND	4.1	ND	5.1	< 6.0	6	U	1.9	< 6.3	6.3	U	2	< 6.1	6.1	U	2
Total VOCs Concentration			130.0		77.0		24.9		34.3		1,051.6		581.8		12,068		9,145.4		30.6		0.0		4,510.2		11				12.3				104.9			

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
853 Lexington Ave,
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*	B7												B8												B9												B10			
			(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(10-12') 1/7/2014 µg/Kg				(43-45') 1/7/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,1,1,2-Tetrachlorothane			< 7.6	7.6	U	1.3	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.83	< 6.4	6.4	U	1.1	< 10	10	U	1.7	< 4.7	4.7	U	0.78	< 6.1	6.1	U	1	< 6.4	6.4	U	1	< 6.6	6.6	U	1.1	< 10	10	U	1.7
1,1,1-Trichloroethane	680	100,000	< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1	< 6.4	6.4	U	1.3	< 10	10	U	2	< 4.7	4.7	U	0.95	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
1,1,2,2-Tetrachloroethane			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.72	< 6.4	6.4	U	0.91	< 10	10	U	1.4	< 4.7	4.7	U	0.67	< 6.1	6.1	U	0.86	< 6.4	6.4	U	0.91	< 6.6	6.6	U	0.93	< 10	10	U	1.5
1,1,2-Trichloroethane			< 7.6	7.6	U	0.75	< 8.8	8.8	U	0.86	< 5.1	5.1	U	0.5	< 6.4	6.4	U	0.63	< 10	10	U	0.99	< 4.7	4.7	U	0.46	< 6.1	6.1	U	0.59	< 6.4	6.4	U	0.63	< 6.6	6.6	U	0.64	< 10	10	U	1
1,1-Dichloroethane	270	26,000	< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.7	< 5.1	5.1	U	1	< 6.4	6.4	U	1.3	< 10	10	U	2	< 4.7	4.7	U	0.94	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
1,1-Dichloroethene	330	100,000	< 7.6	7.6	U	1.7	< 8.8	8.8	U	1.9	< 5.1	5.1	U	1.1	< 6.4	6.4	U	1.4	< 10	10	U	2.2	< 4.7	4.7	U	1	< 6.1	6.1	U	1.3	< 6.4	6.4	U	1.4	< 6.6	6.6	U	1.4	< 10	10	U	2.2
1,1-Dichloropropene			< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.7	< 5.1	5.1	U	0.98	< 6.4	6.4	U	1.2	< 10	10	U	2	< 4.7	4.7	U	0.92	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.3	< 10	10	U	2
1,2,3-Trichlorobenzene			< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1	< 290	290	U	59	< 10	10	U	2	< 4.7	4.7	U	0.95	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
1,2,3-Trichloropropane			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.72	< 290	290	U	42	< 10	10	U	1.4	< 4.7	4.7	U	0.67	< 6.1	6.1	U	0.86	< 6.4	6.4	U	0.91	< 6.6	6.6	U	0.93	< 10	10	U	1.5
1,2,4-Trichlorobenzene			< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1	< 290	290	U	59	< 10	10	U	2	< 4.7	4.7	U	0.95	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
1,2,4-Trimethylbenzene	3,600	52,000	1.2	7.6	J	1.1	< 8.8	8.8	U	1.3	< 5.1	5.1	U	0.73	< 290	290	U	42	< 10	10	U	1.4	< 4.7	4.7	U	0.68	< 6.1	6.1	U	0.87	< 6.4	6.4	U	0.92	< 6.6	6.6	U	0.94	< 10	10	U	1.5
1,2-Dibromo-3-chloropropane			< 7.6	7.6	U	2	< 8.8	8.8	U	2.4	< 5.1	5.1	U	1.4	< 290	290	U	79	< 10	10	U	2.7	< 4.7	4.7	U	1.3	< 6.1	6.1	U	1.6	< 6.4	6.4	U	1.7	< 6.6	6.6	U	1.8	< 10	10	U	2.7
1,2-Dibromoethane			< 7.6	7.6	U	2	< 8.8	8.8	U	2.3	< 5.1	5.1	U	1.3	< 6.4	6.4	U	1.7	< 10	10	U	2.7	< 4.7	4.7	U	1.3	< 6.1	6.1	U	1.6	< 6.4	6.4	U	1.7	< 6.6	6.6	U	1.7	< 10	10	U	2.7
1,2-Dichlorobenzene	1,100	100,000	< 7.6	7.6	U	0.84	< 8.8	8.8	U	0.97	< 5.1	5.1	U	0.56	< 290	290	U	32	< 10	10	U	1.1	< 4.7	4.7	U	0.52	< 6.1	6.1	U	0.67	< 6.4	6.4	U	0.7	< 6.6	6.6	U	0.72	< 10	10	U	1.1
1,2-Dichloroethane	20	3,100	< 7.6	7.6	U	0.67	< 8.8	8.8	U	0.77	< 5.1	5.1	U	0.44	< 6.4	6.4	U	0.57	< 10	10	U	0.89	< 4.7	4.7	U	0.42	< 6.1	6.1	U	0.53	< 6.4	6.4	U	0.56	< 6.6	6.6	U	0.58	< 10	10	U	0.9
1,2-Dichloropropane			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.72	< 6.4	6.4	U	0.91	< 10	10	U	1.4	< 4.7	4.7	U	0.67	< 6.1	6.1	U	0.86	< 6.4	6.4	U	0.91	< 6.6	6.6	U	0.93	< 10	10	U	1.5
1,3,5-Trimethylbenzene	8,400	52,000	< 7.6	7.6	U	1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.67	< 290	290	U	39	< 10	10	U	1.3	< 4.7	4.7	U	0.62	< 6.1	6.1	U	0.8	< 6.4	6.4	U	0.84	< 6.6	6.6	U	0.87	< 10	10	U	1.4
1,3-Dichlorobenzene	2,400	4,900	< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.3	< 5.1	5.1	U	0.75	< 290	290	U	44	< 10	10	U	1.5	< 4.7	4.7	U	0.7	< 6.1	6.1	U	0.9	< 6.4	6.4	U	0.95	< 6.6	6.6	U	0.97	< 10	10	U	1.5
1,3-Dichloropropane			< 7.6	7.6	U	0.81	< 8.8	8.8	U	0.93	< 5.1	5.1	U	0.54	< 6.4	6.4	U	0.68	< 10	10	U	1.1	< 4.7	4.7	U	0.5	< 6.1	6.1	U	0.64	< 6.4	6.4	U	0.68	< 6.6	6.6	U	0.69	< 10	10	U	1.1
1,4-Dichlorobenzene	1,800	13,000	< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.8	< 290	290	U	47	< 10	10	U	1.6	< 4.7	4.7	U	0.75	< 6.1	6.1	U	0.96	< 6.4	6.4	U	1	< 6.6	6.6	U	1	< 10	10	U	1.6
2,2-Dichloropropane			< 7.6	7.6	U	1.3	< 8.8	8.8	U	1.5	< 5.1	5.1	U	0.85	< 6.4	6.4	U	1.1	< 10	10	U	1.7	< 4.7	4.7	U	0.79	< 6.1	6.1	U	1	< 6.4	6.4	U	1.1	< 6.6	6.6	U	1.1	< 10	10	U	1.7
2-Chlorotoluene			< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.81	< 290	290	U	47	< 10	10	U	1.6	< 4.7	4.7	U	0.76	< 6.1	6.1	U	0.97	< 6.4	6.4	U	1	< 6.6	6.6	U	1	< 10	10	U	1.6
2-Hexanone (Methyl Butyl Ketone)			< 38	38	U	3.4	< 44	44	U	4	< 25	25	U	2.3	< 32	32	U	2.9	< 50	50	U	4.5	< 24	24	U	2.1	< 30	30	U	2.7	< 32	32	U	2.9	< 33	33	U	3	< 51	51	U	4.6
2-Isopropyltoluene			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.7	< 290	290	U	41	< 10	10	U	1.4	< 4.7	4.7	U	0.65	< 6.1	6.1	U	0.84	< 6.4	6.4	U	0.88	< 6.6	6.6	U	0.9	< 10	10	U	1.4
4-Chlorotoluene			< 7.6	7.6	U	0.88	< 8.8	8.8	U	1	< 5.1	5.1	U	0.59	< 290	290	U	34	< 10	10	U	1.2	< 4.7	4.7	U	0.55	< 6.1	6.1	U	0.7	< 6.4	6.4	U	0.74	< 6.6	6.6	U	0.76	< 10	10	U	1.2
4-Methyl-2-Pentanone			< 38	38	U	1.8	< 44	44	U	2.1	< 25	25	U	1.2	< 32	32	U	1.5	< 50	50	U	2.4	< 24	24	U	1.1	< 30	30	U	1.4	< 32	32	U	1.5	< 33	33	U	1.6	< 51	51	U	2.4
Acetone	50	100,000	**21**	50	JS	7.6	**10**	50	JS	8.7	**7**	50	JS	5	**22**	50	JS	6.4	**29**	50	JS	10	**7.8**	47	JS	4.7	**140**	50	S	6	< 50	50	U	6.4	< 50	50	U	6.5	**210**	50	S	10
Acrylonitrile			< 15	15	U	4.3	< 18	18	U	4.9	< 10	10	U	2.8	< 13	13	U	3.6	< 20	20	U	5.7	< 9.5	9.5	U	2.7	< 12	12	U	3.4	< 13	13	U	3.6	< 13	13	U	3.7	< 20	20	U	5.8
Benzene	60	4,800	< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.7	< 5.1	5.1	U	1	< 6.4	6.4	U	1.3	< 10	10	U	2	< 4.7	4.7	U	0.94	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
Bromobenzene			< 7.6	7.6	U	0.99	< 8.8	8.8	U	1.1	< 5.1	5.1	U	0.66	< 290	290	U	38	< 10	10	U	1.3	< 4.7	4.7	U	0.62	< 6.1	6.1	U	0.79	< 6.4	6.4	U	0.83	< 6.6	6.6	U	0.85	< 10	10	U	1.3
Bromochloromethane			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.3	< 5.1	5.1	U	0.74	< 6.4	6.4	U	0.94	< 10	10	U	1.5	< 4.7	4.7	U	0.69	< 6.1	6.1	U	0.89	< 6.4	6.4	U	0.93	< 6.6	6.6	U	0.96	< 10	10	U	1.5
Bromodichloromethane			< 7.6	7.6	U	0.95	< 8.8	8.8	U	1.1	< 5.1	5.1	U	0.63	< 6.4	6.4	U	0.8	< 10	10	U	1.2	< 4.7	4.7	U	0.59	< 6.1	6.1	U	0.75	< 6.4	6.4	U	0.79	< 6.6	6.6	U	0.81	< 10	10	U	1.3
Bromoform			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.2	< 5.1	5.1	U	0.71	< 6.4	6.4	U	0.9	< 10	10	U	1.4	< 4.7	4.7	U	0.66	< 6.1	6.1	U	0.85	< 6.4	6.4	U	0.89	< 6.6	6.6	U	0.92	< 10	10	U	1.4
Bromomethane			< 7.6	7.6	U	5.9	< 8.8	8.8	U	6.8	< 5.1	5.1	U	3.9	< 6.4	6.4	U	4.9	< 10	10	U	7.7	< 4.7	4.7	U	3.6	< 6.1	6.1	U	4.7	< 6.4	6.4	U	4.9	< 6.6	6.6	U	5	< 10	10	U	7.9
Carbon Disulfide			< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.82	< 6.4	6.4	U	1	< 10	10	U	1.6	< 4.7	4.7	U	0.77	< 6.1	6.1	U	0.98	< 6.4	6.4	U	1	< 6.6	6.6	U	1.1	< 10	10	U	1.7
Carbon tetrachloride	760	2,400	< 7.6	7.6	U	0.88	< 8.8	8.8	U	1	< 5.1	5.1	U	0.59	< 6.4	6.4	U	0.74	< 10	10	U	1.2	< 4.7	4.7	U	0.55	< 6.1	6.1	U	0.7	< 6.4	6.4	U	0.74	< 6.6	6.6	U	0.76	< 10	10	U	1.2
Chlorobenzene	1,100	100,000	< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.3	< 5.1	5.1	U	0.75	< 6.4	6.4	U	0.95	< 10	10	U	1.5	< 4.7	4.7	U	0.7	< 6.1	6.1	U	0.9	< 6.4	6.4	U	0.95	< 6.6	6.6	U	0.97	< 10	10	U	1.5
Chloroethane			< 7.6	7.6	U	1.8	< 8.8	8.8	U	2.1	< 5.1	5.1	U	1.2	< 6.4	6.4	U	1.5	< 10	10	U	2.4	< 4.7	4.7	U	1.1	< 6.1	6.1	U	1.4	< 6.4	6.4	U	1.5	< 6.6	6.6	U	1.5	< 10	10	U	2.4
Chloroform	370	49,000	< 7.6	7.6	U	1.4	< 8.8	8.8	U	1.6	< 5.1	5.1	U	0.92	< 6.4	6.4	U	1.2	< 10	10	U	1.8	< 4.7	4.7	U	0.86	< 6.1	6.1	U	1.1	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.2	< 10	10	U	1.9
Chloromethane			< 7.6	7.6	U	4	< 8.8	8.8	U	4.6	< 5.1	5.1	U	2.6	< 6.4	6.4	U	3.4	< 10	10	U	5.3	< 4.7	4.7	U	2.5	< 6.1	6.1	U	3.2	< 6.4	6.4	U	3.3	< 6.6	6.6	U	3.4	< 10	10	U	5.4
cis-1,2-Dichloroethene	250	100,000	< 7.6	7.6	U	1.7	< 8.8	8.8	U	1.9	< 5.1	5.1	U	1.1	< 6.4	6.4	U	1.4	< 10	10	U	2.2	< 4.7	4.7	U	1	< 6.1	6.1	U	1.3	< 6.4	6.4	U	1.4	< 6.6	6.6	U	1.4	< 10	10	U	2.2
cis-1,3-Dichloropropene			< 7.6	7.6	U	0.82	< 8.8	8.8	U	0.95	< 5.1	5.1	U	0.55	< 6.4	6.4	U	0.69	< 10	10	U	1.1	< 4.7	4.7	U	0.51	< 6.1	6.1	U	0.66	< 6.4	6.4	U	0.69	< 6.6	6.6	U	0.71	< 10	10	U	1.1
Dibromochloromethane			< 7.6	7.6	U	0.85	< 8.8	8.8	U	0.98	< 5.1	5.1	U	0.57	< 6.4	6.4	U	0.72	< 10	10	U	1.1	< 4.7	4.7	U	0.53	< 6.1	6.1	U	0.68	< 6.4	6.4	U	0.72	< 6.6	6.6	U	0.73	< 10	10	U	1.1
Dibromomethane			< 7.6	7.6	U	0.96	< 8.8	8.8	U	1.1	< 5.1	5.1	U	0.64	< 6.4	6.4	U	0.81	< 10	10	U	1.3	< 4.7	4.7	U	0.6	< 6.1	6.1	U	0.76	< 6.4	6.4	U	0.81	< 6.6	6.6	U	0.83	< 10	10	U	1.3
Dichlorodifluoromethane			< 7.6	7.6	U	2	< 8.8	8.8	U	2.3	< 5.1	5.1	U	1.3	< 6.4	6.4	U	1.7	< 10	10	U	2.7	< 4.7	4.7	U	1.3	< 6.1	6.1	U	1.6	< 6.4	6.4	U	1.7	< 6.6	6.6	U	1.7	< 10	10	U	2.7
Ethylbenzene	1,000	41,000	< 7.6	7.6	U	1.4	< 8.8	8.8	U	1.6	< 5.1	5.1	U	0.92	< 6.4	6.4	U	1.2	< 10	10	U	1.8	< 4.7	4.7	U	0.86	< 6.1	6.1	U	1.1	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.2	< 10	10	U	1.9
Hexachlorobutadiene			< 7.6	7.6	U	1.6	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1.1	< 290	290	U	62	< 10	10	U	2.1	< 4.7	4.7	U	0.99	< 6.1	6.1	U	1.3	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.4	< 10	10	U	2.2
Isopropylbenzene			< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.7	< 5.1	5.1	U	0.97	< 290	290	U	57	< 10	10	U	1.9	< 4.7	4.7	U	0.91	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.3	< 10	10	U	2
m&p-Xylenes	260	100,000	< 7.6	7.6	U	3	< 8.8	8.8	U	3.5	< 5.1	5.1	U	2	< 6.4	6.4	U	2.5	< 10	10	U	4	< 4.7	4.7	U	1.9	< 6.1	6.1	U	2.4	< 6.4	6.4	U	2.5	< 6.6	6.6	U	2.6	< 10	10	U	4
Methyl Ethyl Ketone (2-Butanone)	120	100,000	< 46	46	U	6.6	< 53	53	U	7.6	< 30	30	U	4.4	< 39	39	U	5.6	< 60	60	U	8.7	< 28	28	U	4.1	< 36	36	U	5.3	< 38	38	U	5.5	< 39	39	U	5.7	< 61	61	U	8.9
Methyl t-butyl ether (MTBE)	930	100,000	< 15	15	U	2.1	< 18	18	U	2.4	< 10	10	U	1.4	< 13	13	U	1.8	< 20	20	U	2.8	< 9.5	9.5	U	1.3	< 12	12	U	1.7	< 13	13	U	1.8	< 13	13	U	1.8	< 20	20	U	2.8
Methylene chloride	50	100,000	**1.5**	7.6	JS	1.3	**2.7**	8.8	JS	1.4	**1.3**	5.1	JS	0.83	< 6.4	6.4	U	1.1	**1.8**	10	JS	1.7	**1.4**	4.7	JS	0.78	< 6.1	6.1	U	1	< 6.4	6.4	U	1	< 6.6	6.6	U	1.1	< 10	10	U	1.7
Naphthalene	12,000	100,000	< 7.6	7.6	U	2	< 8.8	8.8	U	2.4	< 5.1	5.1	U	1.4	< 290	290	U	79	< 10	10	U	2.7	< 4.7	4.7	U	1.3	< 6.1	6.1	U	1.6	< 6.4	6.4	U	1.7	< 6.6	6.6	U	1.8	< 10	10	U	2.7
n-Butylbenzene	12,000	100,000	< 7.6	7.6	U	1.4	< 8.8	8.8	U	1.6	< 5.1	5.1	U	0.92	< 290	290	U	54	< 10	10	U	1.8	< 4.7	4.7	U	0.86	< 6.1	6.1	U	1.1	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.2	< 10	10	U	1.9
n-Propylbenzene	3,900	100,000	< 7.6	7.6	U	1.4	< 8.8	8.8	U	1.6	< 5.1	5.1	U	0.91	< 290	290	U	53	< 10	10	U	1.8	< 4.7	4.7	U	0.85	< 6.1	6.1	U	1.1	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.2	< 10	10	U	1.8
o-Xylene	260	100,000	< 7.6	7.6	U	2.9	< 8.8	8.8	U	3.4	< 5.1	5.1	U	1.9	< 6.4	6.4	U	2.5	< 10	10	U	3.8	< 4.7	4.7	U	1.8	< 6.1	6.1	U	2.3	< 6.4	6.4	U	2.4	< 6.6	6.6	U	2.5	< 10	10	U	3.9
p-Isopropyltoluene			< 7.6	7.6	U	1.1	< 8.8	8.8	U	1.3	< 5.1	5.1	U	0.73	< 290	290	U	42	< 10	10	U	1.4	< 4.7	4.7	U	0.68	< 6.1	6.1	U	0.87	< 6.4	6.4	U	0.92	< 6.6	6.6	U	0.94	< 10	10	U	1.5
sec-Butylbenzene	11,000	100,000	< 7.6	7.6	U	1.4	< 8.8	8.8	U	1.7	< 5.1	5.1	U	0.95	< 290	290	U	55	< 10	10	U	1.9	< 4.7	4.7	U	0.89	< 6.1	6.1	U	1.1	< 6.4	6.4	U	1.2	< 6.6	6.6	U	1.2	< 10	10	U	1.9
Styrene			< 7.6	7.6	U	2.2	< 8.8	8.8	U	2.5	< 5.1	5.1	U	1.5	< 6.4	6.4	U	1.8	< 10	10	U	2.9	< 4.7	4.7	U	1.4	< 6.1	6.1	U	1.7	< 6.4	6.4	U	1.8	< 6.6	6.6	U	1.9	< 10	10	U	2.9
tert-Butylbenzene	5,900	100,000	< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.81	< 290	290	U	47	< 10	10	U	1.6	< 4.7	4.7	U	0.76	< 6.1	6.1	U	0.97	< 6.4	6.4	U	1	< 6.6	6.6	U	1	< 10	10	U	1.6
Tetrachloroethene	1,300	19,000	**3.8**	7.6	J	1.6	**59**	8.8		1.8	**6.7**	5.1		1.1	**750**	290		62	**97**	330	J	70	**13**	4.7		0.99	**22**	6.1		1.3	< 6.4	6.4	U	1.3	**3.7**	6.6	J	1.4	**1,200**	300		62
Tetrahydrofuran (THF)			< 15	15	U	6.9	< 18	18	U	7.9	< 10	10	U	4.5	< 13	13	U	5.8	**11**	20	J	9.1	< 9.5	9.5	U	4.3	< 12	12	U	5.5	< 13	13	U	5.8	**13**	13	J	5.9	**24**	20		9.2
Toluene	700	100,000	< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.8	< 6.4	6.4	U	1	< 10	10	U	1.6	< 4.7	4.7	U	0.75	**1**	6.1	J	0.96	< 6.4	6.4	U	1	< 6.6	6.6	U	1	< 10	10	U	1.6
trans-1,2-Dichloroethene	190	100,000	< 7.6	7.6	U	1.5	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1	< 6.4	6.4	U	1.3	< 10	10	U	2	< 4.7	4.7	U	0.95	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2
trans-1,3-Dichloropropene			< 7.6	7.6	U	1.6	< 8.8	8.8	U	1.8	< 5.1	5.1	U	1	< 6.4	6.4	U	1.3	< 10	10	U	2.1	< 4.7	4.7	U	0.97	< 6.1	6.1	U	1.2	< 6.4	6.4	U	1.3	< 6.6	6.6	U	1.3	< 10	10	U	2.1
trabs-1,4-dichloro-2-butene			< 15	15	U	14	< 18	18	U	16	< 10	10	U	9.4	< 590	590	U	550	< 20	20	U	19	< 9.5	9.5	U	8.8	< 12	12	U	11	< 13	13	U	12	< 13	13	U	12	< 20	20	U	19
Trichloroethene	470	21,000	< 7.6	7.6	U	1.6	< 8.8	8.8	U	1.9	**2.5**	5.1	J	1.1	< 6.4	6.4	U	1.4	< 10	10	U	2.1	**4.6**	4.7	J	1	**7.1**	6.1		1.3	< 6.4	6.4	U	1.4	**1.8**	6.6	J	1.4	**5**	10	J	2.2
Trichlorofluoromethane			< 7.6	7.6	U	1.7	< 8.8	8.8	U	2	< 5.1	5.1	U	1.1	< 6.4	6.4	U	1.4	< 10	10	U	2.2	< 4.7	4.7	U	1.1	< 6.1	6.1	U	1.3	< 6.4	6.4	U	1.4	< 6.6	6.6	U	1.5	< 10	10	U	2.3
Trichlorotrifluoroethane			< 7.6	7.6	U	1.2	< 8.8	8.8	U	1.4	< 5.1	5.1	U	0.79	< 6.4	6.4	U	1	< 10	10	U	1.6	< 4.7	4.7	U	0.74	< 6.1	6.1	U	0.95	< 6.4	6.4	U	1	< 6.6	6.6	U	1	< 10	10	U	1.6
Vinyl Chloride	20	900	< 7.6	7.6	U	2.5	< 8.8	8.8	U	2.8	< 5.1	5.1	U	1.6	< 6.4	6.4	U	2.1	< 10	10	U	3.3	< 4.7	4.7	U	1.5	< 6.1	6.1	U	2	< 6.4	6.4	U	2.1	< 6.6	6.6	U	2.1	< 10	10	U	3.3
Total VOCs Concentration			27.5				71.7				17.9				772				138.8				26.8				170.1				0.0				18.5				1,439			

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times th
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 3
853 Lexington Ave,
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*	B10								B11								B12								B13								Duplicate 1				Duplicate 2			
			(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8ft) 1/7/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(B7 10-15') 1/7/2014 µg/Kg				(B610-15') 1/7/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,1,1,2-Tetrachlorothane			< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1.1	< 9.0	9	U	1.5	< 7.1	7.1	U	1.2	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.4	< 9.5	9.5	U	1.6	< 6.8	6.8	U	1.1
1,1,1-Trichloroethane	680	100,000	< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
1,1,2,2-Tetrachloroethane			< 8.0	8	U	1.1	< 7.4	7.4	U	1	< 7.3	7.3	U	1	< 6.5	6.5	U	0.92	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	0.97
1,1,2-Trichloroethane			< 8.0	8	U	0.79	< 7.4	7.4	U	0.72	< 7.3	7.3	U	0.72	< 6.5	6.5	U	0.64	< 9.0	9	U	0.89	< 7.1	7.1	U	0.7	< 7.6	7.6	U	0.74	< 8.5	8.5	U	0.83	< 9.5	9.5	U	0.94	< 6.8	6.8	U	0.67
1,1-Dichloroethane	270	26,000	< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.4	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
1,1-Dichloroethene	330	100,000	< 8.0	8	U	1.8	< 7.4	7.4	U	1.6	< 7.3	7.3	U	1.6	< 6.5	6.5	U	1.4	< 9.0	9	U	2	< 7.1	7.1	U	1.6	< 7.6	7.6	U	1.6	< 8.5	8.5	U	1.9	< 9.5	9.5	U	2.1	< 6.8	6.8	U	1.5
1,1-Dichloropropene			< 8.0	8	U	1.6	< 7.4	7.4	U	1.4	< 7.3	7.3	U	1.4	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.3
1,2,3-Trichlorobenzene			< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
1,2,3-Trichloropropane			< 8.0	8	U	1.1	< 7.4	7.4	U	1	< 7.3	7.3	U	1	< 6.5	6.5	U	0.92	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	0.97
1,2,4-Trichlorobenzene			< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
1,2,4-Trimethylbenzene	3,600	52,000	< 8.0	8	U	1.2	< 7.4	7.4	U	1.1	< 7.3	7.3	U	1.1	< 6.5	6.5	U	0.93	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	0.98
1,2-Dibromo-3-chloropropane			< 8.0	8	U	2.2	< 7.4	7.4	U	2	< 7.3	7.3	U	2	< 6.5	6.5	U	1.7	< 9.0	9	U	2.4	< 7.1	7.1	U	1.9	< 7.6	7.6	U	2	< 8.5	8.5	U	2.3	< 9.5	9.5	U	2.6	< 6.8	6.8	U	1.8
1,2-Dibromoethane			< 8.0	8	U	2.1	< 7.4	7.4	U	2	< 7.3	7.3	U	1.9	< 6.5	6.5	U	1.7	< 9.0	9	U	2.4	< 7.1	7.1	U	1.9	< 7.6	7.6	U	2	< 8.5	8.5	U	2.3	< 9.5	9.5	U	2.5	< 6.8	6.8	U	1.8
1,2-Dichlorobenzene	1,100	100,000	< 8.0	8	U	0.89	< 7.4	7.4	U	0.81	< 7.3	7.3	U	0.8	< 6.5	6.5	U	0.71	< 9.0	9	U	0.99	< 7.1	7.1	U	0.79	< 7.6	7.6	U	0.83	< 8.5	8.5	U	0.94	< 9.5	9.5	U	1.1	< 6.8	6.8	U	0.75
1,2-Dichloroethane	20	3,100	< 8.0	8	U	0.71	< 7.4	7.4	U	0.65	< 7.3	7.3	U	0.64	< 6.5	6.5	U	0.57	< 9.0	9	U	0.8	< 7.1	7.1	U	0.63	< 7.6	7.6	U	0.67	< 8.5	8.5	U	0.75	< 9.5	9.5	U	0.84	< 6.8	6.8	U	0.6
1,2-Dichloropropane			< 8.0	8	U	1.1	< 7.4	7.4	U	1	< 7.3	7.3	U	1	< 6.5	6.5	U	0.92	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	0.97
1,3,5-Trimethylbenzene	8,400	52,000	< 8.0	8	U	1.1	< 7.4	7.4	U	0.98	< 7.3	7.3	U	0.96	< 6.5	6.5	U	0.86	< 9.0	9	U	1.2	< 7.1	7.1	U	0.94	< 7.6	7.6	U	1	< 8.5	8.5	U	1.1	< 9.5	9.5	U	1.3	< 6.8	6.8	U	0.9
1,3-Dichlorobenzene	2,400	4,900	< 8.0	8	U	1.2	< 7.4	7.4	U	1.1	< 7.3	7.3	U	1.1	< 6.5	6.5	U	0.96	< 9.0	9	U	1.3	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.3	< 9.5	9.5	U	1.4	< 6.8	6.8	U	1
1,3-Dichloropropane			< 8.0	8	U	0.85	< 7.4	7.4	U	0.78	< 7.3	7.3	U	0.77	< 6.5	6.5	U	0.69	< 9.0	9	U	0.96	< 7.1	7.1	U	0.76	< 7.6	7.6	U	0.8	< 8.5	8.5	U	0.9	< 9.5	9.5	U	1	< 6.8	6.8	U	0.72
1,4-Dichlorobenzene	1,800	13,000	< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1	< 9.0	9	U	1.4	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.3	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
2,2-Dichloropropane			< 8.0	8	U	1.4	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1.1	< 9.0	9	U	1.5	< 7.1	7.1	U	1.2	< 7.6	7.6	U	1.3	< 8.5	8.5	U	1.4	< 9.5	9.5	U	1.6	< 6.8	6.8	U	1.1
2-Chlorotoluene			< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1	< 9.0	9	U	1.4	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.4	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
2-Hexanone (Methyl Butyl Ketone)			< 40	40	U	3.6	< 37	37	U	3.3	< 37	37	U	3.3	< 32	32	U	2.9	< 45	45	U	4.1	< 36	36	U	3.2	< 38	38	U	3.4	< 43	43	U	3.8	< 48	48	U	4.3	< 34	34	U	3.1
2-Isopropyltoluene			< 8.0	8	U	1.1	< 7.4	7.4	U	1	< 7.3	7.3	U	1	< 6.5	6.5	U	0.89	< 9.0	9	U	1.2	< 7.1	7.1	U	0.99	< 7.6	7.6	U	1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.3	< 6.8	6.8	U	0.94
4-Chlorotoluene			< 8.0	8	U	0.93	< 7.4	7.4	U	0.86	< 7.3	7.3	U	0.85	< 6.5	6.5	U	0.75	< 9.0	9	U	1	< 7.1	7.1	U	0.83	< 7.6	7.6	U	0.88	< 8.5	8.5	U	0.99	< 9.5	9.5	U	1.1	< 6.8	6.8	U	0.79
4-Methyl-2-Pentanone			< 40	40	U	1.9	< 37	37	U	1.8	< 37	37	U	1.7	< 32	32	U	1.5	< 45	45	U	2.2	< 36	36	U	1.7	< 38	38	U	1.8	< 43	43	U	2	< 48	48	U	2.3	< 34	34	U	1.6
Acetone	50	100,000	< 50	50	U	8	< 50	50	U	7.3	**29**	50	JS	7.3	< 50	50	U	6.4	**55**	50	JS	9	**150**	50	S	7.1	**160**	50	S	7.5	**190**	50	S	8.5	**39**	50	JS	9.5	< 50	50	U	6.8
Acrylonitrile			< 16	16	U	4.5	< 15	15	U	4.2	< 15	15	U	4.1	< 13	13	U	3.6	< 18	18	U	5.1	< 14	14	U	4	< 15	15	U	4.2	< 17	17	U	4.8	< 19	19	U	5.4	< 14	14	U	3.8
Benzene	60	4,800	< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.4	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
Bromobenzene			< 8.0	8	U	1	< 7.4	7.4	U	0.96	< 7.3	7.3	U	0.95	< 6.5	6.5	U	0.84	< 9.0	9	U	1.2	< 7.1	7.1	U	0.93	< 7.6	7.6	U	0.98	< 8.5	8.5	U	1.1	< 9.5	9.5	U	1.2	< 6.8	6.8	U	0.89
Bromochloromethane			< 8.0	8	U	1.2	< 7.4	7.4	U	1.1	< 7.3	7.3	U	1.1	< 6.5	6.5	U	0.95	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	1
Bromodichloromethane			< 8.0	8	U	1	< 7.4	7.4	U	0.92	< 7.3	7.3	U	0.91	< 6.5	6.5	U	0.8	< 9.0	9	U	1.1	< 7.1	7.1	U	0.89	< 7.6	7.6	U	0.94	< 8.5	8.5	U	1.1	< 9.5	9.5	U	1.2	< 6.8	6.8	U	0.85
Bromoform			< 8.0	8	U	1.1	< 7.4	7.4	U	1	< 7.3	7.3	U	1	< 6.5	6.5	U	0.91	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.3	< 6.8	6.8	U	0.96
Bromomethane			< 8.0	8	U	6.2	< 7.4	7.4	U	5.7	< 7.3	7.3	U	5.6	< 6.5	6.5	U	5	< 9.0	9	U	7	< 7.1	7.1	U	5.5	< 7.6	7.6	U	5.8	< 8.5	8.5	U	6.6	< 9.5	9.5	U	7.4	< 6.8	6.8	U	5.3
Carbon Disulfide			< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1.1	< 9.0	9	U	1.5	< 7.1	7.1	U	1.2	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.4	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
Carbon tetrachloride	760	2,400	< 8.0	8	U	0.93	< 7.4	7.4	U	0.86	< 7.3	7.3	U	0.85	< 6.5	6.5	U	0.75	< 9.0	9	U	1	< 7.1	7.1	U	0.83	< 7.6	7.6	U	0.88	< 8.5	8.5	U	0.99	< 9.5	9.5	U	1.1	< 6.8	6.8	U	0.79
Chlorobenzene	1,100	100,000	< 8.0	8	U	1.2	< 7.4	7.4	U	1.1	< 7.3	7.3	U	1.1	< 6.5	6.5	U	0.96	< 9.0	9	U	1.3	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.3	< 9.5	9.5	U	1.4	< 6.8	6.8	U	1
Chloroethane			< 8.0	8	U	1.9	< 7.4	7.4	U	1.7	< 7.3	7.3	U	1.7	< 6.5	6.5	U	1.5	< 9.0	9	U	2.1	< 7.1	7.1	U	1.7	< 7.6	7.6	U	1.8	< 8.5	8.5	U	2	< 9.5	9.5	U	2.2	< 6.8	6.8	U	1.6
Chloroform	370	49,000	< 8.0	8	U	1.5	< 7.4	7.4	U	1.3	< 7.3	7.3	U	1.3	< 6.5	6.5	U	1.2	< 9.0	9	U	1.6	< 7.1	7.1	U	1.3	< 7.6	7.6	U	1.4	< 8.5	8.5	U	1.6	< 9.5	9.5	U	1.7	< 6.8	6.8	U	1.2
Chloromethane			< 8.0	8	U	4.2	< 7.4	7.4	U	3.9	< 7.3	7.3	U	3.8	< 6.5	6.5	U	3.4	< 9.0	9	U	4.7	< 7.1	7.1	U	3.7	< 7.6	7.6	U	4	< 8.5	8.5	U	4.5	< 9.5	9.5	U	5	< 6.8	6.8	U	3.6
cis-1,2-Dichloroethene	250	100,000	< 8.0	8	U	1.8	< 7.4	7.4	U	1.6	< 7.3	7.3	U	1.6	< 6.5	6.5	U	1.4	< 9.0	9	U	2	< 7.1	7.1	U	1.6	< 7.6	7.6	U	1.6	< 8.5	8.5	U	1.9	< 9.5	9.5	U	2.1	< 6.8	6.8	U	1.5
cis-1,3-Dichloropropene			< 8.0	8	U	0.87	< 7.4	7.4	U	0.8	< 7.3	7.3	U	0.79	< 6.5	6.5	U	0.7	< 9.0	9	U	0.98	< 7.1	7.1	U	0.77	< 7.6	7.6	U	0.82	< 8.5	8.5	U	0.92	< 9.5	9.5	U	1	< 6.8	6.8	U	0.74
Dibromochloromethane			< 8.0	8	U	0.9	< 7.4	7.4	U	0.83	< 7.3	7.3	U	0.82	< 6.5	6.5	U	0.73	< 9.0	9	U	1	< 7.1	7.1	U	0.8	< 7.6	7.6	U	0.85	< 8.5	8.5	U	0.95	< 9.5	9.5	U	1.1	< 6.8	6.8	U	0.77
Dibromomethane			< 8.0	8	U	1	< 7.4	7.4	U	0.93	< 7.3	7.3	U	0.92	< 6.5	6.5	U	0.82	< 9.0	9	U	1.1	< 7.1	7.1	U	0.9	< 7.6	7.6	U	0.95	< 8.5	8.5	U	1.1	< 9.5	9.5	U	1.2	< 6.8	6.8	U	0.86
Dichlorodifluoromethane			< 8.0	8	U	2.1	< 7.4	7.4	U	2	< 7.3	7.3	U	1.9	< 6.5	6.5	U	1.7	< 9.0	9	U	2.4	< 7.1	7.1	U	1.9	< 7.6	7.6	U	2	< 8.5	8.5	U	2.3	< 9.5	9.5	U	2.5	< 6.8	6.8	U	1.8
Ethylbenzene	1,000	41,000	< 8.0	8	U	1.5	< 7.4	7.4	U	1.3	< 7.3	7.3	U	1.3	< 6.5	6.5	U	1.2	< 9.0	9	U	1.6	< 7.1	7.1	U	1.3	< 7.6	7.6	U	1.4	< 8.5	8.5	U	1.6	< 9.5	9.5	U	1.7	< 6.8	6.8	U	1.2
Hexachlorobutadiene			< 8.0	8	U	1.7	< 7.4	7.4	U	1.6	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.4	< 9.0	9	U	1.9	< 7.1	7.1	U	1.5	< 7.6	7.6	U	1.6	< 8.5	8.5	U	1.8	< 9.5	9.5	U	2	< 6.8	6.8	U	1.4
Isopropylbenzene			< 8.0	8	U	1.5	< 7.4	7.4	U	1.4	< 7.3	7.3	U	1.4	< 6.5	6.5	U	1.2	< 9.0	9	U	1.7	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.6	< 9.5	9.5	U	1.8	< 6.8	6.8	U	1.3
m&p-Xylenes	260	100,000	< 8.0	8	U	3.2	< 7.4	7.4	U	2.9	< 7.3	7.3	U	2.9	< 6.5	6.5	U	2.6	< 9.0	9	U	3.6	< 7.1	7.1	U	2.8	< 7.6	7.6	U	3	< 8.5	8.5	U	3.4	< 9.5	9.5	U	3.8	< 6.8	6.8	U	2.7
Methyl Ethyl Ketone (2-Butanone)	120	100,000	< 48	48	U	7	< 44	44	U	6.4	< 44	44	U	6.3	< 39	39	U	5.6	< 54	54	U	7.8	< 43	43	U	6.2	< 45	45	U	6.6	< 51	51	U	7.4	< 57	57	U	8.3	< 41	41	U	5.9
Methyl t-butyl ether (MTBE)	930	100,000	< 16	16	U	2.2	< 15	15	U	2	< 15	15	U	2	< 13	13	U	1.8	< 18	18	U	2.5	< 14	14	U	2	< 15	15	U	2.1	< 17	17	U	2.4	< 19	19	U	2.6	< 14	14	U	1.9
Methylene chloride	50	100,000	< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1.1	< 9.0	9	U	1.5	< 7.1	7.1	U	1.2	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.4	**2.5**	9.5	JS	1.6	< 6.8	6.8	U	1.1
Naphthalene	12,000	100,000	< 8.0	8	U	2.2	< 7.4	7.4	U	2	< 7.3	7.3	U	2	< 6.5	6.5	U	1.7	< 9.0	9	U	2.4	< 7.1	7.1	U	1.9	< 7.6	7.6	U	2	< 8.5	8.5	U	2.3	< 9.5	9.5	U	2.6	< 6.8	6.8	U	1.8
n-Butylbenzene	12,000	100,000	< 8.0	8	U	1.5	< 7.4	7.4	U	1.3	< 7.3	7.3	U	1.3	< 6.5	6.5	U	1.2	< 9.0	9	U	1.6	< 7.1	7.1	U	1.3	< 7.6	7.6	U	1.4	< 8.5	8.5	U	1.6	< 9.5	9.5	U	1.7	< 6.8	6.8	U	1.2
n-Propylbenzene	3,900	100,000	< 8.0	8	U	1.4	< 7.4	7.4	U	1.3	< 7.3	7.3	U	1.3	< 6.5	6.5	U	1.2	< 9.0	9	U	1.6	< 7.1	7.1	U	1.3	< 7.6	7.6	U	1.4	< 8.5	8.5	U	1.5	< 9.5	9.5	U	1.7	< 6.8	6.8	U	1.2
o-Xylene	260	100,000	< 8.0	8	U	3.1	< 7.4	7.4	U	2.8	< 7.3	7.3	U	2.8	< 6.5	6.5	U	2.5	< 9.0	9	U	3.5	< 7.1	7.1	U	2.7	< 7.6	7.6	U	2.9	< 8.5	8.5	U	3.3	< 9.5	9.5	U	3.6	< 6.8	6.8	U	2.6
p-Isopropyltoluene			< 8.0	8	U	1.2	< 7.4	7.4	U	1.1	< 7.3	7.3	U	1.1	< 6.5	6.5	U	0.93	< 9.0	9	U	1.3	< 7.1	7.1	U	1	< 7.6	7.6	U	1.1	< 8.5	8.5	U	1.2	< 9.5	9.5	U	1.4	< 6.8	6.8	U	0.98
sec-Butylbenzene	11,000	100,000	< 8.0	8	U	1.5	< 7.4	7.4	U	1.4	< 7.3	7.3	U	1.4	< 6.5	6.5	U	1.2	< 9.0	9	U	1.7	< 7.1	7.1	U	1.3	< 7.6	7.6	U	1.4	< 8.5	8.5	U	1.6	< 9.5	9.5	U	1.8	< 6.8	6.8	U	1.3
Styrene			< 8.0	8	U	2.3	< 7.4	7.4	U	2.1	< 7.3	7.3	U	2.1	< 6.5	6.5	U	1.9	< 9.0	9	U	2.6	< 7.1	7.1	U	2.1	< 7.6	7.6	U	2.2	< 8.5	8.5	U	2.5	< 9.5	9.5	U	2.7	< 6.8	6.8	U	2
tert-Butylbenzene	5,900	100,000	< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.2	< 6.5	6.5	U	1	< 9.0	9	U	1.4	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.4	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
Tetrachloroethene	1,300	19,000	**7**	8	J	1.7	**5.9**	7.4	J	1.6	**1.6**	7.3	J	1.5	< 6.5	6.5	U	1.4	**12**	9		1.9	< 7.1	7.1	U	1.5	< 7.6	7.6	U	1.6	< 8.5	8.5	U	1.8	**32**	9.5		2	**4**	6.8	J	1.4
Tetrahydrofuran (THF)			**20**	16		7.2	< 15	15	U	6.6	< 15	15	U	6.6	< 13	13	U	5.8	< 18	18	U	8.1	< 14	14	U	6.4	< 15	15	U	6.8	< 17	17	U	7.7	< 19	19	U	8.6	< 14	14	U	6.2
Toluene	700	100,000	< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	**2.2**	7.3	J	1.2	**2.3**	6.5	J	1	< 9.0	9	U	1.4	**2.8**	7.1	J	1.1	< 7.6	7.6	U	1.2	**2.5**	8.5	J	1.3	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
trans-1,2-Dichloroethene	190	100,000	< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.4	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
trans-1,3-Dichloropropene			< 8.0	8	U	1.6	< 7.4	7.4	U	1.5	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.3	< 9.0	9	U	1.8	< 7.1	7.1	U	1.5	< 7.6	7.6	U	1.5	< 8.5	8.5	U	1.7	< 9.5	9.5	U	1.9	< 6.8	6.8	U	1.4
trabs-1,4-dichloro-2-butene			< 16	16	U	15	< 15	15	U	14	< 15	15	U	14	< 13	13	U	12	< 18	18	U	17	< 14	14	U	13	< 15	15	U	14	< 17	17	U	16	< 19	19	U	18	< 14	14	U	13
Trichloroethene	470	21,000	< 8.0	8	U	1.7	**2.3**	7.4	J	1.6	< 7.3	7.3	U	1.5	< 6.5	6.5	U	1.4	< 9.0	9	U	1.9	< 7.1	7.1	U	1.5	< 7.6	7.6	U	1.6	< 8.5	8.5	U	1.8	< 9.5	9.5	U	2	< 6.8	6.8	U	1.4
Trichlorofluoromethane			< 8.0	8	U	1.8	< 7.4	7.4	U	1.6	< 7.3	7.3	U	1.6	< 6.5	6.5	U	1.4	< 9.0	9	U	2	< 7.1	7.1	U	1.6	< 7.6	7.6	U	1.7	< 8.5	8.5	U	1.9	< 9.5	9.5	U	2.1	< 6.8	6.8	U	1.5
Trichlorotrifluoroethane			< 8.0	8	U	1.3	< 7.4	7.4	U	1.2	< 7.3	7.3	U	1.1	< 6.5	6.5	U	1	< 9.0	9	U	1.4	< 7.1	7.1	U	1.1	< 7.6	7.6	U	1.2	< 8.5	8.5	U	1.3	< 9.5	9.5	U	1.5	< 6.8	6.8	U	1.1
Vinyl Chloride	20	900	< 8.0	8	U	2.6	< 7.4	7.4	U	2.4	< 7.3	7.3	U	2.4	< 6.5	6.5	U	2.1	< 9.0	9	U	2.9	< 7.1	7.1	U	2.3	< 7.6	7.6	U	2.4	< 8.5	8.5	U	2.8	< 9.5	9.5	U	3.1	< 6.8	6.8	U	2.2
Total VOCs Concentration			27				8.2				32.8				2.3				67.0				152.8				160				192.5				73.5				3.7			

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times th
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
853 Lexington Ave,
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*	B1				B2				B3				B4				B5				Duplicate B3		B6			
			(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(0-2') 1/7/2014 µg/Kg			
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Qual	MDL
1,2,4,5-Tetrachlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
1,2,4-Trichlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
1,2-Dichlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
1,2-Diphenylhydrazine			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	120
1,3-Dichlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
1,4-Dichlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
2,4,5-Trichlorophenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	200
2,4,6-Trichlorophenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
2,4-Dichlorophenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
2,4-Dimethylphenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	88
2,4-Dinitrophenol			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	250
2,4-Dinitrotoluene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	140
2,6-Dinitrotoluene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
2-Chloronaphthalene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
2-Chlorophenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
2-Methylnaphthalene			ND	270	ND	250	ND	260	ND	260	**570**	260	**410**	250	ND	2,700	ND	260	ND	250	ND	240	**360**	260	< 250	250	U	110
2-Methylphenol (o-cresol)	330	100,000	ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	170
2-Nitroaniline			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	360
2-Nitrophenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	230
3&4-Methylphenol (m&p-cresol)			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	140
3,3'-Dichlorobenzidine			ND	770	ND	700	ND	760	ND	740	ND	750	ND	720	ND	7,700	ND	740	ND	720	ND	680	ND	750	< 710	710	U	170
3-Nitroaniline			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	780
4,6-Dinitro-2-methylphenol			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	380
4-Bromophenyl phenyl ether			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
4-Chloro-3-methylphenol			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
4-Chloroaniline			ND	770	ND	700	ND	760	ND	740	ND	750	ND	720	ND	7,700	ND	740	ND	720	ND	680	ND	750	< 710	710	U	170
4-Chlorophenyl phenyl ether			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	120
4-Nitroaniline			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	120
4-Nitrophenol			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	160
Acenaphthene	20,000	100,000	**1,000**	270	ND	250	ND	260	ND	260	**710**	260	**540**	250	ND	2,700	ND	260	ND	250	ND	240	**420**	260	< 250	250	U	110
Acenaphthylene	100,000	100,000	ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
Acetophenone			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Aniline			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	720
Anthracene	100,000	100,000	**1,900**	270	**150**	250	ND	260	ND	260	**1,500**	260	**1,100**	250	ND	2,700	ND	260	ND	250	ND	240	**880**	260	< 250	250	U	120
Benz(a)anthracene	1,000	1,000	**4,300**	270	**320**	250	**140**	260	ND	260	**2,000**	260	**1,600**	250	ND	2,700	ND	260	**230**	250	ND	240	**1,200**	260	< 250	250	U	120
Benzidine			ND	770	ND	700	ND	760	ND	740	ND	750	ND	720	ND	7,700	ND	740	ND	720	ND	680	ND	750	< 710	710	U	210
Benzo(a)pyrene	1,000	1,000	**3,500**	270	**260**	250	ND	260	ND	260	**1,500**	260	**1,200**	250	ND	2,700	ND	260	**220**	250	ND	240	**890**	260	< 250	250	U	120
Benzo(b)fluoranthene	1,000	1,000	**4,000**	270	**300**	250	**160**	260	ND	260	**1,900**	260	**1,600**	250	ND	2,700	ND	260	**310**	250	ND	240	**1,100**	260	< 250	250	U	120
Benzo(ghi)perylene	100,000	100,000	**2,700**	270	**190**	250	ND	260	ND	260	**1,000**	260	**850**	250	ND	2,700	ND	260	**170**	250	ND	240	**580**	260	< 250	250	U	120
Benzo(k)fluoranthene	800	1,000	**1,300**	270	ND	250	ND	260	ND	260	**680**	260	**510**	250	ND	2,700	ND	260	ND	250	ND	240	**400**	260	< 250	250	U	120
Benzoic acid			ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	1,900	ND	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	ND	1,900	< 1800	1,800	U	710
Benzyl butyl phthalate			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	92
Bis(2-chloroethoxy)methane			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	98
Bis(2-chloroethyl)ether			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	96
Bis(2-chloroisopropyl)ether			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	99
Bis(2-ethylhexyl)phthalate			ND	270	ND	250	ND	260	ND	260	**3,100**	260	**6,200**	250	ND	2,700	ND	260	ND	250	ND	240	**3,000**	260	< 250	250	U	100
Carbazole			**730**	1,900	ND	1,800	ND	1,900	ND	1,800	**1,000**	1,900	**910**	1,800	ND	19,000	ND	1,900	ND	1,800	ND	1,700	**550**	1,900	< 1800	1,800	U	270
Chrysene	1,000	1,000	**4,900**	270	**340**	250	**140**	260	ND	260	**2,200**	260	**1,800**	250	ND	2,700	ND	260	**270**	250	ND	240	**1,400**	260	< 250	250	U	120
Dibenz(a,h)anthracene	330	330	**560**	270	ND	250	ND	260	ND	260	**330**	260	**220**	250	ND	2,700	ND	260	ND	250	ND	240	**160**	260	< 250	250	U	120
Dibenzofuran	7,000	59,000	**350**	270	ND	250	ND	260	ND	260	**570**	260	**440**	250	ND	2,700	ND	260	ND	250	ND	240	**350**	260	< 250	250	U	100
Diethyl phthalate			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Dimethylphthalate			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Di-n-butylphthalate			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	95
Di-n-octylphthalate			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	92
Fluoranthene	100,000	100,000	**8,100**	270	**840**	250	**380**	260	**170**	260	**4,500**	260	**3,600**	250	ND	2,700	ND	260	**490**	250	ND	240	**3,200**	260	**190**	250	J	120
Fluorene	30,000	100,000	**710**	270	ND	250	ND	260	ND	260	**830**	260	**580**	250	ND	2,700	ND	260	ND	250	ND	240	**490**	260	< 250	250	U	120
Hexachlorobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
Hexachlorobutadiene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
Hexachlorocyclopentadiene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Hexachloroethane			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Indeno(1,2,3-cd)pyrene	500	500	**2,000**	270	**140**	250	ND	260	ND	260	**870**	260	**690**	250	ND	2,700	ND	260	**140**	250	ND	240	**500**	260	< 250	250	U	120
Isophorone			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
Naphthalene	12,000	100,000	**160**	270	ND	250	ND	260	ND	260	**870**	260	**630**	250	ND	2,700	ND	260	ND	250	ND	240	**490**	260	< 250	250	U	100
Nitrobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	120
N-Nitrosodimethylamine			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	100
N-Nitrosodi-n-propylamine			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	120
N-Nitrosodiphenylamine			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	140
Pentachloronitrobenzene			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
Pentachlorophenol	800	2,400	ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	130
Phenanthrene	100,000	100,000	**9,200**	270	**740**	250	**400**	260	**190**	260	**6,800**	260	**5,400**	250	ND	2,700	ND	260	**280**	250	ND	240	**4,200**	260	**210**	250	J	100
Phenol	330	100,000	ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	110
Pyrene	100,000	100,000	**8,900**	270	**1,000**	250	**350**	260	**150**	260	**3,700**	260	**3,000**	250	ND	2,700	ND	260	**430**	250	ND	240	**2,700**	260	**140**	250	J	120
Pyridine			ND	270	ND	250	ND	260	ND	260	ND	260	ND	250	ND	2,700	ND	260	ND	250	ND	240	ND	260	< 250	250	U	88

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
853 Lexington Ave,
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*	B6								B7												B8											
			(10-12') 1/7/2014 µg/Kg				(43-45') 1/7/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,2,4,5-Tetrachlorobenzene			< 250	250	U	130	< 260	260	U	130	< 290	290	U	150	< 310	310	U	160	< 250	250	U	130	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
1,2,4-Trichlorobenzene			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	110
1,2-Dichlorobenzene			< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 250	250	U	99
1,2-Diphenylhydrazine			< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
1,3-Dichlorobenzene			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
1,4-Dichlorobenzene			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
2,4,5-Trichlorophenol			< 250	250	U	200	< 260	260	U	200	< 290	290	U	230	< 310	310	U	240	< 250	250	U	200	< 260	260	U	200	< 290	290	U	220	< 250	250	U	190
2,4,6-Trichlorophenol			< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
2,4-Dichlorophenol			< 250	250	U	130	< 260	260	U	130	< 290	290	U	150	< 310	310	U	160	< 250	250	U	130	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
2,4-Dimethylphenol			< 250	250	U	89	< 260	260	U	92	< 290	290	U	100	< 310	310	U	110	< 250	250	U	89	< 260	260	U	92	< 290	290	U	100	< 250	250	U	87
2,4-Dinitrophenol			< 1800	1,800	U	250	< 1900	1,900	U	260	< 2100	2,100	U	290	< 2200	2,200	U	310	< 1800	1,800	U	250	< 1800	1,800	U	260	< 2000	2,000	U	290	< 1800	1,800	U	250
2,4-Dinitrotoluene			< 250	250	U	140	< 260	260	U	150	< 290	290	U	160	< 310	310	U	180	< 250	250	U	140	< 260	260	U	150	< 290	290	U	160	< 250	250	U	140
2,6-Dinitrotoluene			< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
2-Chloronaphthalene			< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 250	250	U	100
2-Chlorophenol			< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 250	250	U	100
2-Methylnaphthalene			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
2-Methylphenol (o-cresol)	330	100,000	< 250	250	U	170	< 260	260	U	170	< 290	290	U	190	< 310	310	U	210	< 250	250	U	170	< 260	260	U	170	< 290	290	U	190	< 250	250	U	170
2-Nitroaniline			< 1800	1,800	U	360	< 1900	1,900	U	370	< 2100	2,100	U	420	< 2200	2,200	U	450	< 1800	1,800	U	360	< 1800	1,800	U	370	< 2000	2,000	U	410	< 1800	1,800	U	360
2-Nitrophenol			< 250	250	U	230	< 260	260	U	230	< 290	290	U	260	< 310	310	U	280	< 250	250	U	230	< 260	260	U	230	< 290	290	U	260	< 250	250	U	220
3&4-Methylphenol (m&p-cresol)			< 250	250	U	140	< 260	260	U	150	< 290	290	U	160	< 310	310	U	180	< 250	250	U	140	< 260	260	U	150	< 290	290	U	160	< 250	250	U	140
3,3'-Dichlorobenzidine			< 720	720	U	170	< 740	740	U	170	< 820	820	U	190	< 890	890	U	210	< 720	720	U	170	< 740	740	U	170	< 820	820	U	190	< 700	700	U	170
3-Nitroaniline			< 1800	1,800	U	780	< 1900	1,900	U	810	< 2100	2,100	U	900	< 2200	2,200	U	970	< 1800	1,800	U	780	< 1800	1,800	U	800	< 2000	2,000	U	890	< 1800	1,800	U	770
4,6-Dinitro-2-methylphenol			< 1800	1,800	U	390	< 1900	1,900	U	400	< 2100	2,100	U	440	< 2200	2,200	U	480	< 1800	1,800	U	390	< 1800	1,800	U	400	< 2000	2,000	U	440	< 1800	1,800	U	380
4-Bromophenyl phenyl ether			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
4-Chloro-3-methylphenol			< 250	250	U	130	< 260	260	U	130	< 290	290	U	150	< 310	310	U	160	< 250	250	U	130	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
4-Chloroaniline			< 720	720	U	170	< 740	740	U	170	< 820	820	U	190	< 890	890	U	210	< 720	720	U	170	< 740	740	U	170	< 820	820	U	190	< 700	700	U	160
4-Chlorophenyl phenyl ether			< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 250	250	U	120
4-Nitroaniline			< 1800	1,800	U	120	< 1900	1,900	U	120	< 2100	2,100	U	140	< 2200	2,200	U	150	< 1800	1,800	U	120	< 1800	1,800	U	120	< 2000	2,000	U	140	< 1800	1,800	U	120
4-Nitrophenol			< 1800	1,800	U	160	< 1900	1,900	U	170	< 2100	2,100	U	190	< 2200	2,200	U	200	< 1800	1,800	U	160	< 1800	1,800	U	170	< 2000	2,000	U	180	< 1800	1,800	U	160
Acenaphthene	20,000	100,000	< 250	250	U	110	< 260	260	U	110	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	110
Acenaphthylene	100,000	100,000	< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 310	310	U	120	< 250	250	U	100	< 260	260	U	100	< 290	290	U	110	< 250	250	U	99
Acetophenone			< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Aniline			< 1800	1,800	U	720	< 1900	1,900	U	750	< 2100	2,100	U	830	< 2200	2,200	U	900	< 1800	1,800	U	720	< 1800	1,800	U	750	< 2000	2,000	U	820	< 1800	1,800	U	710
Anthracene	100,000	100,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	120
Benz(a)anthracene	1,000	1,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 250	250	U	120
Benzidine			< 720	720	U	210	< 740	740	U	220	< 820	820	U	240	< 890	890	U	260	< 720	720	U	210	< 740	740	U	220	< 820	820	U	240	< 700	700	U	210
Benzo(a)pyrene	1,000	1,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Benzo(b)fluoranthene	1,000	1,000	< 250	250	U	120	< 260	260	U	130	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
Benzo(ghi)perylene	100,000	100,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Benzo(k)fluoranthene	800	1,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 250	250	U	120
Benzoic acid			< 1800	1,800	U	720	< 1900	1,900	U	740	< 2100	2,100	U	820	< 2200	2,200	U	890	< 1800	1,800	U	720	< 1800	1,800	U	740	< 2000	2,000	U	820	< 1800	1,800	U	700
Benzyl butyl phthalate			< 250	250	U	93	< 260	260	U	96	< 290	290	U	110	< 310	310	U	110	< 250	250	U	92	< 260	260	U	95	< 290	290	U	110	< 250	250	U	91
Bis(2-chloroethoxy)methane			< 250	250	U	99	< 260	260	U	100	< 290	290	U	110	< 310	310	U	120	< 250	250	U	99	< 260	260	U	100	< 290	290	U	110	< 250	250	U	97
Bis(2-chloroethyl)ether			< 250	250	U	97	< 260	260	U	100	< 290	290	U	110	< 310	310	U	120	< 250	250	U	97	< 260	260	U	100	< 290	290	U	110	< 250	250	U	95
Bis(2-chloroisopropyl)ether			< 250	250	U	100	< 260	260	U	100	< 290	290	U	110	< 310	310	U	120	< 250	250	U	100	< 260	260	U	100	< 290	290	U	110	< 250	250	U	98
Bis(2-ethylhexyl)phthalate			< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
Carbazole			< 1800	1,800	U	270	< 1900	1,900	U	280	< 2100	2,100	U	310	< 2200	2,200	U	340	< 1800	1,800	U	270	< 1800	1,800	U	280	< 2000	2,000	U	310	< 1800	1,800	U	270
Chrysene	1,000	1,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 250	250	U	120
Dibenz(a,h)anthracene	330	330	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Dibenzofuran	7,000	59,000	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
Diethyl phthalate			< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Dimethylphthalate			< 250	250	U	110	< 260	260	U	110	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	110	< 290	290	U	130	< 250	250	U	110
Di-n-butylphthalate			< 250	250	U	95	< 260	260	U	99	< 290	290	U	110	< 310	310	U	120	< 250	250	U	95	< 260	260	U	98	< 290	290	U	110	< 250	250	U	94
Di-n-octylphthalate			< 250	250	U	93	< 260	260	U	96	< 290	290	U	110	< 310	310	U	110	< 250	250	U	92	< 260	260	U	95	< 290	290	U	110	< 250	250	U	91
Fluoranthene	100,000	100,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Fluorene	30,000	100,000	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	120
Hexachlorobenzene			< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
Hexachlorobutadiene			< 250	250	U	130	< 260	260	U	130	< 290	290	U	150	< 310	310	U	160	< 250	250	U	130	< 260	260	U	130	< 290	290	U	150	< 250	250	U	130
Hexachlorocyclopentadiene			< 250	250	U	110	< 260	260	U	110	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	110
Hexachloroethane			< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	110	< 260	260	U	110	< 290	290	U	120	< 250	250	U	110
Indeno(1,2,3-cd)pyrene	500	500	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	120	< 290	290	U	140	< 250	250	U	120
Isophorone			< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 310	310	U	120	< 250	250	U	100	< 260	260	U	100	< 290	290	U	110	< 250	250	U	99
Naphthalene	12,000	100,000	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
Nitrobenzene			< 250	250	U	130	< 260	260	U	130	< 290	290	U	140	< 310	310	U	160	< 250	250	U	130	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
N-Nitrosodimethylamine			< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	100	< 290	290	U	120	< 250	250	U	99
N-Nitrosodi-n-propylamine			< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	120	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
N-Nitrosodiphenylamine			< 250	250	U	140	< 260	260	U	140	< 290	290	U	160	< 310	310	U	170	< 250	250	U	140	< 260	260	U	140	< 290	290	U	160	< 250	250	U	140
Pentachloronitrobenzene			< 250	250	U	130	< 260	260	U	140	< 290	290	U	150	< 310	310	U	170	< 250	250	U	130	< 260	260	U	140	< 290	290	U	150	< 250	250	U	130
Pentachlorophenol	800	2,400	< 250	250	U	140	< 260	260	U	140	< 290	290	U	160	< 310	310	U	170	< 250	250	U	140	< 260	260	U	140	< 290	290	U	150	< 250	250	U	130
Phenanthrene	100,000	100,000	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 310	310	U	130	< 250	250	U	100	< 260	260	U	110	< 290	290	U	120	< 250	250	U	100
Phenol	330	100,000	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 310	310	U	140	< 250	250	U	110	< 260	260	U	120	< 290	290	U	130	< 250	250	U	110
Pyrene	100,000	100,000	< 250	250	U	120	< 260	260	U	130	< 290	290	U	140	< 310	310	U	150	< 250	250	U	120	< 260	260	U	130	< 290	290	U	140	< 250	250	U	120
Pyridine			< 250	250	U	88	< 260	260	U	91	< 290	290	U	100	< 310	310	U	110	< 250	250	U	88	< 260	260	U	91	< 290	290	U	100	< 250	250	U	87

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five ti
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
853 Lexington Ave,
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*	B9												B10												B11							
			(0-2') 1/7/2014 µg/Kg				(10-12') 1/7/2014 µg/Kg				(43-45') 1/7/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8ft) 1/7/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,2,4,5-Tetrachlorobenzene			< 260	260	U	130	< 250	250	U	130	< 260	260	U	130	< 270	270	U	140	< 270	270	U	130	< 260	260	U	130	< 260	260	U	130	< 250	250	U	130
1,2,4-Trichlorobenzene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	120	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
1,2-Dichlorobenzene			< 260	260	U	110	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
1,2-Diphenylhydrazine			< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
1,3-Dichlorobenzene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
1,4-Dichlorobenzene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
2,4,5-Trichlorophenol			< 260	260	U	200	< 250	250	U	200	< 260	260	U	200	< 270	270	U	210	< 270	270	U	210	< 260	260	U	200	< 260	260	U	200	< 250	250	U	200
2,4,6-Trichlorophenol			< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	120	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
2,4-Dichlorophenol			< 260	260	U	130	< 250	250	U	130	< 260	260	U	130	< 270	270	U	140	< 270	270	U	130	< 260	260	U	130	< 260	260	U	130	< 250	250	U	130
2,4-Dimethylphenol			< 260	260	U	93	< 250	250	U	90	< 260	260	U	91	< 270	270	U	96	< 270	270	U	95	< 260	260	U	91	< 260	260	U	91	< 250	250	U	90
2,4-Dinitrophenol			< 1900	1,900	U	260	< 1800	1,800	U	250	< 1800	1,800	U	260	< 1900	1,900	U	270	< 1900	1,900	U	270	< 1800	1,800	U	260	< 1800	1800	U	260	< 1800	1800	U	250
2,4-Dinitrotoluene			< 260	260	U	150	< 250	250	U	140	< 260	260	U	140	< 270	270	U	150	< 270	270	U	150	< 260	260	U	140	< 260	260	U	140	< 250	250	U	140
2,6-Dinitrotoluene			< 260	260	U	120	< 250	250	U	110	< 260	260	U	120	< 270	270	U	120	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	110
2-Chloronaphthalene			< 260	260	U	110	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
2-Chlorophenol			< 260	260	U	110	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
2-Methylnaphthalene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
2-Methylphenol (o-cresol)	330	100,000	< 260	260	U	180	< 250	250	U	170	< 260	260	U	170	< 270	270	U	180	< 270	270	U	180	< 260	260	U	170	< 260	260	U	170	< 250	250	U	170
2-Nitroaniline			< 1900	1,900	U	380	< 1800	1,800	U	370	< 1800	1,800	U	370	< 1900	1,900	U	390	< 1900	1,900	U	390	< 1800	1,800	U	370	< 1800	1800	U	370	< 1800	1800	U	370
2-Nitrophenol			< 260	260	U	240	< 250	250	U	230	< 260	260	U	230	< 270	270	U	240	< 270	270	U	240	< 260	260	U	230	< 260	260	U	230	< 250	250	U	230
3&4-Methylphenol (m&p-cresol)			< 260	260	U	150	< 250	250	U	140	< 260	260	U	140	< 270	270	U	150	< 270	270	U	150	< 260	260	U	140	< 260	260	U	140	< 250	250	U	140
3,3'-Dichlorobenzidine			< 750	750	U	180	< 730	730	U	170	< 730	730	U	170	< 770	770	U	180	< 770	770	U	180	< 740	740	U	170	< 730	730	U	170	< 720	720	U	170
3-Nitroaniline			< 1900	1,900	U	810	< 1800	1,800	U	790	< 1800	1,800	U	800	< 1900	1,900	U	840	< 1900	1,900	U	830	< 1800	1,800	U	800	< 1800	1800	U	800	< 1800	1800	U	790
4,6-Dinitro-2-methylphenol			< 1900	1,900	U	400	< 1800	1,800	U	390	< 1800	1,800	U	400	< 1900	1,900	U	420	< 1900	1,900	U	410	< 1800	1,800	U	400	< 1800	1800	U	390	< 1800	1800	U	390
4-Bromophenyl phenyl ether			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
4-Chloro-3-methylphenol			< 260	260	U	130	< 250	250	U	130	< 260	260	U	130	< 270	270	U	140	< 270	270	U	130	< 260	260	U	130	< 260	260	U	130	< 250	250	U	130
4-Chloroaniline			< 750	750	U	170	< 730	730	U	170	< 730	730	U	170	< 770	770	U	180	< 770	770	U	180	< 740	740	U	170	< 730	730	U	170	< 720	720	U	170
4-Chlorophenyl phenyl ether			< 260	260	U	130	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
4-Nitroaniline			< 1900	1,900	U	120	< 1800	1,800	U	120	< 1800	1,800	U	120	< 1900	1,900	U	130	< 1900	1,900	U	130	< 1800	1,800	U	120	< 1800	1800	U	120	< 1800	1800	U	120
4-Nitrophenol			< 1900	1,900	U	170	< 1800	1,800	U	160	< 1800	1,800	U	170	< 1900	1,900	U	170	< 1900	1,900	U	170	< 1800	1,800	U	170	< 1800	1800	U	170	< 1800	1800	U	160
Acenaphthene	20,000	100,000	< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	120	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Acenaphthylene	100,000	100,000	< 260	260	U	100	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
Acetophenone			< 260	260	U	120	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	120	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Aniline			< 1900	1,900	U	760	< 1800	1,800	U	730	< 1800	1,800	U	740	< 1900	1,900	U	780	< 1900	1,900	U	770	< 1800	1,800	U	740	< 1800	1800	U	740	< 1800	1800	U	730
Anthracene	100,000	100,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Benz(a)anthracene	1,000	1,000	**140**	260	J	130	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Benzidine			< 750	750	U	220	< 730	730	U	210	< 730	730	U	220	< 770	770	U	230	< 770	770	U	230	< 740	740	U	220	< 730	730	U	220	< 720	720	U	210
Benzo(a)pyrene	1,000	1,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Benzo(b)fluoranthene	1,000	1,000	**140**	260	J	130	< 250	250	U	120	< 260	260	U	130	< 270	270	U	130	< 270	270	U	130	< 260	260	U	130	< 260	260	U	130	< 250	250	U	120
Benzo(ghi)perylene	100,000	100,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Benzo(k)fluoranthene	800	1,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Benzoic acid			< 1900	1,900	U	750	< 1800	1,800	U	730	< 1800	1,800	U	730	< 1900	1,900	U	770	< 1900	1,900	U	770	< 1800	1,800	U	740	< 1800	1800	U	730	< 1800	1800	U	720
Benzyl butyl phthalate			< 260	260	U	97	< 250	250	U	94	< 260	260	U	95	< 270	270	U	100	< 270	270	U	99	< 260	260	U	95	< 260	260	U	95	< 250	250	U	93
Bis(2-chloroethoxy)methane			< 260	260	U	100	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
Bis(2-chloroethyl)ether			< 260	260	U	100	< 250	250	U	98	< 260	260	U	99	< 270	270	U	100	< 270	270	U	100	< 260	260	U	99	< 260	260	U	99	< 250	250	U	98
Bis(2-chloroisopropyl)ether			< 260	260	U	100	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
Bis(2-ethylhexyl)phthalate			< 260	260	U	110	< 250	250	U	100	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	**110**	260	J	110	< 250	250	U	100
Carbazole			< 1900	1,900	U	280	< 1800	1,800	U	280	< 1800	1,800	U	280	< 1900	1,900	U	290	< 1900	1,900	U	290	< 1800	1,800	U	280	< 1800	1800	U	280	< 1800	1800	U	270
Chrysene	1,000	1,000	**150**	260	J	130	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Dibenz(a,h)anthracene	330	330	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Dibenzofuran	7,000	59,000	< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Diethyl phthalate			< 260	260	U	120	< 250	250	U	110	< 260	260	U	120	< 270	270	U	120	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	110
Dimethylphthalate			< 260	260	U	120	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	120	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Di-n-butylphthalate			< 260	260	U	99	< 250	250	U	97	< 260	260	U	98	< 270	270	U	100	< 270	270	U	100	< 260	260	U	98	< 260	260	U	98	< 250	250	U	96
Di-n-octylphthalate			< 260	260	U	97	< 250	250	U	94	< 260	260	U	95	< 270	270	U	100	< 270	270	U	99	< 260	260	U	95	< 260	260	U	95	< 250	250	U	93
Fluoranthene	100,000	100,000	**240**	260	J	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	**140**	260	J	120	< 250	250	U	120
Fluorene	30,000	100,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Hexachlorobenzene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Hexachlorobutadiene			< 260	260	U	140	< 250	250	U	130	< 260	260	U	130	< 270	270	U	140	< 270	270	U	140	< 260	260	U	130	< 260	260	U	130	< 250	250	U	130
Hexachlorocyclopentadiene			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	120	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Hexachloroethane			< 260	260	U	110	< 250	250	U	110	< 260	260	U	110	< 270	270	U	120	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	110
Indeno(1,2,3-cd)pyrene	500	500	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	130	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Isophorone			< 260	260	U	100	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
Naphthalene	12,000	100,000	< 260	260	U	110	< 250	250	U	100	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	< 260	260	U	110	< 250	250	U	100
Nitrobenzene			< 260	260	U	130	< 250	250	U	130	< 260	260	U	130	< 270	270	U	140	< 270	270	U	130	< 260	260	U	130	< 260	260	U	130	< 250	250	U	130
N-Nitrosodimethylamine			< 260	260	U	110	< 250	250	U	100	< 260	260	U	100	< 270	270	U	110	< 270	270	U	110	< 260	260	U	100	< 260	260	U	100	< 250	250	U	100
N-Nitrosodi-n-propylamine			< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	130	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
N-Nitrosodiphenylamine			< 260	260	U	140	< 250	250	U	140	< 260	260	U	140	< 270	270	U	150	< 270	270	U	150	< 260	260	U	140	< 260	260	U	140	< 250	250	U	140
Pentachloronitrobenzene			< 260	260	U	140	< 250	250	U	140	< 260	260	U	140	< 270	270	U	140	< 270	270	U	140	< 260	260	U	140	< 260	260	U	140	< 250	250	U	130
Pentachlorophenol	800	2,400	< 260	260	U	140	< 250	250	U	140	< 260	260	U	140	< 270	270	U	150	< 270	270	U	140	< 260	260	U	140	< 260	260	U	140	< 250	250	U	140
Phenanthrene	100,000	100,000	**150**	260	J	110	< 250	250	U	100	< 260	260	U	110	< 270	270	U	110	< 270	270	U	110	< 260	260	U	110	**220**	260	J	100	< 250	250	U	100
Phenol	330	100,000	< 260	260	U	120	< 250	250	U	120	< 260	260	U	120	< 270	270	U	120	< 270	270	U	120	< 260	260	U	120	< 260	260	U	120	< 250	250	U	120
Pyrene	100,000	100,000	**260**	260		130	< 250	250	U	120	< 260	260	U	130	< 270	270	U	130	< 270	270	U	130	< 260	260	U	130	**150**	260	J	130	< 250	250	U	120
Pyridine			< 260	260	U	92	< 250	250	U	89	< 260	260	U	90	< 270	270	U	95	< 270	270	U	94	< 260	260	U	90	< 260	260	U	90	< 250	250	U	89

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five ti
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 4
853 Lexington Ave,
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*	B12								B13								Duplicate 1				Duplicate 2			
			(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(B7 10-15') 1/7/2014 µg/Kg				(B610-15') 1/7/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
1,2,4,5-Tetrachlorobenzene			< 290	290	U	150	< 260	260	U	130	< 270	270	U	140	< 250	250	U	130	< 300	300	U	150	< 260	260	U	130
1,2,4-Trichlorobenzene			< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
1,2-Dichlorobenzene			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
1,2-Diphenylhydrazine			< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
1,3-Dichlorobenzene			< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
1,4-Dichlorobenzene			< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
2,4,5-Trichlorophenol			< 290	290	U	230	< 260	260	U	200	< 270	270	U	210	< 250	250	U	200	< 300	300	U	240	< 260	260	U	200
2,4,6-Trichlorophenol			< 290	290	U	130	< 260	260	U	120	< 270	270	U	120	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
2,4-Dichlorophenol			< 290	290	U	150	< 260	260	U	130	< 270	270	U	140	< 250	250	U	130	< 300	300	U	150	< 260	260	U	130
2,4-Dimethylphenol			< 290	290	U	100	< 260	260	U	91	< 270	270	U	96	< 250	250	U	90	< 300	300	U	110	< 260	260	U	90
2,4-Dinitrophenol			< 2100	2100	U	290	< 1800	1800	U	260	< 1900	1900	U	270	< 1800	1800	U	250	< 2200	2200	U	300	< 1800	1800	U	260
2,4-Dinitrotoluene			< 290	290	U	160	< 260	260	U	140	< 270	270	U	150	< 250	250	U	140	< 300	300	U	170	< 260	260	U	140
2,6-Dinitrotoluene			< 290	290	U	130	< 260	260	U	120	< 270	270	U	120	< 250	250	U	110	< 300	300	U	140	< 260	260	U	120
2-Chloronaphthalene			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
2-Chlorophenol			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
2-Methylnaphthalene			< 290	290	U	120	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
2-Methylphenol (o-cresol)	330	100,000	< 290	290	U	200	< 260	260	U	170	< 270	270	U	180	< 250	250	U	170	< 300	300	U	200	< 260	260	U	170
2-Nitroaniline			< 2100	2100	U	420	< 1800	1800	U	370	< 1900	1900	U	390	< 1800	1800	U	370	< 2200	2200	U	440	< 1800	1800	U	370
2-Nitrophenol			< 290	290	U	260	< 260	260	U	230	< 270	270	U	250	< 250	250	U	230	< 300	300	U	270	< 260	260	U	230
3&4-Methylphenol (m&p-cresol)			< 290	290	U	160	< 260	260	U	140	< 270	270	U	150	< 250	250	U	140	< 300	300	U	170	< 260	260	U	140
3,3'-Dichlorobenzidine			< 840	840	U	200	< 730	730	U	170	< 770	770	U	180	< 720	720	U	170	< 860	860	U	200	< 730	730	U	170
3-Nitroaniline			< 2100	2100	U	910	< 1800	1800	U	790	< 1900	1900	U	840	< 1800	1800	U	790	< 2200	2200	U	940	< 1800	1800	U	790
4,6-Dinitro-2-methylphenol			< 2100	2100	U	450	< 1800	1800	U	390	< 1900	1900	U	420	< 1800	1800	U	390	< 2200	2200	U	460	< 1800	1800	U	390
4-Bromophenyl phenyl ether			< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
4-Chloro-3-methylphenol			< 290	290	U	150	< 260	260	U	130	< 270	270	U	140	< 250	250	U	130	< 300	300	U	150	< 260	260	U	130
4-Chloroaniline			< 840	840	U	190	< 730	730	U	170	< 770	770	U	180	< 720	720	U	170	< 860	860	U	200	< 730	730	U	170
4-Chlorophenyl phenyl ether			< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	150	< 260	260	U	120
4-Nitroaniline			< 2100	2100	U	140	< 1800	1800	U	120	< 1900	1900	U	130	< 1800	1800	U	120	< 2200	2200	U	140	< 1800	1800	U	120
4-Nitrophenol			< 2100	2100	U	190	< 1800	1800	U	170	< 1900	1900	U	170	< 1800	1800	U	160	< 2200	2200	U	200	< 1800	1800	U	160
Acenaphthene	20,000	100,000	< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Acenaphthylene	100,000	100,000	< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Acetophenone			< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Aniline			< 2100	2100	U	840	< 1800	1800	U	740	< 1900	1900	U	780	< 1800	1800	U	730	< 2200	2200	U	870	< 1800	1800	U	740
Anthracene	100,000	100,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Benz(a)anthracene	1,000	1,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	150	< 260	260	U	120
Benzidine			< 840	840	U	250	< 730	730	U	210	< 770	770	U	230	< 720	720	U	210	< 860	860	U	250	< 730	730	U	210
Benzo(a)pyrene	1,000	1,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Benzo(b)fluoranthene	1,000	1,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	150	< 260	260	U	120
Benzo(ghi)perylene	100,000	100,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Benzo(k)fluoranthene	800	1,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Benzoic acid			< 2100	2100	U	840	< 1800	1800	U	730	< 1900	1900	U	770	< 1800	1800	U	720	< 2200	2200	U	860	< 1800	1800	U	730
Benzyl butyl phthalate			< 290	290	U	110	< 260	260	U	94	< 270	270	U	100	< 250	250	U	93	< 300	300	U	110	< 260	260	U	94
Bis(2-chloroethoxy)methane			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Bis(2-chloroethyl)ether			< 290	290	U	110	< 260	260	U	99	< 270	270	U	100	< 250	250	U	98	< 300	300	U	120	< 260	260	U	98
Bis(2-chloroisopropyl)ether			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Bis(2-ethylhexyl)phthalate			< 290	290	U	120	< 260	260	U	110	**4,400**	270		110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Carbazole			< 2100	2100	U	320	< 1800	1800	U	280	< 1900	1900	U	290	< 1800	1800	U	270	< 2200	2200	U	330	< 1800	1800	U	280
Chrysene	1,000	1,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	150	< 260	260	U	120
Dibenz(a,h)anthracene	330	330	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Dibenzofuran	7,000	59,000	< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Diethyl phthalate			< 290	290	U	130	< 260	260	U	120	< 270	270	U	120	< 250	250	U	110	< 300	300	U	140	< 260	260	U	120
Dimethylphthalate			< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Di-n-butylphthalate			< 290	290	U	110	< 260	260	U	97	< 270	270	U	100	< 250	250	U	96	< 300	300	U	110	< 260	260	U	97
Di-n-octylphthalate			< 290	290	U	110	< 260	260	U	94	< 270	270	U	100	< 250	250	U	93	< 300	300	U	110	< 260	260	U	94
Fluoranthene	100,000	100,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Fluorene	30,000	100,000	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Hexachlorobenzene			< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Hexachlorobutadiene			< 290	290	U	150	< 260	260	U	130	< 270	270	U	140	< 250	250	U	130	< 300	300	U	160	< 260	260	U	130
Hexachlorocyclopentadiene			< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Hexachloroethane			< 290	290	U	130	< 260	260	U	110	< 270	270	U	120	< 250	250	U	110	< 300	300	U	130	< 260	260	U	110
Indeno(1,2,3-cd)pyrene	500	500	< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Isophorone			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Naphthalene	12,000	100,000	< 290	290	U	120	< 260	260	U	110	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Nitrobenzene			< 290	290	U	150	< 260	260	U	130	< 270	270	U	140	< 250	250	U	130	< 300	300	U	150	< 260	260	U	130
N-Nitrosodimethylamine			< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
N-Nitrosodi-n-propylamine			< 290	290	U	140	< 260	260	U	120	< 270	270	U	130	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
N-Nitrosodiphenylamine			< 290	290	U	160	< 260	260	U	140	< 270	270	U	150	< 250	250	U	140	< 300	300	U	170	< 260	260	U	140
Pentachloronitrobenzene			< 290	290	U	160	< 260	260	U	140	< 270	270	U	140	< 250	250	U	130	< 300	300	U	160	< 260	260	U	140
Pentachlorophenol	800	2,400	< 290	290	U	160	< 260	260	U	140	< 270	270	U	150	< 250	250	U	140	< 300	300	U	160	< 260	260	U	140
Phenanthrene	100,000	100,000	< 290	290	U	120	< 260	260	U	100	< 270	270	U	110	< 250	250	U	100	< 300	300	U	120	< 260	260	U	100
Phenol	330	100,000	< 290	290	U	130	< 260	260	U	120	< 270	270	U	120	< 250	250	U	120	< 300	300	U	140	< 260	260	U	120
Pyrene	100,000	100,000	< 290	290	U	140	< 260	260	U	130	< 270	270	U	130	< 250	250	U	120	< 300	300	U	150	< 260	260	U	130
Pyridine			< 290	290	U	100	< 260	260	U	90	< 270	270	U	95	< 250	250	U	89	< 300	300	U	110	< 260	260	U	90

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Not-detected
RL - Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five ti
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
853 Lexington Ave,
Brooklyn, New York
Soil Analytical Results
Pesticides PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B1				B2				B3				B4				B5				Duplicate B3		B6							
			(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(4-6') 5/22/2013 µg/Kg		(0-2') 5/22/2013 µg/Kg		(0-2') 1/7/2014 µg/Kg				(10-12') 1/7/2014 µg/Kg			
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
4,4' -DDD	3.3	2,600	ND	2.7	ND	2.5	ND	2.8	ND	2.6	ND	2.6	ND	2.6	ND*	270	ND*	270	ND	2.6	ND	2.4	ND	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
4,4' -DDE	3.3	1,800	**4.4**	2.7	ND	2.5	ND	2.8	ND	2.6	ND	2.6	**3.6**	2.6	ND*	270	ND*	270	ND	2.6	ND	2.4	**3.4**	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
4,4' -DDT	3.3	1,700	ND	2.7	ND	2.5	ND	2.8	ND	2.6	ND	2.6	ND	2.6	ND*	270	ND*	270	ND	2.6	ND	2.4	ND	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
a-BHC	20	97	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
a-Chlordane			ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Aldrin	5	19	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
b-BHC	36	72	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Chlordane			ND	22	ND	21	ND	23	ND	22	ND	22	ND	21	ND*	2200	ND*	2300	ND	22	ND	20	ND	22	< 21	21	U	21	< 21	21	U	21
d-BHC	40	100,000	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Dieldrin	5	39	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Endosulfan I	2,400	4,800	ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Endosulfan II	2,400	4,800	ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Endosulfan sulfate	2,400	4,800	ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Endrin	14	2,200	ND*	9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Endrin aldehyde			ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Endrin ketone			ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
g-BHC	100	280	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
g-Chlordane			ND	3.7	ND	3.4	ND	3.8	ND	3.6	ND	3.7	ND	3.6	ND*	370	ND*	380	ND	3.6	ND	3.4	ND	3.6	< 3.6	3.6	U	3.6	< 3.6	3.6	U	3.6
Heptachlor	42	420	ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Heptachlor epoxide			ND	1.9	ND	1.7	ND	1.9	ND	1.8	ND	1.8	ND	1.8	ND*	180	ND*	190	ND	1.8	ND	1.7	ND	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Methoxychlor			ND	7.5	ND	6.9	ND	7.7	ND	7.3	ND	7.4	ND	7.1	ND*	740	ND*	760	ND	7.2	ND	6.8	ND	7.3	< 7.1	7.1	U	7.1	< 7.1	7.1	U	7.1
Toxaphene			ND	36	ND	33	ND	37	ND	35	ND	35	ND	34	ND*	3600	ND*	3600	ND	34	ND	32	ND	35	< 34	34	U	34	< 34	34	U	34
PCB-1016	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1221	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1232	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1242	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1248	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1254	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1260	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1262	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36
PCB-1268	100	1,000	ND	37	ND	34	ND	38	ND	36	ND	37	ND	36	ND	37	ND	38	ND	36	ND	34	ND	36	< 36	36	U	36	< 36	36	U	36

Notes:

* Due to matrix interference from non target compounds in the sample an elevated RL was reported.
** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Non-Detect
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
853 Lexington Ave,
Brooklyn, New York
Soil Analytical Results
Pesticides PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B6				B7												B8											
			(43-45') 1/7/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
4,4' -DDD	3.3	2,600	< 2.6	2.6	U	2.6	< 2.9	2.9	U	2.9	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.9	2.9	U	2.9	< 2.5	2.5	U	2.5
4,4' -DDE	3.3	1,800	< 2.6	2.6	U	2.6	< 2.9	2.9	U	2.9	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.9	2.9	U	2.9	< 2.5	2.5	U	2.5
4,4' -DDT	3.3	1,700	< 2.6	2.6	U	2.6	< 2.9	2.9	U	2.9	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.9	2.9	U	2.9	< 2.5	2.5	U	2.5
a-BHC	20	97	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
a-Chlordane			< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Aldrin	5	19	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
b-BHC	36	72	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Chlordane			< 22	22	U	22	< 24	24	U	24	< 26	26	U	26	< 21	21	U	21	< 22	22	U	22	< 24	24	U	24	< 21	21	U	21
d-BHC	40	100,000	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Dieldrin	5	39	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Endosulfan I	2,400	4,800	< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Endosulfan II	2,400	4,800	< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Endosulfan sulfate	2,400	4,800	< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Endrin	14	2,200	< 1.8	1.8	U	1.8	< 2.0	2	U	2	ND*	2.2	U (*)	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Endrin aldehyde			< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Endrin ketone			< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
g-BHC	100	280	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
g-Chlordane			< 3.6	3.6	U	3.6	< 4.1	4.1	U	4.1	< 4.4	4.4	U	4.4	< 3.5	3.5	U	3.5	< 3.8	3.8	U	3.8	< 4.0	4	U	4	< 3.5	3.5	U	3.5
Heptachlor	42	420	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Heptachlor epoxide			< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 2.2	2.2	U	2.2	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 2.0	2	U	2	< 1.8	1.8	U	1.8
Methoxychlor			< 7.3	7.3	U	7.3	< 8.1	8.1	U	8.1	< 8.7	8.7	U	8.7	< 7.1	7.1	U	7.1	< 7.5	7.5	U	7.5	< 8.1	8.1	U	8.1	< 7.0	7	U	7
Toxaphene			< 35	35	U	35	< 39	39	U	39	< 42	42	U	42	< 34	34	U	34	< 36	36	U	36	< 39	39	U	39	< 34	34	U	34
PCB-1016	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1221	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1232	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1242	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1248	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1254	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1260	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1262	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35
PCB-1268	100	1,000	< 36	36	U	36	< 41	41	U	41	< 44	44	U	44	< 35	35	U	35	< 38	38	U	38	< 40	40	U	40	< 35	35	U	35

Notes:

* Due to matrix interference from non target compounds in the sample an elevated RL was reporte
** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Non-Detect
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspecte
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
853 Lexington Ave,
Brooklyn, New York
Soil Analytical Results
Pesticides PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B9												B10												B11							
			(0-2') 1/7/2014 µg/Kg				(10-12') 1/7/2014 µg/Kg				(43-45') 1/7/2014 µg/Kg				(0-2') 1/6/2014 µg/Kg				(10-12') 1/6/2014 µg/Kg				(43-45') 1/6/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8ft) 1/7/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
4,4' -DDD	3.3	2,600	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.8	2.8	U	2.8	< 2.7	2.7	U	2.7	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
4,4' -DDE	3.3	1,800	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.8	2.8	U	2.8	< 2.7	2.7	U	2.7	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
4,4' -DDT	3.3	1,700	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6	< 2.8	2.8	U	2.8	< 2.7	2.7	U	2.7	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 2.6	2.6	U	2.6
a-BHC	20	97	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
a-Chlordane			< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Aldrin	5	19	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
b-BHC	36	72	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Chlordane			< 22	22	U	22	< 22	22	U	22	< 22	22	U	22	< 24	24	U	24	< 22	22	U	22	< 22	22	U	22	< 22	22	U	22	< 22	22	U	22
d-BHC	40	100,000	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Dieldrin	5	39	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Endosulfan I	2,400	4,800	< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Endosulfan II	2,400	4,800	< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Endosulfan sulfate	2,400	4,800	< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Endrin	14	2,200	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Endrin aldehyde			< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Endrin ketone			< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
g-BHC	100	280	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
g-Chlordane			< 3.7	3.7	U	3.7	< 3.6	3.6	U	3.6	< 3.7	3.7	U	3.7	< 4.0	4	U	4	< 3.8	3.8	U	3.8	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7	< 3.7	3.7	U	3.7
Heptachlor	42	420	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Heptachlor epoxide			< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 2.0	2	U	2	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8	< 1.8	1.8	U	1.8
Methoxychlor			< 7.4	7.4	U	7.4	< 7.2	7.2	U	7.2	< 7.3	7.3	U	7.3	< 7.9	7.9	U	7.9	< 7.5	7.5	U	7.5	< 7.4	7.4	U	7.4	< 7.4	7.4	U	7.4	< 7.3	7.3	U	7.3
Toxaphene			< 35	35	U	35	< 35	35	U	35	< 35	35	U	35	< 38	38	U	38	< 36	36	U	36	< 36	36	U	36	< 35	35	U	35	< 35	35	U	35
PCB-1016	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1221	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1232	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1242	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1248	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1254	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1260	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1262	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37
PCB-1268	100	1,000	< 37	37	U	37	< 36	36	U	36	< 37	37	U	37	< 40	40	U	40	< 38	38	U	38	< 37	37	U	37	< 37	37	U	37	< 37	37	U	37

Notes:

* Due to matrix interference from non target compounds in the sample an elevated RL was reporte
** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Non-Detect
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspecte
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 5
853 Lexington Ave,
Brooklyn, New York
Soil Analytical Results
Pesticides PCBs

COMPOUND	NYSDEC Part 375.6 Unrestricted Use Soil Cleanup Objectives	NYDEC Part 375.6 Restricted Residential Soil Cleanup Objectives*	B12								B13								Duplicate 1				Duplicate 2			
			(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(0-2') 1/7/2014 µg/Kg				(6-8') 1/7/2014 µg/Kg				(B7 10-15') 1/7/2014 µg/Kg				(B610-15') 1/7/2014 µg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
4,4' -DDD	3.3	2,600	< 3.0	3	U	3	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6
4,4' -DDE	3.3	1,800	< 3.0	3	U	3	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6
4,4' -DDT	3.3	1,700	< 3.0	3	U	3	< 2.6	2.6	U	2.6	< 2.7	2.7	U	2.7	< 2.6	2.6	U	2.6	< 3.1	3.1	U	3.1	< 2.6	2.6	U	2.6
a-BHC	20	97	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
a-Chlordane			< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Aldrin	5	19	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
b-BHC	36	72	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
Chlordane			< 25	25	U	25	< 21	21	U	21	< 22	22	U	22	< 21	21	U	21	< 26	26	U	26	< 22	22	U	22
d-BHC	40	100,000	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
Dieldrin	5	39	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
Endosulfan I	2,400	4,800	< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Endosulfan II	2,400	4,800	< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Endosulfan sulfate	2,400	4,800	< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Endrin	14	2,200	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	ND*	2.1	U (*)	2.1	< 1.8	1.8	U	1.8
Endrin aldehyde			< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Endrin ketone			< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
g-BHC	100	280	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
g-Chlordane			< 4.2	4.2	U	4.2	< 3.6	3.6	U	3.6	< 3.8	3.8	U	3.8	< 3.6	3.6	U	3.6	< 4.3	4.3	U	4.3	< 3.6	3.6	U	3.6
Heptachlor	42	420	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
Heptachlor epoxide			< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8	< 1.9	1.9	U	1.9	< 1.8	1.8	U	1.8	< 2.1	2.1	U	2.1	< 1.8	1.8	U	1.8
Methoxychlor			< 8.4	8.4	U	8.4	< 7.1	7.1	U	7.1	< 7.5	7.5	U	7.5	< 7.2	7.2	U	7.2	< 8.5	8.5	U	8.5	< 7.2	7.2	U	7.2
Toxaphene			< 40	40	U	40	< 34	34	U	34	< 36	36	U	36	< 34	34	U	34	< 41	41	U	41	< 35	35	U	35
PCB-1016	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1221	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1232	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1242	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1248	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1254	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1260	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1262	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36
PCB-1268	100	1,000	< 42	42	U	42	< 36	36	U	36	< 38	38	U	38	< 36	36	U	36	< 43	43	U	43	< 36	36	U	36

Notes:

* Due to matrix interference from non target compounds in the sample an elevated RL was reporte
** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
ND - Non-Detect
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspecte
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
853 Lexington Ave,
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*	B1				B2				B3				B4				B5				Duplicate B3		B6			
			(0-2') 5/22/2013 mg/Kg		(4-6') 5/22/2013 mg/Kg		(0-2') 5/22/2013 mg/Kg		(4-6') 5/22/2013 mg/Kg		(0-2') 5/22/2013 mg/Kg		(4-6') 5/22/2013 mg/Kg		(0-2') 5/22/2013 mg/Kg		(4-6') 5/22/2013 mg/Kg		(0-2') 5/22/2013 mg/Kg		(4-6') 5/22/2013 mg/Kg		(0-2') 5/22/2013 mg/Kg		(0-2') 1/7/2014 mg/Kg			
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Qual	MDL
Aluminum			**12,900**	34	**4,690**	35	**13,800**	35	**5,190**	37	**9,150**	36	**5,120**	37	**6,980**	40	**8,790**	36	**6,150**	34	**3,490**	35	**9,530**	40	**6,740**	35		7.1
Antimony			BRL	1.7	BRL	1.7	BRL	1.7	BRL	1.9	BRL	1.8	BRL	1.9	BRL	2	BRL	1.8	BRL	1.7	BRL	1.8	BRL	2	**1.5**	1.8	B	0.71
Arsenic	13	16	**3.5**	0.7	**1.5**	0.7	**4.8**	0.7	**0.8**	0.7	**3.5**	0.7	**3.3**	0.7	**2.7**	0.8	**1.8**	0.7	**5.4**	0.7	BRL	0.7	**4.2**	0.8	**1.8**	0.7		0.71
Barium	350	400	**90.9**	0.7	**35.6**	0.7	**34.8**	0.7	**14.7**	0.7	**63**	0.7	**24.1**	0.7	**1,140**	0.8	**39.1**	0.7	**39**	0.7	**8.9**	0.7	**57.3**	0.8	**16.8**	0.7		0.14
Beryllium	7.2	72	**0.76**	0.27	**0.24**	0.28	**0.48**	0.28	**0.28**	0.3	**0.48**	0.29	**0.28**	0.3	**0.39**	0.32	**0.48**	0.29	**0.28**	0.28	**0.17**	0.28	**0.45**	0.32	**0.3**	0.28		0.14
Cadmium	2.5	4.3	**0.55**	0.34	**0.19**	0.35	**0.78**	0.35	**0.23**	0.37	**0.26**	0.36	**0.23**	0.37	**0.2**	0.4	**0.31**	0.36	**0.44**	0.34	BRL	0.35	**0.31**	0.4	< 0.35	0.35	U	0.14
Calcium			**4,160**	3.4	**3410**	3.5	**1,740**	3.5	**3,330**	3.7	**5,720**	3.6	**2,220**	3.7	**9,990**	4	**683**	3.6	**19,100**	34	**279**	3.5	**7,450**	4	**7,120**	3.5	*	3.2
Chromium			**31.5**	0.34	**9.42**	0.35	**23.2**	0.35	**10.8**	0.37	**14.1**	0.36	**11.4**	0.37	**11.2**	0.4	**19.5**	0.36	**15.1**	0.34	**7.36**	0.35	**18.4**	0.4	**11.6**	0.35		0.14
Cobalt			**9.01**	0.34	**3.87**	0.35	**6.46**	0.35	**4.6**	0.37	**3.59**	0.36	**3.23**	0.37	**2.5**	0.4	**5.99**	0.36	**3.13**	0.34	**2.5**	0.35	**3.98**	0.4	**3.64**	0.35	*	0.14
Copper	50	270	**24.9**	0.34	**7.96**	0.35	**11.2**	0.35	**9.16**	0.37	**11.2**	0.36	**10.3**	0.37	**15.5**	0.4	**11.9**	0.36	**14.5**	0.34	**5.21**	0.35	**10.9**	0.4	**9.45**	0.35		0.28
Iron			**29,200**	34	**9,790**	35	**20,500**	35	**10,600**	37	**12,000**	36	**11,600**	37	**9,100**	4	**17,300**	36	**14,100**	34	**6,990**	3.5	**14,300**	40	**12,100**	35		35
Lead	63	400	**59**	0.7	**20.6**	0.7	**27.2**	0.7	**6.1**	0.7	**66**	0.7	**28.2**	0.7	**64**	0.8	**5.2**	0.7	**56.1**	0.7	**1.7**	0.7	**64.7**	0.8	**6**	0.7		0.21
Magnesium			**4,330**	3.4	**1,540**	3.5	**2,120**	3.5	**1,950**	3.7	**1,570**	3.6	**1,590**	3.7	**2,490**	4	**2,850**	3.6	**2,490**	3.4	**1,100**	3.5	**1,760**	4	**2,650**	3.5		0.21
Manganese	1,600	2,000	**366**	3.4	**239**	3.5	**147**	3.5	**296**	3.7	**276**	3.6	**211**	3.7	**192**	4	**235**	3.6	**160**	3.4	**201**	3.5	**263**	4	**302**	3.5	N	1.4
Mercury	0.18	0.81	**1.47**	0.07	BRL	0.09	**0.12**	0.09	BRL	0.08	**0.09**	0.09	BRL	0.08	**0.06**	0.07	BRL	0.09	BRL	0.09	BRL	0.08	**0.1**	0.07	< 0.08	0.08	U	0.05
Nickel	30	310	**20.5**	0.34	**7.98**	0.35	**11.8**	0.35	**10.8**	0.37	**9.62**	0.36	**10.6**	0.37	**7.39**	0.4	**14**	0.36	**8.62**	0.34	**6.9**	0.35	**10.5**	0.4	**10.5**	0.35	*	0.14
Potassium			**2,440**	7	**502**	7	**831**	7	**621**	7	**634**	7	**521**	7	**744**	8	**1,260**	7	**837**	7	**378**	7	**567**	8	**639**	7	N	2.8
Selenium	3.9	180	BRL	1.4	BRL	1.4	BRL	1.4	BRL	1.5	BRL	1.5	BRL	1.5	BRL	1.6	BRL	1.4	BRL	1.4	BRL	1.4	BRL	1.6	< 1.4	1.4	U	1.2
Silver	2	180	BRL	0.34	BRL	0.35	BRL	0.35	BRL	0.37	BRL	0.36	BRL	0.37	BRL	0.4	BRL	0.36	BRL	0.34	BRL	0.35	BRL	0.4	< 0.35	0.35	U	0.21
Sodium			**255**	7	**68**	7	**83**	7	**99**	7	**71**	7	**47**	7	**277**	8	**64**	7	**261**	7	**35**	7	**70**	8	**66**	7	N	3
Thallium			BRL	1.4	BRL	1.4	BRL	1.4	BRL	1.5	BRL	1.5	BRL	1.5	BRL	1.6	BRL	1.4	BRL	1.4	BRL	1.4	BRL	1.6	< 1.4	1.4	U	1.4
Vanadium			**40.9**	0.3	**11.5**	0.3	**30.9**	0.3	**13.2**	0.4	**18.2**	0.4	**14.1**	0.4	**16.2**	0.4	**25.7**	0.4	**18.5**	0.3	**8.2**	0.4	**21.5**	0.4	**16**	0.4		0.14
Zinc	109	10,000	**75.3**	0.7	**28**	0.7	**152**	6.9	**30.1**	0.7	**44**	0.7	**25.6**	0.7	**48**	0.8	**28.8**	0.7	**69.7**	0.7	**10.9**	0.7	**58**	0.8	**18.6**	0.7		0.35

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
BRL - Below Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
853 Lexington Ave,
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*	B6								B7												B8							
			(10-12') 1/7/2014 mg/Kg				(43-45') 1/7/2014 mg/Kg				(0-2') 1/6/2014 mg/Kg				(10-12') 1/6/2014 mg/Kg				(43-45') 1/6/2014 mg/Kg				(0-2') 1/6/2014 mg/Kg				(10-12') 1/6/2014 mg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
Aluminum			**8,960**	36		7.2	**2,810**	38		7.6	**10,500**	41		8.1	**20,700**	43		8.7	**8,720**	34		6.9	**10,400**	36		7.1	**14,400**	37		7.4
Antimony			< 1.8	1.8	U	0.72	< 1.9	1.9	U	0.76	< 2.0	2	U	0.81	< 2.2	2.2	U	0.87	< 1.7	1.7	U	0.69	**0.7**	1.8	B	0.71	< 1.8	1.8	U	0.74
Arsenic	13	16	**1.3**	0.7		0.72	**1.8**	0.8		0.76	**26.7**	0.8		0.81	**4**	0.9		0.87	**1.4**	0.7		0.69	**2.2**	0.7		0.71	**2.5**	0.7		0.74
Barium	350	400	**79.2**	0.7		0.14	**29**	0.8		0.15	**88**	0.8		0.16	**130**	0.9		0.17	**36.3**	0.7		0.14	**59.1**	0.7		0.14	**76.3**	0.7		0.15
Beryllium	7.2	72	**0.65**	0.29		0.14	**0.24**	0.3	B	0.15	**0.6**	0.32		0.16	**1.06**	0.35		0.17	**0.45**	0.27		0.14	**0.47**	0.28		0.14	**0.78**	0.29		0.15
Cadmium	2.5	4.3	**0.54**	0.36		0.14	**0.3**	0.38	B	0.15	**0.39**	0.41	B	0.16	< 0.43	0.43	U	0.17	**0.36**	0.34		0.14	< 0.36	0.36	U	0.14	< 0.37	0.37	U	0.15
Calcium			**902**	3.6	*	3.3	**914**	3.8	*	3.5	**65,300**	41	*	37	**11,800**	4.3	*	4	**2,720**	3.4	*	3.2	**58,600**	36	*	33	**1,590**	3.7	*	3.4
Chromium			**26.3**	0.36		0.14	**11.5**	0.38		0.15	**22**	0.41		0.16	**49.7**	0.43		0.17	**28.9**	0.34		0.14	**15.9**	0.36		0.14	**43.3**	0.37		0.15
Cobalt			**8.35**	0.36	*	0.14	**4.17**	0.38	*	0.15	**5.08**	0.41	*	0.16	**13.2**	0.43	*	0.17	**7.09**	0.34	*	0.14	**6.79**	0.36	*	0.14	**8.22**	0.37	*	0.15
Copper	50	270	**19.4**	0.36		0.29	**13.5**	0.38		0.3	**22.5**	0.41		0.32	**34**	0.43		0.35	**27.8**	0.34		0.27	**14.6**	0.36		0.28	**28.9**	0.37		0.29
Iron			**47,400**	36		36	**21,100**	38		38	**14,200**	41		41	**44,800**	43		43	**35,800**	34		34	**12,400**	36		36	**33,300**	37		37
Lead	63	400	**7.3**	0.7		0.22	**5**	0.8		0.23	**127**	0.8		0.24	**15.2**	0.9		0.26	**4.7**	0.7		0.21	**20.3**	0.7		0.21	**9.4**	0.7		0.22
Magnesium			**2,370**	3.6		0.22	**1,290**	3.8		0.23	**10,500**	41		2.4	**8,870**	43		2.6	**5,950**	34		2.1	**3,990**	3.6		0.21	**5,220**	3.7		0.22
Manganese	1,600	2,000	**1,720**	36		14	**418**	3.8	N	1.5	**357**	4.1	N	1.6	**557**	4.3	N	1.7	**514**	3.4	N	1.4	**133**	3.6	N	1.4	**310**	3.7	N	1.5
Mercury	0.18	0.81	< 0.07	0.07	U	0.04	< 0.07	0.07	U	0.04	< 0.10	0.1	U	0.06	< 0.09	0.09	U	0.05	< 0.07	0.07	U	0.04	< 0.09	0.09	U	0.05	< 0.09	0.09	U	0.05
Nickel	30	310	**23.3**	0.36	*	0.14	**7.36**	0.38	*	0.15	**28.1**	0.41	*	0.16	**30.2**	0.43	*	0.17	**29**	0.34	*	0.14	**18.1**	0.36	*	0.14	**21.8**	0.37	*	0.15
Potassium			**1,240**	7	N	2.8	**546**	8	N	3	**2,120**	8	N	3.2	**3,990**	9	N	3.4	**947**	7	N	2.7	**1,200**	7	N	2.8	**2,030**	7	N	2.9
Selenium	3.9	180	< 1.4	1.4	U	1.2	< 1.5	1.5	U	1.3	7.3	1.6		1.4	< 1.7	1.7	U	1.5	< 1.4	1.4	U	1.2	< 1.4	1.4	U	1.2	< 1.5	1.5	U	1.2
Silver	2	180	< 0.36	0.36	U	0.22	< 0.38	0.38	U	0.23	< 0.41	0.41	U	0.24	< 0.43	0.43	U	0.26	< 0.34	0.34	U	0.21	< 0.36	0.36	U	0.21	< 0.37	0.37	U	0.22
Sodium			**86**	7	N	3.1	**75**	8	N	3.3	**1,620**	8	N	3.5	**220**	9	N	3.7	**485**	7	N	3	**531**	7	N	3.1	**141**	7	N	3.2
Thallium			< 1.4	1.4	U	1.4	< 1.5	1.5	U	1.5	< 1.6	1.6	U	1.6	< 1.7	1.7	U	1.7	< 1.4	1.4	U	1.4	< 1.4	1.4	U	1.4	< 1.5	1.5	U	1.5
Vanadium			**39**	0.4		0.14	**22**	0.4		0.15	**23.8**	0.4		0.16	**56.1**	0.4		0.17	**53.5**	0.3		0.14	**28.4**	0.4		0.14	**51.3**	0.4		0.15
Zinc	109	10,000	**30**	0.7		0.36	**16**	0.8		0.38	**176**	8.1		4.1	**78.2**	0.9		0.43	**31.7**	0.7		0.34	**13.7**	0.7		0.36	**58**	0.7		0.37

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
BRL - Below Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspectec
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
853 Lexington Ave,
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*	B8				B9												B10												B11			
			(43-45') 1/6/2014 mg/Kg				(0-2') 1/7/2014 mg/Kg				(10-12') 1/7/2014 mg/Kg				(43-45') 1/7/2014 mg/Kg				(0-2') 1/6/2014 mg/Kg				(10-12') 1/6/2014 mg/Kg				(43-45') 1/6/2014 mg/Kg				(0-2') 1/7/2014 mg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
Aluminum			3,420	35		7.1	11,200	36		7.1	9,340	33		6.6	3,680	35		6.9	10,300	39		7.8	14,700	39		7.8	3,480	39		7.8	13,000	38		8
Antimony			< 1.8	1.8	U	0.71	< 1.8	1.8	U	0.71	< 1.7	1.7	U	0.66	< 1.7	1.7	U	0.69	< 2.0	2	U	0.78	< 1.9	1.9	U	0.78	< 1.9	1.9	U	0.78	< 1.9	1.9	U	0.76
Arsenic	13	16	1.3	0.7		0.71	3.1	0.7		0.71	1.7	0.7		0.66	1.4	0.7		0.69	6.7	0.8		0.78	6.9	0.8		0.78	2	0.8		0.78	3.5	0.8		0.76
Barium	350	400	20.4	0.7		0.14	67.3	0.7		0.14	64.4	0.7		0.13	28.8	0.7		0.14	53.6	0.8		0.16	85.1	0.8		0.16	27.5	0.8		0.16	62.6	0.8		0.15
Beryllium	7.2	72	0.24	0.28	B	0.14	0.47	0.28		0.14	0.46	0.26		0.13	0.32	0.28		0.14	0.45	0.31		0.16	0.77	0.31		0.16	0.27	0.31	B	0.16	0.75	0.3		0.15
Cadmium	2.5	4.3	0.18	0.35	B	0.14	< 0.36	0.36	U	0.14	0.19	0.33	B	0.13	0.4	0.35		0.14	< 0.39	0.39	U	0.16	0.5	0.39		0.16	0.37	0.39	B	0.16	< 0.38	0.38	U*	0.15
Calcium			1,410	3.5	*	3.3	4,020	3.6	*	3.3	828	3.3	*	3	1,220	3.5	*	3.2	54,600	39	*	36	1,350	3.9	*	3.6	1,120	3.9	*	3.6	12,600	38		35
Chromium			14.6	0.35		0.14	20.7	0.36		0.14	24.7	0.33		0.13	11.8	0.35		0.14	13.6	0.39		0.16	37.6	0.39		0.16	12.3	0.39		0.16	55.4	0.38		0.15
Cobalt			4.17	0.35	*	0.14	5.43	0.36	*	0.14	5.85	0.33	*	0.13	4.03	0.35	*	0.14	4.47	0.39	*	0.16	13.9	0.39	*	0.16	3.6	0.39	*	0.16	6.75	0.38		0.15
Copper	50	270	11.6	0.35		0.28	19.7	0.36		0.28	17	0.33		0.26	15.8	0.35		0.28	14.1	0.39		0.31	25.3	0.39		0.31	11.5	0.39		0.31	23.5	0.38		0.3
Iron			12,000	35		35	18,700	36		36	27,000	33		33	28,000	35		35	14,000	39		39	54,800	39		39	26,500	39		39	31,200	38		38
Lead	63	400	3.6	0.7		0.21	62.5	0.7		0.21	4.8	0.7		0.2	3.2	0.7		0.21	43.8	0.8		0.23	9.2	0.8		0.23	3.6	0.8		0.23	6.7	0.8		0.23
Magnesium			3,960	3.5		0.21	2,870	3.6		0.21	2,520	3.3		0.2	2,600	3.5		0.21	5,450	3.9		0.23	4,730	3.9		0.23	1,800	3.9		0.23	4,040	3.8		
Manganese	1,600	2,000	238	3.5	N	1.4	308	3.6	N	1.4	421	3.3	N	1.3	493	3.5	N	1.4	389	3.9	N	1.6	1070	3.9	N	1.6	375	3.9	N	1.6	395	3.8		1.5
Mercury	0.18	0.81	< 0.08	0.08	U	0.05	0.25	0.08		0.05	< 0.07	0.07	U	0.04	< 0.06	0.06	U	0.04	0.15	0.07		0.04	< 0.07	0.07	U	0.04	< 0.07	0.07	U	0.04	< 0.08	0.08	U	0.05
Nickel	30	310	35.3	0.35	*	0.14	14	0.36	*	0.14	13.6	0.33	*	0.13	22.1	0.35	*	0.14	11.9	0.39	*	0.16	23.9	0.39	*	0.16	13.9	0.39	*	0.16	23.9	0.38		0.15
Potassium			744	7	N	2.8	1,360	7	N	2.8	1,400	7	N	2.6	627	7	N	2.7	1,150	8	N	3.1	2,610	8	N	3	565	8	N	3	1,590	8	N	3
Selenium	3.9	180	< 1.4	1.4	U	1.2	< 1.4	1.4	U	1.2	< 1.3	1.3	U	1.1	< 1.4	1.4	U	1.2	4.5	1.6		1.3	< 1.6	1.6	U	1.3	< 1.6	1.6	U	1.3	< 1.5	1.5	U	1.3
Silver	2	180	< 0.35	0.35	U	0.21	< 0.36	0.36	U	0.21	< 0.33	0.33	U	0.2	< 0.35	0.35	U	0.21	< 0.39	0.39	U	0.23	< 0.39	0.39	U	0.23	< 0.39	0.39	U	0.23	< 0.38	0.38	U	0.23
Sodium			135	7	N	3	126	7	N	3.1	72	7	N	2.8	107	7	N	3	210	8	N	3.4	84	8	N	3.3	105	8	N	3.3	121	8	N	3.3
Thallium			< 1.4	1.4	U	1.4	< 1.4	1.4	U	1.4	< 1.3	1.3	U	1.3	< 1.4	1.4	U	1.4	< 1.6	1.6	U	1.6	< 1.6	1.6	U	1.6	< 1.6	1.6	U	1.6	< 1.5	1.5	U	1.5
Vanadium			16.3	0.4		0.14	27.1	0.4		0.14	31.3	0.3		0.13	25.5	0.3		0.14	22.6	0.4		0.16	47.9	0.4		0.16	28.4	0.4		0.16	43.8	0.4		0.15
Zinc	109	10,000	20.6	0.7		0.35	54.3	0.7		0.36	27.8	0.7		0.33	18.8	0.7		0.35	42.4	0.8		0.39	50.6	0.8		0.39	16.6	0.8		0.39	34.2	0.8	N	0.38

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
BRL - Below Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspectec
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 6
853 Lexington Ave,
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*	B11 (6-8ft) 1/7/2014 mg/Kg				B12 (0-2') 1/7/2014 mg/Kg				B12 (6-8') 1/7/2014 mg/Kg				B13 (0-2') 1/7/2014 mg/Kg				B13 (6-8') 1/7/2014 mg/Kg				Duplicate 1 (B7 10-15') 1/7/2014 mg/Kg				Duplicate 2 (B610-15') 1/7/2014 mg/Kg			
			Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Qual	MDL
Aluminum			7,800	37		7.4	10,800	42		8.3	5,800	33		6.5	12,800	40		8.1	5,770	39		7.7	15,700	42		8.3	9,280	34		6.9
Antimony			< 1.9	1.9	U	0.74	2.3	2.1		0.83	< 1.6	1.6	U	0.65	< 2.0	2	U	0.81	< 1.9	1.9	U	0.77	< 2.1	2.1	U	0.83	< 1.7	1.7	U	0.69
Arsenic	13	16	2	0.7		0.74	4.4	0.8		0.83	1.3	0.7		0.65	3.3	0.8		0.81	1.3	0.8		0.77	5.9	0.8		0.83	1.8	0.7		0.69
Barium	350	400	42.1	0.7		0.15	83.3	0.8		0.17	38.3	0.7		0.13	76.4	0.8		0.16	24.5	0.8		0.15	105	0.8		0.17	51.5	0.7		0.14
Beryllium	7.2	72	0.56	0.3		0.15	0.54	0.33		0.17	0.45	0.26		0.13	0.58	0.32		0.16	0.4	0.31		0.15	0.8	0.33		0.17	0.62	0.27		0.14
Cadmium	2.5	4.3	0.28	0.37	B*	0.15	0.28	0.42	B*	0.17	0.47	0.33	*	0.13	0.76	0.4	*	0.16	0.24	0.39	B*	0.15	0.21	0.42	B*	0.17	0.61	0.34	*	0.14
Calcium			5,020	3.7		3.4	2,910	4.2		3.8	757	3.3		3	63,500	40		37	867	3.9		3.6	15,700	42		38	980	3.4		3.2
Chromium			22.3	0.37		0.15	25.7	0.42		0.17	20.6	0.33		0.13	30.7	0.4		0.16	17.2	0.39		0.15	41.9	0.42		0.17	24.4	0.34		0.14
Cobalt			7.02	0.37		0.15	8.16	0.42		0.17	5.42	0.33		0.13	5.88	0.4		0.16	5.19	0.39		0.15	10.2	0.42		0.17	7.3	0.34		0.14
Copper	50	270	19.1	0.37		0.3	20.6	0.42		0.33	12.8	0.33		0.26	22.9	0.4		0.32	16.9	0.39		0.31	28.3	0.42		0.33	18.7	0.34		0.27
Iron			28,200	37		37	29,500	42		42	34,900	33		33	17,600	40		40	23,600	39		39	39,200	42		42	52,100	34		34
Lead	63	400	5.8	0.7		0.22	12.7	0.8		0.25	5	0.7		0.2	21.4	0.8		0.24	5.4	0.8		0.23	16.7	0.8		0.25	6.9	0.7		0.21
Magnesium			2,200	3.7		0.22	3,500	4.2		0.25	1,690	3.3		0.2	8,530	40		2.4	1,870	3.9		0.23	6,650	42		2.5	2,880	3.4		0.21
Manganese	1,600	2,000	545	3.7		1.5	996	4.2		1.7	808	3.3		1.3	289	4		1.6	256	3.9		1.5	415	4.2		1.7	1,090	3.4		1.4
Mercury	0.18	0.81	< 0.09	0.09	U	0.05	< 0.10	0.1	U	0.06	< 0.07	0.07	U	0.04	< 0.08	0.08	U	0.05	< 0.07	0.07	U	0.04	< 0.10	0.1	U	0.06	< 0.08	0.08	U	0.05
Nickel	30	310	14.8	0.37		0.15	19.8	0.42		0.17	12.8	0.33		0.13	43.5	0.4		0.16	10.3	0.39		0.15	26.4	0.42		0.17	19.3	0.34		0.14
Potassium			825	7	N	2.9	1,560	8	N	3.2	732	7	N	2.6	3,230	8	N	3.1	964	8	N	3	2,820	8	N	3.2	1,200	7	N	2.7
Selenium	3.9	180	< 1.5	1.5	U	1.3	< 1.7	1.7	U	1.4	< 1.3	1.3	U	1.1	< 1.6	1.6	U	1.4	< 1.5	1.5	U	1.3	< 1.7	1.7	U	1.4	< 1.4	1.4	U	1.2
Silver	2	180	< 0.37	0.37	U	0.22	< 0.42	0.42	U	0.25	< 0.33	0.33	U	0.2	2.99	0.4		0.24	< 0.39	0.39	U	0.23	< 0.42	0.42	U	0.25	< 0.34	0.34	U	0.21
Sodium			81	7	N	3.2	93	8	N	3.6	60	7	N	2.8	521	8	N	3.5	77	8	N	3.3	219	8	N	3.6	96	7	N	2.9
Thallium			< 1.5	1.5	U	1.5	< 1.7	1.7	U	1.7	< 1.3	1.3	U	1.3	< 1.6	1.6	U	1.6	< 1.5	1.5	U	1.5	< 1.7	1.7	U	1.7	< 1.4	1.4	U	1.4
Vanadium			36.2	0.4		0.15	33.1	0.4		0.17	28.5	0.3		0.13	29.1	0.4		0.16	28.6	0.4		0.15	45.9	0.4		0.17	37.8	0.3		0.14
Zinc	109	10,000	25.3	0.7	N	0.37	45.6	0.8	N	0.42	21	0.7	N	0.33	44.1	0.8	N	0.4	22.3	0.8	N	0.39	65.9	0.8	N	0.42	31	0.7	N	0.34

Notes:

** - 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives
BRL - Below Reporting Limit
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspectec
Bold/highlighted- Indicated exceedance of the NYSDEC UUSCO Guidance Value
Bold/highlighted- Indicated exceedance of the NYSDEC RRSCO Guidance Value

TABLE 7
853 Lexington Ave,
Brooklyn , New York
Groundwater Analytical Results
Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards	MW1 5/31/2013 µg/L		MW1 1/8/2014 µg/L				MW2 5/31/2013 µg/L		MW2 1/8/2014 µg/L				MW3 5/31/2013 µg/L	
	µg/L	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL
1,1,1,2-Tetrachlorothane	5	ND	1	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19	ND	1
1,1,1-Trichloroethane	5	ND	1	< 5.0	5	U	0.19	ND	1	< 5.0	5	U	0.19	ND	1
1,1,2,2-Tetrachloroethane	5	ND	0.5	< 1.0	1	U	0.15	ND	0.5	< 1.0	1	U	0.15	ND	0.5
1,1,2-Trichloroethane	1	ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
1,1-Dichloroethane	5	ND	1	< 5.0	5	U	0.23	ND	1	< 5.0	5	U	0.23	ND	1
1,1-Dichloroethene	5	ND	1	< 1.0	1	U	0.24	ND	1	< 1.0	1	U	0.24	ND	1
1,1-Dichloropropene		ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
1,2,3-Trichlorobenzene		ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
1,2,3-Trichloropropane	0.04	ND	1	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21	ND	1
1,2,4-Trichlorobenzene		ND	1	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18	ND	1
1,2,4-Trimethylbenzene	5	ND	1	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18	ND	1
1,2-Dibromo-3-chloropropane	0.04	ND	1	< 1.0	1	U	0.36	ND	1	< 1.0	1	U	0.36	ND	1
1,2-Dibromoethane	5	ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
1,2-Dichlorobenzene	0.6	ND	1	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16	ND	1
1,2-Dichloethane	0.94	ND	0.6	< 0.6	0.6	U	0.2	ND	0.6	< 0.6	0.6	U	0.2	ND	0.6
1,2-Dibropropane		ND	1	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18	ND	1
1,3,5-Trimethylbenzene	5	ND	1	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21	ND	1
1,3-Dichlorobenzene	5	ND	1	< 3	3	U	0.19	ND	1	< 3	3	U	0.19	ND	1
1,3-Dichloropropane	5	ND	1	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22	ND	1
1,4-Dichlorobenzene	5	ND	1	< 5.0	5	U	0.19	ND	1	< 5.0	5	U	0.19	ND	1
2,2-Dichloropropane	5	ND	1	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16	ND	1
2-Chlorotoluene	5	ND	1	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23	ND	1
2-Hexanone (Methyl Butyl Ketone)		ND	5	< 1.0	1	U	0.27	ND	5	< 1.0	1	U	0.27	ND	5
2-Isopropyltoluene	5	ND	1	**0.48**	1	J	0.21	ND	1	< 1.0	1	U	0.21	ND	1
4-Chlorotoluene	5	ND	1	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16	ND	1
4-Methyl-2-Pentanone		ND	5	< 1.0	1	U	0.19	ND	5	< 1.0	1	U	0.19	ND	5
Acetone		ND	25	**6.7**	5		0.31	ND	25	**3.2**	5	J	0.31	ND	25
Acrylonitrile	5	ND	5	< 5.0	5	U	0.95	ND	5	< 5.0	5	U	0.95	ND	5
Benzene	1	ND	0.7	< 5.0	5	U	0.17	ND	0.7	< 5.0	5	U	0.17	ND	0.7
Bromobenzene	5	ND	1	< 0.70	0.7	U	0.19	ND	1	< 0.70	0.7	U	0.19	ND	1
Bromochloromethane	5	ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
Bromodichloromethane		ND	0.5	< 1.0	1	U	0.22	ND	0.5	< 1.0	1	U	0.22	ND	0.5
Bromoform		ND	1	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16	ND	1
Bromomethane	5	ND	1	< 5.0	5	U	0.1	ND	1	< 5.0	5	U	0.1	ND	1
Carbon Disulfide	60	ND	5	< 5.0	5	U	0.25	ND	5	< 5.0	5	U	0.25	ND	5
Carbon tetrachloride	5	ND	1	< 1.0	1	U	0.24	ND	1	< 1.0	1	U	0.24	ND	1
Chlorobenzene	5	ND	1	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23	ND	1
Chloroethane	5	ND	1	< 5.0	5	U	0.2	ND	1	< 5.0	5	U	0.2	ND	1
Chloroform	7	ND	1	< 5.0	5	U	0.24	ND	1	< 5.0	5	U	0.24	ND	1
Chloromethane	60	ND	1	< 5.0	5	U	0.22	ND	1	< 5.0	5	U	0.22	ND	1
cis-1,2-Dichloroethene	5	**3.3**	1	< 5.0	5	U	0.21	**1.6**	1	< 5.0	5	U	0.21	**4.4**	1
cis-1,3-Dichloropropene		ND	0.4	**2.2**	1		0.23	ND	0.4	**1.4**	1		0.23	ND	0.4
Dibromochloromethane		ND	0.5	< 0.40	0.4	U	0.15	ND	0.5	< 0.40	0.4	U	0.15	ND	0.5
Dibromomethane	5	ND	1	< 1.0	1	U	0.15	ND	1	< 1.0	1	U	0.15	ND	1
Dichlorodifluoromethane	5	ND	1	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23	ND	1
Ethylbenzene	5	ND	1	< 1.0	1	U	0.26	ND	1	< 1.0	1	U	0.26	ND	1
Hexachlorobutadiene	0.5	ND	0.4	< 1.0	1	U	0.19	ND	0.4	< 1.0	1	U	0.19	ND	0.4
Isopropylbenzene	5	ND	1	< 0.5	0.5	U	0.13	ND	1	< 0.5	0.5	U	0.13	ND	1
m&p-Xylenes	5	ND	1	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22	ND	1
Methyl Ethyl Ketone (2-Butanone)		ND	5	< 1.0	1	U	0.42	ND	5	< 1.0	1	U	0.42	ND	5
Methyl t-butyl ether (MTBE)	10	ND	1	< 1.0	1	U	0.5	ND	1	< 1.0	1	U	0.5	ND	1
Methylene chloride	5	ND	1	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19	**3.8**	1
Naphthalene	10	ND	1	< 3.0	3	U	0.16	ND	1	< 3.0	3	U	0.16	ND	1
n-Butylbenzene	5	ND	1	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19	ND	1
n-Propylbenzene	5	ND	1	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22	ND	1
o-Xylene	5	ND	1	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2	ND	1
p-Isopropyltoluene		ND	1	< 1.0	1	U	0.45	ND	1	< 1.0	1	U	0.45	ND	1
sec-Butylbenzene	5	ND	1	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21	ND	1
Styrene	5	ND	1	**1.2**	1		0.22	ND	1	< 1.0	1	U	0.22	ND	1
tert-Butylbenzene	5	ND	1	< 1.0	1	U	0.41	ND	1	< 1.0	1	U	0.41	ND	1
Tetrachloroethene	5	**50**	5	< 1.0	1	U	0.23	**15**	1	< 1.0	1	U	0.23	**110**	10
Tetrahydrofuran (THF)		ND	2.5	**15**	1		0.24	ND	2.5	**14**	1		0.24	ND	2.5
Toluene	5	ND	1	< 5.0	5	U	0.51	ND	1	< 5.0	5	U	0.51	ND	1
Total Xylenes	5	ND	2	< 1.0	1	U	0.2	ND	2	< 1.0	1	U	0.2	ND	2
trans-1,2-Dichloroethene	5	ND	1	< 5.0	5	U	0.2	ND	1	**0.25**	5	J	0.2	ND	1
trans-1,3-Dichloropropene	0.4	ND	0.4	< 0.40	0.4	U	0.14	ND	0.4	< 0.40	0.4	U	0.14	ND	0.4
trans-1,4-dichloro-2-butene	5	ND	5	< 1.0	1	U	0.45	ND	5	< 1.0	1	U	0.45	ND	5
Trichloroethene	5	**61**	5	**19**	1		0.18	**23**	1	**17**	1		0.18	**85**	10
Trichlorofluoromethane	5	ND	1	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23	ND	1
Trichlorotrifluoroethane		ND	1	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23	ND	1
Vinyl Chloride	2	ND	1	< 1.0	1	U	0.14	ND	1	< 1.0	1	U	0.14	ND	1

Notes:

ND - Not detected
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 7
853 Lexington Ave,
Brooklyn , New York
Groundwater Analytical Results
Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards	MW3 1/8/2014 µg/L				MW4 1/8/2014 µg/L				Duplicate (MW1) 5/31/2013 µg/L		Duplicate (MW1) 1/8/2014 µg/L			
	µg/L	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL
1,1,1,2-Tetrachlorothane	5	< 1.0	1	U	0.19	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19
1,1,1-Trichloroethane	5	< 5.0	5	U	0.19	< 5.0	5	U	0.19	ND	1	< 5.0	5	U	0.19
1,1,2,2-Tetrachloroethane	5	< 1.0	1	U	0.15	< 1.0	1	U	0.15	ND	0.5	< 1.0	1	U	0.15
1,1,2-Trichloroethane	1	< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
1,1-Dichloroethane	5	< 5.0	5	U	0.23	< 5.0	5	U	0.23	ND	1	< 5.0	5	U	0.23
1,1-Dichloroethene	5	< 1.0	1	U	0.24	< 1.0	1	U	0.24	ND	1	< 1.0	1	U	0.24
1,1-Dichloropropene		< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
1,2,3-Trichlorobenzene		< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
1,2,3-Trichloropropane	0.04	< 1.0	1	U	0.21	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21
1,2,4-Trichlorobenzene		< 1.0	1	U	0.18	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18
1,2,4-Trimethylbenzene	5	< 1.0	1	U	0.18	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18
1,2-Dibromo-3-chloropropane	0.04	< 1.0	1	U	0.36	< 1.0	1	U	0.36	ND	1	< 1.0	1	U	0.36
1,2-Dibromoethane	5	< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
1,2-Dichlorobenzene	0.6	< 1.0	1	U	0.16	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16
1,2-Dichloethane	0.94	< 0.6	0.6	U	0.2	< 0.6	0.6	U	0.2	ND	0.6	< 0.6	0.6	U	0.2
1,2-Dibropropane		< 1.0	1	U	0.18	< 1.0	1	U	0.18	ND	1	< 1.0	1	U	0.18
1,3,5-Trimethylbenzene	5	< 1.0	1	U	0.21	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21
1,3-Dichlorobenzene	5	< 3	3	U	0.19	< 3	3	U	0.19	ND	1	< 3	3	U	0.19
1,3-Dichloropropane	5	< 1.0	1	U	0.22	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22
1,4-Dichlorobenzene	5	< 5.0	5	U	0.19	< 5.0	5	U	0.19	ND	1	< 5.0	5	U	0.19
2,2-Dichloropropane	5	< 1.0	1	U	0.16	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16
2-Chlorotoluene	5	< 1.0	1	U	0.23	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23
2-Hexanone (Methyl Butyl Ketone)		< 1.0	1	U	0.27	< 1.0	1	U	0.27	ND	5	< 1.0	1	U	0.27
2-Isopropyltoluene	5	< 1.0	1	U	0.21	< 1.0	1	U	0.21	ND	1	**0.4**	1	J	0.21
4-Chlorotoluene	5	< 1.0	1	U	0.16	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16
4-Methyl-2-Pentanone		< 1.0	1	U	0.19	< 1.0	1	U	0.19	ND	5	< 1.0	1	U	0.19
Acetone		**3.6**	5	J	0.31	**4**	5	J	0.31	ND	25	< 5.0	5	U	0.31
Acrylonitrile	5	< 5.0	5	U	0.95	< 5.0	5	U	0.95	ND	5	< 5.0	5	U	0.95
Benzene	1	< 5.0	5	U	0.17	< 5.0	5	U	0.17	ND	0.7	< 5.0	5	U	0.17
Bromobenzene	5	< 0.70	0.7	U	0.19	< 0.70	0.7	U	0.19	ND	1	< 0.70	0.7	U	0.19
Bromochloromethane	5	< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
Bromodichloromethane		< 1.0	1	U	0.22	< 1.0	1	U	0.22	ND	0.5	< 1.0	1	U	0.22
Bromoform		< 1.0	1	U	0.16	< 1.0	1	U	0.16	ND	1	< 1.0	1	U	0.16
Bromomethane	5	< 5.0	5	U	0.1	< 5.0	5	U	0.1	ND	1	< 5.0	5	U	0.1
Carbon Disulfide	60	< 5.0	5	U	0.25	< 5.0	5	U	0.25	ND	5	< 5.0	5	U	0.25
Carbon tetrachloride	5	< 1.0	1	U	0.24	< 1.0	1	U	0.24	ND	1	< 1.0	1	U	0.24
Chlorobenzene	5	< 1.0	1	U	0.23	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23
Chloroethane	5	< 5.0	5	U	0.2	< 5.0	5	U	0.2	ND	1	< 5.0	5	U	0.2
Chloroform	7	< 5.0	5	U	0.24	< 5.0	5	U	0.24	ND	1	< 5.0	5	U	0.24
Chloromethane	60	**1.1**	5	J	0.22	**0.71**	5	J	0.22	ND	1	< 5.0	5	U	0.22
cis-1,2-Dichloroethene	5	**0.21**	5	J	0.21	**0.68**	5	J	0.21	**3.3**	1	< 5.0	5	U	0.21
cis-1,3-Dichloropropene		**0.82**	1	J	0.23	**6.5**	1		0.23	ND	0.4	**2.3**	1		0.23
Dibromochloromethane		< 0.40	0.4	U	0.15	< 0.40	0.4	U	0.15	ND	0.5	< 0.40	0.4	U	0.15
Dibromomethane	5	< 1.0	1	U	0.15	< 1.0	1	U	0.15	ND	1	< 1.0	1	U	0.15
Dichlorodifluoromethane	5	< 1.0	1	U	0.23	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23
Ethylbenzene	5	< 1.0	1	U	0.26	< 1.0	1	U	0.26	ND	1	< 1.0	1	U	0.26
Hexachlorobutadiene	0.5	< 1.0	1	U	0.19	< 1.0	1	U	0.19	ND	0.4	< 1.0	1	U	0.19
Isopropylbenzene	5	< 0.5	0.5	U	0.13	< 0.5	0.5	U	0.13	ND	1	< 0.5	0.5	U	0.13
m&p-Xylenes	5	< 1.0	1	U	0.22	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22
Methyl Ethyl Ketone (2-Butanone)		< 1.0	1	U	0.42	< 1.0	1	U	0.42	ND	5	< 1.0	1	U	0.42
Methyl t-butyl ether (MTBE)	10	< 1.0	1	U	0.5	< 1.0	1	U	0.5	ND	1	< 1.0	1	U	0.5
Methylene chloride	5	< 1.0	1	U	0.19	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19
Naphthalene	10	< 3.0	3	U	0.16	< 3.0	3	U	0.16	ND	1	< 3.0	3	U	0.16
n-Butylbenzene	5	< 1.0	1	U	0.19	< 1.0	1	U	0.19	ND	1	< 1.0	1	U	0.19
n-Propylbenzene	5	< 1.0	1	U	0.22	< 1.0	1	U	0.22	ND	1	< 1.0	1	U	0.22
o-Xylene	5	< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	1	< 1.0	1	U	0.2
p-Isopropyltoluene		< 1.0	1	U	0.45	< 1.0	1	U	0.45	ND	1	< 1.0	1	U	0.45
sec-Butylbenzene	5	< 1.0	1	U	0.21	< 1.0	1	U	0.21	ND	1	< 1.0	1	U	0.21
Styrene	5	< 1.0	1	U	0.22	< 1.0	1	U	0.22	ND	1	**1.3**	1		0.22
tert-Butylbenzene	5	< 1.0	1	U	0.41	< 1.0	1	U	0.41	ND	1	< 1.0	1	U	0.41
Tetrachloroethene	5	< 1.0	1	U	0.23	< 1.0	1	U	0.23	**47**	5	< 1.0	1	U	0.23
Tetrahydrofuran (THF)		**39**	5		5	**170**	10		2.4	ND	2.5	**18**	1		0.24
Toluene	5	< 5.0	5	U	0.51	< 5.0	5	U	0.51	ND	1	< 5.0	5	U	0.51
Total Xylenes	5	< 1.0	1	U	0.2	< 1.0	1	U	0.2	ND	2	< 1.0	1	U	0.2
trans-1,2-Dichloroethene	5	< 5.0	5	U	0.2	**0.83**	5	J	0.2	ND	1	< 5.0	5	U	0.2
trans-1,3-Dichloropropene	0.4	< 0.40	0.4	U	0.14	< 0.40	0.4	U	0.14	ND	0.4	< 0.40	0.4	U	0.14
trans-1,4-dichloro-2-butene	5	< 1.0	1	U	0.45	< 1.0	1	U	0.45	ND	5	< 1.0	1	U	0.45
Trichloroethene	5	**29**	1		0.18	**120**	10		1.8	**57**	5	**21**	1		0.18
Trichlorofluoromethane	5	< 1.0	1	U	0.23	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23
Trichlorotrifluoroethane		< 1.0	1	U	0.23	< 1.0	1	U	0.23	ND	1	< 1.0	1	U	0.23
Vinyl Chloride	2	< 1.0	1	U	0.14	< 1.0	1	U	0.14	ND	1	< 1.0	1	U	0.14

Notes:

ND - Not detected
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contaminatior
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 8
853 Lexington Ave,
Brooklyn, New York
Groundwater Analytical Results
Semi-Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards	MW1 5/31/2013 µg/L		MW1 1/8/2014 µg/L				MW2 5/31/2013 µg/L		MW2 1/8/2014 µg/L				MW3 5/31/2013 µg/L	
	µg/L	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL
1,2,4,5-Tetrachlorobenzene		ND	1.7	< 1.5	1.5	U	1.5	ND	1.7	< 1.5	1.5	U	1.5	ND	1.8
1,2,4-Trichlorobenzene		ND	5.3	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5	ND	5.6
1,2-Dichlorobenzene		ND	4	< 3	3	U	1.4	ND	4	< 3	3	U	1.4	ND	5.6
1,2-Diphenylhdrazine		ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
1,3-Dichlorobenzene		ND	3	< 3	3	U	1.5	ND	3	< 3	3	U	1.5	ND	5.6
1,4-Dichlorobenzene		ND	5	< 3	3	U	1.5	ND	5	< 3	3	U	1.5	ND	5.6
2,4,5-Trichlorophenol	3	ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2,4,6-Trichlorophenol	3	ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2,4-Dichlorophenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2,4-Dimethylphenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2,4-Dinitrophenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	56
2,4-Dinitrotoluene	5	ND	5	< 5.0	5	U	2	ND	5	< 5.0	5	U	2	ND	5.6
2,6-Dinitrotoluene	5	ND	5	< 5.0	5	U	1.6	ND	5	< 5.0	5	U	1.6	ND	5.6
2-Chloronaphthalene	10	ND	5.3	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4	ND	5.6
2-Chlorophenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2-Methylnaphthalene		ND	5.3	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5	ND	5.6
2-Methylphenol (o-cresol)		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
2-Nitroaniline	5	ND	5	< 5	5	U	5	ND	5	< 5	5	U	5	ND	56
2-Nitrophenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	11
3&4-Methylphenol (m&p-cresol)		ND	11	< 5.0	5	U	2	ND	11	< 5.0	5	U	2	ND	11
3,3'-Dichlorobenzidine	5	ND	5	< 5	5	U	2.4	ND	5	< 5	5	U	2.4	ND	56
3-Nitroaniline	5	ND	5	< 5	5	U	5	ND	5	< 5	5	U	5	ND	56
4,6-Dinitro-2-methylphenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	56
4-Bromophenyl phenyl ether		ND	5.3	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5	ND	5.6
4-Chloro-3-methylphenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	22
4-Chloroaniline	5	ND	5	< 5	5	U	2.3	ND	5	< 5	5	U	2.3	ND	22
4-Chlorophenyl phenyl ether		ND	5.3	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7	ND	5.6
4-Nitroaniline	5	ND	5	< 5	5	U	1.7	ND	5	< 5	5	U	1.7	ND	22
4-Nitrophenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	56
Acenaphthene	20	ND	0.053	< 5.0	5	U	1.5	ND	0.053	< 5.0	5	U	1.5	**0.11**	0.056
Acenaphthylene		ND	0.053	< 5.0	5	U	1.6	ND	0.053	< 5.0	5	U	1.6	ND	0.056
Acetophenone		ND	5.3	< 5	5	U	5	ND	5.3	< 5	5	U	5	ND	5.6
Aniline		ND	5	< 5.0	5	U	1.6	ND	5	< 5.0	5	U	1.6	ND	11
Anthracene	50	ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
Benzo(a)anthracene	0.002	**0.074**	0.042	**0.07**	0.02		0.02	**0.063**	0.042	**0.05**	0.02		0.02	**0.28**	0.044
Benzidine	5	ND	5	< 5	5	U	2.9	ND	5	< 5	5	U	2.9	ND	56
Benzo(a)pyrene		ND	0.053	< 0.02	0.02	U	0.02	ND	0.053	< 0.02	0.02	U	0.02	**0.2**	0.056
Benzo(b)fluoranthene	0.002	**0.063**	0.053	**0.03**	0.02		0.02	**0.053**	0.053	< 0.02	0.02	U	0.02	**0.3**	0.056
Benzo(g,h,i)perylene		ND	3.2	< 0.02	0.02	U	0.02	ND	3.2	< 0.02	0.02	U	0.02	ND	3.3
Benzo(k)fluoranthene	0.002	ND	0.053	< 0.02	0.02	U	0.02	ND	0.053	< 0.02	0.02	U	0.02	**0.11**	0.056
Benzoic Acid		ND	50	< 25	25	U	10	ND	50	< 25	25	U	10	ND	56
Benzyl Butyl phthalate		ND	5.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3	ND	5.6
Bis(2-chloroethoxy)methane	5	ND	5	< 5.0	5	U	1.4	ND	5	< 5.0	5	U	1.4	ND	5.6
Bis(2-chloroethyl)ether	1	ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	5.6
Bis(2-chloroisopropyl)ether		ND	5.3	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4	ND	5.6
Bis(2-ethylhexyl)phthalate	5	ND	1.7	< 1.6	1.6	U	1.4	**4.3**	1.7	< 1.6	1.6	U	1.4	**40**	1.8
Carbazole		ND	5.3	< 25	25	U	3.8	ND	5.3	< 25	25	U	3.8	ND	5.6
Chrysene	0.002	**0.074**	0.053	**0.05**	0.02		0.02	**0.053**	0.053	**0.04**	0.02		0.02	**0.33**	0.056
Dibenzo(a,h)anthracene		ND	0.011	< 0.02	0.02	U	0.02	ND	0.011	< 0.02	0.02	U	0.02	**0.044**	0.011
Dibenzofuran		ND	5	< 5.0	5	U	1.5	ND	5	< 5.0	5	U	1.5	ND	5.6
Diethylphthalate	50	ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
Dimethylphthalate	50	ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
Di-n-butylphthalate	50	ND	5.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3	ND	5.6
Di-n-octylphthalate	50	ND	5.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3	ND	5.6
Fluoranthene	50	ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
Hexachlorobenzene	0.04	ND	0.063	< 2.4	2.4	U	1.5	ND	0.063	< 2.4	2.4	U	1.5	ND	0.067
Fluorene	50	ND	5.3	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7	ND	5.6
Hexachlorobutadiene	0.5	ND	0.5	< 0.5	0.5	U	0.5	ND	0.5	< 0.5	0.5	U	0.5	ND	5.6
Hexachlorocyclopentadiene	5	ND	5	< 5.0	5	U	1.5	ND	5	< 5.0	5	U	1.5	ND	5.6
Hexachloroethane	5	ND	2.5	< 2.4	2.4	U	1.5	ND	2.5	< 2.4	2.4	U	1.5	ND	2.7
Indeno(1,2,3-cd)pyrene	0.002	ND	0.053	< 0.02	0.02	U	0.02	ND	0.053	< 0.02	0.02	U	0.02	**0.13**	0.056
Isophorone	50	ND	5.3	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4	ND	5.6
Naphthalene	10	ND	5	< 5.0	5	U	1.4	ND	5	< 5.0	5	U	1.4	ND	5.6
Nitrobenzene	0.4	ND	0.4	< 0.4	0.4	U	0.4	ND	0.4	< 0.4	0.4	U	0.4	ND	5.6
N-Nitrosodimethylamine		ND	5.3	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4	ND	5.6
N-Nitrosodi-n-propylamine		ND	5.3	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6	ND	5.6
N-Nitrosodiphenylamine	50	ND	5.3	< 5.0	5	U	1.9	ND	5.3	< 5.0	5	U	1.9	ND	5.6
Pentachloronitrobenzene		ND	0.11	< 0.10	0.1	U	0.1	ND	0.11	< 0.10	0.1	U	0.1	ND	0.11
Pentachlorophenol		ND	0.84	< 0.80	0.8	U	0.8	ND	0.84	< 0.80	0.8	U	0.8	ND	0.89
Phenanthrene	50	**0.13**	0.053	< 0.10	0.1	U	0.1	**0.063**	0.053	< 0.10	0.1	U	0.1	**0.79**	0.056
Phenol		ND	1	< 1	1	U	1	ND	1	< 1	1	U	1	ND	5.6
Pyrene	50	ND	5.3	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7	ND	5.6
Pyridine		ND	0.53	< 10	10	U	1.2	ND	0.53	< 10	10	U	1.2	ND	0.56

Notes:

ND - Not detected
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 8
853 Lexington Ave,
Brooklyn, New York
Groundwater Analytical Results
Semi-Volatile Organic Compounds

Compound	NYSDEC Groundwater Quality Standards	MW3 1/8/2014				MW4 1/8/2014				Duplicate (MW1) 5/31/2013		Duplicate (MW1) 1/8/2014			
	µg/L	µg/L				µg/L				µg/L		µg/L			
		Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL
1,2,4,5-Tetrachlorobenzene		< 1.5	1.5	U	1.5	< 1.5	1.5	U	1.5	ND	1.9	< 1.5	1.5	U	1.5
1,2,4-Trichlorobenzene		< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5
1,2-Dichlorobenzene		< 3	3	U	1.4	< 3	3	U	1.4	ND	4	< 3	3	U	1.4
1,2-Diphenylhdrazine		< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
1,3-Dichlorobenzene		< 3	3	U	1.5	< 3	3	U	1.5	ND	3	< 3	3	U	1.5
1,4-Dichlorobenzene		< 3	3	U	1.5	< 3	3	U	1.5	ND	5	< 3	3	U	1.5
2,4,5-Trichlorophenol	3	< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2,4,6-Trichlorophenol	3	< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2,4-Dichlorophenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2,4-Dimethylphenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2,4-Dinitrophenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2,4-Dinitrotoluene	5	< 5.0	5	U	2	< 5.0	5	U	2	ND	5	< 5.0	5	U	2
2,6-Dinitrotoluene	5	< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5	< 5.0	5	U	1.6
2-Chloronaphthalene	10	< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4
2-Chlorophenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2-Methylnaphthalene		< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5
2-Methylphenol (o-cresol)		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
2-Nitroaniline	5	< 5	5	U	5	< 5	5	U	5	ND	5	< 5	5	U	5
2-Nitrophenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
3&4-Methylphenol (m&p-cresol)		< 5.0	5	U	2	< 5.0	5	U	2	ND	11	< 5.0	5	U	2
3,3'-Dichlorobenzidine	5	< 5	5	U	2.4	< 5	5	U	2.4	ND	5	< 5	5	U	2.4
3-Nitroaniline	5	< 5	5	U	5	< 5	5	U	5	ND	5	< 5	5	U	5
4,6-Dinitro-2-methylphenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
4-Bromophenyl phenyl ether		< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	5.3	< 5.0	5	U	1.5
4-Chloro-3-methylphenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
4-Chloroaniline	5	< 5	5	U	2.3	< 5	5	U	2.3	ND	5	< 5	5	U	2.3
4-Chlorophenyl phenyl ether		< 5.0	5	U	1.7	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7
4-Nitroaniline	5	< 5	5	U	1.7	< 5	5	U	1.7	ND	5	< 5	5	U	1.7
4-Nitrophenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
Acenaphthene	20	< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	0.059	< 5.0	5	U	1.5
Acenaphthylene		< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	0.059	< 5.0	5	U	1.6
Acetophenone		< 5	5	U	5	< 5	5	U	5	ND	5.3	< 5	5	U	5
Aniline		< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5	< 5.0	5	U	1.6
Anthracene	50	< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
Benzo(a)anthracene	0.002	**0.12**	0.02		0.02	**0.03**	0.02		0.02	ND	0.047	**0.04**	0.02		0.02
Benzidine	5	< 5	5	U	2.9	< 5	5	U	2.9	ND	5	< 5	5	U	2.9
Benzo(a)pyrene		**0.06**	0.02		0.02	< 0.02	0.02	U	0.02	ND	0.059	< 0.02	0.02	U	0.02
Benzo(b)fluoranthene	0.002	**0.11**	0.02		0.02	< 0.02	0.02	U	0.02	ND	0.059	**0.03**	0.02		0.02
Benzo(g,h,i)perylene		**0.04**	0.02		0.02	< 0.02	0.02	U	0.02	ND	3.5	< 0.02	0.02	U	0.02
Benzo(k)fluoranthene	0.002	**0.04**	0.02		0.02	< 0.02	0.02	U	0.02	ND	0.059	< 0.02	0.02	U	0.02
Benzoic Acid		< 25	25	U	10	< 25	25	U	10	ND	50	< 25	25	U	10
Benzyl Butyl phthalate		< 5.0	5	U	1.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3
Bis(2-chloroethoxy)methane	5	< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5	< 5.0	5	U	1.4
Bis(2-chloroethyl)ether	1	< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
Bis(2-chloroisopropyl)ether		< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4
Bis(2-ethylhexyl)phthalate	5	**3**	1.6		1.4	< 1.6	1.6	U	1.4	ND	1.9	< 1.6	1.6	U	1.4
Carbazole		< 25	25	U	3.8	< 25	25	U	3.8	ND	5.3	< 25	25	U	3.8
Chrysene	0.002	**0.13**	0.02		0.02	**0.02**	0.02		0.02	ND	0.059	**0.03**	0.02		0.02
Dibenzo(a,h)anthracene		< 0.02	0.02	U	0.02	< 0.02	0.02	U	0.02	ND	0.012	< 0.02	0.02	U	0.02
Dibenzofuran		< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	5	< 5.0	5	U	1.5
Diethylphthalate	50	< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
Dimethylphthalate	50	< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
Di-n-butylphthalate	50	< 5.0	5	U	1.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3
Di-n-octylphthalate	50	< 5.0	5	U	1.3	< 5.0	5	U	1.3	ND	5.3	< 5.0	5	U	1.3
Fluoranthene	50	< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
Hexachlorobenzene	0.04	< 2.4	2.4	U	1.5	< 2.4	2.4	U	1.5	ND	0.071	< 2.4	2.4	U	1.5
Fluorene	50	< 5.0	5	U	1.7	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7
Hexachlorobutadiene	0.5	< 0.5	0.5	U	0.5	< 0.5	0.5	U	0.5	ND	0.5	< 0.5	0.5	U	0.5
Hexachlorocyclopentadiene	5	< 5.0	5	U	1.5	< 5.0	5	U	1.5	ND	5	< 5.0	5	U	1.5
Hexachloroethane	5	< 2.4	2.4	U	1.5	< 2.4	2.4	U	1.5	ND	2.8	< 2.4	2.4	U	1.5
Indeno(1,2,3-cd)pyrene	0.002	**0.03**	0.02		0.02	< 0.02	0.02	U	0.02	ND	0.059	< 0.02	0.02	U	0.02
Isophorone	50	< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4
Naphthalene	10	< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5	< 5.0	5	U	1.4
Nitrobenzene	0.4	< 0.4	0.4	U	0.4	< 0.4	0.4	U	0.4	ND	0.4	< 0.4	0.4	U	0.4
N-Nitrosodimethylamine		< 5.0	5	U	1.4	< 5.0	5	U	1.4	ND	5.3	< 5.0	5	U	1.4
N-Nitrosodi-n-propylamine		< 5.0	5	U	1.6	< 5.0	5	U	1.6	ND	5.3	< 5.0	5	U	1.6
N-Nitrosodiphenylamine	50	< 5.0	5	U	1.9	< 5.0	5	U	1.9	ND	5.3	< 5.0	5	U	1.9
Pentachloronitrobenzene		< 0.10	0.1	U	0.1	< 0.10	0.1	U	0.1	ND	0.12	< 0.10	0.1	U	0.1
Pentachlorophenol		< 0.80	0.8	U	0.8	< 0.80	0.8	U	0.8	ND	0.94	< 0.80	0.8	U	0.8
Phenanthrene	50	**0.29**	0.1		0.1	< 0.10	0.1	U	0.1	ND	0.059	< 0.10	0.1	U	0.1
Phenol		< 1	1	U	1	< 1	1	U	1	ND	1	< 1	1	U	1
Pyrene	50	< 5.0	5	U	1.7	< 5.0	5	U	1.7	ND	5.3	< 5.0	5	U	1.7
Pyridine		< 10	10	U	1.2	< 10	10	U	1.2	ND	0.59	< 10	10	U	1.2

Notes:

ND - Not detected
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is susp

Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 9
853 Lexington Ave,
Brooklyn, New York
Groundwater Analytical Results
Pesticides/PCBs

Compound	NYSDEC Groundwater Quality Standards	MW1 5/31/2013 µg/L		MW1 1/8/2014 µg/L				MW2 5/31/2013 µg/L		MW2 1/8/2014 µg/L				MW3 5/31/2013 µg/L		MW3 1/8/2014 µg/L				MW4 1/8/2014 µg/L				Duplicate (MW1) 5/31/2013 µg/L		Duplicate (MW1) 1/8/2014 µg/L			
	µg/L	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL
PCB-1016	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1221	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1232	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1242	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1248	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1254	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1260	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1262	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
PCB-1268	0.09	ND	0.05	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072	ND	0.086	< 0.072	0.072	U	0.072	< 0.072	0.072	U	0.072	ND	0.05	< 0.072	0.072	U	0.072
4,4-DDD	0.3	ND	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.01	ND	0.009	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.012
4,4-DDE	0.2	ND	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.01	ND	0.009	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.012
4,4-DDT	0.11	ND	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.01	ND	0.009	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.012
a-BHC	0.94	ND	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.01	ND	0.009	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.01	< 0.010	0.01	U	0.012
a-chlordane		-	-	< 0.025	0.025	U	0.025	-	-	< 0.025	0.025	U	0.025	-	-	< 0.026	0.026	U	0.026	< 0.025	0.025	U	0.025	-	-	< 0.029	0.029	U	0.029
Alachlor		ND	0.002	< 0.075	0.075	U	0.075	ND	0.002	< 0.075	0.075	U	0.075	ND	0.003	< 0.077	0.077	U	0.077	< 0.075	0.075	U	0.075	ND	0.002	< 0.088	0.088	U	0.088
Aldrin		ND	0.005	< 0.002	0.002	U	0.002	ND	0.005	< 0.002	0.002	U	0.002	ND	0.009	< 0.002	0.002	U	0.002	< 0.002	0.002	U	0.002	ND	0.005	< 0.002	0.002	U	0.002
b-BHC	0.04	ND	0.05	< 0.005	0.005	U	0.005	ND	0.05	< 0.005	0.005	U	0.005	ND	0.043	< 0.005	0.005	U	0.005	< 0.005	0.005	U	0.005	ND	0.05	< 0.006	0.006	U	0.006
Chlordane	0.05	ND	0.025	< 0.050	0.05	U	0.05	ND	0.025	< 0.050	0.05	U	0.05	ND	0.04	< 0.050	0.05	U	0.052	< 0.050	0.05	U	0.05	ND	0.025	< 0.050	0.05	U	0.059
d-BHC	0.04	ND	0.002	< 0.025	0.025	U	0.025	ND	0.002	< 0.025	0.025	U	0.025	ND*	0.014	< 0.026	0.026	U	0.026	< 0.025	0.025	U	0.025	ND	0.002	< 0.029	0.029	U	0.029
Dieldrin	0.004	ND	0.05	< 0.002	0.002	U	0.002	ND	0.05	< 0.002	0.002	U	0.002	ND	0.086	< 0.002	0.002	U	0.002	< 0.002	0.002	U	0.002	ND	0.05	< 0.002	0.002	U	0.002
Endosulfan I		ND	0.05	< 0.050	0.05	U	0.05	ND	0.05	< 0.050	0.05	U	0.05	ND	0.086	< 0.052	0.052	U	0.052	< 0.050	0.05	U	0.05	ND	0.05	< 0.059	0.059	U	0.059
Endosulfan II		ND	0.05	< 0.050	0.05	U	0.05	ND	0.05	< 0.050	0.05	U	0.05	ND	0.086	< 0.052	0.052	U	0.052	< 0.050	0.05	U	0.05	ND	0.05	< 0.059	0.059	U	0.059
Endosulfan Sulfate		ND	0.01	< 0.050	0.05	U	0.05	ND	0.01	< 0.050	0.05	U	0.05	ND	0.009	< 0.052	0.052	U	0.052	< 0.050	0.05	U	0.05	ND	0.01	< 0.059	0.059	U	0.059
Endrin		ND	0.05	< 0.010	0.01	U	0.01	ND	0.05	< 0.010	0.01	U	0.01	ND	0.086	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.05	< 0.010	0.01	U	0.012
Endrin aldehyde	5	ND	0.05	< 0.050	0.05	U	0.05	ND	0.05	< 0.050	0.05	U	0.05	ND	0.086	< 0.052	0.052	U	0.052	< 0.050	0.05	U	0.05	ND	0.05	< 0.059	0.059	U	0.059
Endrin ketone		ND	0.025	< 0.050	0.05	U	0.05	ND	0.025	< 0.050	0.05	U	0.05	ND	0.043	< 0.052	0.052	U	0.052	< 0.050	0.05	U	0.05	ND	0.025	< 0.059	0.059	U	0.059
gamma-BHC	0.05	ND	0.01	< 0.025	0.025	U	0.025	ND	0.01	< 0.025	0.025	U	0.025	ND	0.009	< 0.026	0.026	U	0.026	< 0.025	0.025	U	0.025	ND	0.01	< 0.029	0.029	U	0.029
g-chlordane		-	-	< 0.025	0.025	U	0.025	-	-	< 0.025	0.025	U	0.025	-	-	< 0.026	0.026	U	0.026	< 0.025	0.025	U	0.025	-	-	< 0.029	0.029	U	0.029
Heptachlor	0.04	ND	0.1	< 0.010	0.01	U	0.01	ND	0.1	< 0.010	0.01	U	0.01	ND	0.17	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.1	< 0.010	0.01	U	0.012
Heptachlor epoxide	0.03	ND	0.25	< 0.010	0.01	U	0.01	ND	0.25	< 0.010	0.01	U	0.01	ND	0.43	< 0.010	0.01	U	0.01	< 0.010	0.01	U	0.01	ND	0.25	< 0.010	0.01	U	0.012
Methoxychlor	35	ND	0.1	< 0.10	0.1	U	0.1	ND	0.1	< 0.10	0.1	U	0.1	ND	0.1	< 0.10	0.1	U	0.1	< 0.10	0.1	U	0.1	ND	0.1	< 0.12	0.12	U	0.12
Toxaphene		ND	0.25	< 0.25	0.25	U	0.25	ND	0.25	< 0.25	0.25	U	0.25	ND	0.25	< 0.26	0.26	U	0.26	< 0.25	0.25	U	0.25	ND	0.25	< 0.29	0.29	U	0.29

Notes:

ND - Non-detect
ND* - Due to matrix interference from non target compounds in the sample an elevated RL was reported.
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

Table 10
853 Lexington Ave,
Brooklyn, New York
Groundwater Analytical Results
TAL Metals

Compound	NYSDEC Groundwater Quality Standards	MW1 5/31/2013 µg/L		MW1 1/8/2014 µg/L				MW2 5/31/2013 µg/L		MW2 1/8/2014 µg/L				MW3 5/31/2013 µg/L		MW3 1/8/2014 µg/L				MW4 1/8/2014 µg/L				Duplicate (MW1) 5/31/2013 µg/L		Duplicate (MW1) 1/8/2014 µg/L			
	µg/L	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL
Aluminum	**NS**	**24.50**	0.01	**17.60**	0.01		0.00	**42.10**	0.05	**35.20**	0.10		0.02	**55.20**	0.05	**18.90**	0.01		0.00	**32.90**	0.10		0.02	**25.50**	0.01	**11**	0.01		0.0024
Antimony	**0.003**	BRL	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003
Arsenic	**0.025**	**0.006**	0.004	**0.018**	0.004		0.001	**0.009**	0.004	**0.021**	0.004		0.001	**0.022**	0.004	**0.016**	0.004		0.001	**0.024**	0.004		0.001	**0.007**	0.004	**0.014**	0.004		0.001
Barium	**1**	**0.289**	0.002	**0.200**	0.010		0.000	**0.343**	0.002	**0.409**	0.010		0.000	**0.481**	0.002	**0.224**	0.010		0.000	**0.454**	0.010		0.000	**0.300**	0.002	**0.151**	0.010		0.0003
Beryllium	**0.003**	**0.001**	0.001	**0.072**	0.011		0.000	**0.002**	0.001	**0.079**	0.011		0.000	**0.003**	0.001	**0.049**	0.011		0.000	**0.065**	0.011		0.000	**0.001**	0.001	**0.072**	0.011		0.0003
Cadmium	**0.005**	**0.002**	0.001	**0.0004**	0.004	B*	0.000	**0.003**	0.001	**0.002**	0.004	B*	0.000	**0.005**	0.001	**0.001**	0.004	B*	0.000	**0.002**	0.004	B*	0.000	**0.002**	0.001	**0.001**	0.004	B*	0.0002
Calcium	**NS**	**66**	0.01	**69**	0.01		0.00	**53**	0.01	**81.4**	0.01		0.00	**44.8**	0.01	**45**	0.01		0.00	**62.9**	0.01		0.00	**69.2**	0.01	**69**	0.01		0.003
Chromium	**0.05**	**0.105**	0.001	**0.084**	0.001		0.001	**0.193**	0.001	**0.195**	0.001		0.001	**0.242**	0.001	**0.077**	0.001		0.001	**0.137**	0.001		0.001	**0.111**	0.001	**0.053**	0.001		0.0009
Cobalt	**NS**	**0.056**	0.002	**0.043**	0.005		0.000	**0.079**	0.002	**0.074**	0.005		0.000	**0.103**	0.002	**0.048**	0.005		0.000	**0.105**	0.005		0.000	**0.062**	0.002	**0.025**	0.005		0.0003
Copper	**0.2**	**0.096**	0.005	**0.070**	0.005		0.001	**0.156**	0.005	**0.174**	0.005		0.001	**0.215**	0.005	**0.074**	0.005		0.001	**0.139**	0.005		0.001	**0.101**	0.005	**0.042**	0.005		0.001
Iron	**0.5**	**97.1**	0.010	**64.4**	0.010		0.005	**129**	0.010	**110**	0.010		0.005	**213**	0.050	**66.2**	0.010		0.005	**137**	0.100		0.050	**104**	0.010	**39.2**	0.010		0.005
Lead	**0.025**	**0.044**	0.002	**0.032**	0.002		0.001	**0.046**	0.002	**0.052**	0.002		0.001	**0.093**	0.002	**0.032**	0.002		0.001	**0.052**	0.002		0.001	**0.040**	0.002	**0.018**	0.002		0.001
Magnesium	**35**	**39.1**	0.010	**36**	0.010		0.001	**36.6**	0.010	**43.30**	0.010		0.001	**48.20**	0.010	**29.1**	0.010		0.001	**34.30**	0.010		0.001	**40.8**	0.010	**33.7**	0.010		0.001
Manganese	**0.3**	**5.0**	0.005	**2.1**	0.050		0.010	**6.61**	0.005	**4.17**	0.050		0.010	**8.02**	0.005	**2.7**	0.050		0.010	**9**	0.050		0.010	**5.01**	0.005	**1.2**	0.005		0.001
Mercury	**0.0007**	BRL	0.000	< 0.0002	0.000	U	0.000	BRL	0.000	< 0.0002	0.000	U	0.000	BRL	0.000	< 0.0002	0.000	U	0.000	< 0.0002	0.000	U	0.000	BRL	0.000	< 0.0002	0.000	U	0.00015
Nickel	**0.1**	**0.137**	0.001	**0.064**	0.004		0.001	**0.137**	0.001	**0.107**	0.004		0.001	**0.253**	0.001	**0.071**	0.004		0.001	**0.186**	0.004		0.001	**0.140**	0.001	**0.041**	0.004		0.0005
Potassium	**NS**	**12.4**	0.100	**8.5**	1.000		1.000	**11.8**	0.100	**9**	1.000		1.000	**14.1**	0.100	**5.4**	1.000		1.000	**13.5**	1.000		1.000	**12.3**	0.100	**6.3**	1.000		1
Selenium	**0.01**	BRL	0.010	< 0.004	0.004	U	0.002	BRL	0.010	< 0.004	0.004	U	0.002	BRL	0.010	< 0.004	0.004	U	0.002	**0.002**	0.004	B	0.002	BRL	0.010	< 0.004	0.004	U	0.002
Silver	**0.05**	BRL	0.001	< 0.005	0.005	U	0.001	BRL	0.001	< 0.005	0.005	U	0.001	BRL	0.001	< 0.005	0.005	U	0.001	< 0.005	0.005	U	0.001	BRL	0.001	< 0.005	0.005	U	0.001
Sodium	**2**	**34**	0.100	**53**	1.000		1.000	**35**	0.100	**40**	1.000		1.000	**14**	0.100	**10**	1.000		1.000	**19**	1.000		1.000	**34**	0.100	**48**	1.000		1
Thallium	**0.0005**	BRL	0.001	< 0.0005	0.001	U	0.001	BRL	0.001	< 0.0005	0.001	U	0.001	BRL	0.001	< 0.0005	0.001	U	0.001	< 0.0005	0.001	U	0.001	BRL	0.001	< 0.0005	0.001	U	0.0005
Vanadium	**NS**	**0.099**	0.002	**0.064**	0.010		0.001	**0.120**	0.002	**0.108**	0.010		0.001	**0.196**	0.002	**0.064**	0.010		0.001	**0.134**	0.010		0.001	**0.104**	0.002	**0.040**	0.010		0.001
Zinc	**2**	**0.131**	0.002	**0.106**	0.010		0.001	**0.482**	0.002	**0.327**	0.010		0.001	**0.387**	0.002	**0.116**	0.010		0.001	**0.158**	0.010		0.001	**0.135**	0.002	**0.067**	0.010		0.001

Notes:

BRL - Below Reporting Limit
NS - No Standard
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

Table 11
853 Lexington Ave
Brooklyn, New York
Groundwater Analytical Results
TAL Filtered Metals

Compound	NYSDEC Groundwater Quality Standards	MW1 5/31/2013 µg/L		MW1 1/8/2014 µg/L				MW2 5/31/2013 µg/L		MW2 1/8/2014 µg/L				MW3 5/31/2013 µg/L		MW3 1/8/2014 µg/L				MW4 1/8/2014 µg/L				Duplicate (MW1) 5/31/2013 µg/L		Duplicate (MW1) 1/8/2014 µg/L			
	µg/L	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL	Result	RL	Qual	MDL	Result	RL	Result	RL	Qual	MDL
Aluminum	NS	BRL	0.01	0.17	0.01		0.0026	0.07	0.01	0.06	0.01		0.0026	0.14	0.01	0.10	0.01		0.0026	0.06	0.01		0.0026	BRL	0.01	0.07	0.01		0.0026
Antimony	0.003	BRL	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003	< 0.003	0.003	U	0.003	BRL	0.003	< 0.003	0.003	U	0.003
Arsenic	0.025	0.004	0.004	< 0.003	0.003	U	0.001	0.004	0.004	< 0.003	0.003	U	0.001	BRL	0.004	0.008	0.003		0.001	0.001	0.003	B	0.001	BRL	0.004	0.003	0.003		0.001
Barium	1	0.081	0.002	0.072	0.011		0.0003	0.045	0.002	0.08	0.011		0.0003	0.03	0.002	0.049	0.011		0.0003	0.065	0.011		0.0003	0.078	0.002	0.072	0.011		0.0003
Beryllium	0.003	BRL	0.001	< 0.001	0.001	U	0.001	BRL	0.001	< 0.001	0.001	U	0.001	BRL	0.001	< 0.001	0.001	U	0.001	< 0.001	0.001	U	0.001	BRL	0.001	< 0.001	0.001	U	0.001
Cadmium	0.005	BRL	0.001	< 0.004	0.004	U	0.0002	BRL	0.001	< 0.004	0.004	U	0.0002	BRL	0.001	< 0.004	0.004	U	0.0002	< 0.004	0.004	U	0.0002	BRL	0.001	< 0.004	0.004	U	0.0002
Calcium	NS	67	0.01	68	0.01		0.003	48	0.01	75	0.01		0.003	32	0.01	40	0.01		0.003	58.9	0.01		0.003	67	0.01	70.3	0.01		0.003
Chromium	0.05	BRL	0.001	< 0.001	0.001	U	0.001	BRL	0.001	< 0.001	0.001	U	0.001	BRL	0.001	0.007	0.001		0.001	< 0.001	0.001	U	0.001	BRL	0.001	< 0.001	0.001	U	0.001
Cobalt	NS	0.004	0.001	0.002	0.005	B	0.0003	0.005	0.001	0.002	0.005	B	0.0003	BRL	0.001	0.001	0.005	B	0.0003	0.004	0.005	B	0.0003	0.004	0.001	0.004	0.005	B	0.0003
Copper	0.2	BRL	0.005	0.001	0.005	B*	0.001	BRL	0.005	0.001	0.005	B*	0.001	BRL	0.005	0.004	0.005	B*	0.001	< 0.005	0.005	U*	0.001	BRL	0.005	< 0.005	0.005	U*	0.001
Iron	0.5	0.057	0.011	0.21	0.01		0.005	0.07	0.011	0.03	0.01		0.005	0.16	0.011	0.03	0.01		0.005	0.1	0.01		0.005	0.08	0.011	0.02	0.01		0.005
Lead	0.025	BRL	0.002	< 0.002	0.002	U	0.001	BRL	0.002	< 0.002	0.002	U	0.001	BRL	0.002	0.003	0.002	*	0.001	< 0.002	0.002	U	0.001	BRL	0.002	< 0.002	0.002	U*	0.001
Magnesium	35	30	0.01	30	0.01		0.001	22	0.01	31	0.01		0.001	22	0.01	21	0.01		0.001	20.7	0.01		0.001	28	0.01	30.7	0.01		0.001
Manganese	0.3	**2.490**	0.011	0.149	0.005		0.001	**4.520**	0.011	**0.466**	0.005		0.001	**1.22**	0.001	0.079	0.005	*	0.001	**0.96**	0.005		0.001	**2.030**	0.001	**0.329**	0.005	*	0.001
Mercury	0.0007	BRL	0.0002	< 0.0002	0.0002	U	0.0002	BRL	0.0002	< 0.0002	0.0002	U	0.0002	BRL	0.0002	< 0.0002	0.0002	U	0.0002	< 0.0002	0.0002	U	0.0002	BRL	0.0002	< 0.0002	0.0002	U	0.0002
Nickel	0.1	0.047	0.001	0.006	0.004		0.0005	0.014	0.001	0.007	0.004		0.0005	0.017	0.001	0.007	0.004	*	0.0005	0.017	0.004		0.0005	0.041	0.001	0.007	0.004	*	0.0005
Potassium	NS	7	0.1	5	0.1		0.1	4	0.1	3	0.1		0.1	3	0.1	3	0.1		0.1	7.9	0.1		0.1	6	0.1	4.8	0.1		0.1
Selenium	0.01	BRL	0.01	< 0.004	0.004	U	0.002	BRL	0.01	< 0.004	0.004	U	0.002	BRL	0.01	< 0.004	0.004	U	0.002	0.008	0.004		0.002	BRL	0.01	< 0.004	0.004	U	0.002
Silver	0.05	BRL	0.001	< 0.005	0.005	U	0.0006	BRL	0.001	< 0.005	0.005	U	0.0006	BRL	0.001	< 0.005	0.005	U	0.0006	< 0.005	0.005	U	0.0006	BRL	0.001	< 0.005	0.005	U	0.0006
Sodium	2	**35**	0.11	**45**	1.1		1.1	**40**	0.11	**45**	0.11		0.1	**12**	0.11	**10**	0.11		0.1	**19.8**	0.11		0.1	**36**	0.11	**52.9**	1.1		1.1
Thallium	0.0005	BRL	0.0005	< 0.0005	0.0005	U	0.0005	BRL	0.0005	< 0.0005	0.0005	U	0.0005	BRL	0.0005	< 0.0005	0.0005	U	0.0005	< 0.0005	0.0005	U	0.0005	BRL	0.0005	< 0.0005	0.0005	U	0.0005
Vanadium	NS	BRL	0.002	< 0.01	0.01	U	0.001	BRL	0.002	< 0.01	0.01	U	0.001	BRL	0.002	0	0.01	B	0.001	< 0.01	0.01	U	0.001	BRL	0.002	< 0.01	0.01	U	0.001
Zinc	2	0.003	0.002	0.003	0.011	B	0.001	0.006	0.002	0.008	0.011	B	0.001	0.002	0.002	0.007	0.011	B	0.001	0.002	0.011	B	0.001	0.003	0.002	0.003	0.011	B	0.001

Notes:

BRL - Below Reporting Limit
NS - No Standard
Qual - Qualifier
MDL - Minimum Detection Limit
U - the compound was analyzed for but not detected at or above the MDL
N - the concentrations is based on the response if the nearest internal.
J - the value is estimated - see report for further details
D - reported concentration is a result of a diluted analysis
S - this compound is a solvent that is used in the laboratory. Laboratory contamination is suspected id concentration is less than five times the reporting level
Bold/highlighted- Indicated exceedance of the NYSDEC Groundwater Standard

TABLE 12
853 Lexington Ave,
Brooklyn, New York
Soil Gas - Volatile Organic Compounds

COMPOUNDS	NYSDOH Maximum Sub-Slab Value (µg/m³) (a)	NYSDOH Soil Outdoor Background Levels (µg/m³) (b)	SG-1 (µg/m3) 5/31/2013		SG-2 (µg/m3) 5/31/2013		SG-3 (µg/m3) 5/31/2013		SG-4 (µg/m3) 5/31/2013		SG-5 (µg/m3) 1/8/2014		SG-6 (µg/m3) 1/8/2014	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,1,1-Trichloroethane	100	<2.0 - 2.8	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,1,2,2-Tetrachloroethane		<1.5	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,1,2-Trichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,1-Dichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,1-Dichloroethene		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2,4-Trichlorobenzene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2,4-Trimethylbenzene		<1.0	**1.57**	1	**2.9**	1	**2.01**	1	**2.01**	1	**6.19**	1	**5.26**	1
1,2-Dibromoethane		<1.5	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2-Dichloroethane		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2-Dichloropropane			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,2-Dichlorotetrafluoroethane			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,3,5-Trimethylbenzene		<1.0	ND	1	ND	1	ND	1	ND	1	**1.62**	1	**1.38**	1
1,3-Butadiene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,3-Dichlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,4-Dichlorobenzene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
1,4-Dioxane			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
2-Hexanone			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
4-Ethyltoluene		NA	ND	1	ND	1	ND	1	ND	1	**1.77**	1	**1.33**	1
4-Isopropyltoluene			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
4-Methyl-2-pentanone			ND	1	**1.8**	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Acetone		NA	**6.1**	1	**5.58**	1	**4.49**	1	**6.62**	1	**31.3**	1	**38**	1
Acrylonitrile			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Benzene		<1.6 - 4.7	ND	1	**1.53**	1	**1.21**	1	**1.6**	1	**3.83**	1	**1.24**	1
Benzyl Chloride		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Bromodichloromethane		<5.0	ND	1	ND	1	**1.14**	1	ND	1	< 1.00	1	< 1.00	1
Bromoform		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Bromomethane		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Carbon Disulfide		NA	**13.2**	1	**1.03**	1	**10.7**	1	ND	1	< 1.00	1	< 1.00	1
Carbon Tetrachloride	5	<3.1	**0.566**	0.25	**2.45**	0.25	**0.566**	0.25	**1.19**	0.25	**0.377**	0.25	**0.44**	0.25
Chlorobenzene		<2.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Chloroethane		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Chloroform		<2.4	ND	1	**4.44**	1	**1.12**	1	**3.81**	1	< 1.00	1	< 1.00	1
Chloromethane		<1.0 - 1.4	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
cis-1,2-Dichloroethene		<1.0	ND	1	**229**	1	ND	1	**3.25**	1	**13.8**	1	< 1.00	1
cis-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Cyclohexane		NA	ND	1	ND	1	**1.14**	1	**1.51**	1	**3.3**	1	**1.07**	1
Dibromochloromethane		<5.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Dichlorodifluromethane		NA	**2.47**	1	**2.92**	1	**2.67**	1	**2.82**	1	**1.78**	1	**2.52**	1
Ethanol			**36.7**	1	**39.5**	1	**44.1**	1	**25.2**	1	**54.6**	1	**26.9**	1
Ethyl Acetate		NA	**6.59**	1	**6.34**	1	**7.96**	1	**6.59**	1	< 1.00	1	< 1.00	1
Ethylbenzene		<4.3	ND	1	**7.81**	1	**1.17**	1	ND	1	**5.64**	1	**2.91**	1
Heptane		NA	ND	1	ND	1	ND	1	ND	1	**7.86**	1	**2.99**	1
Hexachlorobutadiene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Hexane		<1.5	ND	1	ND	1	ND	1	ND	1	**10**	1	**2.75**	1
Isopropylalcohol		NA	ND	1	ND	1	ND	1	ND	1	**1.99**	1	< 1.00	1
Isopropylbenzene			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Xylene (m&p)		<4.3	**2.04**	1	**22.6**	1	**3.52**	1	**2.91**	1	**18.6**	1	**10.2**	1
Methyl Ethyl Ketone			**1.18**	1	**1.03**	1	ND	1	**2.48**	1	< 1.00	1	< 1.00	1
MTBE		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Methylene Chloride		<3.4	**2.15**	1	**4.58**	1	ND	1	**1.42**	1	< 1.00	1	< 1.00	1
n-Butylbenzene			ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Xylene (o)		<4.3	ND	1	**10.5**	1	**1.74**	1	**1.39**	1	**7.38**	1	**4.47**	1
Propylene		NA	ND	1	ND	1	**7.28**	1	ND	1	**1.53**	1	**3.22**	1
sec-Butylbenzene			ND	1	ND	1	ND	1	ND	1	**1.15**	1	< 1.00	1
Styrene		<1.0	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Tetrachloroethene	100		**42.3**	0.25	**9,290**	0.25	**10,400**	0.25	**6,980**	0.25	**187**	0.25	**334**	0.25
Tetrahydrofuran		NA	ND	1	**1.21**	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Toluene		1.0 - 6.1	**3.2**	1	**5.91**	1	**4.71**	1	**4.82**	1	**25.2**	1	**9.19**	1
trans-1,2-Dichloroethene		NA	ND	1	**1.19**	1	ND	1	ND	1	< 1.00	1	< 1.00	1
trans-1,3-Dichloropropene		NA	ND	1	ND	1	ND	1	ND	1	< 1.00	1	< 1.00	1
Trichloroethene	5	<1.7	**13.7**	0.25	**3,290**	0.25	**142**	0.25	**1,110**	0.25	**204**	0.25	**52**	0.25
Trichlorofluoromethane		NA	**1.24**	1	**1.29**	1	**1.46**	1	**1.29**	1	< 1.00	1	**1.18**	1
Trichlorotrifluoroethane			ND	1	ND	1	ND	1	ND	1	**1.15**	1	**1.61**	1
Vinyl Chloride		<1.0	ND	0.25	ND	0.25	ND	0.25	ND	0.25	< 0.25	0.25	< 0.25	0.25

Notes:
NA No guidance value or standard available
(a) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health.
(b) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005, Summary of Background Levels for Selected Compounds (NYSDOH Database, Outdoor
Value detected above NYSDOH Air Guidance Value of which would require at a minimum, monitoring.

TABLE 12
853 Lexington Ave,
Brooklyn, New York
Soil Gas - Volatile Organic Compounds

COMPOUNDS	NYSDOH Maximum Sub-Slab Value (µg/m3) (a)	NYSDOH Soil Outdoor Background Levels (µg/m3) (b)	SG-7 (µg/m3) 1/8/2014		SG-8 (µg/m3) 1/8/2014		SG-9 (µg/m3) 1/8/2014		SG-10 (µg/m3) 1/8/2014		IA-1 (µg/m3) 1/8/2014		OA-1 (µg/m3) 1/8/2014	
			Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL
1,1,1,2-Tetrachloroethane			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,1,1-Trichloroethane	100	<2.0 - 2.8	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,1,2,2-Tetrachloroethane		<1.5	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,1,2-Trichloroethane		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,1-Dichloroethane		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,1-Dichloroethene		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2,4-Trichlorobenzene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2,4-Trimethylbenzene		<1.0	**5.31**	1	**5.4**	1	**4.32**	1	**3.05**	1	**1.42**	1	< 1.00	1
1,2-Dibromoethane		<1.5	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2-Dichlorobenzene		<2.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2-Dichloroethane		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2-Dichloropropane			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,2-Dichlorotetrafluoroethane			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	**3.49**	1
1,3,5-Trimethylbenzene		<1.0	**1.42**	1	**1.47**	1	**1.13**	1	< 1.00	1	< 1.00	1	< 1.00	1
1,3-Butadiene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,3-Dichlorobenzene		<2.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,4-Dichlorobenzene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
1,4-Dioxane			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
2-Hexanone			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
4-Ethyltoluene		NA	< 1.00	1	**1.28**	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
4-Isopropyltoluene			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
4-Methyl-2-pentanone			< 1.00	1	< 1.00	1	< 1.00	1	**1.51**	1	< 1.00	1	< 1.00	1
Acetone		NA	**20.6**	1	**18.7**	1	**36.6**	1	**82.8**	1	**3.56**	1	**4.58**	1
Acrylonitrile			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Benzene		<1.6 - 4.7	**2.84**	1	**2.78**	1	**3.42**	1	**3.22**	1	**2.36**	1	< 1.00	1
Benzyl Chloride		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Bromodichloromethane		<5.0	**3.15**	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Bromoform		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Bromomethane		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Carbon Disulfide		NA	**3.24**	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Carbon Tetrachloride	5	<3.1	**0.44**	0.25	**0.251**	0.25	**0.44**	0.25	**0.44**	0.25	**0.503**	0.25	**0.377**	0.25
Chlorobenzene		<2.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Chloroethane		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Chloroform		<2.4	**2.68**	1	**244**	1	**3.95**	1	< 1.00	1	< 1.00	1	< 1.00	1
Chloromethane		<1.0 - 1.4	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
cis-1,2-Dichloroethene		<1.0	**1.5**	1	**11.1**	1	**2.18**	1	< 1.00	1	< 1.00	1	< 1.00	1
cis-1,3-Dichloropropene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Cyclohexane		NA	**1.65**	1	**2.37**	1	**2.82**	1	**1.58**	1	< 1.00	1	< 1.00	1
Dibromochloromethane		<5.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Dichlorodifluromethane		NA	**2.52**	1	**2.42**	1	**2.57**	1	**2.22**	1	**2.42**	1	**1.83**	1
Ethanol			**24.1**	1	**25.4**	1	**43.3**	1	**40.7**	1	**10.8**	1	**6.06**	1
Ethyl Acetate		NA	< 1.00	1	**1.01**	1	< 1.00	1	**10.1**	1	< 1.00	1	< 1.00	1
Ethylbenzene		<4.3	**3.08**	1	**4.25**	1	**3.47**	1	**3.12**	1	< 1.00	1	< 1.00	1
Heptane		NA	**3.32**	1	**4.91**	1	**5**	1	**4.38**	1	**1.02**	1	< 1.00	1
Hexachlorobutadiene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Hexane		<1.5	**3.63**	1	**5.46**	1	**5.32**	1	**6.23**	1	**2.25**	1	< 1.00	1
Isopropylalcohol		NA	**1.5**	1	**1.5**	1	**1.4**	1	**1.89**	1	**1.08**	1	**1.08**	1
Isopropylbenzene			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Xylene (m&p)		<4.3	**11.5**	1	**14.4**	1	**11.5**	1	**10.2**	1	**2.69**	1	**1.22**	1
Methyl Ethyl Ketone			**1.18**	1	**1.3**	1	**1.59**	1	**5.28**	1	< 1.00	1	< 1.00	1
MTBE		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Methylene Chloride		<3.4	< 1.00	1	**1.08**	1	< 1.00	1	**1.04**	1	< 1.00	1	< 1.00	1
n-Butylbenzene			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Xylene (o)		<4.3	**4.51**	1	**5.64**	1	**4.73**	1	**4.08**	1	**1.13**	1	< 1.00	1
Propylene		NA	**7**	1	**8.68**	1	**6.74**	1	**3.66**	1	**2.87**	1	**1.7**	1
sec-Butylbenzene			< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Styrene		<1.0	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Tetrachloroethene	100		**647**	0.25	**874**	0.25	**65**	0.25	**2**	0.25	**60**	0.25	**1**	0.25
Tetrahydrofuran		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Toluene		1.0 - 6.1	**10.6**	1	**16.7**	1	**15.1**	1	**13**	1	**4.52**	1	**2.86**	1
trans-1,2-Dichloroethene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
trans-1,3-Dichloropropene		NA	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1	< 1.00	1
Trichloroethene	5	<1.7	**324**	0.25	**80**	0.25	**7**	0.25	**1**	0.25	**17**	0.25	**0.43**	0.25
Trichlorofluoromethane		NA	**1.12**	1	**1.01**	1	**1.18**	1	**1.01**	1	**1.24**	1	< 1.00	1
Trichlorotrifluoroethane			**1.53**	1	**1.38**	1	**1.61**	1	**1.38**	1	**1.68**	1	**1.22**	1
Vinyl Chloride		<1.0	< 0.25	0.25	**0.255**	0.25	**1.12**	0.25	< 0.25	0.25	< 0.25	0.25	< 0.25	0.25

Notes:
NA No guidance value or standard available
(a) Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health.
(b) NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005, Summary of Background Levels for Selected Compounds (NYSDOH Database, Outdoor
Value detected above NYSDOH Air Guidance Value of which would require at a minimum, monitoring.

TABLE 13
Former Lexington Laundry Service Site
853 Lexington Avenue, Brooklyn, NY
Parameters Detected Above Track 1 Soil Cleanup Objectives

COMPOUND	Range in Exceedances	Frequency of Detection	B1		B2		B3		B4		B5		B6			B7		
			(0-2)	(4-6)	(0-2)	(4-6)	(0-2)	(4-6)	(0-2)	(4-6)	(0-2)	(4-6)	(0-2)	(10-12)	(43-45)	(0-2)	(10-12)	(43-45)
Sample Results in µg/kg																		
Acetone	76-130	4	130	77				76							86			
Tetrachloroethene	9,000-12,000	2							12,000	9,000								
Benzo(a)anthrancene	1,600-4,300	3	4,300				2,000	1,600										
Benzo(a)pyrene	1,200-3,500	3	3,500				1,500	1,200										
Benzo(b)fluoranthene	1,600-4,000	3	4,000				1,900	1,600										
Benzo(k)fluoranthene	1,300	1	1,300															
Chrysene	1,800-4,900	3	4,900				2,200	1,800										
Dibenz(a,h)anthracene	330-560	2	560				330											
Indeno(1,2,3-cd)pyrene	690-2,000	3	2,000				870	690										
4,4'-DDE	3.6-4.4	2	4.4					3.6										
Sample Results in mg/kg																		
Lead	63-64	2					66		64							127		
Barium	1,140	1							1,140									
Mercury	1	1	1.47														30.2	
Zinc	152	1			152											176		

COMPOUND	Range in Exceedances	Frequency of Detection	B8			B9			B10			B11		B12		B13	
			(0-2)	(10-12)	(43-45)	(0-2)	(10-12)	(43-45)	(0-2)	(10-12)	(43-45)	(0-2)	(6-8)	(0-2)	(6-8)	(0-2)	(6-8)
Sample Results in µg/kg																	
Acetone	55-210	6				140			210					55	150	160	190
Sample Results in mg/kg																	
Nickel	35.3-43.5	2			35.3											43.5	

TABLE 14
Former Lexington Laundry Service Site
853 Lexington Avenue, Brooklyn NY
Parameters Detected Above Ambient Water Quality Standards

VOCs / SVOCs

COMPOUND	Range in Detections	MW1 5/31/13	MW1 1/8/14	MW2 5/31/13	MW2 1/8/14	MW3 5/31/13	MW3 1/8/14	MW4 1/8/14
Sample Results in (µg/L)								
Tetrachloroethene	15-110	50		15		110		
Trichloroethene	17-120	61	19	23	17	85	29	120
Benzo(a)anthracene	0.03-0.12	0.074	0.07	0.063	0.05	0.28	0.12	0.03
Benzo(b)fluoranthene	0.03-0.3	0.063	0.03	0.053		0.3	0.11	
Bis(2-ethylhexyl)phthalate	40					40		
Benzo(k)fluoranthene	0.04-0.11					0.11	0.04	
Chyrsene	0.02-0.33	0.074	0.05	0.053	0.04	0.33	0.13	0.02
Indeno(1,2,3-cd)pyrene	0.03-0.13					0.13	0.03	

Metals (dissolved)

COMPOUND	Range in Detections	MW1 5/31/13	MW1 1/8/14	MW2 5/31/13	MW2 1/8/14	MW3 5/31/13	MW3 1/8/14	MW4 1/8/14
Sample Results in (µg/L)								
Beryllium	0.003-0.079		0.072		0.079	0.003		0.065
Cadmium	0.005					0.005		
Chromium	0.077-0.242	0.105	0.084	0.193	0.195	0.242	0.077	0.137
Copper	0.215					0.215		
Iron	64.4-213	97.1	64.4	129	110	213	66.2	137
Lead	0.032-0.093	0.044	0.032	0.046	0.052	0.093	0.032	0.052
Magnesium	5-43.3	5	36	6.61	43.3	8.02		
Manganese	2.1-9		2.10		4.17		2.7	9
Nickel	0.137-0.253	0.137		0.137		0.253		
Sodium	10-53	34	53	35	40	14	10	19

Metals (total)

COMPOUND	Range in Detections	MW1 5/31/13	MW1 1/8/14	MW2 5/31/13	MW2 1/8/14	MW3 5/31/13	MW3 1/8/14	MW4 1/8/14
Sample Results in (µg/L)								
Manganese	0.96-4.52	2.49		4.52	0.47	1.2		0.96
Sodium	10-45	35	45	40	45	12	10	19.8

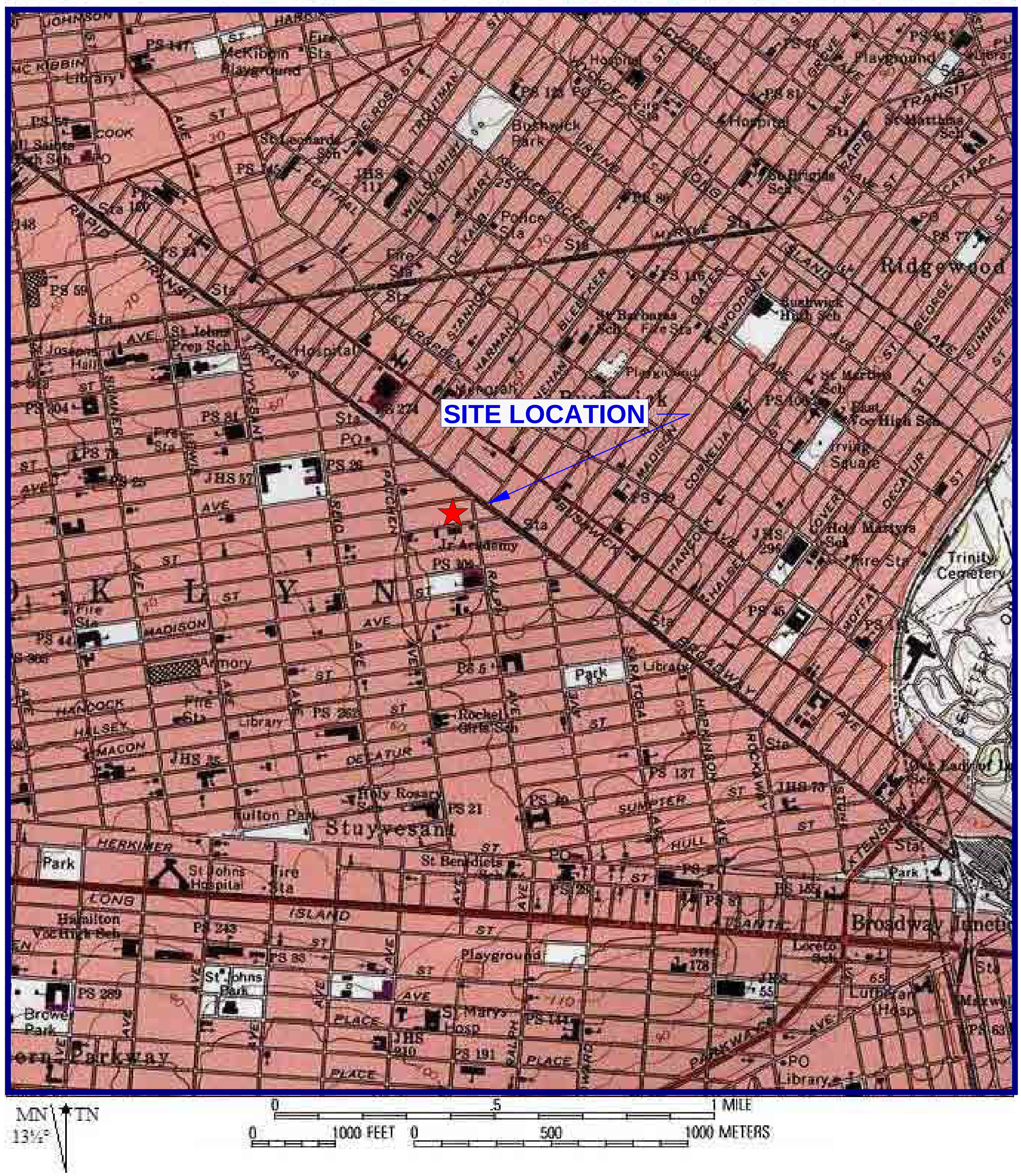
TABLE 15
Project Permit Listing
To Be Updated as Project Progresses

Permit	***Permit Number***	***Originating Agency***	***Pursuant to***	***Issued***	***Expires***	***Contact Phone***
No Permits Issued as of March 2014						

Table 16
853 Lexington Avenue
Brooklyn, NY
Emergency Contact List

General Emergencies	911
NYC Police	911
NYC Fire Department	911
Woodhull Medical Center	(718) 963-8000
NYSDEC Spills Hotline	1-800-457-7362
NYSDEC Project Manager	(518) 402-9768
NYC Department of Health	(212) 676-2400
National Response Center	1-800-424-8802
Poison Control	1-800-222-1222
AMC Remedial Engineer	1-516-417-8588
EBC Project Manager	1-631-504-6000
EBC BCP Program Manager	1-631-504-6000
EBC Site Safety Officer	1-631-504-6000
Remedial Engineer	1-516-987-1662
Construction Manager	TBD

FIGURES



USGS Brooklyn Quadrangle 1995, Contour Interval = 10 feet

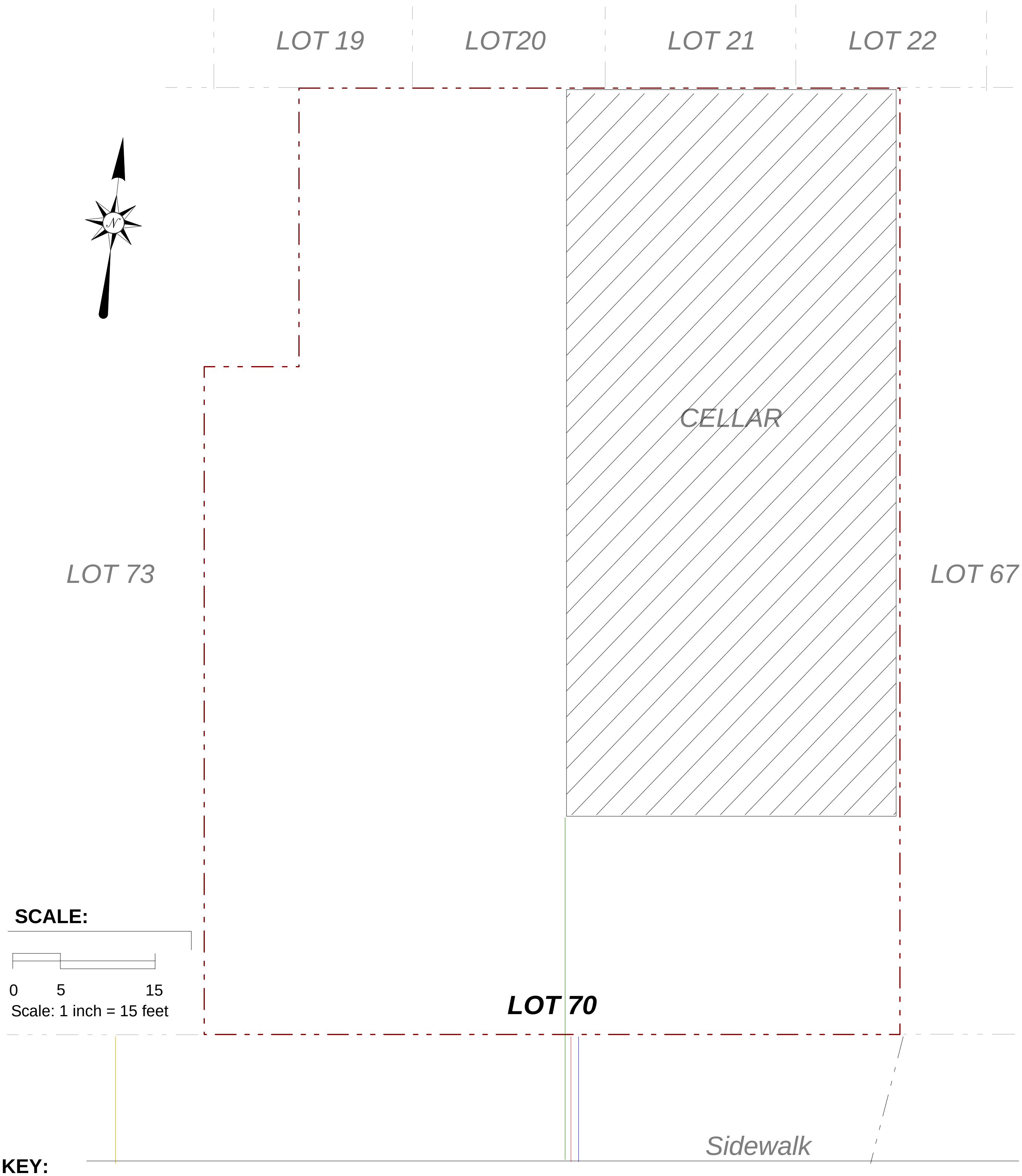
EBC

Phone 631.504.6000
Fax 631. 924 .2870

ENVIRONMENTAL BUSINESS CONSULTANTS

853 LEXINGTON AVENUE
BROOKLYN, NY

FIGURE 1 SITE LOCATION MAP



KEY:

Property/Site Boundary

Underground Piping
(Sewer, Gas, Electric, Water)

LEXINGTON AVENUE

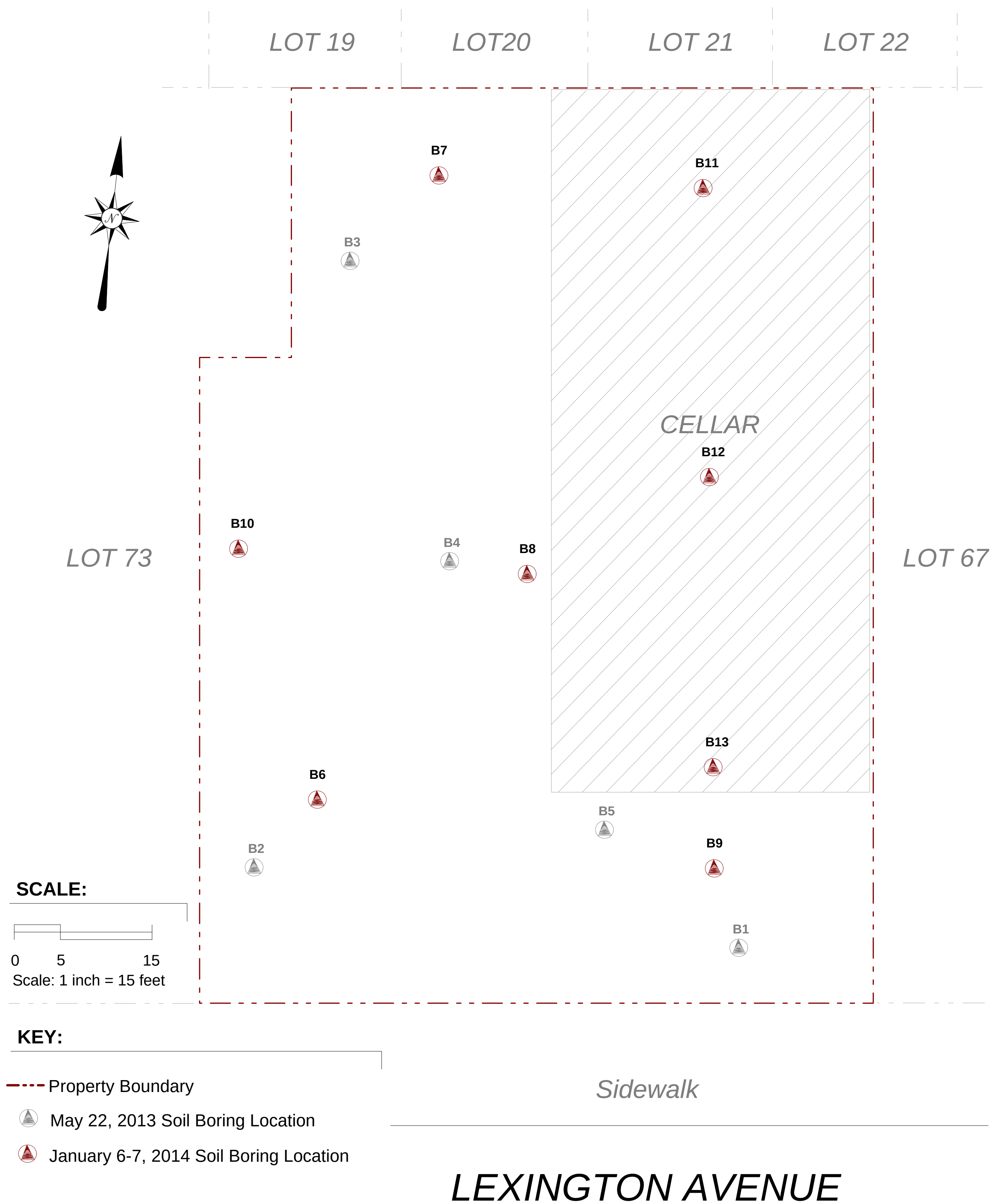
EBC ENVIRONMENTAL BUSINESS CONSULTANTS Phone 631.504.6000 Fax 631. 924 .2870	Figure No. 2	Site Name:	Residential Building Project
		Site Address:	853 Lexington Avenue, Brooklyn, NY
		Drawing Title:	Site Plan

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD. RIDGE. NY 11961
Phone: 631.504.6000
Fax: 631.924.2780

853 LEXINGTON AVENUE
BROOKLYN, NY 11221

FIGURE 3

SURROUNDING PROPERTIES



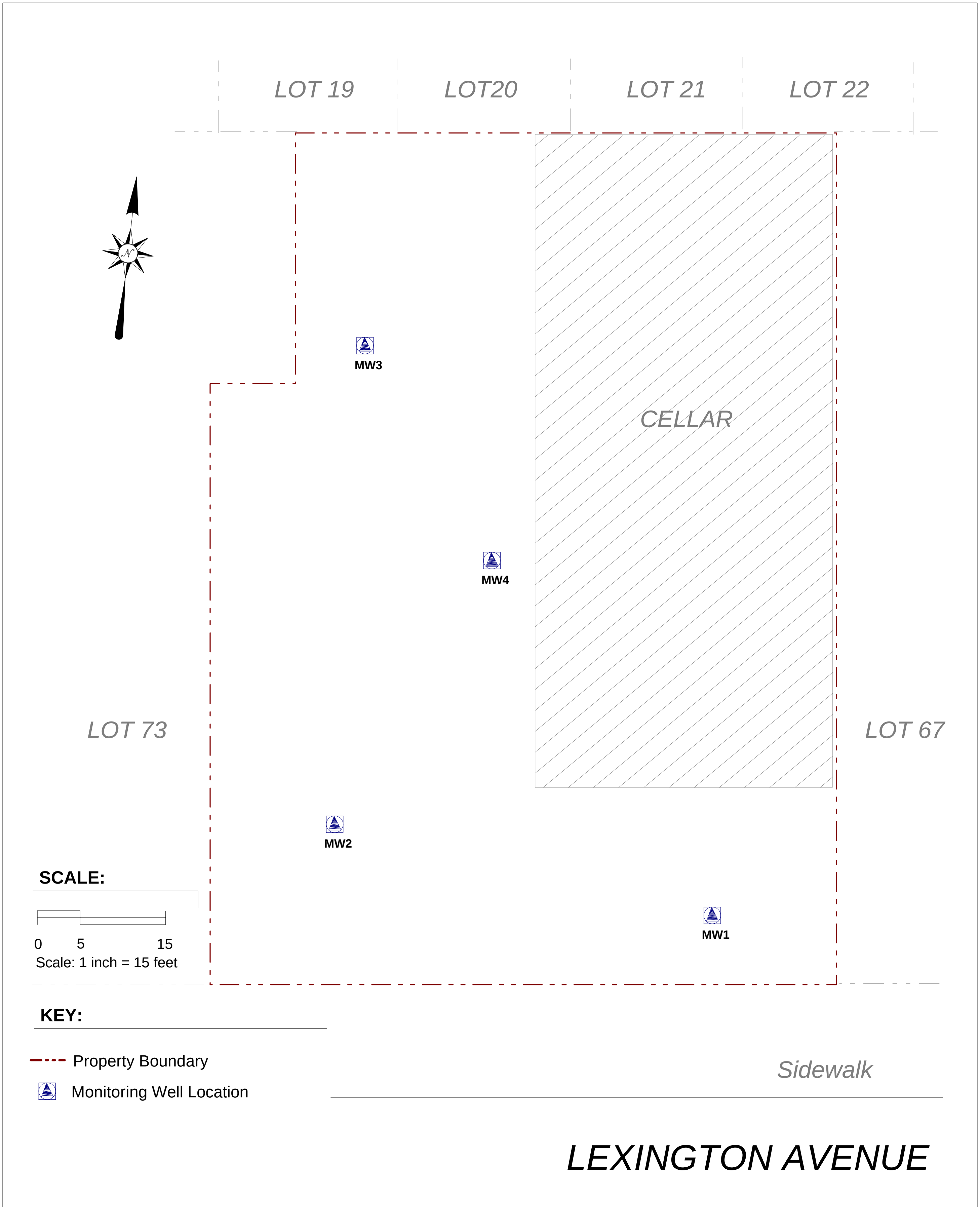
EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 4

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

Drawing Title: Soil Boring Locations



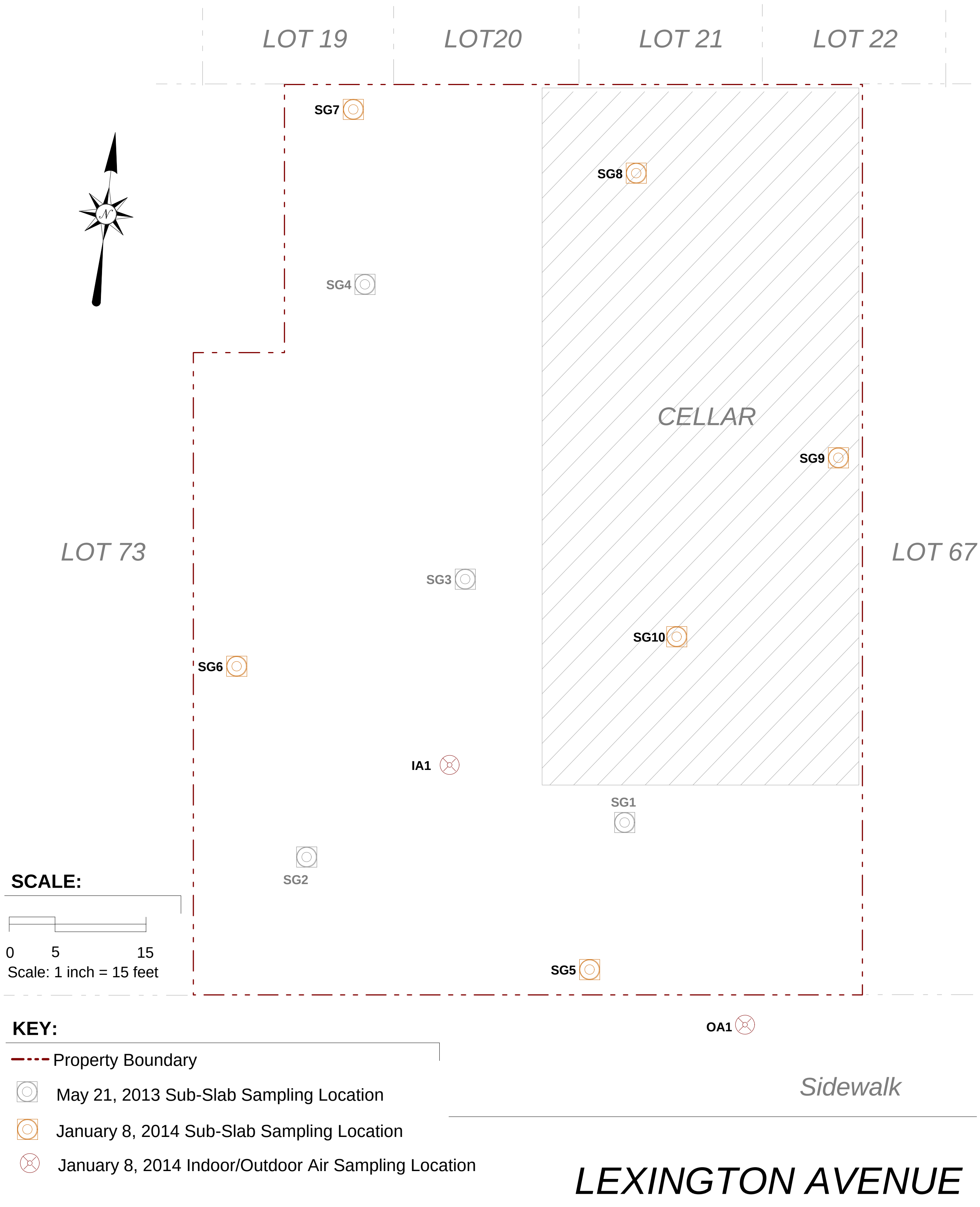
EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 5

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue Brooklyn, NY

Drawing Title: Monitoring Well Locations



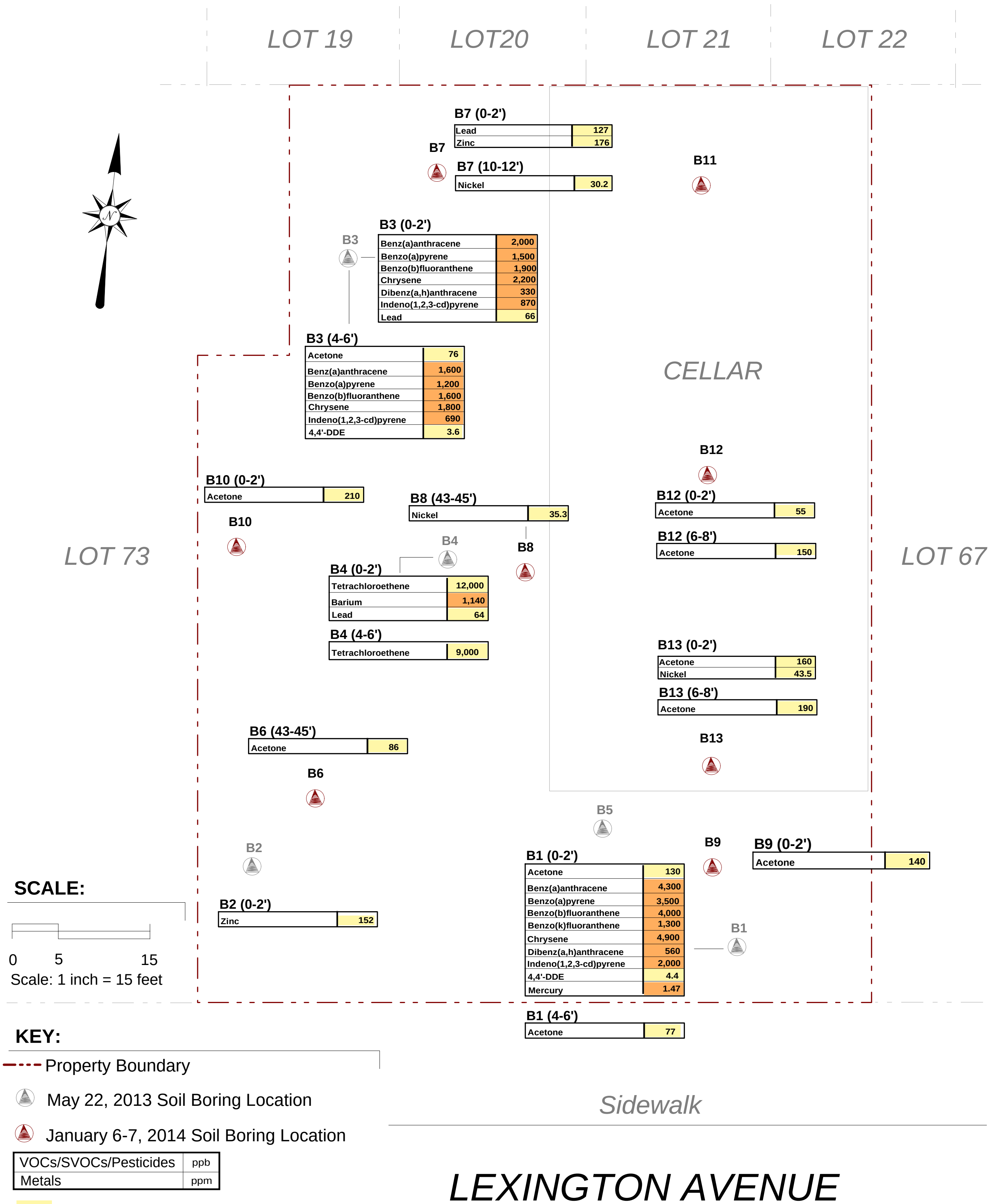
EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 6

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

Drawing Title: Soil Gas Sampling Locations



B7 (0-2')

Lead	127
Zinc	176

B7 (10-12')

Nickel	30.2

B3 (0-2')

Benz(a)anthracene	2,000
Benzo(a)pyrene	1,500
Benzo(b)fluoranthene	1,900
Chrysene	2,200
Dibenz(a,h)anthracene	330
Indeno(1,2,3-cd)pyrene	870
Lead	66

B3 (4-6')

Acetone	76
Benz(a)anthracene	1,600
Benzo(a)pyrene	1,200
Benzo(b)fluoranthene	1,600
Chrysene	1,800
Indeno(1,2,3-cd)pyrene	690
4,4'-DDE	3.6

B10 (0-2')

Acetone	210

B8 (43-45')

Nickel	35.3

B12 (0-2')

Acetone	55

B12 (6-8')

Acetone	150

B4 (0-2')

Tetrachloroethene	12,000
Barium	1,140
Lead	64

B4 (4-6')

Tetrachloroethene	9,000

B13 (0-2')

Acetone	160
Nickel	43.5

B13 (6-8')

Acetone	190

B6 (43-45')

Acetone	86

B9 (0-2')

Acetone	140

B1 (0-2')

Acetone	130
Benz(a)anthracene	4,300
Benzo(a)pyrene	3,500
Benzo(b)fluoranthene	4,000
Benzo(k)fluoranthene	1,300
Chrysene	4,900
Dibenz(a,h)anthracene	560
Indeno(1,2,3-cd)pyrene	2,000
4,4'-DDE	4.4
Mercury	1.47

B2 (0-2')

Zinc	152

B1 (4-6')

Acetone	77

KEY:

Property Boundary

May 22, 2013 Soil Boring Location

January 6-7, 2014 Soil Boring Location

VOCs/SVOCs/Pesticides	ppb
Metals	ppm

Exceedence of Unrestricted Use SCO

Exceedence of Restricted Residential SCO

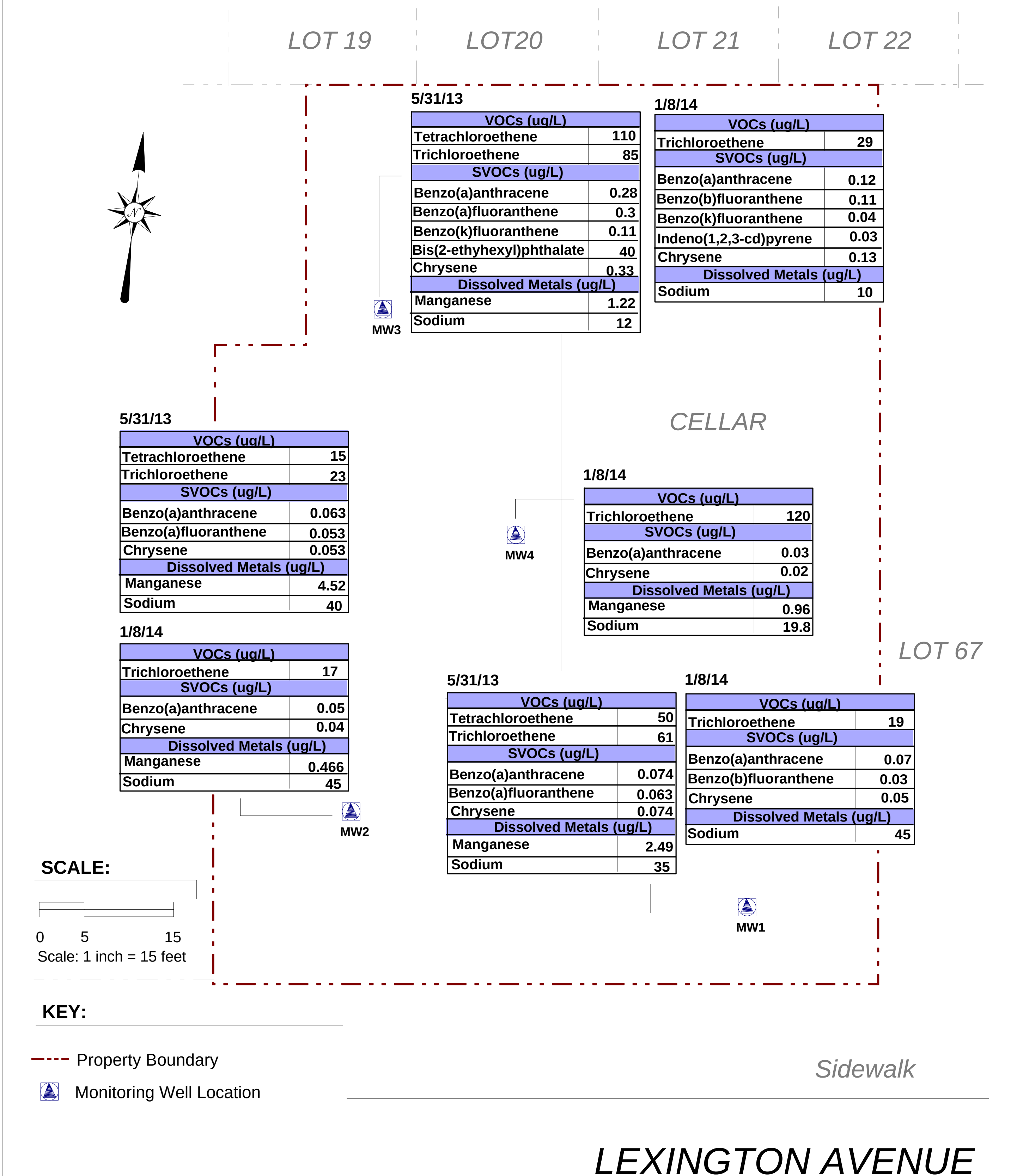
EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 7

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

Drawing Title: Soil Exceedences



5/31/13

VOCs (ug/L)	
Tetrachloroethene	110
Trichloroethene	85
SVOCs (ug/L)	
Benzo(a)anthracene	0.28
Benzo(a)fluoranthene	0.3
Benzo(k)fluoranthene	0.11
Bis(2-ethyhexyl)phthalate	40
Chrysene	0.33
Dissolved Metals (ug/L)	
Manganese	1.22
Sodium	12

1/8/14

VOCs (ug/L)	
Trichloroethene	29
SVOCs (ug/L)	
Benzo(a)anthracene	0.12
Benzo(b)fluoranthene	0.11
Benzo(k)fluoranthene	0.04
Indeno(1,2,3-cd)pyrene	0.03
Chrysene	0.13
Dissolved Metals (ug/L)	
Sodium	10

5/31/13

VOCs (ug/L)	
Tetrachloroethene	15
Trichloroethene	23
SVOCs (ug/L)	
Benzo(a)anthracene	0.063
Benzo(a)fluoranthene	0.053
Chrysene	0.053
Dissolved Metals (ug/L)	
Manganese	4.52
Sodium	40

1/8/14

VOCs (ug/L)	
Trichloroethene	17
SVOCs (ug/L)	
Benzo(a)anthracene	0.05
Chrysene	0.04
Dissolved Metals (ug/L)	
Manganese	0.466
Sodium	45

1/8/14

VOCs (ug/L)	
Trichloroethene	120
SVOCs (ug/L)	
Benzo(a)anthracene	0.03
Chrysene	0.02
Dissolved Metals (ug/L)	
Manganese	0.96
Sodium	19.8

5/31/13

VOCs (ug/L)	
Tetrachloroethene	50
Trichloroethene	61
SVOCs (ug/L)	
Benzo(a)anthracene	0.074
Benzo(a)fluoranthene	0.063
Chrysene	0.074
Dissolved Metals (ug/L)	
Manganese	2.49
Sodium	35

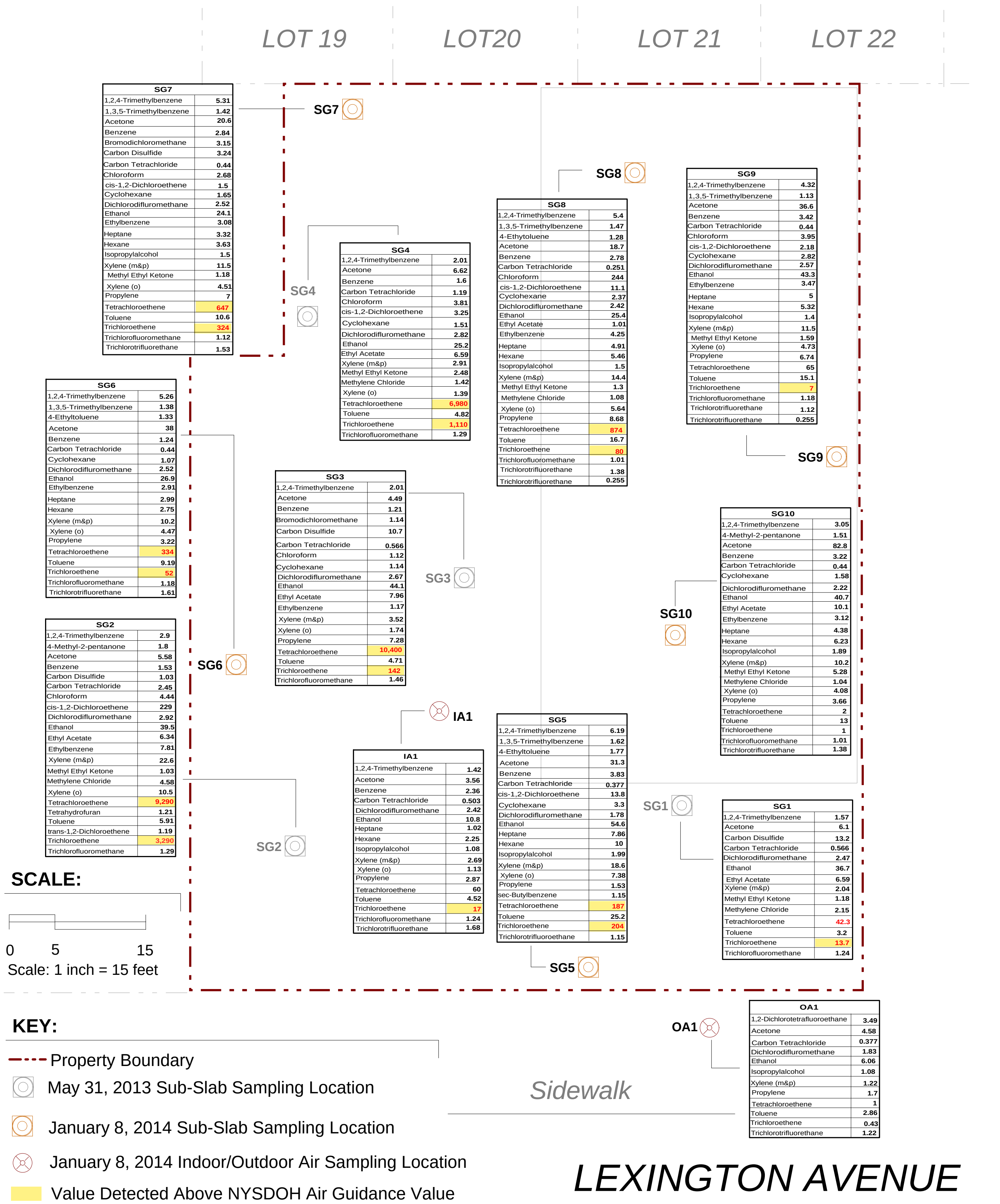
1/8/14

VOCs (ug/L)	
Trichloroethene	19
SVOCs (ug/L)	
Benzo(a)anthracene	0.07
Benzo(b)fluoranthene	0.03
Chrysene	0.05
Dissolved Metals (ug/L)	
Sodium	45

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

Figure No. 8

Site Name: Residential Building Project
Site Address: 853 Lexington Avenue Brooklyn, NY
Drawing Title: Groundwater Exceedences



SG7	
1,2,4-Trimethylbenzene	5.31
1,3,5-Trimethylbenzene	1.42
Acetone	20.6
Benzene	2.84
Bromodichloromethane	3.15
Carbon Disulfide	3.24
Carbon Tetrachloride	0.44
Chloroform	2.68
cis-1,2-Dichloroethene	1.5
Cyclohexane	1.65
Dichlorodifluromethane	2.52
Ethanol	24.1
Ethylbenzene	3.08
Heptane	3.32
Hexane	3.63
Isopropylalcohol	1.5
Xylene (m&p)	11.5
Methyl Ethyl Ketone	1.18
Xylene (o)	4.51
Propylene	7
Tetrachloroethene	647
Toluene	10.6
Trichloroethene	324
Trichlorofluoromethane	1.12
Trichlorotrifluorethane	1.53

SG8	
1,2,4-Trimethylbenzene	5.4
1,3,5-Trimethylbenzene	1.47
4-Ethytoluene	1.28
Acetone	18.7
Benzene	2.78
Carbon Tetrachloride	0.251
Chloroform	244
cis-1,2-Dichloroethene	11.1
Cyclohexane	2.37
Dichlorodifluromethane	2.42
Ethanol	25.4
Ethyl Acetate	1.01
Ethylbenzene	4.25
Heptane	4.91
Hexane	5.46
Isopropylalcohol	1.5
Xylene (m&p)	14.4
Methyl Ethyl Ketone	1.3
Methylene Chloride	1.08
Xylene (o)	5.64
Propylene	8.68
Tetrachloroethene	874
Toluene	16.7
Trichloroethene	80
Trichlorofluoromethane	1.01
Trichlorotrifluorethane	1.38
Trichlorotrifluorethane	0.255

SG9	
1,2,4-Trimethylbenzene	4.32
1,3,5-Trimethylbenzene	1.13
Acetone	36.6
Benzene	3.42
Carbon Tetrachloride	0.44
Chloroform	3.95
cis-1,2-Dichloroethene	2.18
Cyclohexane	2.82
Dichlorodifluromethane	2.57
Ethanol	43.3
Ethylbenzene	3.47
Heptane	5
Hexane	5.32
Isopropylalcohol	1.4
Xylene (m&p)	11.5
Methyl Ethyl Ketone	1.59
Xylene (o)	4.73
Propylene	6.74
Tetrachloroethene	65
Toluene	15.1
Trichloroethene	7
Trichlorofluoromethane	1.18
Trichlorotrifluorethane	1.12
Trichlorotrifluorethane	0.255

SG4	
1,2,4-Trimethylbenzene	2.01
Acetone	6.62
Benzene	1.6
Carbon Tetrachloride	1.19
Chloroform	3.81
cis-1,2-Dichloroethene	3.25
Cyclohexane	1.51
Dichlorodifluromethane	2.82
Ethanol	25.2
Ethyl Acetate	6.59
Xylene (m&p)	2.91
Methyl Ethyl Ketone	2.48
Methylene Chloride	1.42
Xylene (o)	1.39
Tetrachloroethene	6,980
Toluene	4.82
Trichloroethene	1,110
Trichlorofluoromethane	1.29

SG6	
1,2,4-Trimethylbenzene	5.26
1,3,5-Trimethylbenzene	1.38
4-Ethyltoluene	1.33
Acetone	38
Benzene	1.24
Carbon Tetrachloride	0.44
Cyclohexane	1.07
Dichlorodifluromethane	2.52
Ethanol	26.9
Ethylbenzene	2.91
Heptane	2.99
Hexane	2.75
Xylene (m&p)	10.2
Xylene (o)	4.47
Propylene	3.22
Tetrachloroethene	334
Toluene	9.19
Trichloroethene	52
Trichlorofluoromethane	1.18
Trichlorotrifluorethane	1.61

SG3	
1,2,4-Trimethylbenzene	2.01
Acetone	4.49
Benzene	1.21
Bromodichloromethane	1.14
Carbon Disulfide	10.7
Carbon Tetrachloride	0.566
Chloroform	1.12
Cyclohexane	1.14
Dichlorodifluromethane	2.67
Ethanol	44.1
Ethyl Acetate	7.96
Ethylbenzene	1.17
Xylene (m&p)	3.52
Xylene (o)	1.74
Propylene	7.28
Tetrachloroethene	10,400
Toluene	4.71
Trichloroethene	142
Trichlorofluoromethane	1.46

SG10	
1,2,4-Trimethylbenzene	3.05
4-Methyl-2-pentanone	1.51
Acetone	82.8
Benzene	3.22
Carbon Tetrachloride	0.44
Cyclohexane	1.58
Dichlorodifluromethane	2.22
Ethanol	40.7
Ethyl Acetate	10.1
Ethylbenzene	3.12
Heptane	4.38
Hexane	6.23
Isopropylalcohol	1.89
Xylene (m&p)	10.2
Methyl Ethyl Ketone	5.28
Methylene Chloride	1.04
Xylene (o)	4.08
Propylene	3.66
Tetrachloroethene	2
Toluene	13
Trichloroethene	1
Trichlorofluoromethane	1.01
Trichlorotrifluorethane	1.38

SG2	
1,2,4-Trimethylbenzene	2.9
4-Methyl-2-pentanone	1.8
Acetone	5.58
Benzene	1.53
Carbon Disulfide	1.03
Carbon Tetrachloride	2.45
Chloroform	4.44
cis-1,2-Dichloroethene	229
Dichlorodifluromethane	2.92
Ethanol	39.5
Ethyl Acetate	6.34
Ethylbenzene	7.81
Xylene (m&p)	22.6
Methyl Ethyl Ketone	1.03
Methylene Chloride	4.58
Xylene (o)	10.5
Tetrachloroethene	9,290
Tetrahydrofuran	1.21
Toluene	5.91
trans-1,2-Dichloroethene	1.19
Trichloroethene	3,290
Trichlorofluoromethane	1.29

IA1	
1,2,4-Trimethylbenzene	1.42
Acetone	3.56
Benzene	2.36
Carbon Tetrachloride	0.503
Dichlorodifluromethane	2.42
Ethanol	10.8
Heptane	1.02
Hexane	2.25
Isopropylalcohol	1.08
Xylene (m&p)	2.69
Xylene (o)	1.13
Propylene	2.87
Tetrachloroethene	60
Toluene	4.52
Trichloroethene	17
Trichlorofluoromethane	1.24
Trichlorotrifluorethane	1.68

SG5	
1,2,4-Trimethylbenzene	6.19
1,3,5-Trimethylbenzene	1.62
4-Ethyltoluene	1.77
Acetone	31.3
Benzene	3.83
Carbon Tetrachloride	0.377
cis-1,2-Dichloroethene	13.8
Cyclohexane	3.3
Dichlorodifluromethane	1.78
Ethanol	54.6
Heptane	7.86
Hexane	10
Isopropylalcohol	1.99
Xylene (m&p)	18.6
Xylene (o)	7.38
Propylene	1.53
sec-Butylbenzene	1.15
Tetrachloroethene	187
Toluene	25.2
Trichloroethene	204
Trichlorotrifluoroethane	1.15

SG1	
1,2,4-Trimethylbenzene	1.57
Acetone	6.1
Carbon Disulfide	13.2
Carbon Tetrachloride	0.566
Dichlorodifluromethane	2.47
Ethanol	36.7
Ethyl Acetate	6.59
Xylene (m&p)	2.04
Methyl Ethyl Ketone	1.18
Methylene Chloride	2.15
Tetrachloroethene	42.3
Toluene	3.2
Trichloroethene	13.7
Trichlorofluoromethane	1.24

OA1	
1,2-Dichlorotetrafluoroethane	3.49
Acetone	4.58
Carbon Tetrachloride	0.377
Dichlorodifluromethane	1.83
Ethanol	6.06
Isopropylalcohol	1.08
Xylene (m&p)	1.22
Propylene	1.7
Tetrachloroethene	1
Toluene	2.86
Trichloroethene	0.43
Trichlorotrifluorethane	1.22

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS

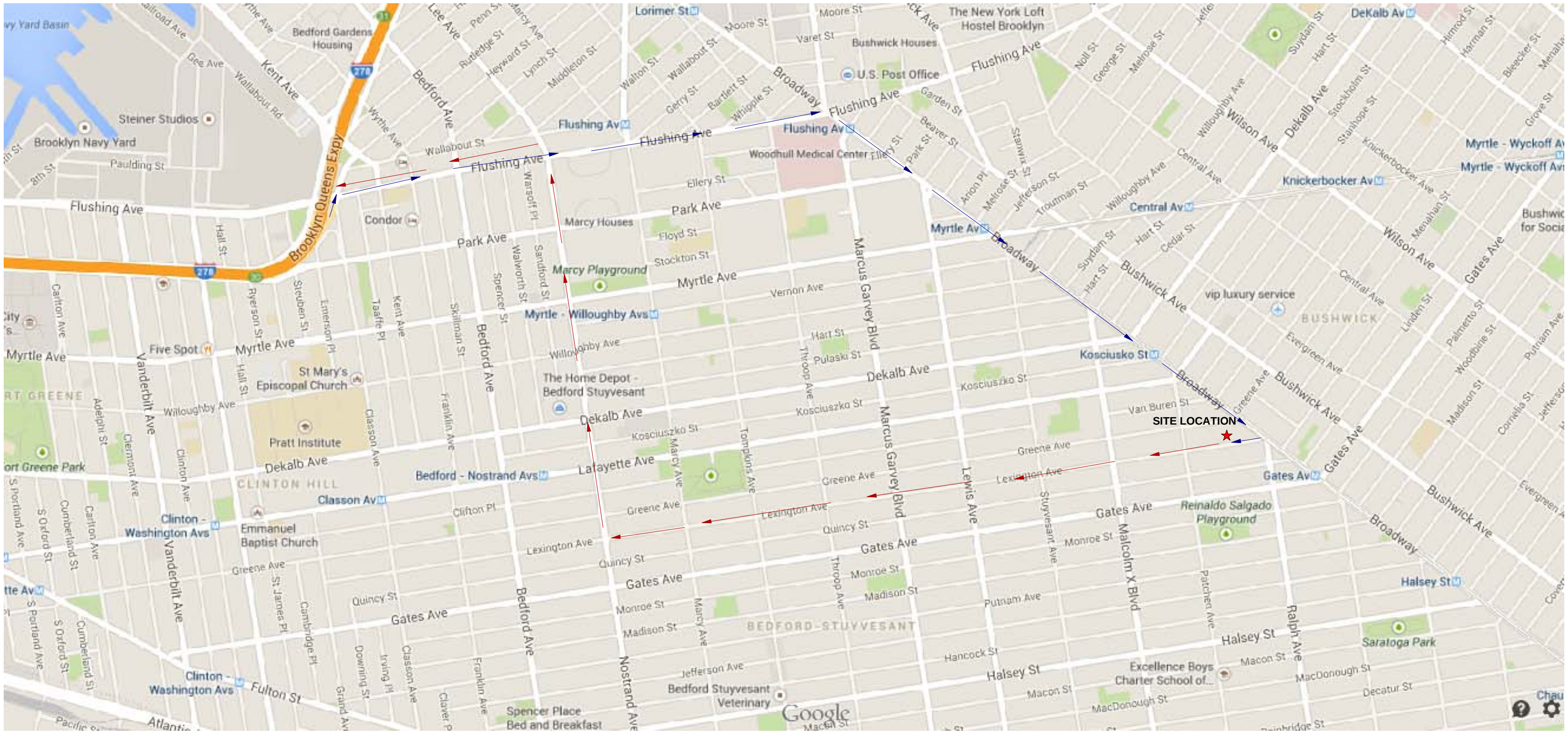
Phone 631.504.6000
Fax 631. 924 .2870

Figure No.
9

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

Drawing Title: Soil Gas Sampling Locations



Key

Truck Route to the Site

Truck Route from the Site

Environmental Business Consultants

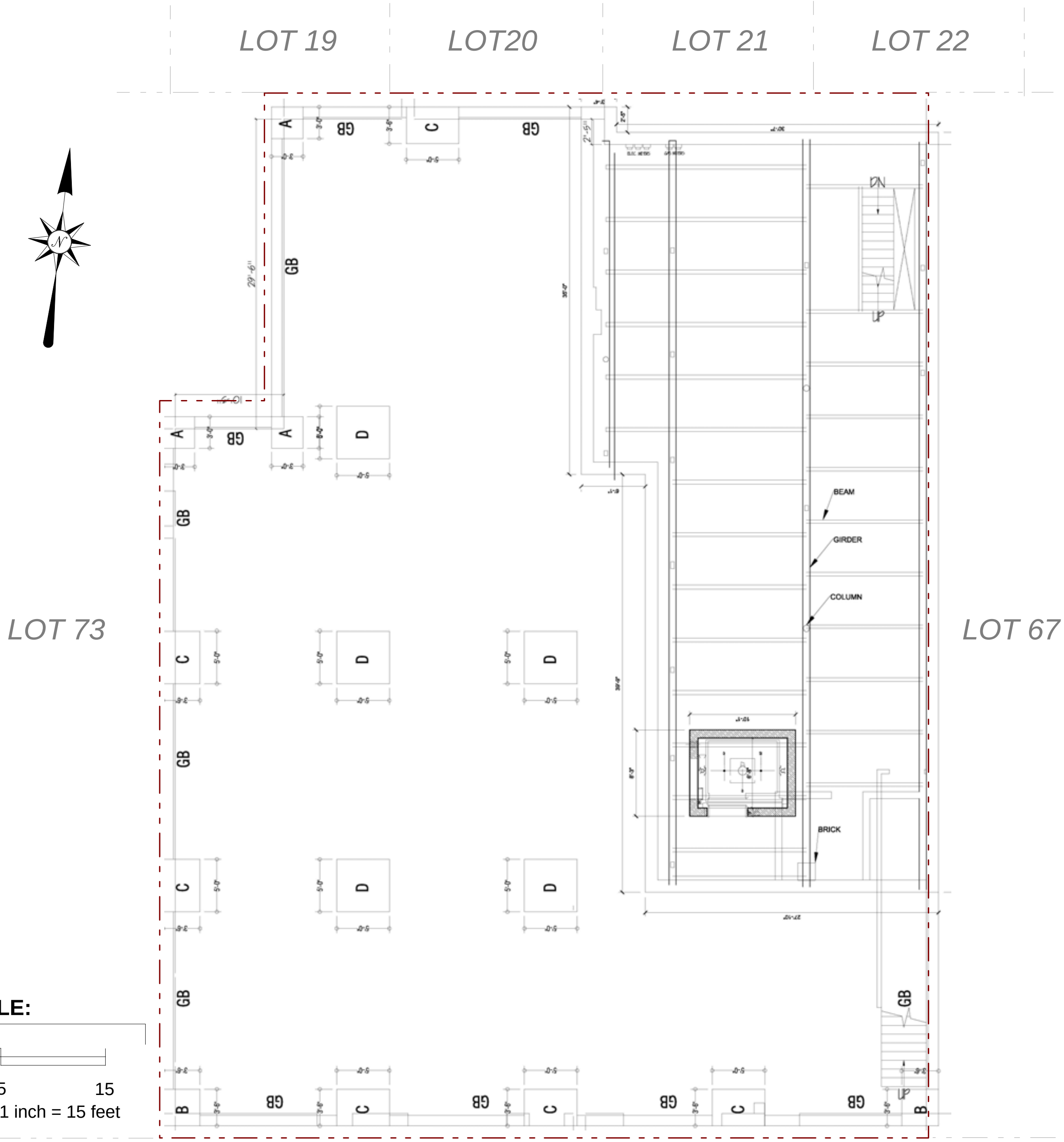
1808 Middle Country Road. Ridge. NY 11961

Phone 631.504.6000

Fax 631.924.2780

853 Lexington Avenue
Brooklyn, NY

FIGURE 10 TRUCK ROUTES



SCALE:

0 5 15

Scale: 1 inch = 15 feet

KEY:

---- Property Boundary

Excavation Legend:

A = 3'x3'x4'
B = 3'6"x3'6"x4'
C = 3'6"x5'x4'
D = 5'x5'x2'
GB = 12"x16"
Elevator = 10'1"x8'3"x5'

LEXINGTON AVENUE

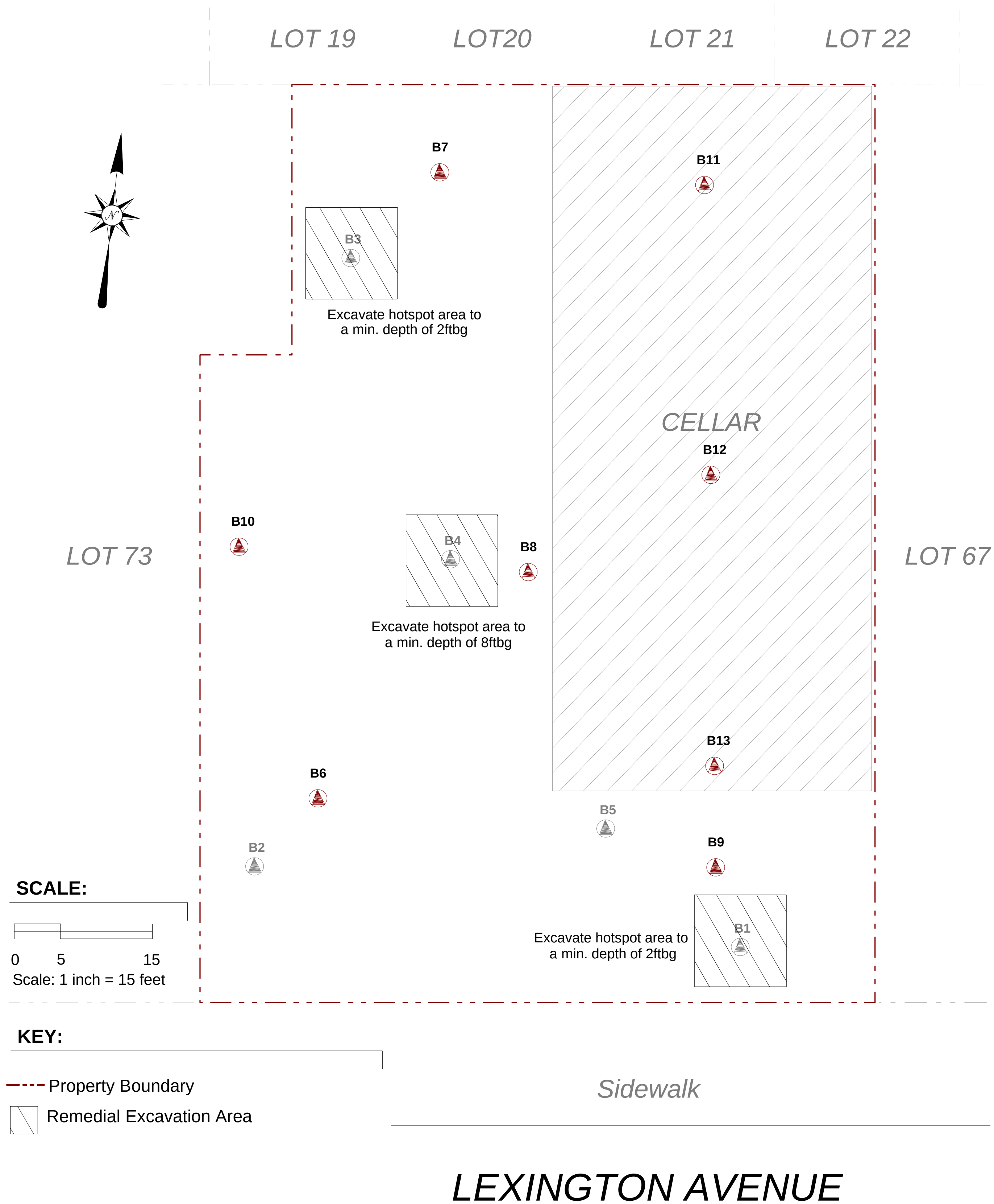
EBC
Environmental Business Consultants
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 11

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

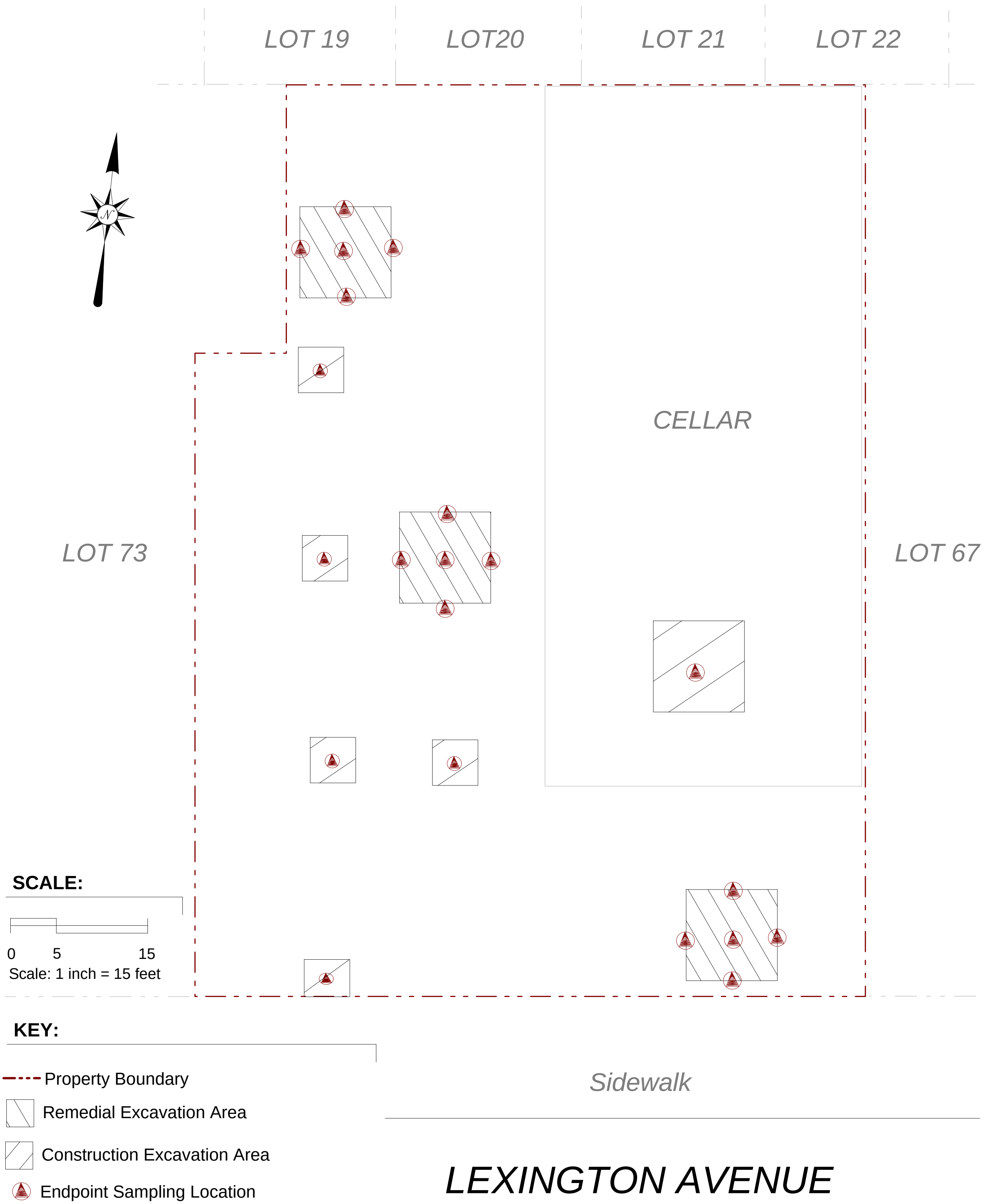
Drawing Title: Planned Construction Excavation



EBC
Environmental Business Consultants
Phone 631.504.6000
Fax 631. 924 .2870

Figure No. 12

Site Name:	Residential Building Project
Site Address:	853 Lexington Avenue, Brooklyn, NY
Drawing Title:	Remedial Excavation Plan



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

Figure No. 13

Site Name: Residential Building Project

Site Address: 853 Lexington Avenue, Brooklyn, NY

Drawing Title: Endpoint Sampling Locations

ATTACHMENT A
Health and Safety Plan

FORMER LEXINGTON LAUNDRY SERVICE SITE

853 LEXINGTON AVENUE
BROOKLYN, NEW YORK
Block 1623 Lot 70
Site No. C-224180

CONSTRUCTION HEALTH AND SAFETY PLAN

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B-12th Floor
625 Broadway
Albany, New York 12233

MAY 2013

Program Volunteer:
853 Lexington LLC
116 Nostrand Avenue
Brooklyn, NY 11205

Prepared By:

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS

1808 Middle Country Road
Ridge, NY 11961

TABLE OF CONTENTS
CONSTRUCTION HEALTH AND SAFETY PLAN
Former Lexington Laundry Service
853 Lexington Avenue, Brooklyn, New York

TABLE OF CONTENTS
CONSTRUCTION HEALTH AND SAFETY PLAN
Former Charles Pfizer & Co. Site
871 Grand Street, Brooklyn, New York

FIGURES

APPENDICES

STATEMENT OF COMMITMENT

This Health and Safety Plan (HASP) has been prepared to ensure that workers are not exposed to risks from hazardous materials during the Remedial Action at 853 Lexington, Brooklyn, New York.

This HASP, which applies to persons present at the site actually or potentially exposed to hazardous materials, describes emergency response procedures for actual and potential chemical hazards. This HASP is also intended to inform and guide personnel entering the work area or exclusion zone. Persons are to acknowledge that they understand the potential hazards and the contents of this Health and Safety policy by signing off on receipt of their individual copy of the document. Contractors and suppliers are retained as independent contractors and are responsible for ensuring the health and safety of their own employees.

1.0 INTRODUCTION AND SITE ENTRY REQUIREMENTS

This document describes the health and safety guidelines developed by Environmental Business Consultants (EBC) for the planned Remedial Action at 853 Lexington Avenue, Brooklyn, New York to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes during remedial activities. In accordance with the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1910.120 Hazardous Waste Operations and Emergency Response Final rule, this CHASP, including the attachments, addresses safety and health hazards related to excavation, loading and other soil disturbance activities and is based on the best information available. The CHASP may be revised by EBC at the request of the client and/or a regulatory agency upon receipt of new information regarding site conditions. Changes will be documented by written amendments signed by EBC's project manager, site safety officer and/or the EBC health and safety consultant.

1.1 Training Requirements

Personnel entering the exclusion zone or decontamination zone are required to be certified in health and safety practices for hazardous waste site operations as specified in the Federal OSHA Regulations CFR 1910.120e (revised 3/6/90).

Paragraph (e - 3) of the above referenced regulations requires that all on-site management personnel directly responsible for or who supervise employees engaged in hazardous waste operations, must initially receive 8 hours of supervisor training related to managing hazardous waste work.

Paragraph (e - 8) of the above referenced regulations requires that workers and supervisors receive 8 hours of refresher training annually on the items specified in Paragraph (e-1) and/or (e-3).

Additionally all on-site personnel must receive adequate site-specific training in the form of an on-site Health and Safety briefing prior to participating in field work with emphasis on the following:

- Protection of the adjacent community from hazardous vapors and / or dust which may be released during intrusive activities.
- Identification of chemicals known or suspected to be present on-site and the health effects and hazards of those substances.
- The need for vigilance in personnel protection, and the importance of attention to proper use, fit and care of personnel protective equipment.
- Decontamination procedures.
- Site control including work zones, access and security.
- Hazards and protection against heat or cold.
- The proper observance of daily health and safety practices, such as entry and exit of work zones and site. Proper hygiene during lunch, break, etc.
- Emergency procedures to be followed in case of fire, explosion and sudden release of hazardous gases.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

Health and Safety meetings will be conducted on a daily basis and will cover protective clothing and other equipment to be used that day, potential and chemical and physical hazards, emergency procedures, and conditions and activities from the previous day.

1.2 Medical Monitoring Requirements

Field personnel and visitors entering the exclusion zone or decontamination zone must have completed appropriate medical monitoring required under OSHA 29 CFR 1910.120(f) if respirators or other breathing related PPE is needed. Medical monitoring enables a physician to monitor each employee's health, physical condition, and his fitness to wear respiratory protective equipment and carry out on-site tasks.

1.3 Site Safety Plan Acceptance, Acknowledgment and Amendments

The project superintendent and the site safety officer are responsible for informing personnel (EBC employees and/or owner or owners representatives) entering the work area of the contents of this plan and ensuring that each person signs the safety plan acknowledging the on-site hazards and procedures required to minimize exposure to adverse effects of these hazards. A copy of the Acknowledgement Form is included in **Appendix A**.

Site conditions may warrant an amendment to the HASP. Amendments to the HASP are acknowledged by completing forms included in **Appendix B**.

1.4 Key Personnel - Roles and Responsibilities

Personnel responsible for implementing this Health and Safety Plan are:

Name	Title	Address	Contact Numbers
Ms. Kristen DiScenza	EBC – Project Manager	1808 Middle Country Rd Ridge, NY 11961	(631) 504-6000 (516) 652-8338
Ms. Chawinie Miller	Health & Safety Manager	1808 Middle Country Rd Ridge, NY 11961	(631) 504-6000
Mr. Kevin Waters	Site Safety Officer	1808 Middle Country Rd Ridge, NY 11961	(631) 504-6000

The project manager is responsible for overall project administration and, with guidance from the site safety officer, for supervising the implementation of this CHASP. The site safety officer will conduct daily (tail gate or tool box) safety meetings at the project site and oversee daily safety issues. Each subcontractor and supplier (defined as an OSHA employer) is also responsible for the health and safety of its employees. If there is any dispute about health and safety or project activities, on-site personnel will attempt to resolve the issue. If the issue cannot be resolved at the site, then the project manager will be consulted.

The site safety officer is also responsible for coordinating health and safety activities related to hazardous material exposure on-site. The site safety officer is responsible for the following:

1. Educating personnel about information in this CHASP and other safety requirements to

be observed during site operations, including, but not limited to, decontamination procedures, designation of work zones and levels of protection, air monitoring, fit testing, and emergency procedures dealing with fire and first aid.

2. Coordinating site safety decisions with the project manager.

3. Designating exclusion, decontamination and support zones on a daily basis.

4. Monitoring the condition and status of known on-site hazards and maintaining and implementing the air quality monitoring program specified in this CHASP.

5. Maintaining the work zone entry/exit log and site entry/exit log.

6. Maintaining records of safety problems, corrective measures and documentation of chemical exposures or physical injuries (the site safety officer will document these conditions in a bound notebook and maintain a copy of the notebook on-site).

The person who observes safety concerns and potential hazards that have not been addressed in the daily safety meetings should immediately report their observations/concerns to the site safety officer or appropriate key personnel.

2.0 SITE BACKGROUND AND SCOPE OF WORK

The Site address is 853 Lexington Avenue, Brooklyn, New York 11211. It is located on the north side of Lexington Avenue between Patchen Avenue and Broadway in Brooklyn, New York. The site is designated as Block 1623 Lot 70 on the Brooklyn Tax Map. The Site consists of a single tax parcel with 73.62 feet of street frontage on Lexington Avenue and is approximately 100 feet deep for a total of 7,358 square feet (0.17 acres). The lot is currently developed with a vacant two story commercial warehouse occupying the entire Lot.

The elevation of the property is approximately 39 feet above the National Geodetic Vertical Datum (NGVD) feet. Based on measurements made at the Site as part of the Remedial Investigation, the depth to groundwater beneath the site is approximately 43 feet below existing grade and flows northwest toward the East River.

2.1 Previous Investigations

2.1.1 Phase I Environmental Site Assessment (SEG)

A Phase I Environmental Site Assessment (ESA) report was prepared by Singer Environmental Group (SEG) in November 2012.

A Phase I was completed by Singer Environmental Group, LTD. in 2012. A history dating back to 1908 was established. According to NYC Oasis information the current building was constructed in 1931. A review of Sanborn maps showed occupancy by HC Bohack Co, in 1908, a laundry facility in 1932, followed by a commercial laundry facility in 1932 through sometime prior to 1951. From 1951 to at least 2007, several furniture manufacturers occupied the building.

Based upon reconnaissance of the subject and surrounding properties, interviews and review of historical records and regulatory agency databases, Singer Environmental Group, LTD identified the following recognized environmental conditions:

The subject property is listed as an "E" designated site with the NYC department of City Planning for "Hazmat/Noise/Air".A Phase I Desktop Environmental Review was conducted by Environmental Business Consultants (EBC) in January 2013.

2.2 Redevelopment Plans

The development project consists of converting the existing 2-story commercial building into a 6-story residential apartment building. The existing cellar, 7 feet below grade, which occupies approximately 35% of the Site, and first floor of the current building, will remain and an additional four floors will be added. As the current structure will not be demolished, excavation will be limited to the installation of building footers as required to support the additional floors, approximately 6 feet below grade. The building will cover the entire Lot, and includes a partial cellar, which will be utilized for storage and utilities. The cellar will have both elevator and stair access. The first floor will contain three residential units as well as indoor parking for twelve vehicles and bicycle parking.

2.3 Description of Remedial Action

Site activities included within the Remedial Action that are included within the scope of this HASP include the following:

1. Removal of CVOC impacted soil from the central portion of the property, adjacent to boring B4, to a depth of approximately 6 feet below grade;
2. Hotspot excavation of soil/fill exceeding Track 2 restricted residential SCOs as listed in **Table 1,** at boring locations B1 and B3;
3. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 2 SCOs;
4. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
5. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in **Table 1**, (2) all Federal, State and local rules and regulations for handling and transport of material;
6. Installation of sub-slab depressurization (SSDS) beneath the existing basement foundation;
7. Installation of a vapor barrier within all excavated areas, SSDS trenches, and utility/plumbing conduits;
8. Installation of an epoxy/polymer sealant across entire existing slab;
9. Installation of a composite cover system consisting of the concrete building slab across the entire Site;
10. Implementation of a Site Management Plan (SMP) for long term maintenance of the Engineering Controls;
11. An Environmental Easement will be filed against the Site to ensure implementation of the SMP.
12.

3.0 HAZARD ASSESSMENT

This section identifies the hazards associated with the proposed scope of work, general physical hazards that can be expected at most sites; and presents a summary of documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those that cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

3.0 HAZARD ASSESSMENT

This section identifies the hazards associated with the proposed scope of work, general physical hazards that can be expected at most sites; and presents a summary of documented or potential chemical hazards at the site. Every effort must be made to reduce or eliminate these hazards. Those that cannot be eliminated must be guarded against using engineering controls and/or personal protective equipment.

3.1 Physical Hazards

3.1.1 Tripping Hazards

An area of risk associated with on-site activities are presented by uneven ground, concrete, curbstones or equipment which may be present at the site thereby creating a potential tripping hazard. During intrusive work, care should be taken to mark or remove any obstacles within the exclusion zone.

3.1.2 Climbing Hazards

During site activities, workers may have to work on excavating equipment by climbing. The excavating contractor will conform with any applicable NIOSH and OSHA requirements or climbing activities.

3.1.3 Cuts and Lacerations

Field activities that involve excavating activities usually involve contact with various types of machinery. A first aid kit approved by the American Red Cross will be available during all intrusive activities.

3.1.4 Lifting Hazards

Improper lifting by workers is one of the leading causes of industrial injuries. Field workers in the excavation program may be required to lift heavy objects. Therefore, all members of the field crew should be trained in the proper methods of lifting heavy objects. All workers should be cautioned against lifting objects too heavy for one person.

3.1.5 Utility Hazards

Before conducting any excavation, the excavation contractor will be responsible for locating and verifying all existing utilities at each excavation.

3.1.6 Traffic Hazards

All traffic, vehicular and pedestrian, shall be maintained and protected at all times consistent with local, state and federal agency regulations regarding such traffic and in accordance with NYCDOT guidelines. The excavation contractor shall carry on his operations without undue interference or delays to traffic. The excavation contractor shall furnish all labor, materials, guards, barricades, signs, lights, and anything else necessary to maintain traffic and to protect his work and the public, during operations.

3.2 Work in Extreme Temperatures

Work under extremely hot or cold weather conditions requires special protocols to minimize the chance that employees will be affected by heat or cold stress.

3.2.1 Heat Stress

The combination of high ambient temperature, high humidity, physical exertion, and personal protective apparel, which limits the dissipation of body heat and moisture, can cause heat stress.

The following prevention, recognition and treatment strategies will be implemented to protect personnel from heat stress. Personnel will be trained to recognize the symptoms of heat stress and to apply the appropriate treatment.

1. Prevention
    a. Provide plenty of fluids. Available in the support zone will be a 50% solution of

fruit punch and water or plain water.

b. Work in Pairs. Individuals should avoid undertaking any activity alone.

c. Provide cooling devices. A spray hose and a source of water will be provided to reduce body temperature, cool protective clothing and/or act as a quick-drench shower in case of an exposure incident.

d. Adjustment of the work schedule. As is practical, the most labor-intensive tasks should be carried out during the coolest part of the day.

2. Recognition and Treatment

a Heat Rash (or prickly heat):

Cause: Continuous exposure to hot and humid air, aggravated by chafing clothing.

Symptoms: Eruption of red pimples around sweat ducts accompanied by intense itching and tingling.

Treatment: Remove source or irritation and cool skin with water or wet cloths.

b. Heat Cramps (or heat prostration)

Cause: Profuse perspiration accompanied by inadequate replenishment of body water and electrolytes.

Symptoms: Muscular weakness, staggering gait, nausea, dizziness, shallow breathing, pale and clammy skin, approximately normal body temperature.

Treatment: Perform the following while making arrangement for transport to a medical facility. Remove the worker to a contamination reduction zone. Remove protective clothing. Lie worker down on back in a cool place and raise feet 6 to 12 inches. Keep warm, but loosen all clothing. If conscious, provide sips of salt-water solution, using one teaspoon of salt in 12 ounces of water. Transport to a medical facility.

c. Heat Stroke

Cause: Same as heat exhaustion. This is also an extremely serious condition.

Symptoms: Dry hot skin, dry mouth, dizziness, nausea, headache, rapid pulse.

Treatment: Cool worker immediately by immersing or spraying with cool water or sponge bare skin after removing protective clothing. Transport to hospital.

3.2.2 Cold Exposure

Exposure to cold weather, wet conditions and extreme wind-chill factors may result in excessive loss of body heat (hypothermia) and /or frostbite. To guard against cold exposure and to prevent cold injuries, appropriate warm clothing should be worn, warm shelter must be readily available, rest periods should be adjusted as needed, and the physical conditions of on-site field personnel should be closely monitored. Personnel and supervisors working on-site will be made aware of the signs and symptoms of frost bite and hypothermia such as shivering, reduced blood pressure, reduced coordination, drowsiness, impaired judgment, fatigue, pupils dilated but reactive to light and numbing of the toes and fingers.

3.3 Chemical Hazards

"Urban fill" materials, present throughout the New York City area typically contain elevated levels of semi-volatile organic compounds and metals. These "contaminants" are not related to a chemical release occurring on the site, but are inherent in the reworked fill material in the area which contains ash and bits of tar and asphalt. Considering the previous sampling results and the past and present use of the site, the following compounds are considered for the site as potential contaminants: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyl's (PCBs), and heavy metals such as arsenic, chromium, lead and mercury.

Based on the findings of the Remedial Investigation and the inherent properties of urban fill, the following compounds are considered for the site as potential contaminants: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and heavy metals.

Volatile organic compounds reported to be present in soil, soil gas and/or groundwater include the following:

Acetone	Tetrachloroethene	Trichloroethene

Semi-Volatile organic compounds reported to be present in soil include the following:

Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene
Chrysene	Dibenzo(ah)anthracene	Indeno(1,2,3-cd)pyrene	
Bis(2-ethylhexyl)phthalate			

Pesticides/ PCBs reported to be present in soil include the following:

4,4,4-DDE

Metals reported to be present in soil and / or groundwater include the following

Barium	Lead	Nickel	Zinc	Manganese	Sodium

The primary routes of exposure to these contaminants are inhalation, ingestion and absorption.

Appendix C includes information sheets for suspected chemicals that may be encountered at the site.

3.3.1 Respirable Dust

Dust may be generated from vehicular traffic and/or excavation activities. If visible observation detects elevated levels of dust, a program of wetting will be employed by the site safety officer. If elevated dust levels persist, the site safety office will employ dust monitoring using a particulate monitor (Miniram or equivalent). If monitoring detects concentrations greater than 150 µg/m3 over daily background, the site safety officer will take corrective actions as defined herein, including the use of water for dust suppression and if this is not effective, requiring workers to wear APRs with efficiency particulate air (HEPA) cartridges.

Absorption pathways for dust and direct contact with soils or groundwater will be mitigated with the implementation of latex gloves, hand washing and decontamination exercises when necessary.

3.3.2 Dust Control and Monitoring During Earthwork

Dust generated during excavation activities or other earthwork may contain contaminants identified in soils at the site. Dust will be controlled by wetting the working surface with water. Calcium chloride may be used if the problem cannot be controlled with water. Air monitoring and dust control techniques are specified in a site specific Dust Control Plan (if applicable). Site workers will not be required to wear APR's unless dust concentrations are consistently over 150 $\mu g/m^3$ over site-specific background in the breathing zone as measured by a dust monitor unless the site safety officer directs workers to wear APRs. The site safety officer will use visible dust as an indicator to implement the dust control plan.

3.3.3 Organic Vapors

Elevated levels of VOCs were detected in both soil and soil gas samples collected during previous investigations at the site. Therefore, excavation activities may cause the release of organic vapors to the atmosphere. The site safety officer will periodically monitor organic vapors with a Photoionization Detector (PID) during excavation activities to determine whether organic vapor concentrations exceed action levels shown in Section 5 and/or the Community Air Monitoring Plan.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

4.0 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) shall be selected in accordance with the site air monitoring program, OSHA 29 CFR 1910.120(c), (g), and 1910.132. Protective equipment shall be NIOSH approved and respiratory protection shall conform to OSHA 29 CFR Part 1910.133 and 1910.134 specifications; head protection shall conform to 1910.135; eye and face protection shall conform to 1910.133; and foot protection shall conform to 1910.136. The only true difference among the levels of protection from D thru B is the addition of the type of respiratory protection. **It is anticipated that work will be performed in Level D PPE.**

4.1 Level D

Level D PPE shall be donned when the atmosphere contains no known hazards and work functions preclude splashes, immersion, or the potential for inhalation of, or contact with, hazardous concentrations of harmful chemicals. Level D PPE consists of:

- standard work uniform, coveralls, or tyvek, as needed;
- steel toe and steel shank work boots;
- hard hat;
- safety vest;
- gloves, as needed;
- safety glasses;
- hearing protection;
- equipment replacements are available as needed.

4.2 Level C

Level C PPE shall be donned when the concentrations of measured total organic vapors in the breathing zone exceed background concentrations (using a portable OVA, or equivalent), but are less than 5 ppm. The specifications on the APR filters used must be appropriate for contaminants identified or expected to be encountered. Level C PPE shall be donned when the identified contaminants have adequate warning properties and criteria for using APR have been met. Level C PPE consists of:

- chemical resistant or coated tyvek coveralls;
- steel-toe and steel-shank workboots;
- chemical resistant overboots or disposable boot covers;
- disposable inner gloves (surgical gloves);
- disposable outer gloves;
- full face APR fitted with organic vapor/dust and mist filters or filters appropriate for the identified or expected contaminants;
- hard hat;
- splash shield, as needed; and,
- ankles/wrists taped with duct tape.

The site safety officer will verify if Level C is appropriate by checking organic vapor

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

concentrations using compound and/or class-specific detector tubes.

- chemical resistant coveralls;
- steel-toe and steel-shank workboots;
- chemical resistant overboots or disposable boot covers;
- disposable inner gloves;
- disposable outer gloves;
- hard hat; and,
- ankles/wrists taped.

The exact PPE ensemble is decided on a site-by-site basis by the Site Safety Officer with the intent to provide the most protective and efficient worker PPE.

4.3 Activity-Specific Levels of Personal Protection

The required level of PPE is activity-specific and is based on air monitoring results (Section 4.0) and properties of identified or expected contaminants. **It is expected that site work will be performed in Level D.** If air monitoring results indicate the necessity to upgrade the level of protection engineering controls (i.e. Facing equipment away from the wind and placing site personnel upwind of drilling locations, active venting, etc.) will be implemented before requiring the use of respiratory protection.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

5.0 AIR MONITORING AND ACTION LEVELS

29 CFR 1910.120(h) specifies that monitoring shall be performed where there may be a question of employee exposure to hazardous concentrations of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment so that employees are not exposed to levels which exceed permissible exposure limits, or published exposure levels if there are no permissible exposure limits, for hazardous substances.

5.1 Air Monitoring Requirements

If excavation work is performed, air will be monitored for VOCs with a portable ION Science 3000EX photoionization detector, or the equivalent. If necessary, Lower Explosive Limit (LEL) and oxygen will be monitored with a Combustible Gas Indicator (CGI). If appropriate, fugitive dust will be monitored using a MiniRam Model PDM-3 aerosol monitor. Air will be monitored when any of the following conditions apply:

- initial site entry;
- during any work where a potential IDLH condition or flammable atmosphere could develop;
- excavation work begins on another portion of the site;
- contaminants, other than those previously identified, have been discovered;
- each time a different task or activity is initiated;
- during trenching and/or excavation work.

The designated site safety officer will record air monitoring data and ensure that air monitoring instruments are calibrated and maintained in accordance with manufacturer's specifications. Instruments will be zeroed daily and checked for accuracy. Monitoring results will be recorded in a field notebook and will be transferred to instrument reading logs.

5.2 Work Stoppage Responses

The following responses will be initiated whenever one or more of the action levels necessitating a work stoppage are exceeded:

1 The SSO will be consulted immediately
2 All personnel (except as necessary for continued monitoring and contaminant migration, if applicable) will be cleared from the work area (eg from the exclusion zone).
3 Monitoring will be continued until intrusive work resumes.

5.3 Action Levels During Excavation Activities

Instrument readings will be taken in the breathing zone above the excavation pit unless otherwise noted. Each action level is independent of all other action levels in determining responses.

Organic Vapors (PID)	LEL %	Responses
0-1 ppm above background	0%	• Continue excavating • Level D protection • Continue monitoring every 10 minutes

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

1-5 ppm Above Background, Sustained Reading	1-10%	• Continue excavating • Go to Level C protection or employ engineering controls • Continue monitoring every 10 minutes
5-25 ppm Above Background, Sustaineed Reading	10-20%	• Discontinue excavating, unless PID is only action level exceeded. • Level C protection or employ engineering controls • Continue monitoring for organic vapors 200 ft downwind • Continuous monitoring for LEL at excavation pit
>25 ppm Above Background, Sustained Reading	>20%	• Discontinue excavating • Withdraw from area, shut off all engine ignition sources. • Allow pit to vent • Continuous monitoring for organic vapors 200 ft downwind.

Notes: Air monitoring will occur in the breathing zone 30 inches above the excavation pit. Readings may also be taken in the excavation pit but will not be used for action levels.

If action levels for any one of the monitoring parameters are exceeded, the appropriate responses listed in the right hand column should be taken. If instrument readings do not return to acceptable levels after the excavation pit has been vented for a period of greater than one-half hour, a decision will then be made whether or not to seal the pit with suppressant foam.

If, during excavation activities, downwind monitoring PID readings are greater than 5 ppm above background for more than one-half hour, excavation will stop until sustained levels are less then 5 ppm (see Community Air Monitoring Plan).

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

6.0 SITE CONTROL

6.1 Work Zones

The primary purpose of site controls is to establish the perimeter of a hazardous area, to reduce the migration of contaminants into clean areas, and to prevent access or exposure to hazardous materials by unauthorized persons. When operations are to take place involving hazardous materials, the site safety officer will establish an exclusion zone, a decontamination zone, and a support zone. These zones "float" (move around the site) depending on the tasks being performed on any given day. The site safety officer will outline these locations before work begins and when zones change. The site safety officer records this information in the site log book.

It is expected that an exclusion zone, decontamination zone, and support zone will only be established during the remedial work required to excavate the SVOC hotspot area. A licensed Environmental Contractor with relative hazardous material handling experience and training is required to perform any soil disturbing activities within the hotspots identified within the Remedial Action Work Plan. All onsite workers must provide evidence of OSHA 40-hour Hazardous Waste Operations and Emergency Response Operations training to conduct work within the exclusion zone established by the site safety officer. The exclusion zone is defined by the site safety officer but will typically be a 50-foot area around work activities. Gross decontamination (as determined by the site Health and Safety Officer) is conducted in the exclusion zone; all other decontamination is performed in the decontamination zone or trailer.

Protective equipment is removed in the decontamination zone. Disposable protective equipment is stored in receptacles staged in the decontamination zone, and non-disposable equipment is decontaminated. All personnel and equipment exit the exclusion zone through the decontamination zone. If a decontamination trailer is provided the first aid equipment, an eye wash unit, and drinking water are kept in the decontamination trailer.

The support zone is used for vehicle parking, daily safety meetings, and supply storage. Eating, drinking, and smoking are permitted only in the support zone. When a decontamination trailer is not provided, the eye wash unit, first aid equipment, and drinking water are kept at a central location designated by the site safety officer.

6.1 General Site Work

Upon completion of the SVOC hotspot remedial activities by an Environmental Contractor, a general excavation contractor may continue with site excavation/grading as needed for basement excavation, shoring, other building requirements, or as necessary to excavate petroleum related VOC contaminated soil as deemed necessary by the Remedial Action Work Plan and/or Project Manager. All onsite employees must have obtained OSHA 24-hour Hazardous Waste Operations and Emergency Response Operations training prior to performing soil disturbing activities.

7.0 CONTINGENCY PLAN/EMERGENCY RESPONSE PLAN

Site personnel must be prepared in the event of an emergency. Emergencies can take many forms: illnesses, injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather.

Emergency telephone numbers and a map to the hospital will be posted in the command post. Site personnel should be familiar with the emergency procedures, and the locations of site safety, first aid, and communication equipment.

7.1 Emergency Equipment On-site

Private telephones:	Site personnel.
Two-way radios:	Site personnel where necessary.
Emergency Alarms:	On-site vehicle horns*.
First aid kits:	On-site, in vehicles or office.
Fire extinguisher:	On-site, in office or on equipment.

* Horns: Air horns will be supplied to personnel at the discretion of the project superintendent or site safety officer.

7.2 Emergency Telephone Numbers

General Emergencies	911
Suffolk County Police	911
NYC Fire Department	911
Woodhul Medical Center	(718) 963-8000
NYSDEC Spills Hotline	1-800-457-7362
NYSDEC Project Manager	(518) 402-9768
NYC Department of Health	(212) 676-2400
National Response Center	1-800-424-8802
Poison Control	1-800-222-1222
Project Manager	1-631-504-6000
Site Safety Officer	1-631-504-6000

7.3 Personnel Responsibilities During an Emergency

The project manager is primarily responsible for responding to and correcting any emergency situations. However, in the absence of the project manager, the site safety officer shall act as the project manager's on-site designee and perform the following tasks:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone, evacuate and secure the site, or upgrade/downgrade the level of protective clothing and respiratory protection;

- Ensure that appropriate federal, state, and local agencies are informed and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. If toxic materials are released to the air, the local authorities should be informed in order to assess the need for evacuation;

- Ensure appropriate decontamination, treatment, or testing for exposed or injured personnel;

- Determine the cause of incidents and make recommendations to prevent recurrence; and,

- Ensure that all required reports have been prepared.

The following key personnel are planned for this project:

• Project Manager	Ms. Kristen DiScenza (631) 504-6000
• Construction Superintendent	To be added
• Site Safety Officer	Mr. Kevin Waters (631) 504-6000

7.4 Medical Emergencies

A person who becomes ill or injured in the exclusion zone will be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination will be completed and first aid administered prior to transport. First aid will be administered while waiting for an ambulance or paramedics. A Field Accident Report (**Appendix D**) must be filled out for any injury.

A person transporting an injured/exposed person to a clinic or hospital for treatment will take the directions to the hospital (**Appendix D**).and information on the chemical(s) to which they may have been exposed (**Appendix C**).

7.5 Fire or Explosion

In the event of a fire or explosion, the local fire department will be summoned immediately. The site safety officer or his designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on-site. If it is safe to do so, site personnel may:

- use fire fighting equipment available on site; or,
- remove or isolate flammable or other hazardous materials that may contribute to the fire.

7.6 Evacuation Routes

Evacuation routes established by work area locations for each site will be reviewed prior to commencing site operations. As the work areas change, the evacuation routes will be altered accordingly, and the new route will be reviewed.

Under extreme emergency conditions, evacuation is to be immediate without regard for equipment. The evacuation signal will be a continuous blast of a vehicle horn, if possible, and/or by verbal/radio communication. When evacuating the site, personnel will follow these instructions:

- Keep upwind of smoke, vapors, or spill location.

- Exit through the decontamination corridor if possible.
- If evacuation through the decontamination corridor is not possible, personnel should remove contaminated clothing once they are in a safe location and leave it near the exclusion zone or in a safe place.

- The site safety officer will conduct a head count to ensure that all personnel have been evacuated safely. The head count will be correlated to the site and/or exclusion zone entry/exit log.

- If emergency site evacuation is necessary, all personnel are to escape the emergency situation and decontaminate to the maximum extent practical.

7.7 Spill Control Procedures

Spills associated with site activities may be attributed to project equipment and include gasoline, diesel and hydraulic oil. In the event of a leak or a release, site personnel will inform their supervisor immediately, locate the source of spillage and stop the flow if it can be done safely. A spill containment kit including absorbent pads, booms and/or granulated speedy dry absorbent material will be available to site personnel to facilitate the immediate recovery of the spilled material. Daily inspections of site equipment components including hydraulic lines, fuel tanks, etc. will be performed by their respective operators as a preventative measure for equipment leaks and to ensure equipment soundness. In the event of a spill, site personnel will immediately notify the NYSDEC (1-800-457-7362), and a spill number will be generated.

7.8 Vapor Release Plan

If work zone organic vapor (excluding methane) exceeds 5 ppm, then a downwind reading will be made either 200 feet from the work zone or at the property line, whichever is closer. If readings at this location exceed 5 ppm over background, the work will be stopped.

If 5 ppm of VOCs are recorded over background on a PID at the property line, then an off-site reading will be taken within 20 feet of the nearest residential or commercial property, whichever is closer. If efforts to mitigate the emission source are unsuccessful for 30 minutes, then the designated site safety officer will:

- contact the local police;
- continue to monitor air every 30 minutes, 20 feet from the closest off-site property. If two successive readings are below 5 ppm (non-methane), off-site air monitoring will be halted.
- All property line and off site air monitoring locations and results associated with vapor releases will be recorded in the site safety log book.

APPENDIX A

SITE SAFETY ACKNOWLEDGEMENT FORM

DAILY BREIFING SIGN-IN SHEET

Date:_______________________________ Person Conducting Briefing:______________________

Project Name and Location:____

1. AWARENESS (topics discussed, special safety concerns, recent incidents, etc...):

____

____

____

____

2. OTHER ISSUES (HASP changes, attendee comments, etc...):

____

____

____

3. ATTENDEES (Print Name):

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

APPENDIX B

SITE SAFETY PLAN AMENDMENTS

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

SITE SAFETY PLAN AMENDMENT FORM

Site Safety Plan Amendment #:____

Site Name: ____

Reason for Amendment:____

Alternative Procedures:____

Required Changes in PPE:____

Project Superintendent (signature)	**Date**
Health and Safety Consultant (signature)	**Date**
Site Safety Officer (signature)	**Date**

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

APPENDIX C

CHEMICAL HAZARDS

CHEMICAL HAZARDS

The attached International Chemical Safety Cards are provided for contaminants of concern that have been identified in soils and/or groundwater at the site.

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

International Chemical Safety Cards

ACETONE

ICSC: 0087

2-Propanone
Dimethyl ketone
Methyl ketone
C_3H_6O / CH_3COCH_3
Molecular mass: 58.1

ICSC # 0087
CAS # 67-64-1
RTECS # AL3150000
UN # 1090
EC # 606-001-00-8
April 22, 1994 Validated
Fi, review at IHE: 10/09/89

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Highly flammable.	NO open flames, NO sparks, and NO smoking.	Powder, alcohol-resistant foam, water in large amounts, carbon dioxide.
EXPLOSION	Vapour/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE			
•INHALATION	Sore throat. Cough. Confusion. Headache. Dizziness. Drowsiness. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Dry skin.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
•EYES	Redness. Pain. Blurred vision. Possible corneal damage.	Safety spectacles or face shield . Contact lenses should not be worn.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Nausea. Vomiting. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Personal protection: self-contained breathing apparatus. Ventilation. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Then wash away with plenty of water.	Fireproof. Separated from strong oxidants. Store in an area without drain or sewer access.	F symbol Xi symbol R: 11-36-66-67 S: 2-9-16-26 UN Hazard Class: 3 UN Packing Group: II

SEE IMPORTANT INFORMATION ON BACK

International Chemical Safety Cards

ACETONE

ICSC: 0087

IMPORTANT DATA	**PHYSICAL STATE; APPEARANCE:** COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR. **PHYSICAL DANGERS:** The vapour is heavier than air and may travel along the ground; distant ignition possible. **CHEMICAL DANGERS:** The substance can form explosive peroxides on contact with strong oxidants such as acetic acid, nitric acid, hydrogen peroxide. Reacts with chloroform and bromoform under basic conditions, causing fire and explosion hazard. Attacks plastic. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 500 ppm as TWA, 750 ppm as STEL; A4 (not classifiable as a human carcinogen); BEI issued; (ACGIH 2004). MAK: 500 ppm 1200 mg/m³ Peak limitation category: I(2); Pregnancy risk group: D; (DFG 2006). OSHA PEL†: TWA 1000 ppm (2400 mg/m^3) NIOSH REL: TWA 250 ppm (590 mg/m^3) NIOSH IDLH: 2500 ppm 10%LEL See: 67641	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation and through the skin. **INHALATION RISK:** A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster. **EFFECTS OF SHORT-TERM EXPOSURE:** The vapour irritates the eyes and the respiratory tract. The substance may cause effects on the central nervous system , liver , kidneys and gastrointestinal tract . **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the blood and bone marrow .
PHYSICAL PROPERTIES	Boiling point: 56°C Melting point: -95°C Relative density (water = 1): 0.8 Solubility in water: miscible Vapour pressure, kPa at 20°C: 24	Relative vapour density (air = 1): 2.0 Relative density of the vapour/air-mixture at 20°C (air = 1): 1.2 Flash point: -18°C c.c. Auto-ignition temperature: 465°C Explosive limits, vol% in air: 2.2-13 Octanol/water partition coefficient as log Pow: -0.24
ENVIRONMENTAL DATA		

NOTES

Use of alcoholic beverages enhances the harmful effect.

Transport Emergency Card: TEC (R)-30S1090

NFPA Code: H 1; F 3; R 0;
Card has been partially updated in July 2007: see Occupational Exposure Limits.
Card has been partially updated in January 2008: see Storage.

ADDITIONAL INFORMATION

ICSC: 0087 **ACETONE**

International Chemical Safety Cards

TETRACHLOROETHYLENE

ICSC: 0076

1,1,2,2-Tetrachloroethylene
Perchloroethylene
Tetrachloroethene
C_2Cl_4 / $Cl_2C{=}CCl_2$
Molecular mass: 165.8

ICSC # 0076
CAS # 127-18-4
RTECS # KX3850000
UN # 1897
EC # 602-028-00-4
April 13, 2000 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		STRICT HYGIENE! PREVENT GENERATION OF MISTS!	
•INHALATION	Dizziness. Drowsiness. Headache. Nausea. Weakness. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
•SKIN	Dry skin. Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety goggles , face shield .	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Rest.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. Personal protection: filter respirator for organic gases and vapours.	Separated from metals ,(see Chemical Dangers), food and feedstuffs . Keep in the dark. Ventilation along the floor.	Do not transport with food and feedstuffs. Marine pollutant. Xn symbol N symbol R: 40-51/53 S: (2-)23-36/37-61 UN Hazard Class: 6.1 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0076

International Chemical Safety Cards

TETRACHLOROETHYLENE

ICSC: 0076

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR.

PHYSICAL DANGERS:
The vapour is heavier than air.

CHEMICAL DANGERS:
On contact with hot surfaces or flames this substance decomposes forming toxic and corrosive fumes (hydrogen chloride, phosgene, chlorine). The substance decomposes slowly on contact with moisture producing trichloroacetic acid and hydrochloric acid. Reacts with metals such as aluminium, lithium, barium, beryllium.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 25 ppm as TWA, 100 ppm as STEL; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued; (ACGIH 2004).
MAK: skin absorption (H);
Carcinogen category: 3B;
(DFG 2004).
OSHA PEL†: TWA 100 ppm C 200 ppm 300 ppm (5-minute maximum peak in any 3-hours)
NIOSH REL: Ca Minimize workplace exposure concentrations. See Appendix A
NIOSH IDLH: Ca 150 ppm See: 127184

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is irritating to the eyes , the skin and the respiratory tract . If this liquid is swallowed, aspiration into the lungs may result in chemical pneumonitis. The substance may cause effects on the central nervous system. Exposure at high levels may result in unconsciousness.

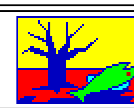
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the liver and kidneys. This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 121°C
Melting point: -22°C
Relative density (water = 1): 1.6
Solubility in water, g/100 ml at 20°C: 0.015
Vapour pressure, kPa at 20°C: 1.9
Relative vapour density (air = 1): 5.8
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.09
Octanol/water partition coefficient as log Pow: 2.9

ENVIRONMENTAL DATA

The substance is toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment.



NOTES

Depending on the degree of exposure, periodic medical examination is suggested. The odour warning when the exposure limit value is exceeded is insufficient. Do NOT use in the vicinity of a fire or a hot surface, or during welding. An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert. Card has been partly updated in April 2005. See section Occupational Exposure Limits.

Transport Emergency Card: TEC (R)-61S1897

NFPA Code: H2; F0; R0;

ADDITIONAL INFORMATION

ICSC: 0076 **TETRACHLOROETHYLENE**

IMPORTANT LEGAL NOTICE:
Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only

	modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

TRICHLOROETHYLENE

ICSC: 0081

1,1,2-Trichloroethylene
Trichloroethene
Ethylene trichloride
Acetylene trichloride
C_2HCl_3 / $ClCH{=}CCl_2$
Molecular mass: 131.4

ICSC # 0081
CAS # 79-01-6
RTECS # KX4550000
UN # 1710
EC # 602-027-00-9
April 10, 2000 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible under specific conditions. See Notes.		In case of fire in the surroundings: all extinguishing agents allowed.
EXPLOSION		Prevent build-up of electrostatic charges (e.g., by grounding).	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		PREVENT GENERATION OF MISTS! STRICT HYGIENE!	
•INHALATION	Dizziness. Drowsiness. Headache. Weakness. Nausea. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
•SKIN	Dry skin. Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness. Pain.	Safety spectacles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Rest.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Ventilation. Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment.	Separated from metals (see Chemical Dangers), strong bases, food and feedstuffs . Dry. Keep in the dark. Ventilation along the floor. Store in an area without drain or sewer access.	Do not transport with food and feedstuffs. Marine pollutant. T symbol R: 45-36/38-52/53-67 S: 53-45-61 UN Hazard Class: 6.1 UN Packing Group: III

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0081 OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

TRICHLOROETHYLENE

ICSC: 0081

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS LIQUID , WITH CHARACTERISTIC ODOUR.

PHYSICAL DANGERS:
The vapour is heavier than air. As a result of flow, agitation, etc., electrostatic charges can be generated.

CHEMICAL DANGERS:
On contact with hot surfaces or flames this substance decomposes forming toxic and corrosive fumes (phosgene , hydrogen chloride). The substance decomposes on contact with strong alkali producing dichloroacetylene , which increases fire hazard. Reacts violently with metal powders such as magnesium, aluminium, titanium, and barium. Slowly decomposed by light in presence of moisture, with formation of corrosive hydrochloric acid.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 50 ppm as TWA; 100 ppm as STEL; A5; BEI issued; (ACGIH 2004).
MAK:
Carcinogen category: 1; Germ cell mutagen group: 3B; (DFG 2007).
OSHA PEL†: TWA 100 ppm C 200 ppm 300 ppm (5-minute maximum peak in any 2 hours)
NIOSH REL: Ca See Appendix A See Appendix C
NIOSH IDLH: Ca 1000 ppm See: 79016

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

EFFECTS OF SHORT-TERM EXPOSURE:
The substance is irritating to the eyes and the skin . Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. The substance may cause effects on the central nervous system , resulting in respiratory failure . Exposure could cause lowering of consciousness.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the central nervous system , resulting in loss of memory. The substance may have effects on the liver and kidneys (see Notes). This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 87°C
Melting point: -73°C
Relative density (water = 1): 1.5
Solubility in water, g/100 ml at 20°C: 0.1
Vapour pressure, kPa at 20°C: 7.8
Relative vapour density (air = 1): 4.5
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.3
Auto-ignition temperature: 410°C
Explosive limits, vol% in air: 8-10.5
Octanol/water partition coefficient as log Pow: 2.42
Electrical conductivity: 800pS/m

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms. The substance may cause long-term effects in the aquatic environment.

NOTES

Combustible vapour/air mixtures difficult to ignite, may be developed under certain conditions. Use of alcoholic beverages enhances the harmful effect. Depending on the degree of exposure, periodic medical examination is suggested. The odour warning when the exposure limit value is exceeded is insufficient. Do NOT use in the vicinity of a fire or a hot surface, or during welding. An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert.

Transport Emergency Card: TEC (R)-61S1710

NFPA Code: H2; F1; R0;
Card has been partially updated in October 2004: see Occupational Exposure Limits, EU Classification, Emergency Response.
Card has been partially updated in April 2010: see Occupational Exposure Limits, Ingestion First Aid, Storage.

ADDITIONAL INFORMATION

ICSC: 0081	**TRICHLOROETHYLENE**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

INDENO(1,2,3-cd)PYRENE

ICSC: 0730

o-Phenylenepyrene
2,3-Phenylenepyrene
$C_{22}H_{12}$
Molecular mass: 276.3

ICSC # 0730
CAS # 193-39-5
RTECS # NK9300000
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0730

International Chemical Safety Cards

INDENO(1,2,3-cd)PYRENE

ICSC: 0730

I
M
P

PHYSICAL STATE; APPEARANCE:
YELLOW CRYSTALS

PHYSICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

INHALATION RISK:

O R T A N T D A T A	**CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established. MAK: Carcinogen category: 2; (DFG 2004).	Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 536°C Melting point: 164°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.58
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality. Bioaccumulation of this chemical may occur in fish.	

N O T E S

Indeno(1,2,3-cd)pyrene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing Indeno(1,2,3-c,d)pyrene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0730 **INDENO(1,2,3-cd)PYRENE**

International Chemical Safety Cards

DIBENZO(a,h)ANTHRACENE

ICSC: 0431

National Institute for Occupational Safety and Health

NIOSH

1,25,6-Dibenzanthracene
$C_{22}H_{14}$
Molecular mass: 278.4

ICSC # 0431
CAS # 53-70-3
RTECS # HN2625000
EC # 601-041-00-2
October 23, 1995 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray, powder.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN	Redness. Swelling. Itching.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES	Redness.	Face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Personal protection: P3 filter respirator for toxic particles.	Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0431

International Chemical Safety Cards

DIBENZO(a,h)ANTHRACENE

ICSC: 0431

I

M

P

O

PHYSICAL STATE; APPEARANCE:
COLOURLESS CRYSTALLINE POWDER.

PHYSICAL DANGERS:

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration

R T A N T D A T A	**CHEMICAL DANGERS:** **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established.	of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** The substance may have effects on the skin , resulting in photosensitization. This substance is probably carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 524°C Melting point: 267°C Relative density (water = 1): 1.28	Solubility in water: none Octanol/water partition coefficient as log Pow: 6.5
ENVIRONMENTAL DATA	Bioaccumulation of this chemical may occur in seafood.	

N O T E S

This is one of many polycyclic aromatic hydrocarbons - standards are usually established for them as mixtures, e.g., coal tar pitch volatiles. However, it may be encountered as a laboratory chemical in its pure form. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Do NOT take working clothes home. DBA is a commonly used name. This substance is one of many polycyclic aromatic hydrocarbons (PAH).

ADDITIONAL INFORMATION

ICSC: 0431 **DIBENZO(a,h)ANTHRACENE**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

CHRYSENE

ICSC: 1672

Benzoaphenanthrene
1,2-Benzophenanthrene
1,2,5,6-Dibenzonaphthalene
$C_{18}H_{12}$
Molecular mass: 228.3

ICSC # 1672
CAS # 218-01-9
RTECS # GC0700000
UN # 3077
EC # 601-048-00-0
October 12, 2006 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray. Dry powder. Foam. Carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Personal protection: P3 filter respirator for toxic particles. Do NOT let this chemical enter the environment. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.	Separated from strong oxidants, Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.	T symbol N symbol R: 45-68-50/53 S: 53-45-60-61 UN Hazard Class: 9 UN Packing Group: III Signal: Warning Aqua-Cancer Suspected of causing cancer Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

SEE IMPORTANT INFORMATION ON BACK

Prepared in the context of cooperation between the International Programme on Chemical Safety & the Commission of the European

International Chemical Safety Cards

CHRYSENE

ICSC: 1672

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS TO BEIGE CRYSTALS OR POWDER

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
The substance decomposes on burning producing toxic fumes Reacts violently with strong oxidants

OCCUPATIONAL EXPOSURE LIMITS:
TLV: A3 (confirmed animal carcinogen with unknown relevance to humans); (ACGIH 2006).
MAK not established.

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
This substance is possibly carcinogenic to humans.

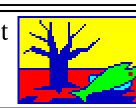
PHYSICAL PROPERTIES

Boiling point: 448°C
Melting point: 254 - 256°C
Density: 1.3
g/cm³

Solubility in water:
very poor
Octanol/water partition coefficient as log Pow: 5.9

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in seafood. It is strongly advised that this substance does not enter the environment.



NOTES

Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home. This substance does not usually occur as a pure substance but as a component of polyaromatic hydrocarbon (PAH) mixtures. Human population studies have associated PAH's exposure with cancer and cardiovascular diseases.

Transport Emergency Card: TEC (R)-90GM7-III

ADDITIONAL INFORMATION

ICSC: 1672 **CHRYSENE**

International Chemical Safety Cards

BENZO(k)FLUORANTHENE

ICSC: 0721

Dibenzo(b,jk)fluorene
8,9-Benzofluoranthene
11,12-Benzofluoranthene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0721
CAS # 207-08-9
RTECS # DF6350000
EC # 601-036-00-5
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

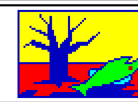
ICSC: 0721

International Chemical Safety Cards

BENZO(k)FLUORANTHENE

ICSC: 0721

I **M**	**PHYSICAL STATE; APPEARANCE:** YELLOW CRYSTALS	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and through the skin.

P O R T A N T D A T A	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established. MAK: Carcinogen category: 2; (DFG 2004).	**INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 480°C Melting point: 217°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.84
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality. Bioaccumulation of this chemical may occur in crustacea and in fish.	

N O T E S

Benzo(k)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(k)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0721 **BENZO(k)FLUORANTHENE**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

Benz(e)acephenanthrylene
2,3-Benzofluoroanthene
Benzo(e)fluoranthene
3,4-Benzofluoranthene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0720
CAS # 205-99-2
RTECS # CU1400000
EC # 601-034-00-4
March 25, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE			In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment.	Provision to contain effluent from fire extinguishing. Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0720

International Chemical Safety Cards

BENZO(b)FLUORANTHENE

ICSC: 0720

I	**PHYSICAL STATE; APPEARANCE:** COLOURLESS CRYSTALS	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation

M P O R T A N T D A T A	**PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: A2 (suspected human carcinogen); (ACGIH 2004). MAK: Carcinogen category: 2; (DFG 2004).	of its aerosol and through the skin. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** This substance is possibly carcinogenic to humans. May cause genetic damage in humans.
PHYSICAL PROPERTIES	Boiling point: 481°C Melting point: 168°C Solubility in water: none	Octanol/water partition coefficient as log Pow: 6.12
ENVIRONMENTAL DATA	This substance may be hazardous to the environment; special attention should be given to air quality and water quality.	

N O T E S

Benzo(b)fluoranthene is present as a component of polycyclic aromatic hydrocarbons (PAH) content in the environment usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.ACGIH recommends environment containing benzo(b)fluoranthene should be evaluated in terms of the TLV-TWA for coal tar pitch volatile, as benzene soluble 0.2 mg/m^3. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

ADDITIONAL INFORMATION

ICSC: 0720 **BENZO(b)FLUORANTHENE**

International Chemical Safety Cards

BENZO(a)PYRENE

ICSC: 0104

Benz(a)pyrene
3,4-Benzopyrene
Benzo(d,e,f)chrysene
$C_{20}H_{12}$
Molecular mass: 252.3

ICSC # 0104
CAS # 50-32-8
RTECS # DJ3675000
EC # 601-032-00-3
October 17, 2005 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray, foam, powder, carbon dioxide.
EXPLOSION			
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	AVOID ALL CONTACT! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN	MAY BE ABSORBED!	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Evacuate danger area! Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.	Separated from strong oxidants.	T symbol N symbol R: 45-46-60-61-43-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0104

International Chemical Safety Cards

BENZO(a)PYRENE

ICSC: 0104

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
PALE-YELLOW CRYSTALS

PHYSICAL DANGERS:

CHEMICAL DANGERS:
Reacts with strong oxidants causing fire and explosion hazard.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: Exposure by all routes should be carefully controlled to levels as low as possible A2 (suspected human carcinogen); (ACGIH 2005).
MAK:
Carcinogen category: 2; Germ cell mutagen group: 2; (DFG 2005).

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
This substance is carcinogenic to humans. May cause heritable genetic damage to human germ cells. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 496°C
Melting point: 178.1°C
Density: 1.4 g/cm³
Solubility in water: none (<0.1 g/100 ml)
Vapour pressure : negligible
Octanol/water partition coefficient as log Pow: 6.04

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish, in plants and in molluscs. The substance may cause long-term effects in the aquatic environment.

NOTES

Do NOT take working clothes home. Benzo(a)pyrene is present as a component of polycyclic aromatic hydrocarbons (PAHs) in the environment, usually resulting from the incomplete combustion or pyrolysis of organic matters, especially fossil fuels and tobacco.

ADDITIONAL INFORMATION

ICSC: 0104 **BENZO(a)PYRENE**

International Chemical Safety Cards

BENZ(a)ANTHRACENE

ICSC: 0385

National Institute for Occupational Safety and Health

1,2-Benzoanthracene
Benzo(a)anthracene
2,3-Benzphenanthrene
Naphthanthracene
$C_{18}H_{12}$
Molecular mass: 228.3

ICSC # 0385
CAS # 56-55-3
RTECS # CV9275000
EC # 601-033-00-9
October 23, 1995 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.		Water spray, powder. In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		AVOID ALL CONTACT!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Personal protection: complete protective clothing including self-contained breathing apparatus.	Well closed.	T symbol N symbol R: 45-50/53 S: 53-45-60-61

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0385

International Chemical Safety Cards

ICSC: 0385

BENZ(a)ANTHRACENE

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
COLOURLESS TO YELLOW BROWN FLUORESCENT FLAKES OR POWDER.

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:

OCCUPATIONAL EXPOSURE LIMITS:
TLV: A2 (suspected human carcinogen); (ACGIH 2004).
MAK:
Carcinogen category: 2 (as pyrolysis product of organic materials)
(DFG 2005).

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Sublimation point: 435°C
Melting point: 162°C
Relative density (water = 1): 1.274
Solubility in water:
none

Vapour pressure, Pa at 20°C: 292
Octanol/water partition coefficient as log Pow: 5.61

ENVIRONMENTAL DATA

Bioaccumulation of this chemical may occur in seafood.

N O T E S

This substance is one of many polycyclic aromatic hydrocarbons - standards are usually established for them as mixtures, e.g., coal tar pitch volatiles. However, it may be encountered as a laboratory chemical in its pure form. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. Do NOT take working clothes home. Tetraphene is a common name. Card has been partly updated in October 2005 and August 2006: see sections Occupational Exposure Limits, EU classification.

ADDITIONAL INFORMATION

ICSC: 0385 **BENZ(a)ANTHRACENE**

International Chemical Safety Cards

ACENAPHTHENE

ICSC: 1674

1,2-Dihydroacenaphthylene
1,8-Ethylenenaphthalene
$C_{12}H_{10}$
Molecular mass: 154.2

ICSC # 1674
CAS # 83-32-9
RTECS # AB1000000
UN # 3077
October 12, 2006 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray. Dry powder. Foam. Carbon dioxide.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE	See NOTES.	PREVENT DISPERSION OF DUST!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety goggles	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Personal protection: P2 filter respirator for harmful particles. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.	Separated from strong oxidants . Provision to contain effluent from fire extinguishing. Store in an area without drain or sewer access.	UN Hazard Class: 9 UN Packing Group: III Signal: Warning Enviro Very toxic to aquatic life with long lasting effects

SEE IMPORTANT INFORMATION ON BACK

ICSC: 1674

International Chemical Safety Cards

ACENAPHTHENE

ICSC: 1674

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
WHITE TO BEIGE CRYSTALS

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
On combustion, forms toxic gases including carbon monoxide. Reacts with strong oxidants .

OCCUPATIONAL EXPOSURE LIMITS:
TLV not established.
MAK not established.

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed .

EFFECTS OF SHORT-TERM EXPOSURE:

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
See Notes.

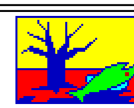
PHYSICAL PROPERTIES

Boiling point: 279°C
Melting point: 95°C
Density: 1.2
g/cm³
Solubility in water, g/100 ml at 25°C: 0.0004

Vapour pressure, Pa at 25°C: 0.3
Relative vapour density (air = 1): 5.3
Flash point: 135°C o.c.
Auto-ignition temperature: >450 °C
Octanol/water partition coefficient as log Pow: 3.9 - 4.5

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. The substance may cause long-term effects in the aquatic environment. It is strongly advised that this substance does not enter the environment.



N O T E S

Acenaphthene occurs as a pure substance and also as a component of polyaromatic hydrocarbon (PAH) mixtures. Human population studies have associated PAH's exposure with cancer and cardiovascular diseases. Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken.

Transport Emergency Card: TEC (R)-90GM7-III

ADDITIONAL INFORMATION

ICSC: 1674 **ACENAPHTHENE**

IMPORTANT LEGAL NOTICE:	Neither NIOSH, the CEC or the IPCS nor any person acting on behalf of NIOSH, the CEC or the IPCS is responsible for the use which might be made of this information. This card contains the collective views of the IPCS Peer Review Committee and may not reflect in all cases all the detailed requirements included in national legislation on the subject. The user should verify compliance of the cards with the relevant legislation in the country of use. The only modifications made to produce the U.S. version is inclusion of the OSHA PELs, NIOSH RELs and NIOSH IDLH values.

MSDS	:	2,2-Bis-(4-chlorophenyl)-1,1-dichloroethylene, 99%
CAS	:	72-55-9
SYNONYMS	:	p,p'-DDE ; ethylene,1,1-dichloro-2,2-bis-(p-chlorophenyl)- ; DDT dehydrochloride ; DDE; 1-1'-(Dichloroethenylidene)bis(4-chlorobenzene)

Catalog of Chemical Suppliers, Buyers, Custom Synthesis Companies And Equipment Manufacturers
[2,2-Bis-(4-chlorophenyl)-1,1-dichloroethylene, 99% 72-55-9]

Suppliers:

Not Available

Buyers:

Not Available

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
72-55-9	2,2-Bis-(4-chlorophenyl)-1,1-dichloroethylene	99	200-784-6

Hazard Symbols: XN
Risk Phrases: 22 33

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW
Harmful if swallowed. Danger of cumulative effects.Cancer suspect agent.Possible risks of irreversible effects.

Potential Health Effects
Eye:
May cause eye irritation.
Skin:
May cause skin irritation.
Ingestion:
May cause irritation of the digestive tract. May be harmful if swallowed. Ingestion of large amounts may cause liver and/or kidney damage.
Inhalation:
May cause respiratory tract irritation.
Chronic:
May cause cancer according to animal studies. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion:
If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:
Treat symptomatically and supportively.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire.
Extinguishing Media:
For large fires, use water spray, fog or regular foam. For small fires, use dry chemical, carbon dioxide, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:
Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Use with adequate ventilation.
Storage:
Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits
CAS# 72-55-9:

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:
Wear appropriate protective gloves to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to prevent skin exposure.
Respirators:
A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Crystals
Color: white
Odor: None reported.
pH: Not available.
Vapor Pressure: 6.5106 mm Hg @ 20 C
Viscosity: Not available.
Boiling Point: 336 deg C
Freezing/Melting Point: 88.00 - 90.00 deg C
Autoignition Temperature: Not available.
Flash Point: Not available.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature:
Solubility in water: 0.010 ppm
Specific Gravity/Density:
Molecular Formula: $C_{14}H_8Cl_4$
Molecular Weight: 318.02

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Incompatible materials, dust generation, strong oxidants.
Incompatibilities with Other Materials:
Strong oxidizing agents - strong bases.
Hazardous Decomposition Products:
Hydrogen chloride, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 72-55-9: KV9450000
LD50/LC50:
CAS# 72-55-9: Oral, mouse: LD50 = 700 mg/kg; Oral, rat: LD50 = 880 mg/kg.
Carcinogenicity:
2,2-Bis-(4-chlorophenyl)-1,1-dichloroethylene -
California: carcinogen, initial date 1/1/89

Other:
See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
Estimated BCF value = 8,300 based on water solubility. Estimated Koc value = 8,300. There was no movement of DDE reported in soil column mobility experiments.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.

**** SECTION 14 - TRANSPORT INFORMATION ****

IATA
Not regulated as a hazardous material.
IMO
Not regulated as a hazardous material.
RID/ADR
Not regulated as a hazardous material.
USA RQ: CAS# 72-55-9: 1 lb final RQ; 0.454 kg final RQ

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:
R 22 Harmful if swallowed.
R 33 Danger of cumulative effects.
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.
WGK (Water Danger/Protection)
CAS# 72-55-9: 3
Canada
None of the chemicals in this product are listed on the DSL/NDSL list.
CAS# 72-55-9 is listed on Canada's Ingredient Disclosure List.
US FEDERAL
TSCA
CAS# 72-55-9 is not listed on the TSCA inventory.
It is for research and development use only.

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 9/28/1998 Revision #3 Date: 3/18/2003

ALL MSDS PAGES IN THIS GROUP

4-Cyano-4-Phenylpiperidine Hydrochloride, 99% (TLC)	51304-58-6
Methanesulfonamide	3144-09-0
gamma-Octanoic lactone, 98%	104-50-7
Cis,cis,cis,cis-1,2,3,4-cyclopentane- tetracarboxylic dianhydride,	4802-47-5
Tetrachloroethylene Carbonate, 98+%	22432-68-4
Oxamic Acid, 98%	471-47-6
1O,11-Dihydro-5H-Dibenzo(A,D)-Cycloheptene, 98%	833-48-7
Thallium (I) Sulfate, 99.9+%	7446-18-6
N-(2,6-Dimethylphenylcarbamoyl-Methyl)-Iminodiacetic Acid, 99%	59160-29-1
P-(Dimethylamino)cinnamic Acid, 99%	1552-96-1
Biebrich Scarlet, 99% (UV-VIS)	4196-99-0
4-Chlorobenzenediazonium hexafluoro- phosphate	1582-27-0
Ammonium hexachloroiridate(IV), 99.99%	16940-92-4
Methylamine-d2 deuteriochloride, 98+ atom % D	593-51-1
2,2-Bis-(4-chlorophenyl)-1,1-dichloroethylene, 99%	72-55-9
Nitro red	56431-61-9
Methyl 2,3-dichlorobenzoate, 98+%	2905-54-6
Isopropyl Bromoacetate, 98% (GC)	29921-57-1
1-Iodo-4-Nitrobenzene, 99%	636-98-6
4-Ethylcyclohexanol, 99% cis/trans mixture	4534-74-1
Fluorescamine	38183-12-9
Tris(2,2,6,6-Tetramethyl-3,5-Heptanedionato)Dysprosium(III), 99+%	15522-69-7
3-Amino-2,2,5,5-Tetramethyl-1-Pyrrolidinyloxy, 99% (Titr.)	34272-83-8
3,4-Dihydroxyphenylacetic Acid,98%	102-32-9

International Chemical Safety Cards

ZINC POWDER

ICSC: 1205

National Institute for Occupational Safety and Health

NIOSH

Blue powder
Merrillite
Zn
Atomic mass: 65.4
(powder)

ICSC # 1205
CAS # 7440-66-6
RTECS # ZG8600000
UN # 1436 (zinc powder or dust)
EC # 030-001-00-1
October 24, 1994 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Highly flammable. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking. NO contact with acid(s), base (s) and incompatible substances (see Chemical Dangers).	Special powder, dry sand, NO other agents. NO water.
EXPLOSION	Risk of fire and explosion on contact with acid(s), base(s), water and incompatible substances.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Prevent deposition of dust.	In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.
EXPOSURE		PREVENT DISPERSION OF DUST! STRICT HYGIENE!	
•INHALATION	Metallic taste and metal fume fever. Symptoms may be delayed (see Notes).	Local exhaust.	Fresh air, rest. Refer for medical attention.
•SKIN	Dry skin.	Protective gloves.	Rinse and then wash skin with water and soap.
•EYES		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Nausea. Vomiting.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Extinguish or remove all ignition sources. Do NOT wash away into sewer. Sweep spilled substance into containers. then remove to safe place. Personal protection: self-contained breathing apparatus.	Fireproof. Separated from acids, bases oxidants Dry.	Airtight. F symbol N symbol R: 15-17-50/53 S: 2-7/8-43-46-60-61 UN Hazard Class: 4.3 UN Subsidiary Risks: 4.2

SEE IMPORTANT INFORMATION ON BACK

International Chemical Safety Cards

ZINC POWDER

ICSC: 1205

IMPORTANT DATA	**PHYSICAL STATE; APPEARANCE:** ODOURLESS GREY TO BLUE POWDER. **PHYSICAL DANGERS:** Dust explosion possible if in powder or granular form, mixed with air. If dry, it can be charged electrostatically by swirling, pneumatic transport, pouring, etc. **CHEMICAL DANGERS:** Upon heating, toxic fumes are formed. The substance is a strong reducing agent and reacts violently with oxidants. Reacts with water and reacts violently with acids and bases forming flammable/explosive gas (hydrogen - see ICSC0001) Reacts violently with sulfur, halogenated hydrocarbons and many other substances causing fire and explosion hazard. **OCCUPATIONAL EXPOSURE LIMITS:** TLV not established.	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation and by ingestion. **INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed. **EFFECTS OF SHORT-TERM EXPOSURE:** Inhalation of fumes may cause metal fume fever. The effects may be delayed. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact with skin may cause dermatitis.
PHYSICAL PROPERTIES	Boiling point: 907°C Melting point: 419°C Relative density (water = 1): 7.14	Solubility in water: reaction Vapour pressure, kPa at 487°C: 0.1 Auto-ignition temperature: 460°C
ENVIRONMENTAL DATA		

N O T E S

Zinc may contain trace amounts of arsenic, when forming hydrogen, may also form toxic gas arsine (see ICSC 0001 and ICSC 0222). Reacts violently with fire extinguishing agents such as water, halons, foam and carbon dioxide. The symptoms of metal fume fever do not become manifest until several hours later. Rinse contaminated clothes (fire hazard) with plenty of water.

Transport Emergency Card: TEC (R)-43GWS-II+III
NFPA Code: H0; F1; R1;

ADDITIONAL INFORMATION

ICSC: 1205 **ZINC POWDER**

International Chemical Safety Cards

LEAD

ICSC: 0052

Lead metal
Plumbum
Pb
Atomic mass: 207.2
(powder)

ICSC # 0052
CAS # 7439-92-1
RTECS # OF7525000
October 08, 2002 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	PREVENT DISPERSION OF DUST! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Nausea. Vomiting.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. Do NOT let this chemical enter the environment. Personal protection: P3 filter respirator for toxic particles.	Separated from food and feedstuffs incompatible materials See Chemical Dangers.	R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0052

International Chemical Safety Cards

LEAD

ICSC: 0052

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
BLUISH-WHITE OR SILVERY-GREY SOLID IN VARIOUS FORMS. TURNS TARNISHED ON EXPOSURE TO AIR.

PHYSICAL DANGERS:
Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
On heating, toxic fumes are formed. Reacts with oxidants. Reacts with hot concentrated nitric acid, boiling concentrated hydrochloric acid and sulfuric acid. Attacked by pure water and by weak organic acids in the presence of oxygen.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 0.05 mg/m³ A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued (ACGIH 2004).
MAK:
Carcinogen category: 3B; Germ cell mutagen group: 3A; (DFG 2004).
EU OEL: as TWA 0.15 mg/m³ (EU 2002).
OSHA PEL*: 1910.1025 TWA 0.050 mg/m^3 See Appendix C *Note: The PEL also applies to other lead compounds (as Pb) -- see Appendix C.
NIOSH REL*: TWA 0.050 mg/m^3 See Appendix C *Note: The REL also applies to other lead compounds (as Pb) -- see Appendix C.
NIOSH IDLH: 100 mg/m^3 (as Pb) See: 7439921

ROUTES OF EXPOSURE:
The substance can be absorbed into the body by inhalation and by ingestion.

INHALATION RISK:
A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

EFFECTS OF SHORT-TERM EXPOSURE:

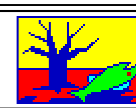
EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
The substance may have effects on the blood bone marrow central nervous system peripheral nervous system kidneys , resulting in anaemia, encephalopathy (e.g., convulsions), peripheral nerve disease, abdominal cramps and kidney impairment. Causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 1740°C
Melting point: 327.5°C
Density: 11.34 g/cm3
Solubility in water: none

ENVIRONMENTAL DATA

Bioaccumulation of this chemical may occur in plants and in mammals. It is strongly advised that this substance does not enter the environment.



N O T E S

Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home.

Transport Emergency Card: TEC (R)-51S1872

ADDITIONAL INFORMATION

ICSC: 0052 **LEAD**

International Chemical Safety Cards

BARIUM SULFATE

ICSC: 0827

Barium sulphate
Blanc fixe
Artificial barite
$BaSO_4$
Molecular mass: 233.43

ICSC # 0827
CAS # 7727-43-7
RTECS # CR0600000
October 20, 1999 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		PREVENT DISPERSION OF DUST!	
•INHALATION		Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
•EYES		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Personal protection: P1 filter respirator for inert particles.		R: S:

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0827

International Chemical Safety Cards

BARIUM SULFATE

ICSC: 0827

I M P O R T A N T D A T A	**PHYSICAL STATE; APPEARANCE:** ODOURLESS TASTELESS, WHITE OR YELLOWISH CRYSTALS OR POWDER. **PHYSICAL DANGERS:** **CHEMICAL DANGERS:** Reacts violently with aluminium powder. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: 10 mg/m³ as TWA; (ACGIH 2004). MAK: (Inhalable fraction) 4 mg/m³; (Respirable fraction) 1.5 mg/m³; (DFG 2004). OSHA PEL†: TWA 15 mg/m³ (total) TWA 5 mg/m³ (resp) NIOSH REL: TWA 10 mg/m³ (total) TWA 5 mg/m³ (resp) NIOSH IDLH: N.D. See: IDLH INDEX	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol. **INHALATION RISK:** Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly. **EFFECTS OF SHORT-TERM EXPOSURE:** **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Lungs may be affected by repeated or prolonged exposure to dust particles , resulting in baritosis (a form of benign pneumoconiosis).
PHYSICAL PROPERTIES	Melting point (decomposes): 1600°C Density: 4.5 g/cm³	Solubility in water: none
ENVIRONMENTAL DATA		

N O T E S

Occurs in nature as the mineral barite; also as barytes, heavy spar. Card has been partly updated in October 2005. See section Occupational Exposure Limits.

ADDITIONAL INFORMATION

ICSC: 0827 **BARIUM SULFATE**

International Chemical Safety Cards

NICKEL

ICSC: 0062

Ni
Atomic mass: 58.7
(powder)

ICSC # 0062
CAS # 7440-02-0
RTECS # QR5950000
EC # 028-002-00-7
October 17, 2001 Peer reviewed

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Flammable as dust. Toxic fumes may be released in a fire.		Dry sand. NO carbon dioxide. NO water.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		PREVENT DISPERSION OF DUST! AVOID ALL CONTACT!	
•INHALATION	Cough. Shortness of breath.	Local exhaust or breathing protection.	Fresh air, rest.
•SKIN		Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
•EYES		Safety spectacles, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Vacuum spilled material. Carefully collect remainder, then remove to safe place. Personal protection: P2 filter respirator for harmful particles.	Separated from strong acids.	Xn symbol R: 40-43 S: 2-22-36

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0062

International Chemical Safety Cards

NICKEL

ICSC: 0062

I	**PHYSICAL STATE; APPEARANCE:** SILVERY METALLIC SOLID IN VARIOUS FORMS. **PHYSICAL DANGERS:**	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of the dust.

I M P O R T A N T D A T A	Dust explosion possible if in powder or granular form, mixed with air. **CHEMICAL DANGERS:** Reacts violently, in powder form, with titanium powder and potassium perchlorate, and oxidants such as ammonium nitrate, causing fire and explosion hazard. Reacts slowly with non-oxidizing acids and more rapidly with oxidizing acids. Toxic gases and vapours (such as nickel carbonyl) may be released in a fire involving nickel. **OCCUPATIONAL EXPOSURE LIMITS:** TLV: (Inhalable fraction) 1.5 mg/m³ as TWA A5 (not suspected as a human carcinogen); (ACGIH 2004). MAK: (Inhalable fraction) sensitization of respiratory tract and skin (Sah); Carcinogen category: 1; (DFG 2004). OSHA PEL*†: TWA 1 mg/m^3 *Note: The PEL does not apply to Nickel carbonyl. NIOSH REL*: Ca TWA 0.015 mg/m^3 See Appendix A *Note: The REL does not apply to Nickel carbonyl. NIOSH IDLH: Ca 10 mg/m^3 (as Ni) See: 7440020	**INHALATION RISK:** Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed. **EFFECTS OF SHORT-TERM EXPOSURE:** May cause mechanical irritation. Inhalation of fumes may cause pneumonitis. **EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:** Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma. Lungs may be affected by repeated or prolonged exposure. This substance is possibly carcinogenic to humans.
PHYSICAL PROPERTIES	Boiling point: 2730°C Melting point: 1455°C Density: 8.9 g/cm3	Solubility in water: none
ENVIRONMENTAL DATA		

N O T E S

At high temperatures, nickel oxide fumes will be formed. Depending on the degree of exposure, periodic medical examination is suggested. The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this substance.

ADDITIONAL INFORMATION

ICSC: 0062 **NICKEL**

International Chemical Safety Cards

SODIUM

ICSC: 0717

Natrium
Na
Atomic mass: 23.0

ICSC # 0717
CAS # 7440-23-5
RTECS # VY0686000
UN # 1428
EC # 011-001-00-0
April 06, 2006 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Highly flammable. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO contact with water, acid(s) or halogens . NO open flames, NO sparks, and NO smoking.	Special powder, dry sand, NO other agents.
EXPLOSION	Risk of fire and explosion. on contact with acid(s) , halogens , water .		Combat fire from a sheltered position.
EXPOSURE			
•INHALATION	Cough. Sore throat. Burning sensation.	Closed system and ventilation.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
•SKIN	Pain. Blisters. Serious skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
•EYES	Severe deep burns. loss of vision.	Face shield .	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Burning sensation. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Chemical protection suit including self-contained breathing apparatus. Cover the spilled material with dry powder.	Fireproof. Keep under mineral oil. Dry. Well closed.	Airtight. Unbreakable packaging; put breakable packaging into closed unbreakable container. F symbol C symbol R: 14/15-34 S: (1/2)-5 -8-43-45 UN Hazard Class: 4.3 UN Packing Group: I Signal: Danger Flame-Corr In contact with water releases flammable gases which may ignite spontaneously Causes severe skin burns and eye damage

SEE IMPORTANT INFORMATION ON BACK

International Chemical Safety Cards

SODIUM

ICSC: 0717

IMPORTANT DATA

PHYSICAL STATE; APPEARANCE:
SILVERY SOLID IN VARIOUS FORMS

PHYSICAL DANGERS:

CHEMICAL DANGERS:
Reacts violently with water , causing fire and explosion hazard . The substance decomposes rapidly under the influence of air and moisture , forming flammable/explosive gas (Hydrogen - see ICSC0001) .

OCCUPATIONAL EXPOSURE LIMITS:
TLV not established.
MAK not established.

ROUTES OF EXPOSURE:
Serious local effects by all routes of exposure.

INHALATION RISK:

EFFECTS OF SHORT-TERM EXPOSURE:
See ICSC 0360 (Sodium hydroxide)

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:

PHYSICAL PROPERTIES

Boiling point: 880°C
Melting point: 97.4°C
Density: 0.97 g/cm³
Solubility in water: reaction
Vapour pressure, Pa at 20°C: negligible
Auto-ignition temperature: 120-125°C

ENVIRONMENTAL DATA

NOTES

Sodium is always kept under mineral oil. Reacts violently with fire extinguishing agents such as water and carbon dioxide .

Transport Emergency Card: TEC (R)-43S1428a
NFPA Code: H3; F3; R2;

ADDITIONAL INFORMATION

ICSC: 0717 **SODIUM**

International Chemical Safety Cards

MANGANESE

ICSC: 0174

Mn
Atomic mass: 54.9
(powder)

ICSC # 0174
CAS # 7439-96-5
RTECS # OO9275000
November 27, 2003 Validated

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Dry sand, special powder.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		PREVENT DISPERSION OF DUST! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
•INHALATION	Cough.	Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN		Protective gloves.	Rinse and then wash skin with water and soap.
•EYES		Safety goggles, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
•INGESTION	Abdominal pain. Nausea.	Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

SPILLAGE DISPOSAL	STORAGE	PACKAGING & LABELLING
Sweep spilled substance into containers. Carefully collect remainder, then remove to safe place. (Extra personal protection: P2 filter respirator for harmful particles.)	Separated from acids. Dry.	

SEE IMPORTANT INFORMATION ON BACK

ICSC: 0174

International Chemical Safety Cards

MANGANESE

ICSC: 0174

I	**PHYSICAL STATE; APPEARANCE:** GREY - WHITE POWDER **PHYSICAL DANGERS:**	**ROUTES OF EXPOSURE:** The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

IMPORTANT DATA

Dust explosion possible if in powder or granular form, mixed with air.

CHEMICAL DANGERS:
Reacts slowly with water more rapidly with steam and acids forming flammable/explosive gas (hydrogen - see ICSC0001) causing fire and explosion hazard.

OCCUPATIONAL EXPOSURE LIMITS:
TLV: 0.2 mg/m^3
(as TWA);
(ACGIH 2003).
MAK: (Inhalable fraction) 0.5 mg/m^3;
Pregnancy risk group: C;
(DFG 2007).
OSHA PEL*: C 5 mg/m^3 *Note: Also see specific listings for Manganese cyclopentadienyl tricarbonyl and Methyl cyclopentadienyl manganese tricarbonyl.
NIOSH REL*: TWA 1 mg/m^3 ST 3 mg/m^3 *Note: Also see specific listings for Manganese cyclopentadienyl tricarbonyl, Methyl cyclopentadienyl manganese tricarbonyl, and Manganese tetroxide.
NIOSH IDLH: 500 mg/m^3 (as Mn) See: 7439965

INHALATION RISK:
Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

EFFECTS OF SHORT-TERM EXPOSURE:
The aerosol is irritating to the respiratory tract .

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE:
The substance may have effects on the lungs and central nervous system , resulting in increased susceptibility to bronchitis, pneumonitis and neurologic, neuropsychiatric disorders (manganism). Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 1962°C
Melting point: 1244°C
Density: 7.47
g/cm^3
Solubility in water:
none

ENVIRONMENTAL DATA

This substance may be hazardous in the environment; special attention should be given to aquatic organisms.

N O T E S

Depending on the degree of exposure, periodic medical examination is suggested. The recommendations on this Card also apply to ferro manganese.

ADDITIONAL INFORMATION

ICSC: 0174 **MANGANESE**

APPENDIX D
HOSPITAL INFORMATION AND MAP
FIELD ACCIDENT REPORT

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

FIELD ACCIDENT REPORT

This report is to be filled out by the designated Site Safety Officer after EVERY accident.

PROJECT NAME ______________________________ PROJECT. NO.____________

Date of Accident ___________________ Time _______ Report By ________________

Type of Accident (Check One):

( ) Vehicular ( ) Personal ( ) Property

Name of Injured _______________________________________ DOB or Age ________

How Long Employed ____

Names of Witnesses ____

____

Description of Accident ____

____

____

Action Taken ____

____

____

Did the Injured Lose Any Time? _______ How Much (Days/Hrs.)? __________________

Was Safety Equipment in Use at the Time of the Accident (Hard Hat, Safety Glasses, Gloves, Safety Shoes, etc.)? ____

____

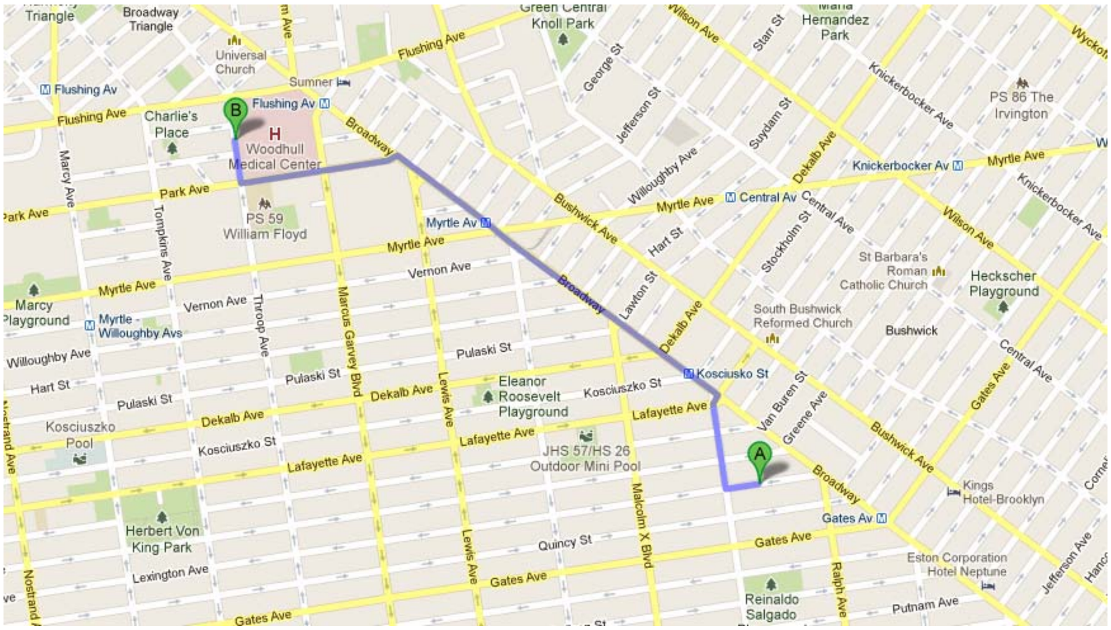
(If not, it is the EMPLOYEE'S sole responsibility to process his/her claim through his/her Health and Welfare Fund.)

INDICATE STREET NAMES, DESCRIPTION OF VEHICLES, AND NORTH ARROW

HOSPITAL INFORMATION AND MAP

The hospital nearest the site is:

WOODHUL MEDICAL CENTER
760 Broadway, Brooklyn, New York 11206
718-963-8000
1.3 Miles – About 7 Minutes



853 Lexington Ave, Brooklyn, NY 11221

1.	Head **west** on **Lexington Ave** toward **Patchen Ave**	go 305 ft total 305 ft
2.	Take the 1st right onto **Patchen Ave** About 56 secs	go 0.2 mi total 0.2 mi
3.	Turn left onto **Broadway** About 4 mins	go 0.7 mi total 0.9 mi
4.	Turn left onto **Park Ave** About 1 min	go 0.3 mi total 1.2 mi
5.	Turn right at the 2nd cross street onto **Throop Ave**	go 404 ft total 1.3 mi

Woodhull Medical and Mental Health Center
760 Broadway Brooklyn, New York 11206

ATTACHMENT B
Quality Assurance Project Plan

QUALITY ASSURANCE PROJECT PLAN
Former Lexington Laundry Service
853 Lexington Avenue, Brooklyn, NY

Prepared on behalf of:

853 Lexington LLC
116 Nostrand Avenue
Brooklyn, NY 11205

Prepared by:

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961

TABLE OF CONTENTS

QUALITY ASSURANCE PROJECT PLAN

Former Lexington Laundry Service
853 Lexington Avenue, Brooklyn, NY

TABLES

1.0 INTRODUCTION

This Quality Assurance Project Plan (QAPP) has been prepared in accordance with DER-10 to detail procedures to be followed during the course of the sampling and analytical portion of the project, as required by the approved work plan.

To ensure the successful completion of the project each individual responsible for a given component of the project must be aware of the quality assurance objectives of his / her particular work and of the overall project. The EBC Project Director, Charles Sosik will be directly responsible to the client for the overall project conduct and quality assurance/quality control (QA/QC) for the project. The Project Director will be responsible for overseeing all technical and administrative aspects of the project and for directing QA/QC activities. Mr. Kevin Brussee will serve as the Quality Assurance Officer (QAO) and in this role may conduct:

- conduct periodic field and sampling audits;
- interface with the analytical laboratory to resolve problems; and
- interface with the data validator and/or the preparer of the DUSR to resolve problems.

Kristen DiScenza will serve as the Project Manager and will be responsible for implementation of the Remedial Investigation and coordination with field sampling crews and subcontractors. Reporting directly to the Project Manager will be the Field Operations Officer, Kevin Waters; who will serve as the on-Site qualified environmental professional who will record observations, direct the drilling crew and be responsible for the collection and handling of all samples.

1.1 Organization

Project QA will be maintained under the direction of the Project Manager, in accordance with this QAPP. QC for specific tasks will be the responsibility of the individuals and organizations listed below, under the direction and coordination of the Project Manager
.

GENERAL RESPONSIBILITY	SCOPE OF WORK	RESPONSIBILITY OF QUALITY CONTROL
Field Operations	Supervision of Field Crew, sample collection and handling	K. Waters, EBC
Project Manager	Implementation of the RI according to the RIWP.	Kristen DiScenza, EBC
Laboratory Analysis	Analysis of soil samples by NYSDEC ASP methods Laboratory	NYSDOH-Certified Laboratory
Data review	Review for completeness and compliance	3rd party validation

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

2.0 QUALITY ASSURANCE PROJECT PLAN OBJECTIVES

2.1 Overview

Overall project goals are defined through the development of Data Quality Objectives (DQOs), which are qualitative and quantitative Statements that specify the quality of the data required to support decisions; DQOs, as described in this section, are based on the end uses of the data as described in the work plan.

In this plan, Quality Assurance and Quality Control are defined as follows:

- Quality Assurance - The overall integrated program for assuring reliability of monitoring and measurement data.

- Quality Control - The routine application of procedures for obtaining prescribed standards of performance in the monitoring and measurement process.

2.2 QA / QC Requirements for Analytical Laboratory

Samples will be analyzed by a New York State Department of Health (NYSDOH) certified laboratory. Data generated from the laboratory will be used to evaluate contaminants such as metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and pesticides / PCBs in both historic fills and native soils and in groundwater and other volatile organic compounds (VOCs) in soil, soil gas. The QA requirements for all subcontracted analytical laboratory work performed on this project are described below. QA elements to be evaluated include accuracy, precision, sensitivity, representativeness, and completeness. The data generated by the analytical laboratory for this project are required to be sensitive enough to achieve detection levels low enough to meet required quantification limits as specified in NYSDEC Analytical Services Protocol (NYSDEC ASP, 07/2005. The analytical results meeting the required quantification limits will provide data sensitive enough to meet the data quality objectives of this remedial program as described in the work plan. Reporting of the data must be clear, concise, and comprehensive. The QC elements that are important to this project are completeness of field data, sample custody, sample holding times, sample preservation, sample storage, instrument calibration and blank contamination.

2.2.1 Instrument Calibration

Calibration curves will be developed for each of the compounds to be analyzed. Standard concentrations and a blank will be used to produce the initial curves. The development of calibration curves and initial calibration response factors must be consistent with method requirements presented in the most recent version of NYSDEC ASP 07/2005).

2.2.2 Continuing Instrument Calibration

The initial calibration curve will be verified every 12 hrs by analyzing one calibration standard. The standard concentration will be the midpoint concentration of the initial calibration curve. The calibration check compound must come within 25% relative percent difference (RPD) of the average response factor obtained during initial calibration. If the RPD is greater than 25%, then corrective action must be taken as provided in the specific methodology.

2.2.3 Method Blanks

Method blank or preparation blank is prepared from an analyte·free matrix which includes the same reagents, internal standards and surrogate standards as me related samples. II is carried through the entire sample preparation and analytical procedure. A method blank analysis will be performed once for each 12 hr period during the analysis of samples for volatiles. An acceptable method blank will contain less than two (2) times the CRQL of methylene chloride, acetone and 2-butanone. For all other target compounds, the method blank must contain less than or equal to the CRQL of any single target compound. For non-target peaks in the method blank, the peak area must be less than 10 percent of the nearest internal standard. The method blank will be used to demonstrate the level of laboratory background and reagent contamination that might result from the analytical process itself.

2.2.4 Trip Blanks.

Trip blanks consist of a single set of sample containers filled at the laboratory with deionized. laboratory-grade water. The water used will be from the same source as that used for the laboratory method blank. The containers will be carried into the field and handled and transported in the same way as the samples collected that day. Analysis of the trip blank for VOCs is used to identify contamination from the air, shipping containers, or from other items coming in contact with the sample bottles. (The bottles holding the trip blanks will be not opened during this procedure.) A complete set of trip blanks will be provided with each shipment of samples to the certified laboratory.

2.2.5 Surrogate Spike Analysis

For organic analyses, all samples and blanks will be spiked with surrogate compounds before purging or extraction in order to monitor preparation and analyses of samples. Surrogate spike recoveries shall fall within the advisory limits in accordance with the NY5DEC ASP protocols for samples falling within the quantification limits without dilution.

2.2.6 Matrix Spike / Matrix Spike Duplicate / Matrix Spike Blank (MS/MSDIMSB) Analysis

MS, MSD and MSB analyses will be performed to evaluate the matrix effect of the sample upon the analytical methodology along with the precision of the instrument by measuring recoveries. The MS / MSD / MSB samples will be analyzed for each group of samples of a similar matrix at a rate of 5% (one for every 20 field samples). The RPD will be calculated from the difference between the MS and MSD. Matrix spike blank analysis will be performed to indicate the appropriateness of the spiking solution(s) used for the MS/MSD.

2.3 Accuracy

Accuracy is defined as the nearness of a real or the mean (x) of a set of results to the true value. Accuracy is assessed by means of reference samples and percent recoveries. Accuracy includes both precision and recovery and is expressed as percent recovery (% REC). The MS sample is used to determine the percent recovery. The matrix spike percent recovery (% REC) is calculated by the following equation:

$$\%REC = \frac{SSR - SR}{SA} \times 100$$

Where:
SSR = spike sample results

SR = sample results
SA = spike added from spiking mix

2.4 Precision

Precision is defined as the measurement of agreement of a set of replicate results among themselves without a Precision is defined as the measurement of agreement of a set of replicate results among themselves without assumption of any prior information as to the true result. Precision is assessed by means of duplicate/replicate sample analyses.

Analytical precision is expressed in terms of RPD. The RPD is calculated using the following formula:

$$RPD = \frac{D^1 - D^2}{(D^1 - D^2)/2} \times 100$$

Where:
RPD = relative percent difference
D^1 = first sample value
D^2 = second sample value (duplicate)

2.5 Sensitivity

The sensitivity objectives for this plan require that data generated by the analytical laboratory achieve quantification levels low enough to meet the required detection limits specified by NYSDEC ASP and to meet all site-specific standards, criteria and guidance values (SGCs) established for this project.

2.6 Representativeness

Representativeness is a measure of the relationship of an individual sample taken from a particular site to the remainder of that site and the relationship of a small aliquot of the sample (i.e., the one used in the actual analysis) to the sample remaining on site. The representativeness of samples is assured by adherence to sampling procedures described in the Remedial Investigation Work Plan.

2.7 Completeness

Completeness is a measure of the quantity of data obtained from a measurement system as compared to the amount of data expected from the measurement system. Completeness is defined as the percentage of all results that are not affected by failing QC qualifiers, and should be between 70 and 100% of all analyses performed. The objective of completeness in laboratory reporting is to provide a thorough data support package. The laboratory data package provides documentation of sample analysis and results in the form of summaries, QC data, and raw analytical data. The laboratory will be required to submit data packages that follow NYSDEC ASP reporting format which, at a minimum, will include the following components:

1. All sample chain-of-custody forms.
2. The case narrative(s) presenting a discussion of any problems and/or procedural changes required during analyses. Also presented in the case narrative are sample summary forms.
3. Documentation demonstrating the laboratory's ability to attain the contract specified detection limits for all target analytes in all required matrices.
4. Tabulated target compound results and tentatively identified compounds.
5. Surrogate spike analysis results (organics).
6. Matrix spike/matrix spike duplicate/matrix spike blank results.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

7. QC check sample and standard recovery results
8. Blank results (field, trip, and method).
9. Internal standard area and RT summary.

2.8 Laboratory Custody Procedures

The following elements are important for maintaining the field custody of samples:

- Sample identification
- Sample labels
- Custody records
- Shipping records
- Packaging procedures

Sample labels will be attached to all sampling bottles before field activities begin; each label will contain an identifying number. Each number will have a suffix that identifies the site and where the sample was taken. Approximate sampling locations will be marked on a map with a description of the sample location. The number, type of sample, and sample identification will be entered into the field logbook. A chain-of-custody form, initiated at the analytical laboratory will accompany the sample bottles from the laboratory into the field. Upon receipt of the bottles and cooler, the sampler will sign and date the first received blank space. After each sample is collected and appropriately identified, entries will be made on the chain-of-custody form that will include:

- Site name and address
- Samplers' names and signatures

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

3.0 ANALYTICAL PROCEDURES

3.1 Laboratory Analysis

Samples will be analyzed by the NYSDOH ELAP laboratory for one or more of the following parameters: VOCs in soil / groundwater by USEPA Method 8260, SVOCs in soil / groundwater by USEPA Method 8270BN, Target Analyte List (TAL) Metals in soil and groundwater, pesticides / PCBs by USEPA Method 8081/8082 and VOCs in air by USEPA Method TO15. If any modifications or additions to the standard procedures are anticipated. and if any nonstandard sample preparation or analytical protocol is to be used, the modifications and the nonstandard protocol will be explicitly defined and documented. Prior approval by EBC's PM will be necessary for any nonstandard analytical or sample preparation protocol used by the laboratory, i.e., dilution of samples or extracts by greater than a factor of five (5).

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

4.0 DATA REDUCTION, REVIEW, AND REPORTING

4.1 Overview

The process of data reduction, review, and reporting ensures the assessments or a conclusion based on the final data accurately reflects actual site conditions. This plan presents the specific procedures, methods, and format that will be employed for data reduction, review and reporting of each measurement parameter determined in the laboratory and field. Also described in this section is the process by which all data, reports, and work plans are proofed and checked for technical and numerical errors prior to final submission.

4.2 Data Reduction

Standard methods and references will be used as guidelines for data handling, reduction, validation, and reporting. All data for the project will be compiled and summarized with an independent verification at each step in the process to prevent transcription/typographical errors. Any computerized entry of data will also undergo verification review.

Sample analysis will be provided by a New York State certified environmental laboratory. Laboratory reports will include ASP category B deliverables for use in the preparation of a data usability summary report (DUSR). All results will be provided in accordance with the NYSDEC Environmental Information Management System (EIMS) electronic data deliverable (EDD) format. Analytical results shall be presented on standard NYSDEC ASP-B forms or equivalents, and include the dates the samples were received and analyzed, and the actual methodology used. Note that if waste characterization samples are analyzed they will be in results only format and will not be evaluated in the DUSR.

Laboratory QA/QC information required by the method protocols will be compiled, including the application of data QA/QC qualifiers as appropriate. In addition, laboratory worksheets, laboratory notebooks, chains-of-custody, instrument logs, standards records, calibration records, and maintenance records, as applicable, will be provided in the laboratory data packages to determine the validity of data. Specifics on internal laboratory data reduction protocols are identified in the laboratory's SOPs.

Following receipt of the laboratory analytical results by EBC, the data results will be compiled and presented in an appropriate tabular form. Where appropriate, the impacts of QA/QC qualifiers resulting from laboratory or external validation reviews will be assessed in terms of data usability.

4.3 Laboratory Data Reporting

All sample data packages submitted by the analytical laboratory will be required to be reported in conformance to the NYSDEC ASP (7/2005), Category B data deliverable requirements as applicable to the method utilized. All results will be provided in accordance with the NYSDEC Environmental Information Management System (EIMS) electronic data deliverable (EDD) format. Note that waste characterization samples if analyzed will be in results only format and will not be evaluated in the DUSR.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 Middle Country Road
Ridge, NY 11961
Phone 631.504.6000
Fax 631.924.2870

5.0 CORRECTIVE ACTION

Review and implementation of systems and procedures may result in recommendations for corrective action. Any deviations from the specified procedures within approved project plans due to unexpected site-specific conditions shall warrant corrective action. All errors, deficiencies, or other problems shall be brought to the immediate attention of the EBC PM, who in turn shall contact the Quality Assurance/Data Quality Manager or his designee (if applicable).

Procedures have been established to ensure that conditions adverse to data quality are promptly investigated, evaluated and corrected. These procedures for review and implementation of a change are as follows:

- Define the problem.
- Investigate the cause of the problem.
- Develop a corrective action to eliminate the problem, in consultation with the personnel who defined the problem and who will implement the change.
- Complete the required form describing the change and its rationale (see below for form requirements).
- Obtain all required written approvals.
- Implement the corrective action.
- Verify that the change has eliminated the problem.

During the field investigation, all changes to the sampling program will be documented in field logs/sheets and the EBC PM advised.

If any problems occur with the laboratory or analyses, the laboratory must immediately notify the PM, who will consult with other project staff. All approved corrective actions shall be controlled and documented.

All corrective action documentation shall include an explanation of the problem and a proposed solution which will be maintained in the project file or associated logs. Each report must be approved by the necessary personnel (e.g., the PM) before implementation of the change occurs. The PM shall be responsible for controlling, tracking, implementing and distributing identified changes.

EBC
ENVIRONMENTAL BUSINESS CONSULTANTS
1808 MIDDLE COUNTRY ROAD
RIDGE, NY 11961
PHONE 631.504.6000
FAX 631.924.2870

TABLE 1
SUMMARY OF
SAMPLING PROGRAM RATIONALE AND ANALYSIS

Matrix	Location	Approximate Number of Samples	Frequency	Rationale for Sampling	Laboratory Analysis	Duplicates	Matrix Spikes	Spike Duplicates	Trip Blanks
Soil	Excavation Bottom	9	1 per 900 square feet	Endpoint verification	VOCs / SVOCs by 8260B / 8270 BN and TAL Metals	1 per day	1 per 20 samples	1 per 20 samples	1 per trip
Soil	CVOC Contaminated Soil Hotspot Excavation Bottom	1	1 per 900 square feet	Endpoint Verification of CVOC Contaminated Soil Hot Spot	VOCs by 8260B	1 per day	1 per 20 samples	1 per 20 samples	1 per trip
Soil	CVOC Contaminated Soil Hotspot Excavation Sidewalls	4	1 per 30 linear feet	Endpoint Verification of CVOC Contaminated Soil Hot Spot	VOCs by 8260B	1 per day	1 per 20 samples	1 per 20 samples	1 per trip
Soil	SVOC/Metal Contaminated Soil Hotspot Excavation Bottom	2	1 per 900 square feet	Endpoint Verification of SVOC/Metal Contaminated Soil Hot Spot	SVOCs by 8270 BN and TAL Metals	1 per day	1 per 20 samples	1 per 20 samples	1 per trip
Soil	SVOC/Metal Contaminated Soil Hotspot Excavation Sidewalls	8	1 per 30 linear feet	Endpoint Verification of SVOC/Metal Contaminated Soil Hot Spot	SVOCs by 8270 BN and TAL Metals	1 per day	1 per 20 samples	1 per 20 samples	1 per trip
Soil	Excavated Historic Fill Material	1	1 per 800 cy	Waste Characterization	VOCs EPA Method 8260B, pesticides and PCBs by EPA 8081/8082, other as per disposal facility	0	0	0	0

TABLE 2
SAMPLE COLLECTION AND ANALYSIS PROTOCOLS

Sample Type	Matrix	Sampling Device	Parameter	Sample Container	Sample Preservation	Analytical Method#	CRQL / MDLH	Holding Time
Soil	Soil	Scoop Direct into Jar	VOCs	(1) 2 oz Jar	Cool to 4^o C HCL	EPA Method 8260	Compound specific (1-5 ug/kg)	14 days
Soil	Soil	Scoop Direct into Jar	SVOCs	(1) 8 oz jar	Cool to 4^o C	EPA Method 8270 BN	Compound specific (1-5 ug/kg)	14 day ext/40 days
Soil	Soil	Scoop Direct into Jar	Pest/PCBs	from 8oz jar above	Cool to 4^o C	EPA Method 8081/8082	Compound specific (1-5 ug/kg)	14 day ext/40 days
Soil	Soil	Scoop Direct into Jar	Metals	from 8oz jar above	Cool to 4^o C	TAL Metals	Compound specific (01-1 mg/kg)	6 months
Groundwater	Water	Pump tubing	VOCs	(3) 40 ml vials	Cool to 4^o C	EPA Method 8260	Compound specific (1-5 ug/L)	14 days
Groundwater	Water	Pump tubing	SVOCs	(1) 1 Liter Amber Bottle	Cool to 4^o C	EPA Method 8270 BN	Compound specific (1-5 ug/L)	14 days
Groundwater	Water	Pump tubing	Pesticides and PCBs	(2) 1 Liter Amber Bottle	Cool to 4^o C	EPA Method 8081 / 8082	Compound specific (1-5 ug/L)	14 days
Groundwater	water	Pump tubing	Total Metals	(1) 100 ml	HNO3	TAL Metals	Compound specific (1-5 mg/L)	6 months
Groundwater	water	Pump tubing	Dissolved Metals	(1) 100 ml	None	TAL Metals	Compound specific (1-5 mg/L)	6 months

Notes:
All holding times listed are from Verified Time of Sample Receipt (VTSR) unless noted otherwise. * Holding time listed is from time of sample collection.
The number in parentheses in the "Sample Container" column denotes the number of containers needed.
Triple volume required when collected MS/MSD samples
The number of trip blanks are estimated.
CRQL / MDL = Contract Required Quantitation Limit / Method Detection Limit.
MCAWW = Methods for Chemical Analysis of Water and Wastes.
NA = Not available or not applicable.

ATTACHMENT C
Community Air Monitoring Plan

COMMUNITY AIR MONITORING PLAN

FORMER LEXINGTON LAUNDRY SERVICE
853 LEXINGTON AVENUE
BROOKLYN, NY

MAY - 2014

FORMER LEXINGTON LAUNDRY SERVICE

COMMUNITY AIR MONITORING PLAN
TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) has been prepared for the drilling and sampling activities to be performed under a Remedial Action Work Plan (RAWP) at the Former Lexington Laundry Service Site. The CAMP provides measures for protection for the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in the remedial activities) from potential airborne contaminant releases resulting from remedial activities at the site.

Compliance with this CAMP is required during all activities associated with soil excavation that have the potential to generate airborne particulate matter and volatile organic compounds (VOCs). These activities include excavation of soils, stockpiling, loading, and backfilling. This CAMP has been prepared to ensure that remediation activities do not adversely affect passersby, residents, or workers in the area immediately surrounding the Site and to preclude or minimize airborne migration of construction-related contaminants to offsite areas.

1.1 Regulatory Requirements

This CAMP was established in accordance with the following requirements:

- New York State Department of Health's (NYSDOH) Generic Community Air Monitoring Plan as presented in DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC May 3, 2010). This guidance specifies that a community air-monitoring program shall be implemented to protect the surrounding community and to confirm that the work does not spread contamination off-site through the air;

- New York State Department of Environmental Conservation (NYSDEC) Technical and Guidance Memorandum (TAGM) #4031 - Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites: This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2.0 AIR MONITORING

Chlorinated volatile organic compounds (VOCs), SVOCs, and metals are the constituents of concern at the Site. The appropriate method to monitor air for these constituents during remediation activities is through real-time VOC and air particulate (dust) monitoring.

2.1 Meteorological Data

At a minimum, wind direction will be evaluated at the start of each workday, noon of each workday, and the end of each workday. These readings will be utilized to position the monitoring equipment in appropriate upwind and downwind locations.

2.2 Community Air Monitoring Requirements

To establish ambient air background concentrations, air will be monitored at several locations around the site perimeter before activities begin. These points will be monitored periodically in series during the site work. When the excavation area is within 20 feet of potentially exposed populations or occupied structures, the perimeter monitoring points will be located to represent the nearest potentially exposed individuals at the downwind location.

Fugitive respirable dust will be monitored using a MiniRam Model PDM-3 aerosol monitor (or equivalent). Air will be monitored for VOCs with a portable Ionscience 3000 photoionization detector (PID), or equivalent. All air monitoring data will be documented in a site log book by the designated site safety officer. The site safety officer or delegate must ensure that air monitoring instruments are calibrated and maintained in accordance with manufacturer's specifications. All instruments will be zeroed daily and checked for accuracy. A daily log will be kept. If additional monitoring is required, the protocols will be developed and appended to this plan

3.0 VOC MONITORING, RESPONSE LEVELS, AND ACTIONS

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present.

The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should 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 must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can 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 must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can 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 must be shutdown. All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

All readings will be recorded and made available for NYSDEC and NYSDOH personnel to review. If an exceedance of the Action Limits occurs, an Action Limit Report, as shown in Appendix A, will be completed.

3.1 Potential Corrective Measures and VOC Suppression Techniques

If the 15-minute integrated VOC level at the downwind location persists at a concentration that exceeds the upwind level by more than 5 ppm but less than 25 ppm during remedial activities, then vapor suppression techniques will be employed. The following techniques, or others, may be employed to mitigate the generation and migration of fugitive organic vapors:

- limiting the excavation size;
- backfilling the excavation;
- spraying water onto the excavation faces and equipment;
- covering soil stockpiles with 6-mil plastic sheeting;
- hauling waste materials in properly tarped containers; and/or
- applying vapor suppressant foam (BioSolve Pinkwater or similar).

4.0 PARTICULATE MONITORING

Air monitoring for particulates (i.e., dust) will be performed continuously during excavation and loading activities using both air monitoring equipment and visual observation at upwind and downwind locations. Monitoring equipment capable of measuring particulate matter smaller than 10 microns (PM_{10}) and capable of integrating (averaging) over periods of 15 minutes or less will be set up at upwind (i.e., background) and downwind locations, at heights approximately four to five feet above land surface (i.e., the breathing zone). Monitoring equipment will be MIE Data Ram monitors, or equivalent. The audible alarm on the particulate monitoring device will be set at 90 micrograms per cubic meter ($\mu g/m_3$). This setting will allow proactive evaluation of worksite conditions prior to reaching the action level of 100 $\mu g/m^3$ above background. The monitors will be calibrated at least once per day prior to work activities and recalibrated as needed thereafter. In addition, fugitive dust migration will be visually assessed during all intrusive work activities.

The following summarizes particulate action levels and the appropriate responses:

- If the downwind PM-10 particulate level is 150 $\mu g/m^3$ for the 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 100 $\mu g/m^3$ 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 100 $\mu g/m^3$ above the upwind level, work must be stopped and an evaluation of activities initiated. Work can resume provided that dust suppression measures (as described in Section 2.3.1 below) and other controls are successful in reducing the downwind PM-10 particulate concentration to within 100 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for NYSDEC and NYSDOH personnel to review. If an exceedance of the Action Limits occurs, an Action Limit Report as shown in **Appendix A** will be completed.

4.1 Potential Particulate Suppression Techniques

If the integrated particulate level at the downwind location exceeds the upwind level by more than 100 $\mu g/m^3$ at any time during remediation activities, then dust suppression techniques will be employed. The following techniques, or others, may be employed to mitigate the generation and migration of fugitive dusts:

- limiting the excavation size;
- backfilling the excavation;
- spraying water onto the excavation faces and equipment;
- covering soil stockpiles with 8-mil plastic sheeting;
- hauling waste materials in properly tarped containers; and/or
- limiting vehicle speeds onsite.

Work may continue with dust suppression techniques provided that downwind PM_{10} levels are not more than 150 μg/m^3 greater than the upwind levels.

There may also be situations where the dust is generated by remediation activities and migrates to downwind locations, but is not detected by the monitoring equipment at or above the action level. Therefore, if dust is observed leaving the working area, dust suppression techniques such as those listed above will be employed.

If dust suppression techniques do not lower particulates to below 150 μg/m^3, or visible dust persists, work will be suspended until appropriate corrective measures are identified and implemented to remedy the situation.

All air monitoring readings will be recorded in the field logbook and will be available for the NYSDEC and NYSDOH personnel to review.

5.0 DATA QUALITY ASSURANCE

5.1 Calibration

Instrument calibration shall be documented on instrument calibration and maintenance sheets or in the designated field logbook. All instruments shall be calibrated as required by the manufacturer. Calibration checks may be used during the day to confirm instrument accuracy. Duplicate readings may be taken to confirm individual instrument response.

5.2 Operations

All instruments shall be operated in accordance with the manufacturer's specifications. Manufacturers' literature, including an operations manual for each piece of monitoring equipment will be maintained on-site by the SSO for reference.

5.3 Data Review

The SSO will interpret all monitoring data based the established criteria and his/her professional judgment. The SSO shall review the data with the PM to evaluate the potential for worker exposure, upgrades/downgrades in level of protection, comparison to direct reading instrumentation and changes in the integrated monitoring strategy.

Monitoring and sampling data, along with all sample documentation will be periodically reviewed by the PM.

6.0 RECORDS AND REPORTING

All air readings must be recorded on daily air monitoring log sheets and made available for review by personnel from NYSDEC and NYSDOH.

APPENDIX A
ACTION LIMIT REPORT

CAMP
ACTION LIMIT REPORT

Project Location: ____________________

Date: ____________________ Time: ____________________

Name: ____________________

Contaminant: ____________________ PM-10: __________ VOC: ____________________

Wind Speed: ____________________ Wind Direction: ____________________

Temperature: ____________________ Barometric Pressure: __________

DOWNWIND DATA

Monitor ID #: ____________________ Location: __________ Level Reported: ____________________

Monitor ID#: ____________________ Location: __________ Level Reported: ____________________

UPWIND DATA

Monitor ID #: ____________________ Location: __________ Level Reported: ____________________

Monitor ID#: ____________________ Location: __________ Level Reported: ____________________

BACKGROUND CORRECTED LEVELS

Monitor ID #: Location: ____________________ Level Reported: Level Reported: ____________________

ACTIONS TAKEN

____
____
____
____
____
____
____
____
____
____
____
____

ATTACHMENT D
Citizen Participation Plan

New York State Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan

For

FORMER LEXINGTON LAUNDRY SERVICE SITE

853 Lexington LLC
116 Nostrand Avenue
Brooklyn, NY 11205

December 2013

Contents

* * * * *

Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.

Applicant: **853 Lexington LLC (“Applicant”)**
Site Name: **Former Lexington Laundry Service (“Site”)**
Site Address: **853 Lexington Avenue**
Site County: **Kings County**
Site Number: **C224180**

1. What is New York’s Brownfield Cleanup Program?

New York’s Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as “brownfields” so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants that conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at: http://www.dec.ny.gov/chemical/8450.html.

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision-makers form or adopt final positions.

Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment;
- Improving public access to, and understanding of, issues and information related to a particular site and that Site’s investigation and cleanup process;

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process;

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community; and

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision-making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the Site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC website. If this occurs, NYSDEC will inform the public in fact sheets distributed about the Site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the Site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.
The site contact list includes, at a minimum:

- Chief executive officer and planning board chairperson of each county, city, town and village in which the Site is located;
- Residents, owners, and occupants of the Site and properties adjacent to the Site;
- The public water supplier which services the area in which the Site is located;
- Any person who has requested to be placed on the site contact list;

- The administrator of any school or day care facility located on or near the Site for purposes of posting and/or dissemination of information at the facility; and
- Location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the Site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

- **Document repositories** allow the public to access and review project documents including investigation and cleanup work plans and final reports.

The public is encouraged to contact project staff at any time during the Site's investigation and cleanup process with questions, comments, or requests for information. This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the Site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the Site, as described in Section 5.

If the Site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the Site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the Site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the Site.

For more information about TAGs, go online at http://www.dec.ny.gov/regulations/2590.html.

Note: The table identifying the citizen participation activities related to the Site's investigation and cleanup program follows on the next page:

Citizen Participation Requirements (Activities)	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repositories	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement:	
• Prepare Citizen Participation (CP) Plan	Before start of Remedial Investigation
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describes RI results	Before NYSDEC approves RI Report
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about proposed RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that summarizes the Final Engineering Report • Distribute fact sheet to site contact list announcing issuance of Certificate of Completion (COC)	At the time NYSDEC approves Final Engineering Report. These two fact sheets are combined if possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the Site. Additional major issues of public concern may be identified during the course of the Site's investigation and cleanup process.

The major issues of concern to the public will be potential impacts of nuisance odors and dust during the removal of affected soil at the Site. Another example of a major issue of public concern would be the impact of increased truck traffic on the surrounding neighborhood. Construction safety issues will also be addressed. In addition, this Site may be located in a potential environmental justice area. Furthermore, it may be determined that translation services may be necessary for fact sheets and public meetings. This work will be performed in accordance with procedures which will be specified under a detailed Remedial Program which considers and takes preventive measures for exposures to future residents of the property and those on adjacent properties during construction. Detailed plans to monitor the potential for exposure including a Health and Safety Plan (HASP) and a Community Air Monitoring Plan (CAMP) are required components of the remedial program. Implementation of these plans will be under the direct oversight of the NYSDEC and the New York State Department of Health (NYSDOH).

These plans will specify the following worker and community health and safety activities during remedial activity at the Site:

- On-site air monitoring for worker protection;
- Perimeter air monitoring for community protection;
- The use of odor, vapor, and dust controls, such as water or foam sprays, as needed;
- Monitoring and control of soil, sediments, and water generated during remediation; and
- Truck routes which avoid residential streets.

The HASP and the CAMP will be prepared as part of the Remedial Action Work Plan (RAWP) and will be available for public review at the document repository as identified in Appendix A (page 11).

Furthermore, the Applicant has prepared a Scoping Sheet for Major Issues of Public Concern which will assist them in identifying any concerns. Experience from similar projects, 311 complaints and other construction projects in the area will help in identifying such issues.

The Site is located in an Environmental Justice Area. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Environmental justice efforts focus on improving the environment in communities, specifically minority and low-income communities, and addressing disproportionate adverse environmental impacts that may exist in those communities. Approximately 70% of the nearby residents are African-American with an additional 20% Hispanic-American. Therefore, all future fact sheets will be translated into Spanish.

4. Site Information

Appendix C contains a map identifying the location of the Site.

Site Description

The Site to be remediated and redeveloped is located in the Bedford-Stuyvesant section of Brooklyn (Kings County) and is comprised of one tax parcel totaling 7,358 square feet (0.168 acres). The subject property is located in the Borough of Brooklyn. The Site has 73.62 feet of frontage on Lexington Avenue.

The lot is currently developed with a two-story vacant commercial building with a partial cellar that occupies the entire lot. According to the NYC Department of Buildings, the current buildings were constructed in 1931.

The elevation of the Site is approximately 39 feet above the National Geodetic Vertical Datum (NGVD). The depth to groundwater beneath the Site, as determined from field measurements, is approximately 43 feet below grade. Based on regional and local groundwater contour maps, and field measurements, groundwater flows northwest toward the East River approximately 2.4 miles from the Site.

The area surrounding the property is highly urbanized and predominantly consists of multi-family residential buildings with mixed-use buildings (residential w/ first floor retail) along main artery corridors such as Broadway located just 500 feet to the northeast. Commercial / industrial properties, equipment yards and warehouses are interspersed with the residential properties as are institutions such as parks, schools, churches and playgrounds within a quarter mile of the Site in all directions.

History of Site Use, Investigation, and Cleanup

853 Lexington LLC is the current owner of the property and has owned the property since January 2012. The building is currently vacant. The Site was originally occupied by H.C. Bohack CO., a grocery store chain, which operated as bakery in the building in the early 1900's. A commercial laundry was known to occupy the property in the 1930's through sometime prior to 1951. From 1951 to at least 2007, several furniture manufacturers occupied the property.

A Phase I Site Assessment was conducted in November 2012 which included reconnaissance of the Site and adjacent properties, interviews and the review of historical records and regulatory agency databases. A Phase II Subsurface Investigation performed at the Site in May 2013 identified chlorinated volatile organic compounds in soil, groundwater and soil vapor at the site.

5. Investigation and Cleanup Process*Application*

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program (BCP) as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the Site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination on-site, and must conduct a qualitative exposure assessment, (a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the Site and to contamination that has migrated from the Site).

The Applicant proposes that the Site will be used for the conversion of the existing two-story commercial building into a 6-story residential apartment building. To achieve this goal, the Applicant will conduct investigation and cleanup activities at the Site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement (BCA) executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the Site.

Investigation

The Applicant has completed a preliminary site investigation before it entered into the BCP. The Applicant will now conduct an investigation of the Site officially called a "remedial investigation" (RI). This investigation will be performed with NYSDEC oversight. The Applicant previously developed a remedial investigation work plan, which was subject to public comment.

The site investigation has several goals:

1) Define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) Identify the source(s) of the contamination;
3) Assess the impact of the contamination on public health and the environment; and
4) Provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the Site poses a significant threat to public health or the environment. If the Site is a significant threat, it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the Site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Remedy Selection

When the investigation of the Site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the Site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a Certificate of Completion (COC) (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a Remedial Work Plan. The Remedial Work Plan describes the Applicant's proposed remedy for addressing contamination related to the Site.

When the Applicant submits a proposed Remedial Work Plan for approval, NYSDEC would announce the availability of the proposed plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a Final Engineering Report (FER) that certifies that cleanup requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the Site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the Site, it will approve the FER. NYSDEC then will issue a COC to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the Site after it receives a COC.

Site Management

Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management may be conducted by the Applicant under NYSDEC oversight, if contamination will remain in place. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan (SMP).

An institutional control is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the Site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that is pumping and treating groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A
Project Contacts and Locations of Reports and Information

Project Contacts
For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

John Durnin
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7016
jedurnin@gw.dec.state.ny.us

Thomas Panzone
Regional Citizen Participation Specialist
NYSDEC Region 2
Division of Environmental Remediation
One Hunters Point Plaza
47-40 21st Street
Long Island City, NY 11101
Tel: (718) 482-4953

New York State Department of Health (NYSDOH):
Chris Doroski
Public Health Specialist 2
New York State Department of Health
Bureau of Environmental Exposure Investigation
Empire State Plaza – Corning Tower Room 1787
Albany, New York 12237
Tel: (518) 402-7860
Email: beei@health.state.ny.us

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Brooklyn Public Library – Macon Branch
361 Lewis Avenue at Macon Street
Brooklyn, NY 11237
718-573-5606

Hours:
Mon 10:00 AM - 6:00 PM
Tue 1:00 PM - 8:00 PM
Wed 10:00 AM - 6:00 PM
Thu 10:00 AM - 6:00 PM
Fri 10:00 AM - 6:00 PM
Sat 10:00 AM - 5:00 PM
Sun closed

Appendix B - Site Contact List

Local Government Contacts:

City of New York
Hon. Bill de Blasio
Mayor-Elect
City Hall
New York, NY 10007

Marty Markowitz
Brooklyn Borough President
209 Joralemon Street
Brooklyn, NY 11201

Tremaine Wright
Chair, Brooklyn Community Board 3
1360 Fulton Street
Brooklyn, NY, 11216

Henry Butler
District Manager, Brooklyn Community Board 3
1360 Fulton Street
Brooklyn, NY, 11216

Darlene Mealy
NYC Council Member
41st District
1757 Union Street, 2nd Floor
Brooklyn, NY 11213

Amanda M. Burden
Commissioner
NYC Dept. of City Planning
22 Reade St.
Third Floor
New York, NY 10007

New York City Department of Transportation
Brooklyn Borough Commissioner
Attn: Joseph Palmieri
16 Court Street
Brooklyn, NY 11241

Kings County Clerk's Office
Nancy T. Sunshine, County Clerk
360 Adams Street, Room 189
Brooklyn, NY 11201

Hon. Letitia James
Public Advocate-Elect
1 Centre Street, 15th Floor
New York, NY 10007

Hon. Scott Stringer
NYC Comptroller-Elect
Office of the Comptroller
1 Centre Street
New York, NY 10007

Hon. Velmanette Montgomery
NY Senate District 25
30 Third Avenue
Brooklyn, NY 11217

NYS Assembly member
Annette Robinson
Assembly District 56
1360 Fulton Street, Room 417
Brooklyn, NY 11216

Hon. Charles Schumer
U.S. Senator
780 Third Avenue, Suite 2301
New York, NY 10017

Hon. Kirsten Gillibrand
U.S. Senator
780 Third Avenue, Suite 2601
New York, NY 10017

Congressman Hakeem Jeffries
U.S. House of Representatives
8th District of NY
55 Hanson Place
Suite 603
Brooklyn, NY 11217

John Wuthenow
Office of Environmental Planning & Assessment
NYC Dept. of Environmental Protection
96-05 Horace Harding Expressway
Flushing, NY 11373

Director
NYC Office of Environmental Coordination
100 Gold Street – 2nd Floor
New York, NY 10038

Daniel Walsh
NYC Department of Environmental Remediation
100 Gold Street – 2nd Floor
New York, NY 10038

Community, Civic, Religious and other Educational Institutions:

Bed-Stuy Gateway
Doug Jones Executive Director
Business Improvement District
1368 Fulton Street, 3rd Floor
Brooklyn, NY 11216

Local Media Outlets:

Courier Life Publications
1 Metro-Tech Center North - 10th Floor
Brooklyn, NY 11201

Brooklyn Daily Eagle
30 Henry Street
Brooklyn, NY 11201

Brooklyn News 12
East 18th Street & Avenue Z
Brooklyn, NY 11235

Hoy Nueva York
1 MetroTech Center, 18th Floor
Brooklyn, NY 11201

El Diario La Prensa
1 MetroTech Center, 18th Floor
Brooklyn, NY 11201

Newsday
235 Pinelawn Road
Melville, NY 11747

The Brooklyn Paper
One Metrotech Center, Suite 1001
Brooklyn, NY 11201
(718) 260-4504

New York Daily News
4 New York Plaza
New York, NY 10004

New York Post
1211 Avenue of the Americas
New York, NY 10036-8790

Public Water Supplier

Hon. Carter Strickland
Commissioner
New York City Department of Environmental Protection
59-17 Junction Boulevard
Flushing, NY 11373

Schools and Daycare Facilities:

1 Charles Churn Christian Academy
1052 Greene Avenue
Brooklyn, NY 11221
(718) 919-6887
Attn: Dr. Linda Hunt

2 Brooklyn Excelsior Charter School
856 Quincy Street
Brooklyn, NY 11221
(718) 246-5681
Attn: Adam Stevens

3 Excellence Girls Charter School
794 Monroe Street
Brooklyn, NY 11221
718-638-1875
Attn: Stephanie Brown

4 Public School 5 Dr. Ronald McNair
820 Hancock Street
Brooklyn, NY 11233
718-574-2333
Attn: Lena Gates

5 Excellence Boys Charter School of Bedford Stuyvesant
225 Patchen Avenue
Brooklyn, NY 11233
718-638-1830
Attn: David Berlin

6 La Cima Charter School
800 Gates Avenue
Brooklyn, NY 11221
718-443-2136
Attn: Kristen Zarcadoolas

7 School of Business Finance & Entrepreneurship
125 Stuyvesant Avenue
Brooklyn, NY 11221
718-602-3271
Attn: Anne Marie Malcolm

8 Frederick Douglass Academy IV Secondary School
1014 Lafayette Avenue
Brooklyn, NY 11221
718-574-2820
Attn: Elvin Crespo

9 Public School 274
800 Bushwick Avenue
Brooklyn NY 11221
718-574-0273
Attn: Maritza Ollivierra-Jones

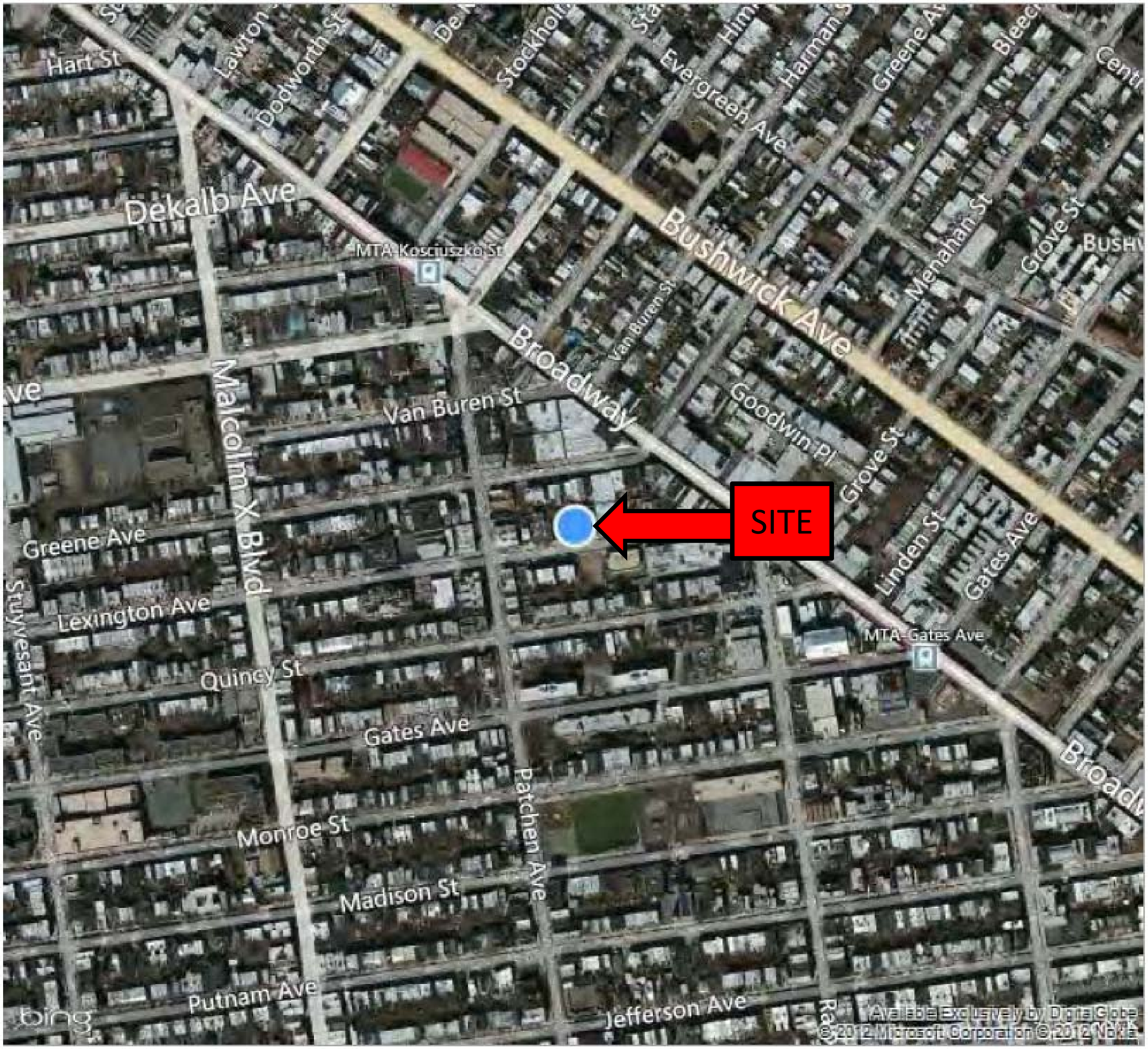
10 Bushwick Leaders High School for Academic Excellence
797 Bushwick Avenue
Brooklyn, NY 11221
718-919-4212
Attn: Catherine Riley

11 Bushwick United Headstart II
331 Central Avenue
Brooklyn, NY 11221
718-453-9040
Attn: William Velasco

12 P.S. 75 Mayda Cortiella
95 Grove Street
Brooklyn, NY 11221
718-574-0244
Attn: Yolanda Williams

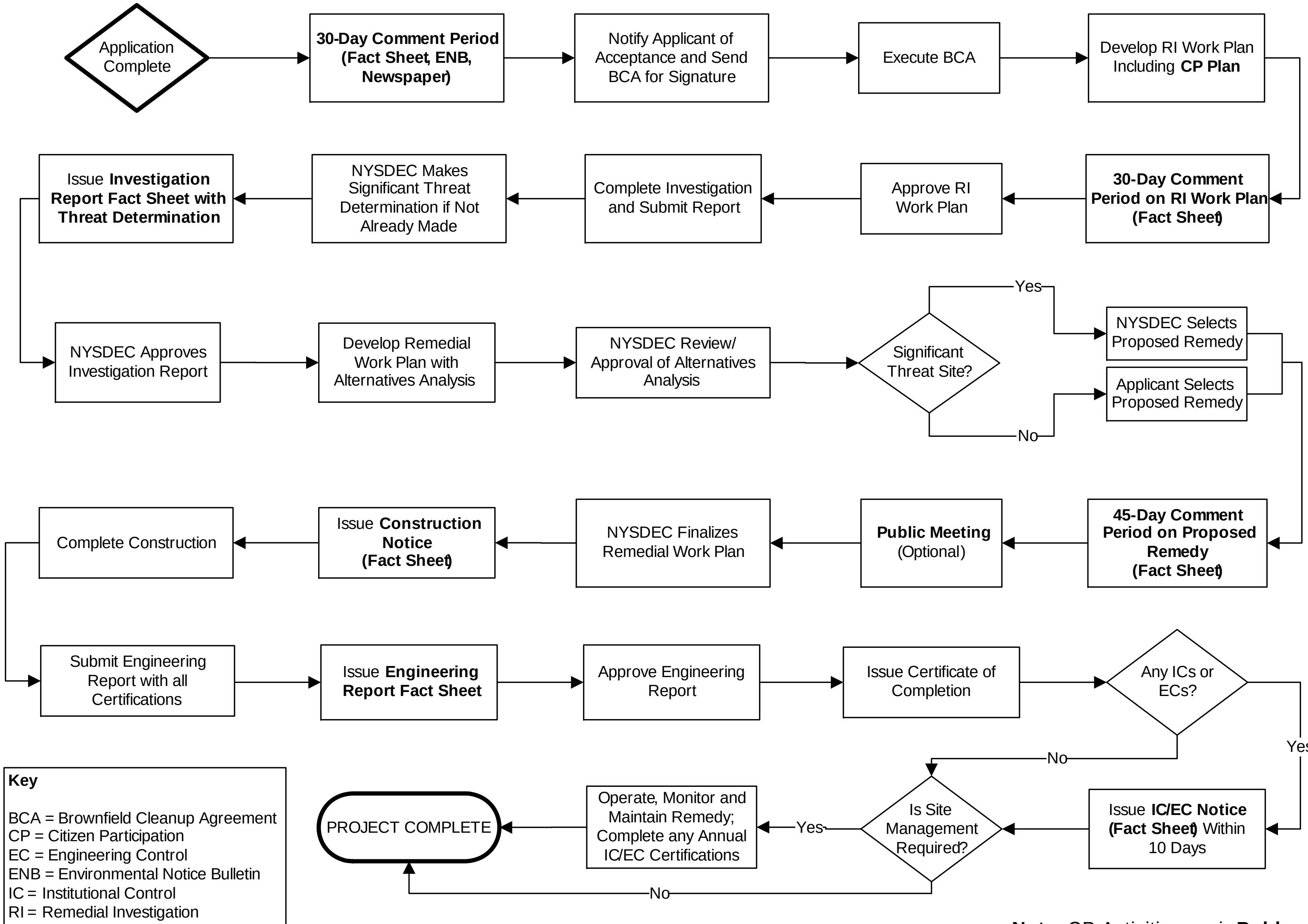
13 Thomas Warren Field School
88 Woodbine Street
Brooklyn, NY 11221
718-919-0134
Attn: Wilma Kanova Kirk

14 Acorn High School For Justice
1396 Broadway
Brooklyn, NY 11221
718-919-1256
Attn: Andrea Piper



Hart St
Lawton
Dodworth St
Stockholm
Evergreen Ave
Harman St
Greene Ave
Dekalb Ave
MTA-Kosciuszko St
Bushwick Ave
Menahan St
Grove St
Van Buren St
Broadway
Goodwin Pl
Malcolm X Blvd
Grove St
SITE
Greene Ave
Linden St
Gates Ave
Lexington Ave
Stuyvesant Ave
MTA-Gates Ave
Quincy St
Gates Ave
Broadway
Monroe St
Patchen Ave
Madison St
Putnam Ave
Jefferson Ave
bing
Available Exclusively by DigitalGlobe
© 2012 Microsoft Corporation © 2012 Nokia

Appendix D– Brownfield Cleanup Program Process



Note: CP Activities are in **Bold**

ATTACHMENT E
Resumes

AMC Engineering
99 Jericho Turnpike, Suite 300J
Jericho, NY 11590
Phone: (516) 417-8588

ARIEL CZEMERINSKI, P.E.

Mr. Czemerinski is a New York State Professional Engineer and CEO of AMC Engineering PLLC an EBC affiliate. Mr. Czemerinski has with 20 years of experience in the chemical and environmental areas. Areas of expertise include environmental compliance, permitting, remedial system design, process and plant safety, and management of a production facility. Mr. Czemerinski is a Registered Professional Engineer in NY, IN, IL, and MI.

Professional Experience
AMC: 14
Prior: 6 years

Education
Master of Science in Chemical Engineering, Columbia University, New York, NY, Feb. 1990. Bachelor of Science in Chemical Engineering, University Of Buenos Aires, Buenos Aires, Argentina, May 1987

Areas of Expertise

- Vapor Intrusion - Barrier and Sub Slab Venting System Design
- Environmental Assessment Statements and Environmental Impact Assessments under CEQR, ULURP
- Remedial Program Design and Management
- Environmental Compliance, Clean Water Act, Clean Air Act, Hazardous Materials
- Dewatering & Treatment System Design
- NYCDEP Sewer Discharge Permitting
- Transfer Station Permitting and Compliance
- Chemical Process Design and Optimization
- Wastewater Treatment Systems and Permitting, SPEDES, Air
- Zoning Regulations and Permitting
- Safety and Environmental Training
- Waste Management Plans

Professional Certifications

- OSHA 40-hr HAZWOPER
- OSHA 8-hr HAZWOPER Supervisor

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

Charles B. Sosik, PG, PHG, Principal

Professional Experience

25 years

Education

MS, Hydrogeology, Adelphi University, NY
BS, Geology, Northern Arizona University, AZ

Areas of Expertise

- Brownfields Redevelopment
- Hazardous Waste Site Investigations
- Pre-purchase Site Evaluations and Support
- Regulatory Negotiations
- Remedial Planning and "Cost to Cure" Analysis
- Strategic Planning
- Real Estate Transactions
- NYC "E" Designations

Professional Certification

- Professional Geologist, NH
- Professional Geologist, Hydrogeologist, WA
- OSHA 40-hr HAZMAT
- OSHA 8-hr. Supervisor
- NYC OER Qualified Environmental Professional

Professional Affiliation / Committees

- NYS Council of Professional Geologists (NYSCPG)
- Association of Groundwater Scientists & Engineers (AGSE)
- NYS RBCA Advisory Committee
- Massachusetts LSP Association
- New Hampshire Association of Professional Geologists
- Interstate Technology Regulatory Council/MTBE Team
- Environmental Business Association, Brownfields Task Force
- Part 375 Working Group

PROFILE

Mr. Sosik has 25 years of experience in environmental consulting. He specializes in advising clients on managing environmental compliance with federal, state, and municipal agencies and has successfully directed numerous investigation and remediation projects involving petroleum, pesticides, chlorinated solvents, heavy metals and radiologically activated media. His work included extensive three-dimensional investigations on MTBE, which have been used effectively to help shape public policy. He also has experience in applying models to groundwater related problems and has completed several large-scale projects to determine fate and transport of contaminants, establish spill scenarios, and closure criteria. His experience and expertise in the area of contaminant hydrogeology has resulted in requests from environmental attorneys, property owners and New York State to serve as an expert witness and technical advisor on a variety of legal disputes.

For the past 10 years Mr. Sosik has been primarily engaged in providing environmental consulting to developers responding to the extensive re-zoning of former industrial and commercial properties, which is currently taking place throughout New York City. These services include everything from pre-purchase evaluations and contract negotiations to gaining acceptance in and moving projects through the NYS Brownfields Program. Mr. Sosik has taken a pro-active role in the continued development of the NYS Brownfields Program and related policy, by attending numerous working seminars, active participation in work groups and task forces and by providing commentary to draft versions of new guidance documents. Throughout his professional career, Mr. Sosik has remained committed to developing innovative cost- efficient solutions to environmental issues, specifically tailored to the needs of his clients.

SELECTED PROJECTS

Scavenger Waste Treatment Facility (SWTF), Suffolk County, NY

Water Treatment Plant EIS - Focused EIS - In response to requests from the Suffolk County Council on Environmental Quality and the Brookhaven Conservation Advisory Council, Mr. Sosik prepared a focused EIS to evaluate the potential impacts to an important surface water resource from the proposed facility including cumulative and synergistic effects with established contaminant plumes in the area.

Advanced Residential Communities, Rockville Centre, NY

Brownfield Project – As the senior project manager on this large scale, high profile redevelopment project, Mr. Sosik was asked to develop a plan to accelerate the regulatory process in the face of general community opposition. Through numerous discussions with the BCP management team, He was able to condense the schedule and review period, through the submission of supporting documents (Investigation Report, Remedial Work Plan) with the BCP application package. Community opposition, which focused on the environmental condition of the site as a means to block the project, was used to advantage in expediting approval of the aggressive interim remedial plan. This will allow the developer to begin remedial work approximately 5 months ahead of schedule.

Former Temco Uniform site, West Haverstraw, NY

Brownfield Project – Mr. Sosik took over management of this project from another consultant following transition of this VCP site to the BCP. Mr. Sosik used the opportunity to renegotiate and revise the scope of work to allow a more cost effective and focused investigation plan without re-writing or resubmitting the RIWP. During the NYSDEC's review of the transition package, he met with and coordinated changes with the NYSDEC Project Manager to gain approval. The result saved the client a significant amount of money, but perhaps more importantly in this case, did so without loss of time.

Grovick Properties, Jackson Heights, NY

Brownfield Project – This Brownfield property is somewhat unique in that it had been investigated and partially remediated by the NYSDEC through the petroleum spill fund. The client was interested in purchasing the property and redeveloping it as office and retail space. Mr. Sosik reviewed the NYSDEC investigation and developed a supplemental plan to meet the requirements of an RI under the BCP program. By performing this limited amount of field work "up-front" he was able to complete an RI Report and Remedial Plan and submit both with the BCP application package. The NYSDEC and NYSDOH approved the RI Report and the Remedial Plan with minor changes. This cut 120 days from the review process and allowed the client to arrange financing and move his project forward knowing what the clean-up costs would be at the outset.

Metro Management, Bronx, NY

Brownfield Project – The site of a former gas station, the developer had planned to construct a 12-story affordable housing apartment complex with first floor retail space. Since the site was located in an Environmental zone, potential tax credits of 22% for site development, remediation and tangible property could be realized under the BCP. In a pre-application meeting with the NYSDEC, Mr. Sosik realized that the department did not believe the site was eligible for the BCP, since it had been previously investigated and closed under the spills program.

Mr. Sosik assisted the developer in securing financing, and due to the demands of an aggressive construction schedule developed an Interim Remedial Measure (IRM), based on chemical oxidation treatment. Working closely with the clients environmental counsel, Mr. Sosik was able to get the IRM approved without a public comment period. Implementation of the IRM is currently underway.

The project was awarded the 2009 NYC Brownfield Award for Innovation.

Brandt Airflex, NY

Technical Consulting Services - Mr. Sosik provided senior level technical advice and strategic planning in developing an off-site RI/FS for the site, in negotiating a tax reduction for the property due to the environmental condition and in preparing a cost to cure estimate for settlement between business partners. After achieving a favorable tax consideration and settlement agreement for his client

Allied Aviation Services, Dallas, Fort Worth, Airport, Dallas, TX

Jet Fuel Investigation - Mr. Sosik developed and managed an investigative plan to quickly identify the extent and source of jet fuel which was discharging from the Airport's storm drain system to a creek a mile away. Through the use of a refined conceptual model, accelerated investigative techniques and a flexible work plan, he was able to identify the source of the fuel and the migration route within a single week. He then identifled remedial options and successfully negotiated a risk based plan with the Texas regulatory agency that had issued a notice of enforcement action against the facility.

KeySpan – Former LILCO Facilities, Various NY Locations

Pesticide Impact Evaluation - Mr. Sosik developed, negotiated and implemented a site screening procedure to evaluate impact to public health and the environment as the result of past herbicide use at 211 utility sites. Using an unsaturated zone leaching model (PRZM) on a small subset of the sites, he was able to establish mass loading schedules for the remaining sites. This was combined with public well data in a GIS environment to perform queries with respect to mass loading, time transport and proximity to vunerable public supply wells. Using this approach Mr. Sosik was able to show that there were no concerns for future impact. This effort satisfied the public health and resource concerns of the state environmental agency and county health department in a reasonable amount of time and at a fraction of the cost of a full scale investigation.

Former Computer Circuits (Superfund) Site, Hauppauge, NY

CERCLA RI/FS - As Senior Project Manager for the site, he played a major role in regaining control of the investigation activites for the PRP. This action prevented the USEPA from initiating an extensive investigation at the site using a RAC II contractor allowing the client to perform a more efficient investigation. He was involved in all negotiations with EPA and was the project lead in developing a revised site characterization plan (work plan, field sampling plan, quality assurance plan, etc.). By carefully managing all phases of the investigation and continued interaction with each of the three regulatory agencies involved, Mr. Sosik was able to keep the project focused and incrementally reinforce the clients position. The estimated cost of the revised investigation is expected to save the client 1.5 to 2 million dollars.

Sun Oil, Seaford, NY

Remediation Consuliting Services & Project Management - Under an atmosphere of regulatory distrust, political pressure and mounting public hostility toward the client, Mr. Sosik conducted an off-site 3-D investigation to define the extent of contamination and the potential impact on public health. By designing and implementing an aggressive source area remediation program and personal interaction with the public and regulatory agencies, he was able to successfully negotiate a limited off-site remediation favorable to the client. Source area remediation was completed within 6 months and the project successfully closed without damage to the client's public image or working relationship with the regulatory agencies.

Con Edison, Various Locations, NY

Hydrogeologic Consulting Services - Under a general consulting contract, Mr. Sosik conducted detailed subsurface hydrogeologic investigations at five locations to assist in the development of groundwater contingency planning. He also developed and implemented work plans to investigate and remediate existing petroleum, cable fluid, and PCB releases at many of the generating facilities and substations. An important aspect of his role was in assisting the client in strategic planning and negotiations with the regulatory agency.

Keyspan - Tuthill Substation, Aqueboque, NY

Accelerated Site Characterization - Using accelerated site characterization techniques, Mr. Sosik presented the project as a case study in establishing the transport of an herbacide and its metobolites aplied at utility sites in the 1980's The results were then used to establish a screening method for evaluating 211 similar sites controlled by the client in a reasonable and eficient manner.

NYSDEC Spill, East Moriches, NY

Spill Release Analysis - With recognized expertise in the area of gasoline plume development on Long Island, Mr. Sosik was asked by

Charles B. Sosik, PG, PHG, Principal

the State to establish the release date (and principal responsible party) of an extensive petroleum spill, which impacted a residential neighborhood. He used multiple lines of evidence, and a new EPA model (HSSM), which he has helped to refine, to reconstruct the release scenario and spill date, in support of the State Attorney General's cost recovery effort from the PRP.

Minmilt Realty, Farmingdale, NY

Fate & Transport Modeling - He completed an RI/FS at this location for a PCE plume that had been in transit for over 30 years. Mr. Sosik applied a conservative model to evaluate time/concentration impacts under a variety of transport scenarios to a municipal wellfield located 13,000 feet away. Through the use of the model and careful interpretation of an extensive data set compiled from several sources, Mr. Sosik was able to propose a plan which was both acceptable to the regulator and favorable to the client.

Sebonack Golf Course Project, Town of Southampton, NY

IPM Pesticide Study - Provided professional hydrogeologic services in support of the EIS prepared for the development of the site. The proposed development included an 18-hole golf course, clubhouse, dormitory facility, cottages, associated structures, and a 6,000 square foot research station for Southampton College. Mr. Sosik performed an extensive evaluation (using a pesticide-leaching model) on the effects of pesticide and nitrogen loading to groundwater as part of the projects commitment to an Integrated Pest Management (IPM) approach.

NYSDEC, Spills Division, Regions 1 – 4

Petroleum Spills Investigation & Remediation - As a prime contractor/consultant for the NYSDEC in Regions 1-4, Mr. Sosik has managed the investigation and remediation of numerous petroleum spills throughout the State. Many of these projects required the development of innovative investigation and remediation techniques to achieve project goals. He was also involved in many pilot projects and research studies to evaluate innovative investigation techniques such as accelerated site characterization, and alternative approaches to remediation such as monitored natural attenuation and risk based corrective action.

Sun Oil, E. Meadow, NY

Exposure Assessment - Performed to seek closure of the spill file, despite the presence of contaminants above standards, Mr. Sosik determined after the extended assessment that the level of remaining contamination would not pose a future threat to human health or the environment. He used multiple lines of evidence, and a fate and transport model to show that degradation processes would achieve standards within a reasonable time.

Sand & Gravel Mine, NY

Property Development - As part of the development of a sand and gravel mine, Mr. Sosik provided environmental consulting services to assist in obtaining a mining permit, which would result in the construction of a 150-acre lake. Specifically, Mr. Sosik investigated if the proposed lake would reduce groundwater quantity to domestic and public well fields, and/or accelerate the migration of potential surface contaminants to the lower part of the aquifer. After assuming the lead role in negotiations with the regulatory agency, Mr. Sosik was able to obtain a permit for the client by adequately addressing water quality and quantity issues, and by preparing a monitoring plan and spill response plan, acceptable to all parties.

NYSDEC, Mamaroneck, NY

Site Characterization / Source Identification - In a complex hydrogeologic setting consisting of contaminant transport through fractured metomorphic bedrock and variable overburden materials, Mr. Sosik was able to develop and implement a sub-surface investigation to differentiate and separate the impact associated with each of two sources. The results of this investigation were successful in encouraging the spiller to accept responsibility for the release.

Riverhead Municipal Water District, NY

Site Characterization / Remedial Planning - Using accelerated characterization techniques, he implemented a 3-D site investigation to identify two service stations 4,000 ft. away as the source of contamination impacting a municipal wellfield. In accordance with the strict time table imposed by the need to return the wellfield to production by early spring, he designed and implemented a multi-point (9 RW, 6 IW) recovery and injection well system using a 3-d numerical flow model, and completed the project on time. Using a contaminant transport model, Mr. Sosik developed clean-up goals which were achieved in 9 months of operation, well below the projected 3 to 5 year project duration.

Montauk Fire Department, NY

Site Assessment - Mr. Sosik performed a limited investigation and used a 2-D flow model to demonstrate that the property could not have been the source of contamination which had impacted an adjacent wellfield as per the results of a previous investigation. This small focused effort successfully reversed a $500,000, and rising, claim against the department by the water district and the NYSDEC.

PREVIOUS EXPERIENCE

P.W. Grosser Consulting, Bohemia, NY
Senior Project Manager, 1999-2006

Environmental Assessment & Remediation, Patchogue, NY
Senior Project Manager, 1994-1999

Miller Environmental Group, Calverton, NY
Project Manager, 1989-1994

DuPont Biosystems, Aston, PA
Hydrogeologist, 1988-1989

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

Charles B. Sosik, PG, PHG, Principal

EXPERT WITNESS TESTIMONY AND DEPOSITIONS

Fact Witness -Testimony on relative age of petroleum spill based on nature and extent of residual and dissolved components at the Delta Service Station in Uniondale, NY Fall/1999

Expert Witness / Expert Report for defendant in cost recovery case by NYS Attorney General regarding a Class II Inactive Hazardous Waste (State Superfund) project by the NYSDEC (October 2004 – present, Report: March 2005, Deposition: April 2005, 2nd Report: Aug. 2013, 2nd Deposition Nov. 2013, Bench Trial: December 2013 - qualified as expert in Federal Court),

Expert Witness / Fact Witness for plaintiff seeking compensation for partial expenses incurred during the investigation and remediation of a USEPA CERCLA site due to the release and migration of contaminants from an “upgradient” industrial property. (Deposition May 2005, case settled April 2007).

Expert Witness / Fact Witness for NYS Attorney General with respect to cost recovery for a NYSDEC petroleum spill site in Holtzville, NY (Deposition April 2005 - case settled).

Expert Witness – Statement of opinion and expert testimony at trial for plaintiff seeking damages from a major oil corporation for contamination under a prior leasing agreement in Rego Park, NY. Case decided in favor of plaintiff. Trial July 2007, in favor of Plaintiff. Qualified as Expert.

Expert Witness / Fact Witness for NYS Attorney General with respect to cost recovery for a NYSDEC petroleum spill site in Lindenhurst, NY (Trial date Dec. 2009, in favor of plaintiff. Qualified as Expert State Supreme Court.

Expert Witness - for NYS Attorney General regarding NYSDEC cost recovery for a petroleum spill site at Riverhead, NY. Case settled July 2008.

Expert Witness for plaintiffs in class action case with respect to damages from chlorinated plume impact to residences in Dayton, OH. (Draft Report – May 2013).

Expert Witness / Fact Witness for defendant with respect to cost recovery and third party responsibility for a NYSDEC petroleum spill site in Lindenhurst, NY (Expert Statement of Fact – October 2005).

Expert Witness for plaintiff seeking damages related to a petroleum spill from the previous owner/operator of a gas station in College Point, NY. Case settled 2009.

Expert Witness for plaintiff (municipal water supply purveyor) seeking damages from major oil companies and manufacturer of MTBE at various locations in Suffolk County, NY. Expert reports July 2007, August 2007 and October 2007, Case settled August, 2008.

Expert Witness - Deposition for NYS Attorney General regarding NYSDEC cost recovery for a petroleum spill site at Sag Harbor, NY. August 2002

Expert Witness for defendant responding to a claim from adjacent commercial property owner on the origin of chlorinated solvents on plaintiff's property located in Cedarhurst, NY. Expert opinion submitted to lead counsel on March 6, 2009, case settled April 2009.

Expert Report - for Attorney General on modeling performed to determine the spill release scenario at a NYSDEC petroleum spill site in East Moriches, NY. June 2000.

Expert Witness - for plaintiff in case regarding impact to private wells from a spill at adjacent Town and County properties with open gasoline spill files in Goshen, NY. Expert report submitted August 2013.

Expert Witness for defendant with respect to cost recovery from Sunoco for a NYSDEC petroleum spill site. (Declaration – January 2013).

Expert Witness - for plaintiff (municipal water supply purveyor) seeking damages from Dow Chemical for PCE impact at various locations in Suffolk County, NY. Affidavit submitted 2011.

MODELING EXPERIENCE (PARTIAL LISTING)

PROJECT	MODEL	APPLICATION
Riverhead Water District, Riverhead, NY	MODFLOW, MODPATH	Remediation system design to intercept MTBE plume and prevent continued impact to municipal well field.
NYSDEC - Region 1, Holbrook, NY	MODFLOW, MODPATH	Simulate transport of MTBE plume to predict future impact.
NYSDEC - Region 1, East Moriches, NY	HSSM	Evaluate release scenario and start date of petroleum spill in support of cost recovery by NYS AG office.
AMOCO, Deer Park, NY	HSSM	Estimate release amount, start date and spill scenario to evaluate the potential for mass unaccounted for
Keyspan Energy, Nassau/Suffolk Counties Substations	PRZM	Estimate mass load of simazine used at 211 electric substations and screen sites according to potential for human health and ecological impacts.
Saboneck Golf Club, Southampton NY	PRZM	Estimate mass load of proposed pesticides on new golf course to evaluate acceptability under an IPM program.
Suffolk County Department of Public Works (SCDPW) Scavenger Waste Treatment Plant, Yaphank, NY	DYNFLOW, DYNTRAC	Evaluate time-transport and nitrogen impact on local river system.
SCDPW SUNY Waste Water Treatment Plant, Stony Brook, NY	DYNFLOW, DYNTRAC	Determine outfall location and time-transport of nitrogen from proposed upgrades to an existing wastewater treatment plant
Water Authority of Great Neck North Great Neck, NY	MODFLOW, MODPATH, MT3D	Review of modeling study performed by EPA to evaluate potential future impact to Well field from PCE plume. Identified serious flaws in model construction and implementation, which invalidated conclusions

PUBLICATIONS / PROFESSIONAL PAPERS

Smart Pump & Treat Strategy for MTBE Impacting a Public Water Supply (14th Annual Conference on Contaminated Soils Proceedings, 1998)
Transport & Transformation of BTEX & MTBE in a Sand Aquifer (Groundwater Monitoring & Remediation 05/1998)
Characteristics of Gasoline Releases in the Water Table Aquifer of Long Island (Petroleum Hydrocarbons Conference Proceedings, 1999)
Field Applications of the Hydrocarbon Spill Screening Model (HSSM) (USEPA Interactive Modeling Web Course www.epa.gov/athens/software/training/webcourse Authored module on model application and applied use of calculators, 02/2000)
Comparative Evaluation of MTBE Sites on Long Island, US EPA Workshop on MTBE Bioremediation (Cincinnati, 02/2000)
Comparison of Four MTBE Plumes in the Upper Glacial Aquifer of Long Island (American Geophysical Union, San Francisco, 12/1996)
Analysis and Simulation of the Gasoline Spill at East Patchogue, New York (American Geophysical Union, San Francisco, 12/1998)

Kevin Waters, Hydrogeologist

Professional Experience
EBC: October 2010
Prior: 5 years

Education
Bachelor of Science, Geology, State University of New York, Stony Brook

Areas of Expertise
- Field Operations
- Phase II and RI Implementation, Site Characterization Studies
- Health & Safety Monitoring and Oversight
- Waste Characterization / Soil Management
- Site Logistics

Professional Certification
- OSHA 40-hr HAZWOPER
- OSHA 8-hr HAZWOPER Supervisor

PROFILE

Mr. Waters has 7 years experience as an environmental consultant and has worked on a wide range of environmental projects. Mr. Waters has conducted Phase II and III Environmental Site Assessments for commercial, industrial, and residential properties in New York.

Mr. Waters' field experience includes soil, air and groundwater sampling, operations and maintenance of groundwater remediation systems, tank removals, spill management and closure, and oversight of monitoring well installations. In addition, Mr. Waters has prepared reports for both regulatory and client use.

PREVIOUS EXPERIENCE

P.W. Grosser Consulting, Bohemia, NY
Field Hydrogeologist, 2003-2008

SELECT PROJECT EXPERIENCE

Project:	Former Gas Station / car wash to mixed use affordable housing / commercial
Location:	Bronx, NY, Southern Boulevard
Type:	NYS BCP, NYC E-Site Hazmat, Former gas station / gar wash
Contamination:	Petroleum - Gasoline
Role:	Field Operations Manager, Health and Safety Officer

ENVIRONMENTAL BUSINESS CONSULTANTS

Kevin Waters, Hydrogeologist

SELECT PROJECT EXPERIENCE

Project:	Former Uniforms for Industry Site – Richmond Hill Senior Living Residences / Richmond Place
Location:	Jamaica Ave, Richmond Hill Queens, NY
Type:	NYS BCP, NYC E-Site Hazmat, Noise, Former industrial Laundry
Contamination:	Chlorinated Solvents, Historic Fill, Petroleum - Fuel oil/Mop oil
Role:	Field Operations Manager, Health and Safety Monitoring and Field Oversight

Project:	Rikers Island – West Intake Facility
Location:	NYC Department of Corrections, Rikers Island, NY
Type:	Municipal Construction Project
Contamination:	Hazardous levels of lead, heavy metals in Historic fill
Role:	Field Operations Manager, Health and Safety Monitoring and Field Oversight

Project:	Residential Redevelopment Project
Location:	Williamsburg Section of Brooklyn, Wallabout Street
Type:	NYC E-Designation Site
Contamination:	Hazardous levels of lead, heavy metals, SVOCs in Historic fill
Role:	Implement RI Work Plan, Supervise sample collection in all media

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

Kevin R. Brussee, Senior Project Manager

Professional Experience
EBC: January 2008
Prior: 6 years

Education
Bachelor of Science, Environmental Science, Plattsburgh State University, NY
Master of Science, Environmental Studies, University of Massachusetts, Lowell

Areas of Expertise
- Management of Site Investigations / Remedial Oversight NYC "E" Designation Sites
- Management of RI Investigations / RAWP Implementation NYS BCP Sites
- NYSDEC Spill Site Investigations
- Phase I / Phase II Property Assessments
- Waste Characterization / Soil Management

Professional Certification
- OSHA 40-hr HAZWOPER
- OSHA 8-hr HAZWOPER Supervisor

PROFILE

Mr. Brussee has 10 years experience as an environmental consultant/contractor and has worked on and managed a wide range of environmental projects. Mr. Brussee has conducted Phase I, II and III Environmental Site Assessments for commercial, industrial, and residential properties in New York, New Jersey, Maryland and Delaware.

Mr. Brussee's field experience includes tank removal and installations, spill management and closure, soil and groundwater sampling, and both the oversight and operation of soil boring and well installation equipment. In addition, Mr. Brussee has performed project research, data reduction and evaluation, and has prepared reports for both regulatory and client use.

PREVIOUS EXPERIENCE

Eastern Environmental Solutions, Inc., Manorville, NY
Project Manager, 2006-2008

EA Engineering, Science & Technology
Hydrogeologist, 2005-2006

P.W. Grosser Consulting, Bohemia, NY
Field Hydrogeologist, 2002-2003

Kevin R. Brussee, Senior Project Manager

SELECT PROJECT EXPERIENCE

Project:	Former Dico G, Autio and Truck Repair Site - Bronx Park Apartments, redevelopment from commercial to mixed use
Location:	Bronx, NY, White Plains Road
Type:	NYS BCP Site, Former gas station, repair shop & junk yard
Contamination:	Petroleum - Gasoline
Role:	Project Manager, during Site Management Phase
Project:	Former Uniforms for Industry Site – Richmond Hill Senior Living Residences / Richmond Place
Location:	Jamaica Ave, Richmond Hill Queens, NY
Type:	NYS BCP, NYC E-Site Hazmat, Noise, Former industrial Laundry
Contamination:	Chlorinated Solvents, Historic Fill, Petroleum - Fuel oil/Mop oil
Role:	Project Manager, RAWP implementation
Project:	Former Gas Station / car wash to mixed use affordable housing / commercial
Location:	Bronx, NY, Southern Boulevard
Type:	NYS BCP, NYC E-Site Hazmat, Former gas station / gar wash
Contamination:	Petroleum - Gasoline
Role:	Project Manager, RAWP implementation
Project:	Redevelopment of former industrial property to residential
Location:	Williamsburg section of Brooklyn, NY, Bedford Ave
Type:	NYC E-Designation Site, Former dye manufacturing plant
Contamination:	Hazardous levels of heavy metals, fuel oil tanks
Role:	Project Manager, RAWP implementation
Project:	Former Domsey Fiber Corp Site
Location:	Williamsburg section of Brooklyn, NY, Kent Ave
Type:	NYC E-Designation Site, Former commercial property
Contamination:	Chlorinated solvents, fuel oil and Historic fill
Role:	Project Manager, RIWP Development and Implementation, RAWP development and implementation, waste characterization and soil management

PUBLICATIONS

Chemical Stress Induced by Copper, Examination of a Biofilm System;
(Water Science Technology, 2006; 54(9): 191-199.)

EBC

ENVIRONMENTAL BUSINESS CONSULTANTS

Kristen DiScenza, Project Manager

Professional Experience
EBC: February 2013
Prior: 7.5 years

Education
Graduate Certificate, Waste Management, Stony Brook University, NY
Bachelor of Science, Environmental Science, SUNY Oneonta, Oneonta, NY

Areas of Expertise
- Phase I /Phase II Property Assessments
- NYSDEC Spill Site Investigations
- Management of Site Investigations/Remedial Oversight NYC "E" Designation Sites
- Management of RI Investigations/RAWP Implementation NYS BCP Sites

Professional Certification
- OSHA 40-hr HAZWOPER
- OSHA 10-hr Construction Health and Safety
- Lead Awareness

PROFILE

Ms. DiScenza has 7.5 years experience as an environmental consultant/contractor and has worked on and managed a wide range of environmental projects. Ms. DiScenza has conducted Phase I, Phase II, and Phase III Environmental Site Assessments for commercial, industrial and residential properties in New York.

Ms. DiScenza's field experience includes tank removal and installations, spill management and closure, soil and groundwater sampling, oversight of soil boring and well installation and abandonment activities, UIC structure remediation and abandonment, Enhanced Fluid Recovery oversight and installation and operation of soil vapor extraction/air sparge and oxygen injection remediation systems. Ms. DiScenza has prepared reports for both regulatory and client use.

PREVIOUS EXPERIENCE

Sovereign Consulting, Inc., Farmingdale, New York
Senior Project Manager, 2006-2013

Tyree Brothers Environmental Services, Farmingdale, New York
Field Technician, 2005-2006

ATTACHMENT F
BCP Signage Specifications

New York State Brownfields Cleanup Program

Former Lexington Laundry Service
BCP Site No. C-224180
853 Lexington LLC

Governor Andrew M. Cuomo
NYSDEC Commissioner Joe Martens
Mayor Bill de Blasio

Transform the Past.   Build for the Future.

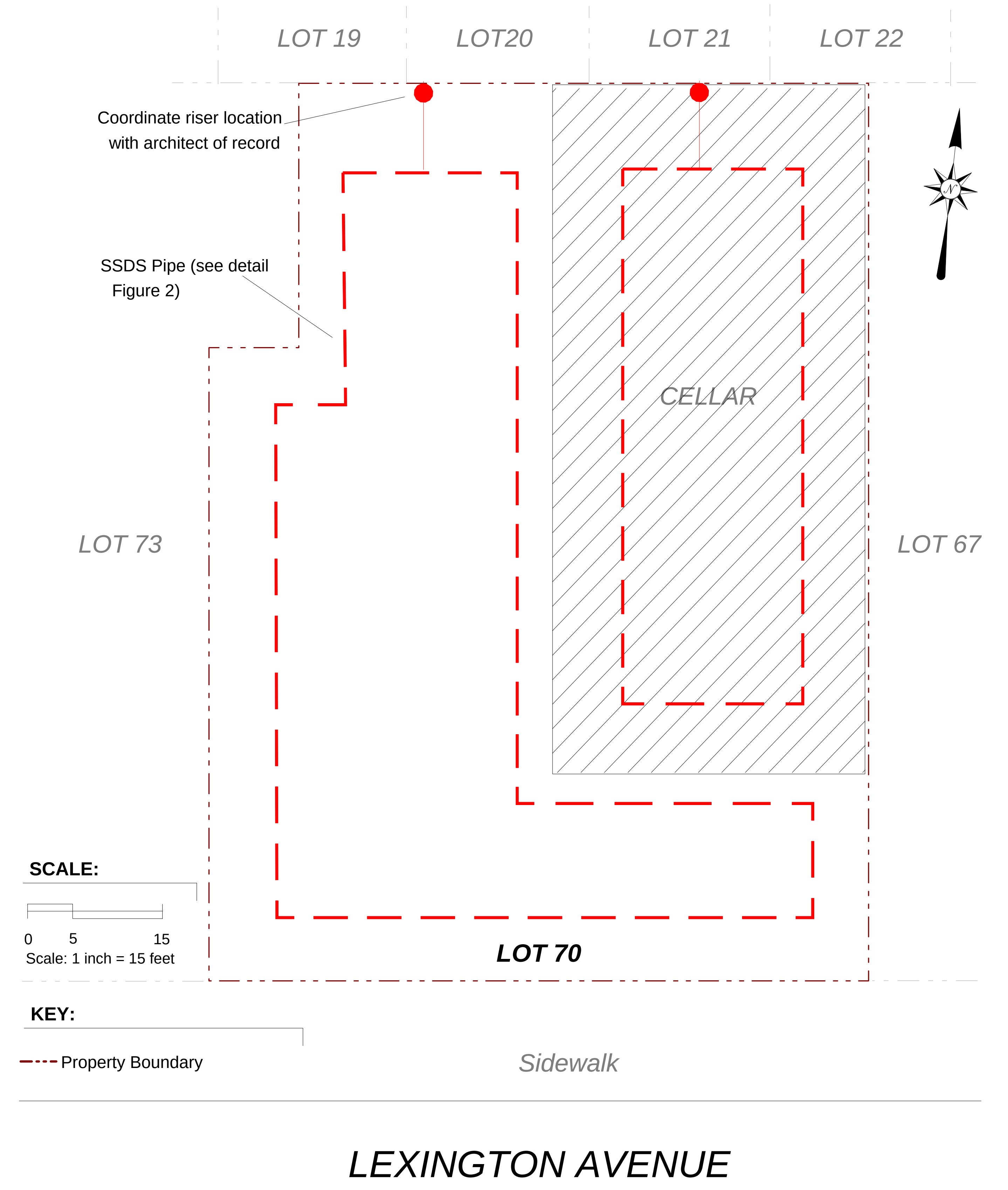
ATTACHMENT G
Estimated Remedial Costs

TABLE 1
FORMER LEXINGTON LAUNDRY SERVICE SITE
853 Lexington Avenue
Brooklyn, NY

Summary of Project Costs

TASK	NYS Brownfields Cleanup Program Costs by Task
BCP Entry Documents	Completed
Supplemental Investigation and RI Report	Completed
Remedial Work Plan, Remedy Scoping & Coordination	Completed
Remedial Program Implementation	$ 442,495.00
Final Engineering Report DEC Fees, etc.	$ 80,000.00
Subtotal	$ 522,495.00
15% Contingency	$ 78,374.25
Total	**$ 600,869.25**

ATTACHMENT H
SSDS/Vapor Barrier/Sealant Specifications



AMC Engineering
99 Jericho Turnpike, Suite 300J
Jericho, NY 11 753
Phone: (516) 417 -8588

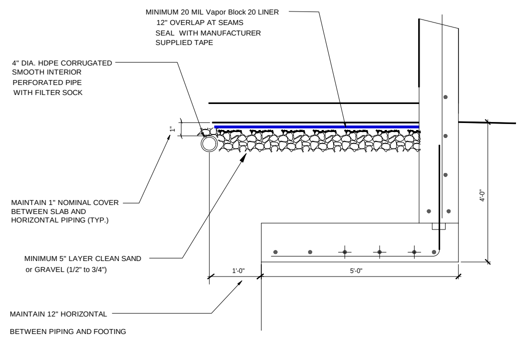
Figure No.
SSDS1

Site Name:	Residential Building Project
Site Address:	853 Lexington Avenue, Brooklyn, NY
Drawing Title:	SSD System Layout

NOTES:

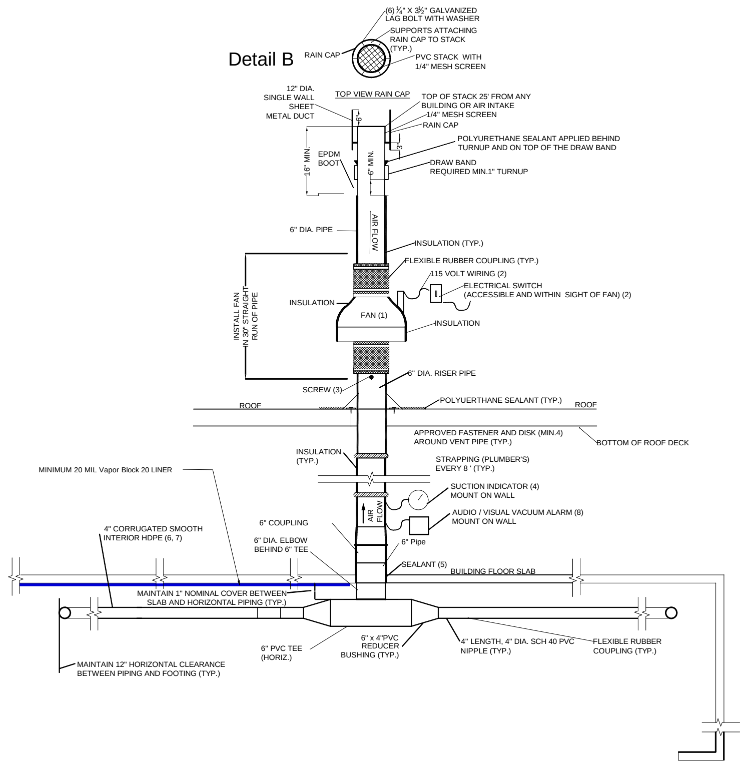
1. FAN TO BE RADONAWAY HIGH-FLOW IN-LINE FAN, MODEL RP 265, OR APPROVED EQUAL.
2. FAN AND ON/OFF SWITCH TO BE HARD-WIRED TOGETHER TO 115 VOLT CIRCUIT.
3. SECURE RUBBER COUPLING WITH SCREW TO PREVENT FAN ASSEMBLY FROM SLIPPING DOWN VERTICAL PIPE.
4. DWYER MAGNAHELIC DIAL TYPE VACUUM GAUGE MODEL 2002-M OR APPROVED EQUAL.
5. SEAL OPENING WITH ELASTOMERIC JOINT SEALANT AS DEFINED IN ASTM C920.
6. HIGH DENSITY POLYETHYLENE CORRUGATED PERFORATED PIPE WITH SMOOTH INTERIOR WATERWAY. 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.

Detail A

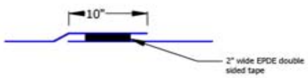


N.T.S.

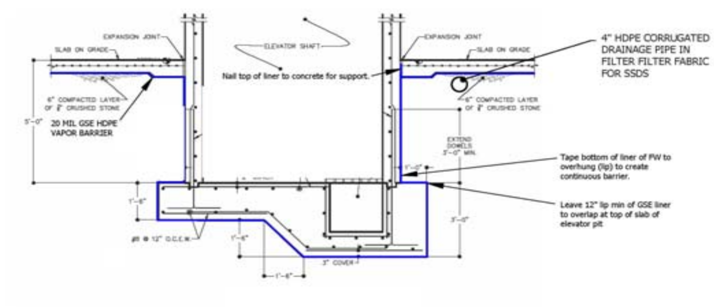
Detail B



Detail C

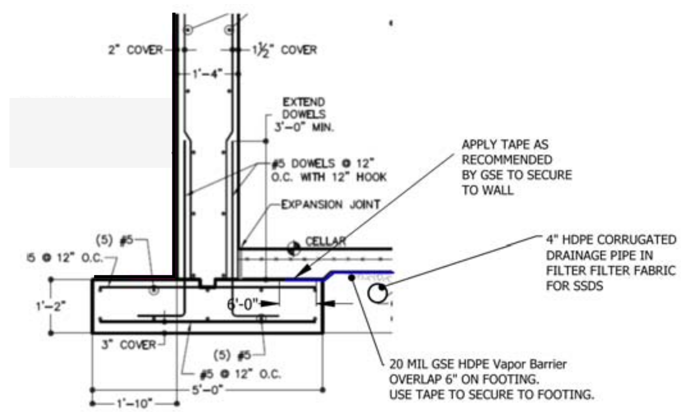


20 mil HDPE liner Overlap Detail



EVEVATOR PIT DETAIL

Detail D



AMC Engineering
99 Jericho Turnpike, Suite 300J
Jericho, NY 11 753
Phone: (516) 417 -8588

FIGURE NO.
SSDS2

853 LEXINGTON AVENUE, BROOKLYN, NY
BROOKLYN, NY

SUB SLAB DEPRESSURIZATION SYSTEM DETAILS

VAPORBLOCK® PLUS™ VBP20

Under-Slab Vapor / Gas Barrier

RAVEN INDUSTRIES

Product Description

VaporBlock® Plus™ 20 is a seven-layer co-extruded barrier made from state-of-the-art polyethylene and EVOH resins to provide unmatched impact strength as well as superior resistance to gas and moisture transmission. VaporBlock® Plus™ 20 is a highly resilient underslab / vertical wall barrier designed to restrict naturally occurring gases such as radon and/or methane from migrating through the ground and concrete slab. VaporBlock® Plus™ 20 is more than 100 times less permeable than typical high-performance polyethylene vapor retarders against Methane, Radon and other harmful VOCs.

VaporBlock® Plus™ 20 is one of the most effective underslab gas barriers in the building industry today far exceeding ASTM E-1745 (Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs) Class A, B and C requirements. Available in a 20 (Class A) mil thicknesses designed to meet the most stringent requirements. VaporBlock® Plus™ 20 is produced within the strict guidelines of our ISO 9001:2008 Certified Management System.

Product Use

VaporBlock® Plus™ 20 resists gas and moisture migration into the building envelop when properly installed to provide protection from toxic/harmful chemicals. It can be installed as part of a passive or active control system extending across the entire building including floors, walls and crawl spaces. When installed as a passive system it is recommended to also include a ventilated system with sump(s) that could be converted to an active control system with properly designed ventilation fans.

VaporBlock® Plus™ 20 works to protect your flooring and other moisture-sensitive furnishings in the building's interior from moisture and water vapor migration, greatly reducing condensation, mold and degradation.

Size & Packaging

VaporBlock® Plus™ 20 is available in 10' x 150' rolls to maximize coverage. All rolls are folded on heavy-duty cores for ease in handling and installation. Other custom sizes with factory welded seams are available based on minimum volume requirements. Installation instructions and ASTM E-1745 classifications accompany each roll.

Under-Slab Vapor/Gas Retarder

Product	Part #
VaporBlock Plus 20	VBP 20

APPLICATIONS

- Radon Barrier
- Methane Barrier
- VOC Barrier
- Under-Slab Vapor Retarder
- Foundation Wall Vapor Retarder

VaporBlock® Plus™

UNDERSLAB VAPOR RETARDER / GAS BARRIER

VAPORBLOCK® PLUS™ VBP20

ISO 9001:2008 CERTIFIED MANAGEMENT SYSTEM

Under-Slab Vapor / Gas Barrier

		VAPORBLOCK PLUS 20	
PROPERTIES	**TEST METHOD**	**IMPERIAL**	**METRIC**
Appearance		White/Gold	
Thickness, Nominal		20 mil	0.51 mm
Weight		102 lbs/MSF	498 g/m²
Classification	ASTM E 1745	CLASS A, B & C	
Tensile Strength lbf/in (N/cm) average MD & TD (new material)	ASTM E 154 Section 9 (D-882)	58 lbf	102 N
Impact Resistance	ASTM D 1709	2600 g	
Maximum Use Temperature		180° F	82° C
Minimum Use Temperature		-70° F	-57° C
Permeance (new material)	ASTM E 154 Section 7 ASTM E 96 Procedure B	0.0051 Perms grains/(ft²·hr·in·Hg)	0.0034 Perms g/(24hr·m²·mm Hg)
Radon Diffusion Coeffiecient	K124/02/95	< 1.1 x 10^{-13} m²/s	
Methane Permeance	ASTM D 1434	< 1.7 x 10^{-10} m²/d• atm 0.32 GTR (Gas Transmission Rate) ml/m²•D•ATM	

VaporBlock® Plus™ Placement

All instructions on architectural or structural drawings should be reviewed and followed.
Detailed installation instructions accompany each roll of VaporBlock® Plus™ and can also be located on our website.
ASTM E-1643 also provides general installation information for vapor retarders.

VaporBlock® Plus™ UNDERSLAB VAPOR RETARDER / GAS BARRIER

VaporBlock® Plus™ is a seven-layer co-extruded barrier made using high quality virgin-grade polyethylene and EVOH resins to provide unmatched impact strength as well as superior resistance to gas and moisture transmission.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.

RAVEN INDUSTRIES
Engineered Films Division
P.O. Box 5107
Sioux Falls, SD 57117-5107
Ph: (605) 335-0174 • Fx: (605) 331-0333

Limited Warranty available at www.RavenEFD.com

Toll Free: 800-635-3456
Email: efdsales@ravenind.com
www.ravenefd.com

1061 Transport Drive, Valparaiso, IN 46383
Toll Free 888.323.4445 ● P 219.465.7671
F 219.531.0898 ● www.elitecrete.com

PI.220 – PRODUCT INFORMATION: Using E100-PT1™ Crystal Clear Epoxy

Revised: 7.14.12

E100-PT1™ Crystal Clear Epoxy is a 100% solids, two component, premium quality, durable, clear coating for protecting interior concrete, polymer modified concrete overlays, stained concrete, colored concrete and concrete floors.

1. DESCRIPTION and USES:
E100-PT1™ is engineered and formulated as a slightly thinner viscosity epoxy compared to E100-UV1™ and is designed for coating and protecting new or old interior concrete floors, polished concrete and polymer modified concrete overlays where a very durable finish is desired.

E100-PT1™ is a 100% solids, two component, premium, clear coating with nearly no odor during or after application and virtually no VOC.

E100-PT1™ is available as a standard set cure and a fast set cure.

E100-PT1™ protects and reduces staining from materials such as oil, grease, food spills, many chemicals and abrasion wear by producing a low maintenance, abrasion resistant film.

E100-PT1™ is excellent for protecting conventional interior concrete floors, polished concrete and concrete which has been coated with E100-PT4™ Pigmented Epoxy, E100-VB5™ or polymer modified concrete overlays.

E100-PT1™ is highly effective when used over conventional concrete, polished concrete or polymer modified concrete overlays which have been colored with CHEM-STONE™ Reactive Stain, HYDRA-STONE™ Dye Stain or ULTRA-STONE™ Antiquing Stain, which produce uneven, variegated and translucent coloring similar to that of natural stone. E100-PT1™ enhances the appearance as well as protects the surface from normal use.

E100-PT1™ should be applied evenly. When applying E100-PT1™ to surfaces with little or no texture, a urethane with a slip resistant additive such as aluminum oxide may be needed to increase skid resistance.

E100-PT1™ is a recommended carrier for REFLECTOR™ Enhancer. It is critical to adequately mix the REFLECTOR™ Enhancer to eliminate “fish eyeing” or “comets”. Once the REFLECTOR™ Enhancer is added, it is recommended to mix for a minimum of 2 minutes. Mixing should take place with a high speed drill with mixing paddle. Stiring or mixing with a stick or “boxing” is never sufficent.

2. LIMITATIONS:
E100-PT1™ must only be used on interior concrete that is well drained and is not subject to hydrostatic pressure. Alkali stains may form at edges, cracks and expansion joints.

If the substrate has vapor emission problems or potential or if the concrete does not have a suitable vapor barrier, E100-VB5™ Vapor Barrier Epoxy should be applied.

E100-PT1™ is not recommended for concrete subject to continuous water submersion or direct UV light.

E100-PT1™ must be allowed to dry completely prior to being exposed to water.

Always use clean mixing containers, mixing tools and application tools to ensure there is no contamination which will result in surface blemishes or coating failure.

Due to the fast curing and achieved hardness of E100-PT1™, additional coats may not adhere properly without first sanding and solvent wiping the first coat. This lack of adhesion may result in surface blemishes or complete coating failure if not properly addressed.

If mixing or using less than the full kit, both components must be adequately pre-mixed with separate mixing paddles before dispensing. Failure to do so may result in curing or finish issues.

E100-PT1™ is a high quality coating and may require occasional maintenance and re-application to maintain premium performance.

For additional abrasion or chemical resistance apply protective top coats of urethane.

3. CHEMICAL COMPOSITION:
E100-PT1™ is a 100% solid epoxy resin solution of aliphatic and cycloaliphatic amines. Solids reduction is not recommended.

4. APPLICABLE STANDARDS:
E100-PT1™ complies with all applicable air quality management regulations including those restricting VOC content to less than 50 g/L.

5. PACKAGING:
E100-PT1™ is available from stock in 1.5, 3, 15 and 150 gallon kits.

6. COVERAGE:
Typical application rates vary from: 100 to 150 sq. ft. per gallon as a clear coating. 70 to 100 sq. ft. per gallon when used with REFLECTOR™ Enhancer. 450 to 500 sq. ft. per gallon when used as an “orange peel” top coat texture. Coverage will also vary depending on method of application and the porosity of the surface. Although one coat is common, user must determine application needs.

7. SHELF LIFE:
When stored in temperature controlled areas, shelf life is one year for unopened containers. It is recommended to rotate stock as formula improvements may be made when technology becomes available.

8. CAUTIONS:
Although E100-PT1™ has little or no odor and carriers zero VOC, E100-PT1™ should only be used with adequate ventilation. Avoid contact with eyes and skin. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. Ensure fresh air entry during application. If you experience watering eyes, headaches, or dizziness or if air monitoring demonstrates vapor levels are above applicable limits, wear a properly fitted respirator (NIOSH/MSHA TC 23C approved) during and after application. Follow respirator manufacturer’s directions for use.

Read the Material Safety Data Sheet for additional information.

9. APPLICATION EQUIPMENT:
Protective gear should be worn when using equipment and materials during preparation and installation.

A notched squeegee, flat squeegee, high quality adhesives type roller, mohair roller or adhesives applicator is recommended for most applications of E100-PT1™ to apply an even coat.

10. APPLICATION:
Cover surrounding areas, walls, equipment, furniture and adjacent surfaces with masking to protect from spills and tracking. The entire work area should be roped off.

Test substrate for cleanliness and adhesion - Before placement of the E100-PT1™, test the cleaned concrete substrate for soundness and cleanliness with a Tensile Pull Test ACI 503 R (min.200 psi). 100% concrete must fail to pass either test without bond line failure.

1061 Transport Drive, Valparaiso, IN 46383
Toll Free 888.323.4445 ● P 219.465.7671
F 219.531.0898 ● www.elitecrete.com

Test Concrete for Vapor Emission –

1. It is recommended that a vapor transmission test(s) be completed before accepting any project.

2. To obtain useful data the concrete must be cleaned in the same manner as it is planned for the complete project.

3. Consult with an Elite Crete Systems Trained Technician for advice on testing and solving vapor transmission problems.

Preconditioning Epoxy Resins - When temperatures drop, epoxy resins typically thicken, may crystalize and becomes harder to flow or to spread. When the temperatures are warmer they typically become thinner. To improve the product flow-ability maintain temperature at about 20^0C (73^0F) before mixing. When the substrate temperature is 10^0C (50^0F) or lower preheat each epoxy component to 90^0F before mixing. Caution the pot life will be reduced by about 50%.

Mixing - E100-PT1™ must be properly mixed prior to application. Failure to mix properly may result in uneven sealing and allow vapor emission throughout the finish. Pre-mix Component "A", then pour Component "B" and component "A" into a clear mixing container and mix for at least 60 seconds (until one even color develops) with a mixing paddle attached to a drill (400-600rpm). The mixed product is ready for immediate placement.

Laying the Product - Application must be made at the coverage rates recommended in section 6 for the intended application. E100-PT1™ should be applied on a dry day when the surface and ambient temperatures are between 40° and 90° F and will not fall below 32° within the next 6 to 8 hours. Do not apply E100-PT1™ foggy, rainy to extremely humid weather conditions. On hot, dry days, application should be made during the cooler part of the day and when the surface is cool.

1. Pour the mixed E100-PT1™ onto the floor and spread evenly over the surface.

2. Back roll the wet epoxy into the surface of the concrete with a roller or applicator. Work the material into the concrete by pressing down onto the roller with extra pressure.

3. Leave a wet film of epoxy on the surface of the concrete after rolling.

4. Inspect all areas to ensure that the concrete has been coated by the epoxy.

5. E100-PT1™ must be applied evenly while maintaining a wet edge and overlapping must be controlled.

Curing -

1. Allow the epoxy to gel and cure until tack free.

2. Carefully inspect the entire area to ensure that the E100-PT1™ film is solid without film break or concrete surface protrusions.

3. If film break or protrusion(s) occur reapply E100-PT1™.

11. CAUTION:

Component "A"- Irritant
Contains epoxy resins. Prolonged contact with skin may cause irritation, rash or allergic reaction. Avoid contact with eyes.

Component "B" - Corrosive
Contains aliphatic and cycloaliphatic amines. Contact with skin may cause severe burns, rash or allergic reaction. Avoid eye contact. Product is a strong sensitizer.

Important Information -
Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/MSHA approved respirator is recommended.

12. CLEAN UP:

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

The use of EXIT™ will assist in the cleanup of work area and tools.

13. FIRST AID:

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

14. PRODUCT AVAILABILITY:

E100-PT1™ is marketed nationwide and internationally, directly to trained installers through strategically located authorized distributor and suppliers.

15. PRODUCT COST:

At an application rate of 100 to 150 sq. ft. per gallon, the material cost per coat is approximately \$0.32 to \$0.48 per sq. ft..

16. OTHER SEALER OPTIONS:

Additional information is available in the Elite Crete Systems Technical Data TD-414 Protective Sealer and Coating Options.

17. WARRANTY SUMMARY:

For the complete warranty statement and important limitations, read the Material Safety Data Sheet and Warranty. Generally, Elite Crete Systems, Incorporated represents and warrants only that its products are of consistent quality. No other oral or written statement is authorized. Any liability is limited to refund or replacement of the defective product. The end user shall determine product's suitability and assume all risks and liability.

1061 Transport Drive, Valparaiso, IN 46383
Toll Free 888.323.4445 ● P 219.465.7671
F 219.531.0898 ● www.elitecrete.com

TD.468 – TECHNICAL DATA: E100-VB5™ Waterborne Epoxy Vapor Barrier

Revised: 2.27.12

Product Name: E100-VB5™ Waterborne Epoxy Vapor Barrier

Product Class: A waterborne epoxy vapor barrier for concrete surfaces that are to be top coated with an epoxy finish.

DESCRIPTION: E100-VB5™ Waterborne Epoxy Vapor Barrier is a high solids, low viscosity, two-component epoxy primer system designed to reduce or eliminate out gassing bubbles in concrete and seal out water penetration. Excellent impact resistance, chemical resistance and superior substrate penetration. Out performs solvent based sealers and primers.

Typical Uses:

- Sealing green concrete surfaces (7 days depending on conditions).
- Sealing existing concrete surfaces.
- Reduces or eliminates out gassing bubbles in concrete.
- Resistant to up to 12 pounds of vapor pressure in concrete.
- Seals concrete from moisture intrusion.
- Very good chemical resistance.

Key Features:

- Slows hydration in new concrete, increasing strength
- Reduce or eliminate out-gassing bubbles in top coats
- Seals out moisture intrusion
- Nearly No Odor
- VOC compliant (0 g/l)
- Air Releasing
- Low Viscosity
- Fast Cure Rate
- Excellent Strength Properties
- Excellent Impact Resistant
- Easy to Place
- USDA Acceptable

Product Properties: (Material and curing conditions at 75^{0}F (23° C) unless noted, 50% R.H.)

- Color – Amber/Green
- Viscosity @ 75^{0}F (23° C)
  - Part A 900 cps
  - Part B 1000 cps
  - Mixed 300 cps (WITH WATER ADDED)
- Pot Life: 25 minutes
- Tack Free: 4 hours
- Recoat or top coat: 5-6 hours
- Foot traffic 6-12 hours
- Heavy duty traffic: 2-4 days

PHYSICAL PROPERTIES
(@77^{0}F (24° C), 7 day ambient cure)

Solids by volume	58%		
Volatile Organic Content	0%		
Colors available	Amber/Green only		
Recommended thickness	5-8 mills (3-6 mills dry)		
Coverage per mixed gallon	225 to 300 sq. ft. per gallon		
Packaging	2 gallon or 10 gallon units. 100 gallon units available as special request		
Mix Ratio:	1 Part A to 1 Part B by volume (Note: add 2 pints of water per mixed gallon **after** mixing A & B)		
Shelf Life	1 year in unopened containers (do not store below 45 F°)		
Abrasion resistance			
Taber Abrasion CS-17 wheel with 1000 gm. load		ASTM 4060	45 MG loss
Impact resistance			
Gardner impact direct			50 in. lb. (passed)
Adhesion 450 psi			
@ elcometer			100% concrete failure no delamination

CHEMICAL RESISTANCE
Splash & Spill Applications (2 hour clean up)

Water (fresh and Salt)	**Butanol**
10% Sodium Hydroxide	**Xylene**
10% Sulfuric Acid	**111 Trichloroethane**
10% HCL	**Gasoline**

IMPORTANT: Mix part A and Part B throughly for 2 minutes with slow speed drill and mix paddel.

Then add 2 pints of clean potable water to each mixed gallon. APPLICATOR MUST FIRST MIX PART A AND B BEFORE ADDING THE WATER.

Packaging: 2 gal. kits and 10 gal. kits. 100 gal. kits available as special order.