

# NYC Brownfield Cleanup Program

Generic Template for  
Remedial Investigation Report

**521 WEST 145TH STREET, NEW YORK, NY**

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## Remedial Investigation Report

**NYC OER Project Number: 14EH-N421**

**NYC VCP Site Number: TBD**

**Prepared for:**

BGCH Apartments, LLC

155 3rd Street

Brooklyn, New York 11231

&

PS186 / Boys & Girls Club of Harlem

521 West 145th Street

New York, NY 10031

**Prepared by:**

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May 28, 2014

# REMEDIAL INVESTIGATION REPORT

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## LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC VCP	New York City Voluntary Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

# CERTIFICATION

I, Greg Mendez-Chicas, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the 521 West 145<sup>th</sup> Street, New York, NY (OER Project Number **14EH-N421**). I am responsible for the content of this Remedial Investigation Report (RIR), have reviewed its contents and certify that this RIR is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Greg Mendez-Chicas

5/28/14



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Qualified Environmental Professional

Date

Signature

# EXECUTIVE SUMMARY

The Remedial Investigation Report (RIR) provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy pursuant to RCNY§ 43-1407(f). The remedial investigation (RI) described in this document is consistent with applicable guidance.

## **Site Location and Current Usage**

The Site is located at 521 West 145th Street in the Harlem section in Manhattan, New York and is identified as Block 2077 and Lot 14 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 0.68-square feet and is bound to the north by West 146th Street, and to the south by West 145th Street, to the east and west by low-rise buildings. A map of the site boundary is shown in Figure 2. The Site is currently developed with an H-shaped, five-story building (formerly PS 186), reportedly constructed in 1901 and subsequently abandoned circa 1970. In addition, a partial sub-grade cellar is situated at the mid-section of the existing building. The surface area of the Site is predominantly covered by the current building footprint with other associated areas consisting of exposed concrete in the two adjacent court yards. The current zoning designation, as per Department of City Planning NYC zoning maps, is R8A and R7A, with a C2-4 commercial overlay.

## **Summary of Proposed Redevelopment Plan**

The proposed future use of the Site will consist of residential. The development project will entail full renovation of the existing building for use as the Boys and Girls Club of Harlem and new residences. The Project Layout of the proposed site development is presented in Figure 3. The current zoning designation is residential and the project will be a mixed-use, mixed-income building, with 79 residential units. The proposed use is consistent with existing zoning for the property.

The Project will be a mixed-use, mixed-income building, with 79 residential units serving very low-income, low-income, middle-income and market-rate households. A 10,000 SF community facility space on the ground floor will serve as the Boys and Girls Club of Harlem. The proposed development will include minor soil disturbance activities to a maximum depth of 6 feet below existing grade, including installation of two elevator pits (basement level), entrance/egress stairs, handicapped-accessible ramps, and planted areas within the north and south court yards. The groundwater table is expected to be 26.5-to-30.5 feet BEG at the Site therefore; soil excavation is expected above the groundwater table. Excavation and removal of any existing surfaces, sub-grade utilities and drainage structures is proposed prior to redevelopment activities.

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

The Site is currently developed with an H-shaped, five-story building (formerly PS 186), reportedly constructed in 1901 and subsequently abandoned circa 1970. Fire insurance maps from 1909 through 1968 and city directory records from 1927 through 1993 depicted an electrical substation, laundry facilities, dry cleaners, and automotive garages adjacent and in the vicinity of the property at various periods in history. In addition, Airtek observed a closed laundry facility south adjacent to the Site during a March 9, 2010 site visit. These past uses in proximity to the Site indicate the potential for storage, use, and release of petroleum products, PCB-containing fluids, and solvents which may have adversely impacted the Site. This finding was considered a REC because it indicates a likely past release of hazardous chemicals and/or petroleum products which have impacted the Site. According to Airtek, the absence or presence of these chemicals on the Site can only be confirmed through further subsurface investigation. The Phase I ESA is included in Appendix A.

The AOCs identified for this site include:

1. Suspected presence of historic fill material
2. E-designation for hazardous material and noise

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

1. Installation of seven (7) boreholes at the project Site, of which eight (8) soil samples and one (1) groundwater sample were collected for chemical analysis to evaluate soil and groundwater quality;
2. Installation and analysis of five (5) semi-permanent, sub-slab soil vapor point samples, analysis of two (2) indoor air samples, and analysis of one (1) ambient outdoor background air sample at the Site. Indoor air samples were collected concurrently with the sub-slab soil vapor samples.
3. Prepared a Phase II Investigation Report based on investigation results.

## **Summary of Environmental Findings**

1. Elevation of the property is approximately 123 above mean sea level (amsl).
2. Depth to groundwater is 28 feet at the Site.
3. Groundwater flow direction in the area of the Site is presumed to be towards the west-northwest due to the proximity of the Hudson River. Depth to groundwater is estimated at 28 feet bgs.
4. Depth to bedrock is variable, ranging from 24.5 feet to 30.5 feet bgs at the Site.
5. Subsurface soil at the Site included a surficial fill layer consisting of concrete, brick, and trace coal in a brown to dark-brown medium sand matrix ranging in thickness from 0-to-4 feet bgs in the north and south courtyard. This fill layer is underlain by brown fine-to-medium sand with some silts and trace gravel extending from 4-to-30 feet bgs, in which a thin clay confining layer exists at 12-to-14 feet bgs. Weathered bedrock (schist) was encountered at depths ranging from 26-to-30 feet bgs in the north courtyard of the Site. No visible or olfactory evidence of petroleum, or other chemicals, was observed in soil recovered from borings installed across the Site. Depth to bedrock varied between 24.5-to-30.5 feet bgs in the north courtyard of the Site during this RI.

6. Soil/fill samples collected during the RI detected no PCBs. one VOC, Acetone, was detected at trace levels in two samples, but did not exceed Unrestricted Use SCOs. Several SVOCs were detected in three of the eight soil samples, but none of the detections exceeded Unrestricted Use SCOs. One pesticide, 4,4-DDT, was detected below its Unrestricted Use SCO. One metal, Arsenic, was detected above its Restricted Residential Use SCO at a concentration of 24 mg/kg one shallow soil sample. All other metals detected in soil samples were at concentrations below Unrestricted Use SCOs.
7. The groundwater sample collected during the RI showed that PCBS and Pesticides were not detected. No SVOCs or metals were detected in the groundwater exceeding New York State 6NYCRR Part 703.5 Groundwater Quality Standards. One VOC, cis-1,2-dichloroethene (7.2 µg/l) was detected in the groundwater sample above GQS. TCE, tert-Butylbenzene, and 1,2-Dichloroethane were identified in the groundwater sample at low concentrations and below GQS.
8. Sub slab soil vapor samples collected during the RI were compared to New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion Air Guideline Values, Table 3.1, and Soil Vapor Intrusion Decision Matrices. All sub-slab soil vapor samples showed numerous VOCs detected at generally low concentrations below the NYSDOH air guideline values. These results indicate that none of the compounds detected in vapors require further action, according to the NYS DOH Final Guidance on Soil Vapor Intrusion (October 2006). While no chlorinated compounds were detected in sub-slab soil vapor, low-level detection of PCE and carbon tetrachloride were present in indoor and outdoor air samples ranging from 0.428 to 0.491 µg/m<sup>3</sup>.

# REMEDIAL INVESTIGATION REPORT

## 1.0 SITE BACKGROUND

PS186 / Boys & Girls Club of Harlem and BGCH Apartments, LLC has enrolled in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate a 0.68-acre - acre site located at 521 West 145th Street in Harlem section of Manhattan, New York.

Residential use is proposed for the property. The RI work was performed April 16, 2014 and May 9, 2014. This RIR summarizes the nature and extent of contamination and provides sufficient information for establishment of remedial action objectives, evaluation of remedial action alternatives, and selection of a remedy that is protective of human health and the environment consistent with the use of the property pursuant to RCNY§ 43-1407(f).

### 1.1 Site Location and Current Usage

The Site is located at at 521 West 145th Street in the Harlem section in Manhattan, New York and is identified as Block 2077 and Lot 14 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 0.68-square feet and is bound to the north by West 146th Street, and to the south by West 145th Street, and low-rise buildings on the east and west adjoining properties. A map of the site boundary is shown in Figure 2. The Site is currently developed with an H-shaped, five-story building (formerly PS 186), reportedly constructed in 1901 and subsequently abandoned circa 1970. In addition, a partial sub-grade cellar is situated at the mid-section of the existing building. The surface area of the Site is predominantly covered by the current building footprint with other associated areas consisting of exposed concrete in the two adjacent court yards. The current zoning designation, as per Department of City Planning NYC zoning maps, is R8A and R7A, with a C2-4 commercial overlay.

Site location: Block 2077 and Lot 14 on the New York City Tax Map

## 1.2 Proposed Redevelopment Plan

The proposed future use of the Site will consist of residential. The development project will entail full renovation of the existing building for use as the Boys and Girls Club of Harlem and new residences. The Project Layout of the proposed site development is presented in Figure 3. The current zoning designation is residential and the project will be a mixed-use, mixed-income building, with 79 residential units. The proposed use is consistent with existing zoning for the property.

The Project will be a mixed-use, mixed-income building, with 79 residential units serving very low-income, low-income, middle-income and market-rate households. A 10,000 SF community facility space on the ground floor will serve as the Boys and Girls Club of Harlem. The proposed development will include minor soil disturbance activities to a maximum depth of 6 feet below existing grade, including installation of two elevator pits (basement level), entrance/egress stairs, handicapped-accessible ramps, and planted areas within the north and south court yards. The groundwater table is expected to be 26.5-to-30.5 feet BEG at the Site therefore; soil excavation is expected above the groundwater table. Excavation and removal of any existing surfaces, sub-grade utilities and drainage structures is proposed prior to redevelopment activities.

## 1.3 Description of Surrounding Property

The Site is located in the West Harlem neighborhood of New York. West Harlem is comprised of the neighborhoods including Hamilton Heights, Sugar Hill and a portion of Manhattanville. The neighborhoods are predominantly of low-to mid-rise residential, made up of five- and six-story apartment buildings, three- and four-story brownstones and rowhouses. Specifically, the Site lies between Broadway and Amsterdam Avenue, which primary consists of six-story mixed-use buildings, retail shopping, a hotel and a public library which are interspersed with a few

under-developed structures. The West Harlem Rezoning proposal was issued in 2008 to preserve the established and varied character of the West Harlem residential neighborhoods, consider opportunities for new mixed-use development in the existing manufacturing district, located between West 126<sup>th</sup> and West 130<sup>th</sup> Streets, and explore the community’s east-west corridors to allow for development opportunities, while utilizing the Inclusionary Housing Program to promote affordable housing. A description of each of the adjoining properties is described in the table below.

Direction	Property Description
<p><b>North</b> <b>Opposite</b> <b>Side of</b> <b>146<sup>th</sup> Street</b></p>	<p><u>Block 2078 Lots 15, 17, and 19</u> (525 W. 146<sup>th</sup> St., 523 W. 146<sup>th</sup> St., and 1740 Amsterdam Ave.) – Three lots that front 146<sup>th</sup> Street. Lot 15 is currently developed with a multi-family walk-up building, zoned R7A with no commercial overlay. Lots 17 and 19 are currently developed with public facilities and institutions. The lots are currently zoned R7A, with a C1-4 commercial overlay on Lot 19.</p>
<p><b>South</b> <b>Opposite</b> <b>Side of</b> <b>145<sup>th</sup> Street</b></p>	<p><u>Block 2076 Lots 49, 46, and 45</u> (524 W. 145<sup>th</sup> St., 520 W. 145<sup>th</sup> St., and 518 W. 145<sup>th</sup> St.) – Three lots that front 145<sup>th</sup> Street. The lots are currently developed with mixed-use residential and commercial buildings. The lots are currently zoned R8A, with a C2-4 commercial overlay.</p>
<p><b><u>West</u></b> <b><u>Adjacent</u></b> <b><u>Properties</u></b></p>	<p><u>Block 2077 Lot 50</u> (540 W. 146<sup>th</sup> St.) – A 7,433-SF lot that fronts 146<sup>th</sup> St. The lot is currently developed with multi-family elevator building. The lot is currently zoned R7A, with no commercial overlay.</p> <p><u>Block 2077 Lot 13</u> (529 W. 145 St.) – A 3,331-SF lot that fronts 145<sup>th</sup> St. The lot is currently developed with a mixed-use residential and commercial building. The lot is currently zoned R8A, with a C2-4 commercial overlay.</p>
<p><b>East</b> <b>Adjacent</b> <b>Properties</b></p>	<p><u>Block 2077 Lot 43</u> (522 W. 146<sup>th</sup> St.) – A 3,997-SF lot that fronts 146<sup>th</sup> St. The lot is currently vacant land. The lot is currently zoned R7A, with no commercial overlay.</p> <p><u>Block 2077 Lot 20</u> (515 W. 145<sup>th</sup> St.) – A 3,327-SF lot that fronts 145<sup>th</sup> St. The lot is currently developed with a commercial building, zoned R8A, with a C2-4 commercial overlay.</p>

Figure 4 shows the surrounding land usage.

## **2.0 SITE HISTORY**

### **2.1 Past Uses and Ownership**

The Site is currently developed with an H-shaped, five-story building (formerly PS 186), reportedly constructed in 1901 and subsequently abandoned circa 1970. Fire insurance maps from 1909 through 1968 and city directory records from 1927 through 1993 depicted an electrical substation, laundry facilities, dry cleaners, and automotive garages adjacent and in the vicinity of the property at various periods in history. In addition, Airtek observed a closed laundry facility south adjacent to the Site during a March 9, 2010 site visit. These past uses in proximity to the Site indicate the potential for storage, use, and release of petroleum products, PCB-containing fluids, and solvents which may have adversely impacted the Site. This finding was considered a REC because it indicates a likely past release of hazardous chemicals and/or petroleum products which have impacted the Site. According to Airtek, the absence or presence of these chemicals on the Site can only be confirmed through further subsurface investigation. The Phase I ESA is included in Appendix A.

### **2.2 Previous Investigations**

A Phase I Environmental Site Assessment (ESA) Report dated March 22, 2010 was prepared by Airteck Environmental Corp. The ESA revealed that the historical Sanborn maps depict the Site as developed with an H-shaped building (consistent with the Site's current configuration) from 1909 to 2005. The Phase I ESA did reveal evidence of recognized environmental conditions (RECs) in connection with the Site. The following is a brief description of the RECs identified with the Site:

1. Airtek observed a store room located at the eastern end of the basement. The store room contained numerous bottles, located on shelves, on the floor, and obscured by the debris coating the floor. Bottles were observed intact and broken, with caps and without, containing liquids, pills, powders, and sludge. Labels on the majority of the bottles had either deteriorated completely or were illegible. Airtek observed a bottle

of acid, a bottle of sodium bicarbonate, bleach powder, and antibiotics. This finding is considered a REC because it indicates a likely release of hazardous chemicals at the Site or structures on the Site. Based on this inspection, Airtek recommended that further subsurface investigation may be warranted.

2. Airtek observed a large pile of miscellaneous debris occupying the center of the first floor's central span. The nature of the observable debris, which included car tires, a car door, a car seat, furniture, and wood, indicated that part or all of the larger debris pile originated offsite. The majority of the debris pile was obscured with the upper layer of debris. This finding was considered a REC because it indicates a likely release or material threat of release of hazardous chemicals on the subject property or structures on the Site.

### 2.3 Final Environmental Impact Statement

A Final Environmental Impact Statement (FEIS) for the West Harlem Rezoning Project on behalf of the City Environmental Quality Review (CEQR) (CEQR No. 12DCP070M) was issued on August 24, 2012. An E Designation for Hazardous Material was placed on the Site due to the following offsite findings within 400 foot buffer zone:

- RCRA-CESQG (4), NY Manifest (4), and RCRA Non-Generator (4)
- NY LTANKS (2), NY UST (2), and NY HIST UST (2) – Underground storage tanks
- NY AST (11) – Above-ground storage tanks
- NY Hist Spills (9)

The Chapter 9-Hazardous Materials section of the FEIS pertaining to the Site's E-designation is included in Appendix B.

## 2.4 Site Inspection

The interior and exterior inspections revealed the following information relevant to the environmental quality of the Site:

1. The building was unoccupied at the time of inspection and many areas were not accessible due to deteriorated structural conditions.
2. Two (2) courtyards are located centrally on the southern and northern sides of the building, along West 145<sup>th</sup> and West 146<sup>th</sup> Streets, respectively. Both courtyards contain large amounts of municipal waste.
3. A large pile of miscellaneous debris was observed in the central portion of the first floor of the building. The items identified include car tires, car doors, car seats, furniture and wood. It appears that these items were obtained from off-Site sources.
4. Coal was observed in the basement of the building. It appears likely that coal was utilized in the two (2) on-Site boilers as a source of energy for heating
5. Bird feces are located throughout the building.
6. No underground storage tanks (USTs) or aboveground storage tanks (ASTs) were observed in the interior or exterior of the building or Site. In addition, no vent pipes, fill port connections, or surface anomalies indicative of a potential UST was observed at the Site. However, many areas of the Site interior and exterior were inaccessible due to the presence of security fencing, large amounts of debris, overgrown vegetation, and dangerous conditions due to structural deterioration.
7. No electrical transformers or drywells were identified on the Site in accessible areas.
8. No floor drains were observed within accessible interior portions of the building.
9. Stormwater from the rooftop discharges to the storm drains on West 145<sup>th</sup> and West 146<sup>th</sup> Streets. HVAC units were visible on the rooftop.
10. There are no functional utilities at the Site. However, electricity would be supplied by Con Edison, potable water would be supplied by the NYCDEP, sanitary sewage would be

handled by the municipal sewer system, natural gas would be supplied by Con Edison, and solid waste would be collected by the New York City Department of Sanitation.

11. The presence of staining, cracks and gaps could not be identified on the basement floor or in the courtyards, due to the thick layer of debris and/or municipal waste.

On April 16, 2014 and May 9, 2014, Impact Environmental collected soil samples, soil vapor samples, and groundwater samples on behalf of BGCH Apartments, LLC

## 2.4 Areas of Concern

The AOCs identified for this site include:

1. Suspected presence of historic fill material
2. E-designation for hazardous material and noise

Phase 1 Report is presented in Appendix A. A map showing areas of concern is presented in Figure 5.

## 3.0 PROJECT MANAGEMENT

### 3.1 Project Organization

The Qualified Environmental Profession (QEP) responsible for preparation of this RIR is Greg Mendez-Chicas.

### 3.2 Health and Safety

All work described in this RIR was performed in full compliance with applicable laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements.

### 3.3 Materials Management

All material encountered during the RI was managed in accordance with applicable laws and regulations.

## 4.0 REMEDIAL INVESTIGATION ACTIVITIES

Impact Environmental, on behalf of BGCH Apartments, LLC, performed the following scope of work:

1. Installation of seven (7) boreholes at the project Site, of which eight (8) soil samples and one (1) groundwater sample were collected for chemical analysis to evaluate soil and groundwater quality;
2. Installation and analysis of five (5) semi-permanent, sub-slab soil vapor point samples, analysis of two (2) indoor air samples, and analysis of one (1) ambient outdoor background air sample at the Site. Indoor air samples were collected concurrently with the sub-slab soil vapor samples.
3. Prepared a Phase II Investigation Report based on investigation results.

An investigation of soil, soil vapor, and groundwater was performed to properly characterize the site for potential environmental impacts from historic on-site/off-site uses, operations, etc. The sampling event addressed any RECs and historic fill, as well as provided general horizontal/vertical characterization across the site for development purposes. The sampling procedures of this investigation were performed in accordance with the NYSDEC Technical Guidance for Site Investigation and Remediation DER-10. An outline of Impact Environmental's Quality Assurance and Quality Control Procedures (QA/QC) is included as Appendix C.

### 4.1 Geophysical Investigation

No geophysical survey was conducted during this investigation.

## 4.2 Borings and Monitoring Wells

### **Drilling and Soil Logging**

On April 16, 2014 and May 9, 2014, Impact Environmental collected soil samples from a total of seven (7) soil borings, identified as SB-1, SB-2, SB-3, SB-4, SB-5, SB-6 and SB-7 at the locations depicted in Figure 5. The seven (7) soil boring locations were chosen to gain representative soil quality information across the Site.

Five of seven soil borings (SB-1, SB-2, SB-3, SB-4, and SB-5) were installed in the interior of the on-site building via core drill machine. In addition, an exterior soil boring, identified as SB-6, was installed on the exterior in the south courtyard. A four-inch diameter access hole was cut for each boring through an approximately 6-inch-thick concrete slab at the first floor and basement level of the on-site building. All six soil borings were advanced manually by hand-auger to a depth of 5 feet below grade surface (bgs). Given that borings were installed at separate areas of the building, sample depth intervals varied in elevation. A brief description of each discrete soil sample depth interval is provided below:

- SB-1 (First Floor): Soil sample collected at the 0-to-2 foot bgs interval
- SB-2 (First Floor): Soil sample collected at the 2-to-4 foot bgs interval
- SB-3 (Basement Level): Soil sample collected at the 14-to-16 foot bgs interval
- SB-4 (Basement Level): Soil sample collected at the 13-to-15 foot bgs interval
- SB-5 (First Floor): Soil sample collected at the 0-to-2 foot bgs interval
- SB-6 (South Courtyard – Exterior): Soil sample collected at the 0-to-2 foot bgs interval

One of seven soil boring points, identified as SB-7, was installed by a qualified driller using Geoprobe® direct push technology on the exterior portion of the Site. The borehole location was biased towards the north courtyard due to access restrictions (i.e., steep gradient) with large machinery at the south courtyard. SB-7 was advanced to a depth of 30.5 feet bgs, until refusal. Soil samples were collected discretely at the 0-2 foot bgs interval and 22-23 foot bgs interval.

On May 9, 2014, Impact Environmental advanced three boreholes in the north courtyard of the Site in an effort to obtain groundwater samples. Groundwater was present at approximately 28

feet bgs at boring “GW-1,” as indicated by saturated soil. Two additional exploratory borings, identified as “E-GW2” and “E-GW3”, were advanced until refusal at 24.5 feet and 26 feet bgs, respectively, and did not encounter groundwater. Approximately seven gallons of groundwater was manually purged from the temporary well point GW-1 until clear in appearance, of which one (1) groundwater sample was subsequently collected from the depth interval of 26.5 feet to 30.5 feet bgs for laboratory analysis. Temporary well point locations are show on Figure 5.

Boring logs were prepared by a geologist are attached in Appendix E. A map showing the location of soil borings and monitor wells is shown I n Figure 5.

### **Groundwater Monitoring Well Construction**

The groundwater sampling system used was the Geoprobe® Screen Point 15, which is designed to accurately collect grab samples of groundwater. The Screen Point 15 uses a screen with a standard slot size of 0.004 inches that is sealed inside a 1.5-inch inner diameter alloy steel sheath as it is driven to the desired depth. The screen is sealed inside the sheath with Neoprene O-rings which prevent infiltration of formation fluids until the target depth is attained. When the screen has been driven to the depth of interest in the formation, extension rods are used to hold the screen in position as the driving rods are retracted approximately 4 feet. The 4-foot long sampler sheath forms a seal above the screen as it is retracted. A total of 41.5 inches of slotted screen is placed into contact with the formation. The Screen Point 15 groundwater sampler has a total boring diameter of 1.5 inches, the outside diameter of the screen is 1.0 inch. This provides for a maximum of 0.25 inches between the screen and the natural formation as the sampler sheath is retracted. These conditions approach the ideal for natural formation development which can be conducted when lower turbidity samples are required.

### **Survey**

Soil borings, monitoring wells and soil vapor probes were located to the nearest 0.10 foot with respect to two or more permanent site features using a measuring wheel.

### 4.3 Sample Collection and Chemical Analysis

Sampling performed as part of the field investigation was conducted for all Areas of Concern and also considered other means for bias of sampling based on professional judgment, area history, discolored soil, stressed vegetation, drainage patterns, field instrument measurements, odor, or other field indicators. All media including soil, groundwater and soil vapor have been sampled and evaluated in the RIR. Discrete (grab) samples have been used for final delineation of the nature and extent of contamination and to determine the impact of contaminants on public health and the environment. The sampling performed and presented in this RIR provides sufficient basis for evaluation of remedial action alternatives, establishment of a qualitative human health exposure assessment, and selection of a final remedy.

#### **Soil Sampling**

Soil grab samples were retained to represent the shallow soil layer (i.e., 0-to-2 feet bgs and 2-to-4 feet bgs) or the intermediate soil layer ranging from 13-to-23 ft. bgs, either at, or extending past, the deepest proposed excavation depth for planned redevelopment, which will consist of two elevator pits (intermediate), entrance/egress stairways (shallow), handicapped-accessible ramps, and planted areas (shallow), for a total of eight (8) soil samples. Each piece of sampling or other down hole equipment was decontaminated by wiping clean, washing with Alconox solution, rinsing with deionized water and air drying prior to each use in order to ensure that cross-contamination between sampling locations did not occur. Decontamination procedures were performed in an area segregated from any sampling areas.

Each of the eight (8) soil samples were collected in pre-cleaned, laboratory supplied glassware, appropriately labeled, stored in a cooler with ice and submitted for analysis under proper chain of custody procedures to Alpha Analytical Laboratories (Alpha) of Westborough, MA, a New York State ELAP certified environmental laboratory (ELAP Certification No. 11148). Soil samples were analyzed for the presence of volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides/PCBs by EPA Methods 8081/8082 and target analyte list (TAL) metals by EPA Method 6010.

### *Field Headspace Analysis*

Headspace analysis was performed on each subsurface soil samples acquired from borings SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, and SB-7 to provide precursory data regarding contamination. The headspace analysis detected negligible concentrations of hydrocarbons above ambient levels in soil samples from all seven soil borings, ranging from 0.7 parts per million (ppm) to 6.2 ppm.

### *Sample Characterization*

A visual inspection of all samples recovered during the installation of each of the soil probes was conducted to identify any gross signs of chemical contamination and to classify the sample media. Color classifications were made in accordance with the Munsell Classification System. Gradation classifications were made in accordance with the Unified Soil Classification System. A Soil boring log is presented in Appendix E.

Eight (8) soil samples were collected for chemical analysis during this RI. Data on soil sample collection for chemical analyses, including dates of collection and sample depths, is reported in Table 1. Figure 5 shows the location of samples collected in this investigation. Laboratories and analytical methods are shown below.

### **Groundwater Sampling**

The groundwater sample was collected from the sampler utilizing 3/8 inch in diameter disposable tube equipped with a bottom check valve. The tubing extended from the surface down to the sampler. The tubing was oscillated up and down continuously until the check valve had trapped an adequate volume of a groundwater sample. The tubing was then removed and the water was poured into appropriate sample vessels for subsequent laboratory analysis. See Appendix C for Impact Environmental's Quality Assurance and Quality Control Procedures (QA/QC).

One (1) groundwater sample was collected for chemical analysis during this RI. Groundwater sample collection data is reported in Table 2. Figure 5 shows the location of groundwater sampling. Laboratories and analytical methods are shown below.

## **Soil Vapor Sampling**

### *Sub-Slab Soil Vapor Sampling*

On April 16, 2014 Impact Environmental installed five (5) sub-slab soil vapor probe implants at the site, identified as SV-1, SV-2, SV-3, SV-4, and SV-5. In addition, two (2) indoor air quality samples (IA-1 and IA-2) and one (1) outdoor ambient air sample (OA-1) were collected coincident with sub-slab soil vapor samples. A site plan depicting the above sample location points is attached as Figure 5.

### *Sub-Slab Soil Vapor Probe Installation*

Sub-slab vapor implants were installed by drilling a one-to-two-inch-diameter access hole utilizing hand-powered equipment (e.g., hammer drill) through an approximately six-inch-thick concrete floor in the interior sampling locations on the Site. Each soil vapor probe consisted of a four-inch-long, stainless-steel rod with one-quarter-inch diameter Teflon tubing, which was placed two-inches below the concrete floor slab. Decontaminated filter pack sand was utilized to fill the annular space to two-inches above the top of the steel rod. The remaining annular space atop the sand pack was filled with bentonite grout to prevent ambient air infiltration and dry lock

### *Sub-Slab Soil Vapor and Air Sampling Procedure*

The semi-permanent sub-slab vapor probe was allowed to equilibrate for a minimum of 24 hours prior to sampling. Prior to sampling, each point was purged of a minimum of three tube volumes of soil vapor using a 60 cc syringe, and the effluent was evaluated for the presence of VOCs utilizing a photoionization detector (PID). The vapors evacuated and field screened from the interior sub-slab sampling points (e.g., SV-1, SV-2, SV-3, SV-4, and SV-5) exhibited PID responses ranging from 0.7 to 3.1 ppm. Once the soil vapor probe reached equilibrium, a laboratory-supplied, 6-liter vacuum Summa canister was connected to Teflon tubing subsequent to the purging. Sampling then proceeded by fully opening the flow control valve on each

canister in turn. Immediately after opening the flow control valve on a canister, the initial vacuum (inches of mercury) was recorded in the field log and on the sample tag. Sample collection was performed over a 24-hour period at a flow rate of 0.003 liters per minute (LPM), which is less than the maximum flow rate of 0.2 LPM as established in the NYSDOH Final Guidance Document. When the vacuum level in the canister was between 5 and 8 inches of mercury (approx. 24 hours), the flow controller valve was closed, and the final vacuum recorded in the field notebook and on the sample tag. As a quality assurance/quality control (QA/QC) measure, helium was introduced into a closed/sealed space surrounding the sampling tube as a tracer gas to confirm the integrity of the probe seals to ensure that no air intrusion impacted the soil vapor samples (i.e., no “short circuiting” occurred). The closed/sealed space around the sampling tube was formed utilizing an inverted container placed atop the ground at the point where the tubing exits the subsurface. The Teflon tubing was run through an air-tight fitting installed on the top of the container, and polyethylene tubing was run from the helium supply through another air-tight fitting on the side of the container

The sub-slab soil vapor samples were analyzed by using USEPA Method TO-15 plus helium. Information with respect to sample identification, date and time of sample collection, identity of sampler, sampling methods and devices, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected is recorded on the laboratory chain of custody, included as Appendix D.

Five (5) sub-slab soil vapor probes were installed and 5 sub-slab soil vapor samples were collected for chemical analysis during this RI. Soil vapor sampling locations are shown in Figure 5. Soil vapor sample collection data is reported in Table 3. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006*.

## Chemical Analysis

Chemical analytical work presented in this Investigation Report has been performed in the following manner:

<b>Factor</b>	<b>Description</b>
Quality Assurance Officer	The chemical analytical quality assurance is directed by Tom Tanico
Chemical Analytical Laboratory	Chemical analytical laboratory(s) used in the RI is NYS ELAP certified and were Alpha Analytical Laboratory (ELAP Certification No. 11148)
Chemical Analytical Methods	Soil and Groundwater analytical methods: <ul style="list-style-type: none"><li>• TAL Metals by EPA Method 6010C (rev. 2007);</li><li>• VOCs by EPA Method 8260C (rev. 2006);</li><li>• SVOCs by EPA Method 8270D (rev. 2007);</li><li>• Pesticides by EPA Method 8081B (rev. 2000);</li><li>• PCBs by EPA Method 8082A (rev. 2000);</li></ul> Soil vapor analytical methods: <ul style="list-style-type: none"><li>• VOCs by TO-15 VOC parameters with Helium detection.</li></ul>

## Results of Chemical Analyses

Laboratory data for soil, groundwater and soil vapor are summarized in Tables 1, 2, and 3, respectively. Laboratory data deliverables for all samples evaluated in this RIR are provided in digital form in Appendix D.

## **5.0 ENVIRONMENTAL EVALUATION**

### **5.1 Geological and Hydrogeological Conditions**

#### **Stratigraphy**

Subsurface soil at the Site included a surficial fill layer consisting of concrete, brick, and trace coal in a brown to dark-brown medium sand matrix ranging in thickness from 0-to-4 feet bgs in the north and south courtyard. This fill layer is underlain by brown fine-to-medium sand with some silts and trace gravel extending from 4-to-30 feet bgs, in which a thin clay confining layer exists at 12-to-14 feet bgs. Weathered bedrock (schist) was encountered at depths ranging from 26-to-30 feet bgs in the north courtyard of the Site. No visible or olfactory evidence of petroleum, or other chemicals, was observed in soil recovered from borings installed across the Site. Depth to bedrock varied between 24.5-to-30.5 feet bgs in the north courtyard of the Site during this Phase II investigation. A soil boring log is presented in Appendix E.

#### **Hydrogeology**

Based on topography and location relative to the Hudson River, groundwater is inferred to flow from southeast to northeast in the vicinity of the Site. Based on the findings of this investigation, groundwater depth underneath the Site is approximately 28 feet bgs.

On May 9, 2014, Impact Environmental advanced three boreholes in the north courtyard of the Site in an effort to obtain groundwater samples. Groundwater was present at approximately 28 feet bgs at boring “GW-1,” as indicated by saturated soil. Two additional exploratory borings, identified as “E-GW2” and “E-GW3”, were advanced until refusal at 24.5 feet and 26 feet bgs, respectively, and did not encounter groundwater.

## 5.2 Soil Chemistry

### *Soil Chemistry*

Soil sample results were compared to NYSDEC Unrestricted Use (Track 1) and Restricted Residential Use (Track 2) Soil Cleanup Objectives (SCOs) as presented in NYSDEC Part 375-6 and CP-51.

Soil/fill samples collected during this investigation showed no VOCs exceeding or approaching Track 1 SCOs. Given that no VOCs were detected above the laboratory method detection limit (MDL) or exceeding Track 1 SCOs, VOCs present in soil are not considered a concern for the Site.

Several SVOC polycyclic aromatic hydrocarbons (PAHs) (benzo compounds and chrysene) were detected within a shallow soil sample (0-2 ft.), identified as SB-2, but at concentrations below the assigned Track 1 SCOs. Maximum concentrations for each of the above compounds are as follows: benzo(a)anthracene at 80 µg/kg, benzo(a)pyrene at 72 µg/kg, benzo(b)fluoranthene at 100 µg/kg, benzo(k)fluoranthene at 36 µg/kg, chrysene at 90 µg/kg, benzo(g,h,i)perylene 65 µg/kg, and indeno(1,2,3-cd)pyrene at 60 µg/kg. Several other SVOCs were observed within shallow soil samples SB-2, SB-6, and SB-7 at concentrations below Track 1 SCOs.

The pesticide 4,4-DDT was detected at an intermediate depth of 13-to-14 feet bgs in soil sample SB-4, at a concentration of 3.02 µg/kg, below Track 1 SCOs. No other pesticides or Polychlorinated biphenyls (PCBs) were detected in soil samples collected during this investigation.

Arsenic was detected above Track 1 and Track 2 SCOs at a concentration of 24 mg/kg in the shallow soil sample identified as SB-6. All other metals detected in soil samples were at concentrations below Track 1 SCOs.

Data collected during this investigation is sufficient to delineate the vertical and horizontal distribution of contaminants in soil/fill at the Site. A summary table of data for chemical analysis performed on soil samples is included in Table 1. A copy of the laboratory report is provided in Appendix D.

## 5.3 Groundwater Chemistry

### *Groundwater Water Chemistry*

No VOCs were detected in the groundwater sample above TOGS 1.1.1. Ambient Water Quality Standard's and Limitations - Class GA GQS, with the exception of cis-1,2-dichloroethene, which was detected at 7.2 µg/l, slightly exceeding the standard of 5 µg/l. TCE, tert-Butylbenzene, and 1,2-Dichloroethane were identified in the groundwater sample at low concentrations and below GQS. The above compounds were not identified in the analysis of soil samples taken at the Site.

No SVOCs, pesticides, PCBs, or metals (total and dissolved) were detected in the groundwater exceeding TOGS 1.1.1. Ambient Water Quality Standard's and Limitations - Class GA GQS.

Data collected during this investigation is sufficient to delineate the vertical and horizontal distribution of contaminants in groundwater at the Site. A summary table of data for chemical analysis performed on soil samples is included in Table 2. A copy of the laboratory report is provided in Appendix D.

## 5.4 Soil Vapor Chemistry

### *Soil Vapor Chemistry*

Sub-slab soil vapor samples, SV-1, SV-2, SV-3, SV-4, and SV-5, collected during this investigation were compared to New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion Air Guideline Values, Table 3.1, and Soil Vapor Intrusion Decision Matrices. All sub-slab soil vapor samples showed numerous VOCs detected at generally low concentrations below the NYSDOH air guideline values. While no chlorinated compounds were detected in sub-slab soil vapor, low-level detection of PCE and carbon tetrachloride were present in indoor and outdoor air samples ranging from 0.428 to 0.491 µg/m<sup>3</sup>.

Data collected during this investigation is sufficient to delineate the distribution of contaminants in sub-slab soil vapor at the Site. A summary table of data for chemical analysis performed on the soil vapor sample is included in Table 3.

## **5.5 Prior Activity**

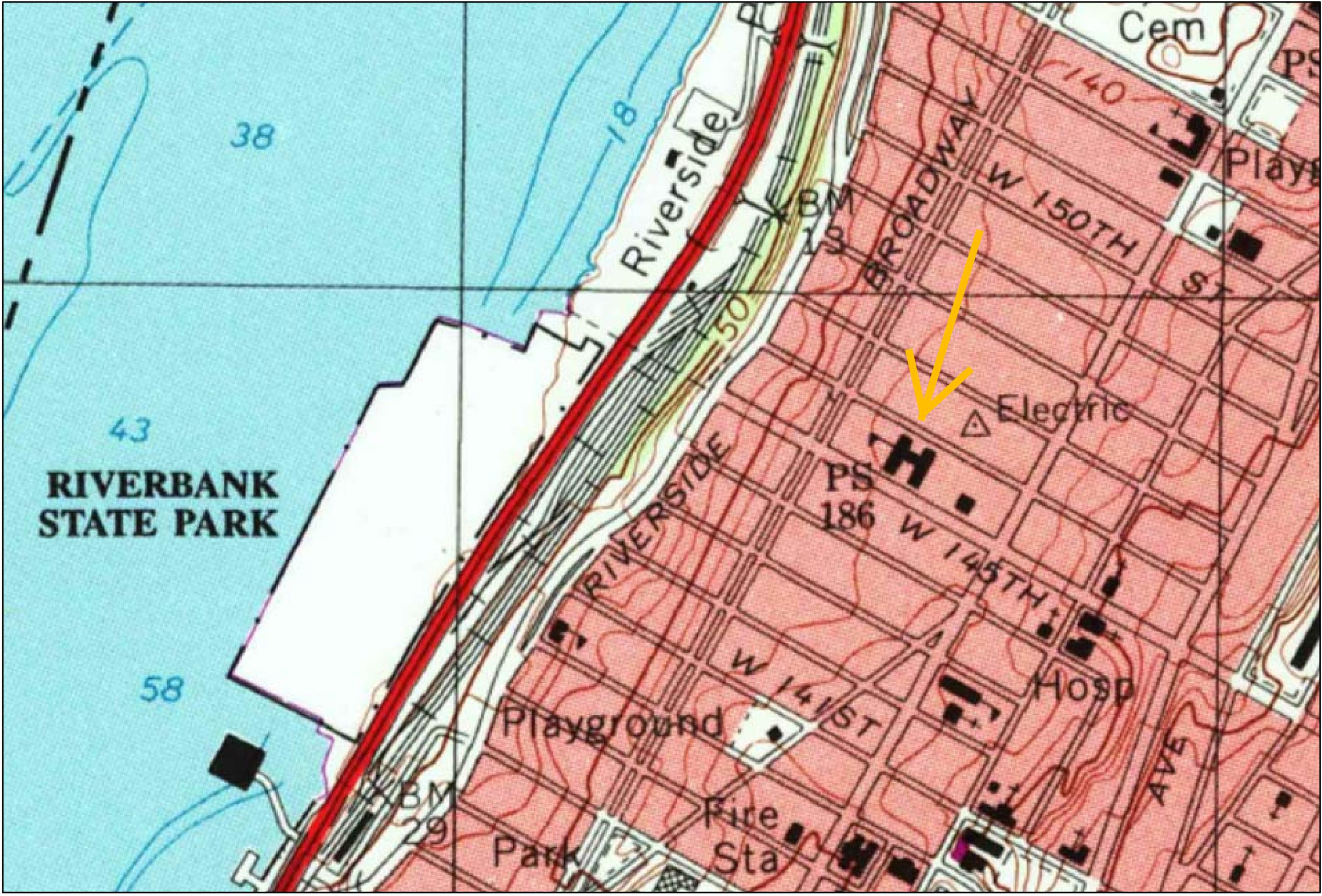
Based on an evaluation of the data and information from the RIR, disposal of significant amounts of hazardous waste is not suspected at this site.

## **5.6 Impediments to Remedial Action**

There are no known impediments to remedial action at this property.

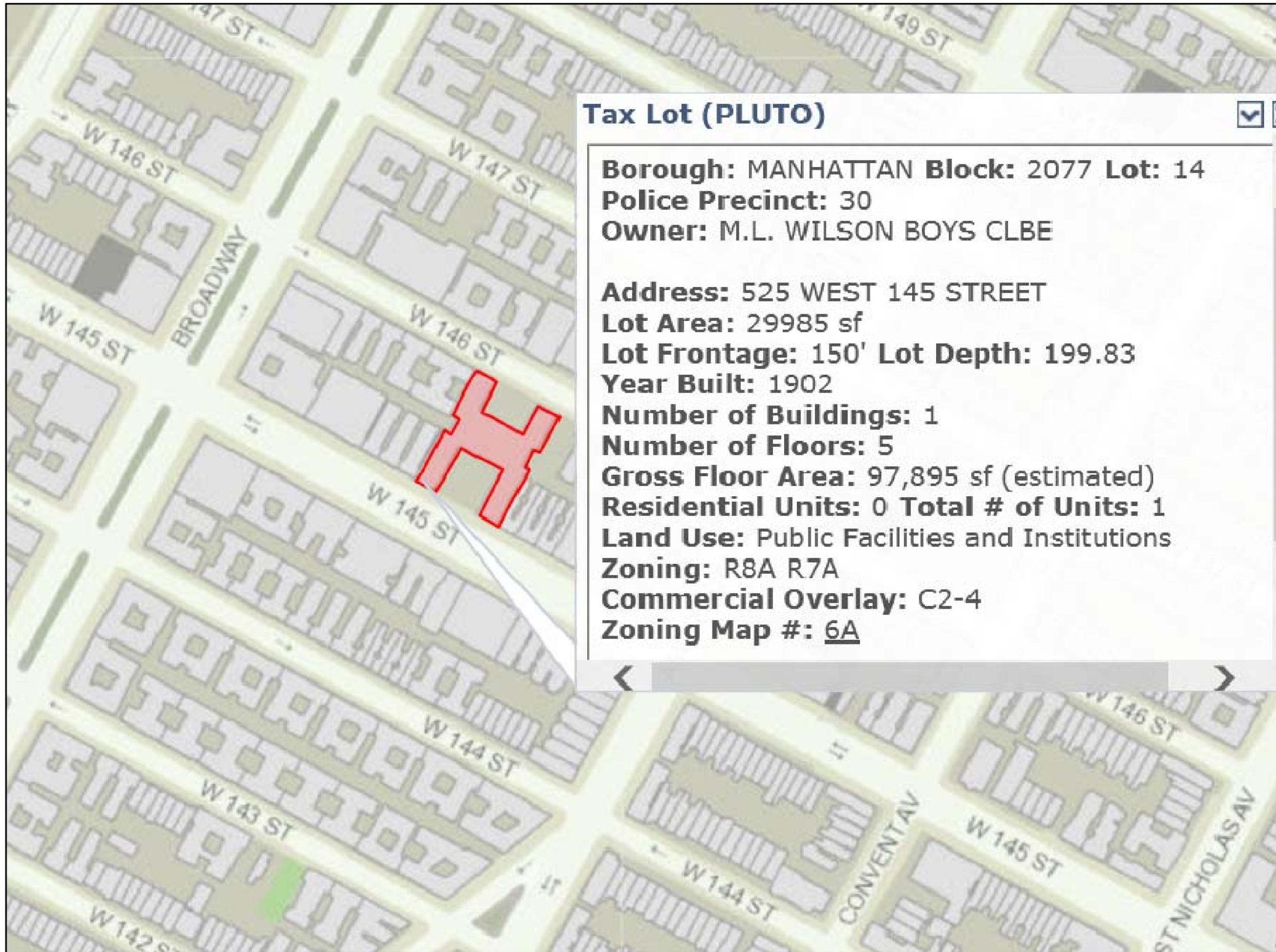
## **FIGURES**

## **Figure 1**



PROJECT # 6627-01-02-2000		FIGURE # 1	
<b>TITLE:</b> Site Location Map 521 West 145th Street, New York, NY			
<b>IMPACT ENVIRONMENTAL</b> 170 KEYLAND COURT BOHEMIA, NEW YORK 11716 TEL (631) 269-8800 FAX (631) 269-1599 1000 PAGE AVENUE LYNHURST, NEW JERSEY 07071			

## Figure 2



### Tax Lot (PLUTO)

**Borough:** MANHATTAN **Block:** 2077 **Lot:** 14  
**Police Precinct:** 30  
**Owner:** M.L. WILSON BOYS CLBE

**Address:** 525 WEST 145 STREET  
**Lot Area:** 29985 sf  
**Lot Frontage:** 150' **Lot Depth:** 199.83  
**Year Built:** 1902  
**Number of Buildings:** 1  
**Number of Floors:** 5  
**Gross Floor Area:** 97,895 sf (estimated)  
**Residential Units:** 0 **Total # of Units:** 1  
**Land Use:** Public Facilities and Institutions  
**Zoning:** R8A R7A  
**Commercial Overlay:** C2-4  
**Zoning Map #:** 6A

PROJECT # 6627-01-02-2000  
 FIGURE # 2

TITLE: Site Location Map  
 521 West 145th Street,  
 New York, NY

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



DRAWN BY:	GMC
CHECKED BY:	KK
DATE:	12/4/13
SCALE:	

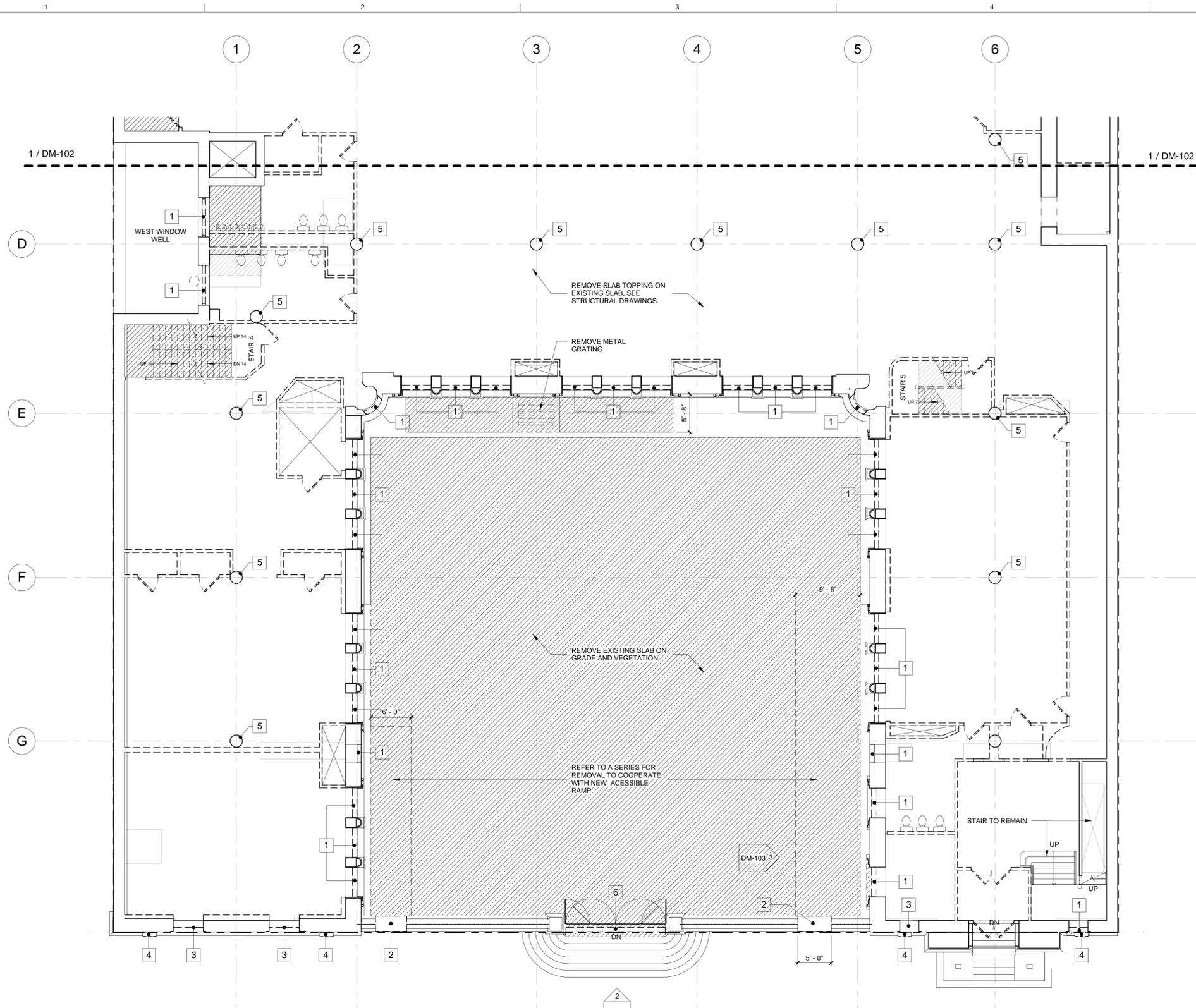
### **Figure 3**





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Project: 0130014-24631 PM



**Removals Plan Legend**

- EXISTING WALL TO REMAIN
- EXISTING SLAB OPENING
- REMOVAL
- REMOVE EXISTING SLAB & STAIR FLIGHTS, SEE STRUCTURAL TO IDENTIFY REMOVAL OF EXISTING STEEL BEAMS.
- Removal Key

**Removal Key Notes**

#	REMOVAL NOTES
1	REMOVE EXISTING CMU INFILL AND ANY REMAINING EXISTING WOOD WINDOW FRAME, TYP.
2	SAWCUT EXISTING STONE WALL.
3	COMPLETELY REMOVE EXISTING WOOD WINDOW FRAMES AND MULLIONS, TYP.
4	REMOVE EXISTING LIGHT FIXTURES AND CONDUITS.
5	REMOVE PLASTER AND TERRA COTTA BLOCK DOWN TO STEEL COLUMN, TYP.
6	CAREFULLY REMOVE EXISTING INFILL IN FRONT OF GATE. CAREFULLY REMOVE GATE TO REFURBISH IN THE SHOP. GC TO COORDINATE FOR REMOVAL AND STORING.
7	REMOVE EXISTING STEEL WINDOW AND STEEL BEAM CLOSURE.
8	ENTIRE ROOF SLAB TOPPING ABOVE TERRA COTTA ARCH TO BE REMOVED. SEE STRUCTURAL FOR ADD. INFO.
9	REMOVE BRICK WALL ABOVE WINDOW LINTELS.

**General Removal Notes:**

- A. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
- B. CONTRACTOR SHALL COORDINATE REMOVALS WITH NEW CONSTRUCTION DRAWINGS AND INSURE THAT NO ITEMS OR SERVICES TO REMAIN ARE DISTURBED DURING CONSTRUCTION.
- C. CONTRACTORS SHALL BE RESPONSIBLE FOR THE PROPER STAGING OF WORK AND SHALL PROTECT ACCESS TO FIRE EGRESS PATHS, ELEVATORS, AND ADJACENT AREAS.
- D. SEE STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS FOR ADDITIONAL WALL OR DEMOLITION REQUIREMENTS. (INCLUDING BUT NOT LIMITED TO: NEW FLUES, DUCTS, DRAINS, PIPES AND OTHER MEP EQUIPMENT.) REMOVAL DRAWINGS ARE NOT THE LIMIT OF CONTRACT FOR THE WORK.
- E. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE FIRE RATING OF ALL BUILDING ELEMENTS IN AREAS WHERE REMOVALS ARE MADE INCLUDING BUT NOT LIMITED TO DOORS, WALLS, CEILINGS, ROOFS AND STRUCTURAL ELEMENTS.
- F. REMOVE DEBRIS AND VEGETATION FROM ALL SLAB AND WALL SURFACES.
- G. REMOVE ALL EXPOSED LIGHT FIXTURES AND ELECTRICAL CONDUITS ON EXTERIOR WALLS.
- H. PORTION OR ENTIRE FLOOR TOPPING TO BE REMOVED. GC TO COORDINATE WITH STRUCTURAL AND VERIFY.

**PS 186**

521 West 144th Street  
New York, New York

**Boys & Girls Club of Harlem**  
425 West 144th Street  
New York, New York 10001

**Alembic Community Development**  
11 Hanover Square, Suite 701  
New York, New York 10001

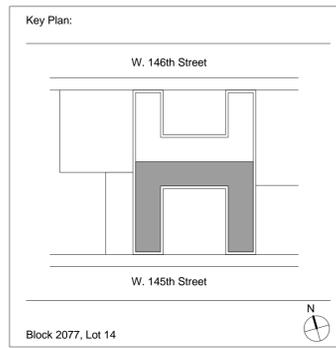
**Monadnock Construction, Inc.**  
155 3rd Street  
Brooklyn, New York 11231

**DattnerArchitects** 1385 Broadway, 15th Floor  
New York, NY 10018  
tel 212 247 2660  
info@dattner.com

**Structural Engineers**  
**De Nardis Engineering, LLC**  
15 Reservoir Road  
White Plains, NY 10603-2516

**Mechanical Electrical Plumbing Engineers**  
**Abraham Joselow, P.C.**  
45 West 34th Street Suite 1101  
New York, NY 10001

Revisions:  
Issue: DOB Permit Submission



Key Plan  
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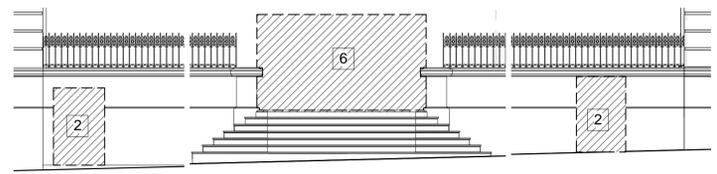
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Checked By Checker  
Project No. 1214 Seal

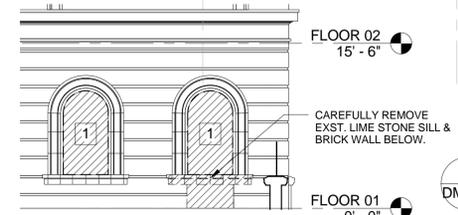


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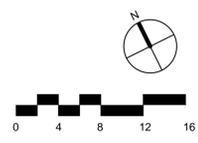
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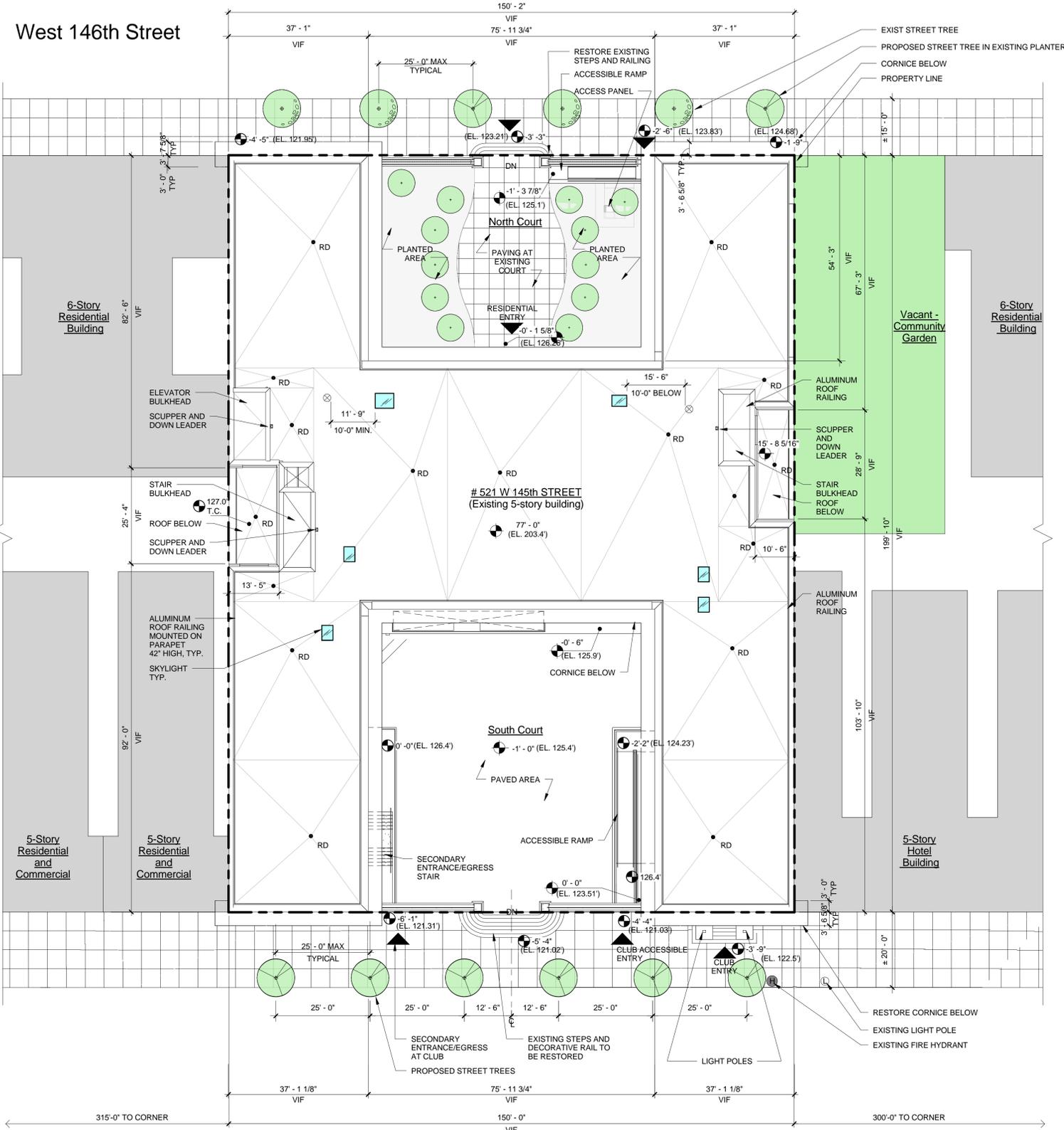
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DM-103 1/8" = 1'-0"



3 Partial West Elevation  
DM-103 1/8" = 1'-0"



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**LEGEND**

- PROPERTY LINE
- EXISTING TREE
- PROPOSED TREE
- ▲ BUILDING ENTRANCE
- NEIGHBORING BUILDING
- SKYLIGHT

**NOTES**

1. Flood Zone: See G-002 for the flood district information.

**PS 186**

521 West 145th Street  
New York, New York

**Boys & Girls Club of Harlem**  
425 West 144th Street  
New York, New York 10001

**Alembic Community Development**  
11 Hanover Square, Suite 701  
New York, New York 10001

**Monadnock Construction, Inc.**  
155 3rd Street  
Brooklyn, New York 11231

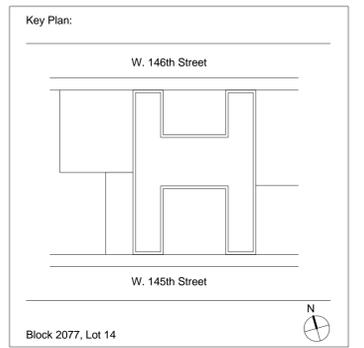
**DattnerArchitects** 1385 Broadway, 15th Floor  
New York, NY 10018  
tel 212 247 2660  
info@dattner.com

**Structural Engineers**  
**De Nardis Engineering, LLC**  
15 Reservoir Road  
White Plains, NY 10603-2516

**Mechanical Electrical Plumbing Engineers**  
**Abraham Joselow, P.C.**  
45 West 34th Street Suite 1101  
New York, NY 10001

Revisions:

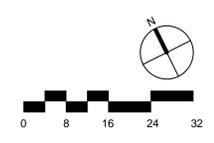
Issue: DOB Permit Submission



Key Plan  
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**Site Plan**

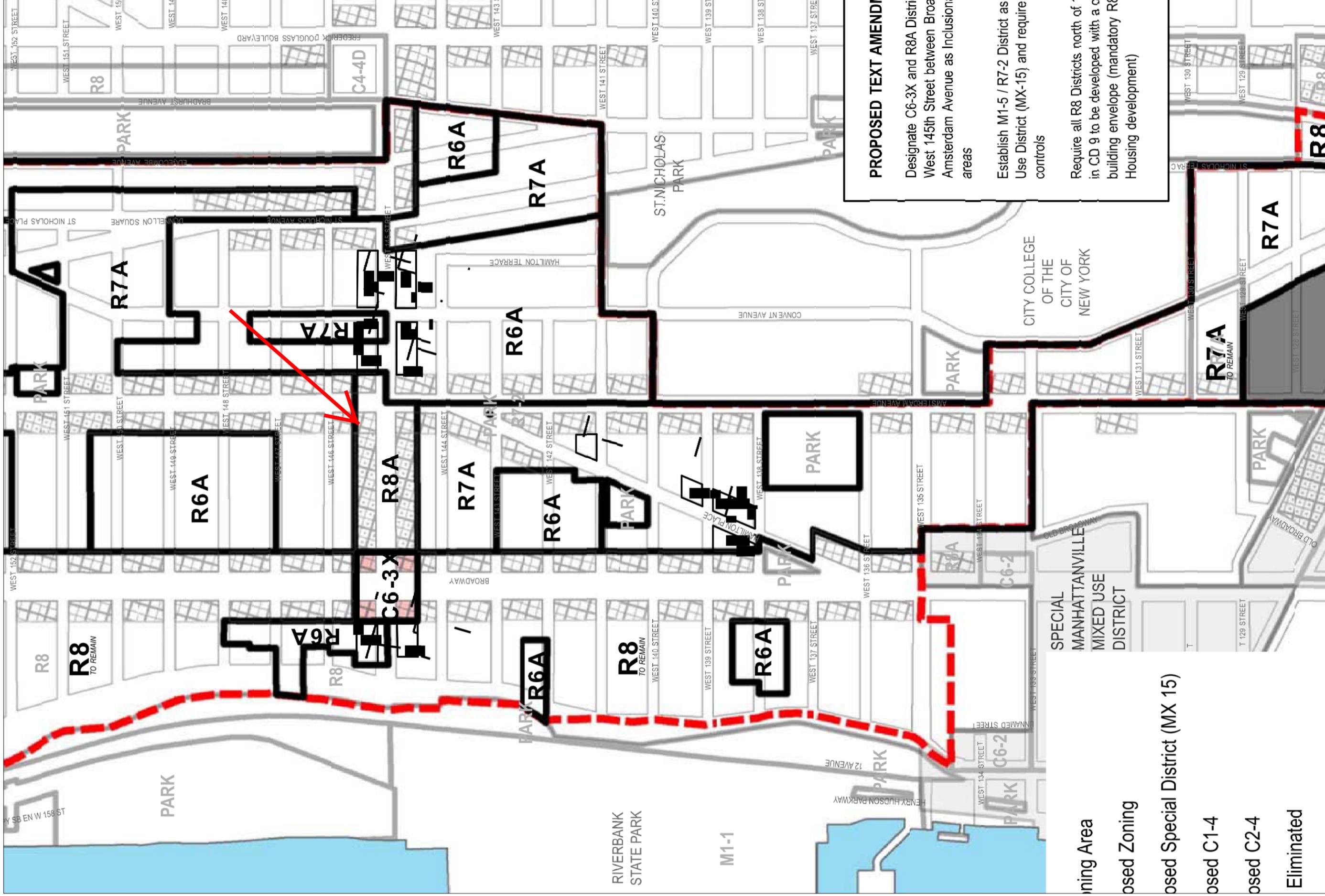
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Scale: As indicated  
Drawn By: YJC  
Checked By: KN,JC  
Project No.: 1214 Seal  
Sheet No.:



1 Site Plan  
A-020 1/16" = 1'-0"

**A-020.00**

## Figure 4



**PROPOSED TEXT AMENDMENT**

Designate C6-3X and R8A Districts between West 145th Street and West 146th Street between Broadway and Amsterdam Avenue as Inclusionary Zoning areas

Establish M1-5 / R7-2 District as Use District (MX-15) and require controls

Require all R8 Districts north of West 145th Street in CD 9 to be developed with a mandatory R8 building envelope (mandatory R8 Housing development)

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

**TITLE:** Surrounding Land Usage  
 521 West 145th Street, New York, NY

**PROJECT #** 6627-01-02-2000  
**FIGURE #** 4



**DRAWN BY:** GMC  
**CHECKED BY:** KK  
**DATE:** 5/28/14  
**SCALE:**

## **Figure 5**



## TABLES





**Table 1 - Soil Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	Parameter ID	NYCRR 375 Unrestricted Use Soil Cleanup Objectives (SCOs)	NYCRR 375 Restricted-Residential Use Soil Cleanup Objectives (SCOs)	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-7
	Sample ID	Depth			3-4 ft. BEG	3.5-4.5 ft. BEG	14-15 ft. BEG	13-14 ft. BEG	2-3 ft. BEG	0-2 ft. BEG	0-2 ft. BEG	22-23 ft. BEG
12674-11-2	Aroclor 1016	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
1104-28-2	Aroclor 1221	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
11141-16-5	Aroclor 1232	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
53469-21-9	Aroclor 1242	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
12672-29-6	Aroclor 1248	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
11097-69-1	Aroclor 1254	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
11096-82-5	Aroclor 1260	PCB	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
319-85-7	beta-BHC	PESTICIDE	36	360	ND	ND	ND	ND	ND	ND	ND	ND
319-86-8	delta-BHC	PESTICIDE	40	100,000a	ND	ND	ND	ND	ND	ND	ND	ND
60-57-1	Dieldrin	PESTICIDE	5	200	ND	ND	ND	ND	ND	ND	ND	ND
115-29-7	Endosulfan	PESTICIDE	2400	NA	-	-	-	-	-	-	-	-
959-98-8	Endosulfan I	PESTICIDE	2,400	24,000i	ND	ND	ND	ND	ND	ND	ND	ND
33213-65-9	Endosulfan II	PESTICIDE	2,400	24,000i	ND	ND	ND	ND	ND	ND	ND	ND
1031-07-8	Endosulfan Sulfate	PESTICIDE	2,400	24,000i	ND	ND	ND	ND	ND	ND	ND	ND
72-20-8	Endrin	PESTICIDE	14	11,000	ND	ND	ND	ND	ND	ND	ND	ND
58-89-9	gamma-BHC	PESTICIDE	100	1,300	ND	ND	ND	ND	ND	ND	ND	ND
76-44-8	Heptachlor	PESTICIDE	42	2,100	ND	ND	ND	ND	ND	ND	ND	ND
1336-36-3	Polychlorinated Biphenyls	PESTICIDE	100	1,000	ND	ND	ND	ND	ND	ND	ND	ND
	Unit		<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>	<i>mg/kg</i>
7440-38-2	Arsenic, As	METAL	13c	16f	3.9	4.1	3	3.7	3.3	<b>24</b>	6.8	3.2
7440-39-3	Barium, Ba	METAL	350c	400	60	61	52	55	73	120	110	98
7440-41-7	Beryllium, Be	METAL	7.2	72	0.31 J	0.27 J	0.27 J	0.24 J	0.26 J	0.58	0.43 J	0.25 J
7440-43-9	Cadmium, Cd	METAL	2.5c	4.3	ND	ND	ND	ND	ND	ND	ND	ND
7440-47-3	Chromium, Cr	METAL	NA	110	10	14	8.6	11	10	19	15	10
18540-29-9	Chromium, hexavalent	METAL	1b	110	ND	ND	ND	ND	ND	ND	ND	ND
16065-83-1	Chromium, trivalent	METAL	30c	180	10	14	8.6	11	10	19	15	10
7440-50-8	Copper, Cu	METAL	50	270	11	10	9.5	12	8.5	11	14	13
57-12-5	Cyanide	METAL	27	27	ND	ND	ND	ND	ND	ND	ND	ND
7439-92-1	Lead, Pb	METAL	63c	400	5.2	8.4	4.5 J	33	5.7	6.9	37	3.7 J
7439-96-5	Manganese, Mn	METAL	1,600c	2,000f	320	250	270	250	190	610	280	310
7439-97-6	Mercury, Hg	METAL	.18c	.81j	ND	ND	ND	ND	ND	0.03 J	0.05 J	ND
7440-02-0	Nickel, Ni	METAL	30	310	10	11	10	11	8.9	10	11	9.8
7782-49-2	Selenium, Se	METAL	3.9c	180	ND	ND	ND	ND	ND	ND	ND	ND
7440-22-4	Silver, Ag	METAL	2	180	ND	ND	ND	ND	ND	ND	ND	ND
7440-66-6	Zinc, Zn	METAL	109c	10,000d	26	23	20	43	24	30	33	19

**Notes:**  
- Shaded/Underlined cells indicate an exceedance of both Unrestricted Use and Restricted Residential Use Criteria  
- J = Estimated value. The target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL).  
ug/kg = micrograms per kilogram (ppb)  
mg/kg = milligrams per kilogram (ppm)

**Table 2 - Groundwater Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	Parameter ID	NYSDEC TOGS 1.1.1 Groundwater Quality Standards	GW-1
		GW Depth		26-30 ft. BEG
		Date		5/9/2014
	Sample ID	Unit	<i>ug/L</i>	<i>ug/L</i>
71-55-6	1,1,1-Trichloroethane (TCA)	VOC	5	ND
75-34-3	1,1-Dichloroethane	VOC	5	ND
75-35-4	1,1-Dichloroethene	VOC	5	ND
95-63-6	1,2,4-Trimethylbenzene	VOC	5	ND
95-50-1	1,2-Dichlorobenzene	VOC	3	ND
107-06-2	1,2-Dichloroethane	VOC	0.6	0.20 J
108-67-8	1,3,5-Trimethylbenzene	VOC	5	ND
541-73-1	1,3-Dichlorobenzene	VOC	3	ND
106-46-7	1,4-Dichlorobenzene	VOC	3	ND
123-91-1	1,4-Dioxane	VOC	NS	ND
110-57-6	trans-1,4-Dichloro-2-butene	VOC	5	ND
78-93-3	2-Butanone	VOC	50	ND
67-64-1	Acetone	VOC	50	ND
71-43-2	Benzene	VOC	1	ND
56-23-5	Carbon Tetrachloride	VOC	5	ND
108-90-7	Chlorobenzene	VOC	5	ND
67-66-3	Chloroform	VOC	7	ND
156-59-2	cis-1,2-Dichloroethene	VOC	5	<b>7.2</b>
100-41-4	Ethylbenzene	VOC	5	ND
75-09-2	Methylene Chloride	VOC	5	ND
1634-04-4	Methyl Tert-Butyl Ether	VOC	10	ND
91-20-3	Naphthalene	VOC	10	ND
104-51-8	n-Butylbenzene	VOC	5	ND
103-65-1	n-Propylbenzene	VOC	5	ND
135-98-8	sec-Butylbenzene	VOC	5	ND
98-06-6	tert-Butylbenzene	VOC	5	0.83 J
127-18-4	Tetrachloroethene (PCE)	VOC	5	ND
108-88-3	Toluene	VOC	5	ND
95-47-6	o Xylene	VOC	5	ND
	m,p Xylene	VOC	5	ND
1330-20-7	Total Xylenes	VOC	NA	ND
156-60-5	trans-1,2-Dichloroethene	VOC	5	ND
79-01-6	Trichloroethene (TCE)	VOC	5	0.75
75-01-4	Vinyl Chloride	VOC	2	ND
	Total BTEX			ND
	Total VOCs			8.31 J

**Table 2 - Groundwater Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	Parameter ID	NYSDEC TOGS 1.1.1 Groundwater Quality Standards	GW-1
		GW Depth		26-30 ft. BEG
		Date		5/9/2014
	Sample ID	Unit	ug/L	ug/L
95-48-7	2-Methylphenol	SVOC	1	ND
88-74-4	2-Nitroaniline	SVOC	NA	ND
88-75-5	2-Nitrophenol	SVOC	NA	ND
91-94-1	3,3-Dichlorobenzidine	SVOC	NA	ND
99-09-2	3-Nitroaniline	SVOC	NA	ND
534-52-1	4,6-Dinitro-2-methylphenol	SVOC	NA	ND
59-50-7	4-Chloro-3-methylphenol	SVOC	NA	ND
106-47-8	4-Chloroaniline	SVOC	NA	ND
100-01-6	4-Nitroaniline	SVOC	NA	ND
100-02-7	4-Nitrophenol	SVOC	NA	ND
83-32-9	Acenaphthene	SVOC	20	ND
208-96-8	Acenaphthylene	SVOC	NS	ND
120-12-7	Anthracene	SVOC	50	ND
56-55-3	Benzo-a-Anthracene	SVOC	0.002	ND
50-32-8	Benzo-a-Pyrene	SVOC	NS	ND
205-99-2	Benzo-b-Fluoranthene	SVOC	0.002	ND
207-08-9	Benzo-k-Fluoranthene	SVOC	0.002	ND
191-24-2	Benzo-g,h,i-Perylene	SVOC	NS	ND
218-01-9	Chrysene	SVOC	0.002	0.06 J
132-64-9	Dibenzofuran	SVOC	NS	ND
53-70-3	Dibenzo-a,h-Anthracene	SVOC	NS	ND
206-44-0	Fluoranthene	SVOC	50	ND
86-73-7	Fluorene	SVOC	50	ND
118-74-1	Hexachlorobenzene	SVOC	0.04	ND
193-39-5	Indeno(1,2,3-cd)Pyrene	SVOC	0.002	ND
95-94-3	1,2,4,5-Tetrachlorobenzene	SVOC	5	ND
87-86-5	Pentachlorophenol	SVOC	1	ND
85-01-8	Phenanthrene	SVOC	50	0.13 J
108-95-2	Phenol	SVOC	1	ND
129-00-0	Pyrene	SVOC	50	ND
	Total cPAHs			0.06 J
	Total SVOCs			0.17 J
72-54-8	4,4-DDD	PESTICIDE	0.3	ND
72-55-9	4,4-DDE	PESTICIDE	0.2	ND
50-29-3	4,4-DDT	PESTICIDE	0.2	ND
309-00-2	Aldrin	PESTICIDE	0	ND
319-84-6	alpha-BHC	PESTICIDE	0.01	ND
5103-71-9	Alpha Chlordane	PESTICIDE	NS	ND
12674-11-2	Aroclor 1016	PCB	NS	ND
1104-28-2	Aroclor 1221	PCB	NS	ND
11141-16-5	Aroclor 1232	PCB	NS	ND
53469-21-9	Aroclor 1242	PCB	NS	ND
12672-29-6	Aroclor 1248	PCB	NS	ND
11097-69-1	Aroclor 1254	PCB	NS	ND
11096-82-5	Aroclor 1260	PCB	NS	ND
319-85-7	beta-BHC	PESTICIDE	0.04	ND

**Table 2 - Groundwater Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	Parameter ID	NYSDEC TOGS 1.1.1 Groundwater Quality Standards	GW-1
		GW Depth		26-30 ft. BEG
		Date		5/9/2014
	Sample ID	Unit	<i>ug/L</i>	<i>ug/L</i>
319-86-8	delta-BHC	PESTICIDE	0.04	ND
60-57-1	Dieldrin	PESTICIDE	0.004	ND
115-29-7	Endosulfan	PESTICIDE	NS	-
959-98-8	Endosulfan I	PESTICIDE	NS	ND
33213-65-9	Endosulfan II	PESTICIDE	NS	ND
1031-07-8	Endosulfan Sulfate	PESTICIDE	NS	ND
72-20-8	Endrin	PESTICIDE	0	ND
58-89-9	gamma-BHC	PESTICIDE	0.05	ND
76-44-8	Heptachlor	PESTICIDE	0.04	ND
1336-36-3	Polychlorinated Biphenyls	PESTICIDE	0.09	ND
	Unit		<i>mg/L</i>	<i>mg/L</i>
7440-38-2	Arsenic, As - Dissolved	METAL	25	0.00028 J
7440-39-3	Barium, Ba - Dissolved	METAL	1000	0.09171
7440-41-7	Beryllium, Be - Dissolved	METAL	3	ND
7440-43-9	Cadmium, Cd - Dissolved	METAL	5	ND
7440-47-3	Chromium, Cr - Dissolved	METAL	50	0.00194
7440-48-4	Cobalt, Co - Dissolved	METAL	NS	0.01206
7440-50-8	Copper, Cu - Dissolved	METAL	200	0.00339
7439-89-6	Iron, Fe - Dissolved	METAL	300	0.143
7439-92-1	Lead, Pb - Dissolved	METAL	25	ND
7439-96-5	Manganese, Mn - Dissolved	METAL	300	2.082
7439-97-6	Mercury, Hg - Dissolved	METAL	0.7	ND
7440-02-0	Nickel, Ni - Dissolved	METAL	100	0.02439
7782-49-2	Selenium, Se - Dissolved	METAL	10	ND
7440-22-4	Silver, Ag - Dissolved	METAL	50	ND
7440-28-0	Thallium, Tl - Dissolved	METAL	0.5	ND
7440-62-2	Vanadium, V - Dissolved	METAL	NS	ND
7440-66-6	Zinc, Zn - Dissolved	METAL	2000	0.07506
7440-38-2	Arsenic, As - Total	METAL	25	0.00829
7440-39-3	Barium, Ba - Total	METAL	1000	1.097
7440-41-7	Beryllium, Be - Total	METAL	3	0.00158
7440-43-9	Cadmium, Cd - Total	METAL	5	0.00045
7440-47-3	Chromium, Cr - Total	METAL	50	0.2111
7440-48-4	Cobalt, Co - Total	METAL	NS	0.0558
7440-50-8	Copper, Cu - Total	METAL	200	0.1725
7439-89-6	Iron, Fe - Total	METAL	300	56.9
7439-92-1	Lead, Pb - Total	METAL	25	0.03789
7439-96-5	Manganese, Mn - Total	METAL	300	4.952
7439-97-6	Mercury, Hg - Total	METAL	0.7	ND
7440-02-0	Nickel, Ni - Total	METAL	100	0.1997
7782-49-2	Selenium, Se - Total	METAL	10	0.00274 J
7440-22-4	Silver, Ag - Total	METAL	50	0.00032 J
7440-28-0	Thallium, Tl - Total	METAL	0.5	0.00045 J
7440-62-2	Vanadium, V - Total	METAL	NS	0.049
7440-66-6	Zinc, Zn - Total	METAL	2000	0.6396

**Note(s):**

- Shaded/Bolded values indicate an exceedance of NYSDEC TOGS 1.1.1 Groundwater Quality Standards  
J = Estimated value. The Target analyte concentration is below the quantitation limit (RL),  
but above the Method Detection Limit (MDL)

ug/L = micrograms per liter

mg/L = milligrams per liter

**Table 3 - Sub-Slab Soil Vapor Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	SV-1	SV-2	SV-3	SV-4	SV-5	IA-1	IA-2	QA-1	USEPA 2001: BASE Indoor Air Concentrations (90th Percentile)	NYSDOH Indoor/Outdoor Air Guidelines Values	NYSDOH Matrix 1/2
	Date	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014			
	Unit	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>								
71-55-6	1,1,1-Trichloroethane (TCA)	ND	20.6	-	<i>Mon./Mit./&lt;100</i>							
79-34-5	1,1,2,2-Tetrachloroethane	ND	NA	-	-							
79-00-5	1,1,2-Trichloroethane	ND	1.5	-	-							
75-34-3	1,1-Dichloroethane	ND	0.7	-	-							
75-35-4	1,1-Dichloroethene	ND	1.4	-	-							
95-63-6	1,2,4-Trimethylbenzene	1.41	1.66	2.19	2.04	2.34	ND	ND	ND	9.5	-	-
106-93-4	1,2-Dibromoethane	ND	1.5	-	-							
95-50-1	1,2-Dichlorobenzene	ND	1.2	-	-							
107-06-2	1,2-Dichloroethane	ND	0.9	-	-							
78-87-5	1,2-Dichloropropane	ND	1.6	-	-							
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	-	-							
108-67-8	1,3,5-Trimethylbenzene	ND	3.7	-	-							
541-73-1	1,3-Dichlorobenzene	ND	2.4	-	-							
106-99-0	1,3-Butadiene	ND	ND	0.779	ND	ND	ND	ND	ND	3	-	-
106-46-7	1,4-Dichlorobenzene	ND	5.5	-	-							
123-91-1	1,4-Dioxane	ND	NA	-	-							
540-84-1	2,2,4-Trimethylpentane	1.78	1.07	2.57	1.53	1.06	ND	ND	ND	NA	-	-
78-93-3	2-Butanone	0.796	ND	1.58	0.696	0.95	ND	ND	ND	12	-	-
591-78-6	2-Hexanone	ND	NA	-	-							
108-10-1	4-Methyl-2-Pentanone	ND	6	-	-							
107-05-1	3-Chloropropene	ND	NA	-	-							
622-96-8	4-Ethyltoluene	ND	3.6	-	-							
67-64-1	Acetone	14.3	25.4	32.5	10.9	21.7	3.04	4.44	6.56	98.9	-	-
71-43-2	Benzene	ND	ND	0.942	ND	ND	ND	ND	0.732	9.4	-	-
100-44-7	Benzyl chloride	ND	6.8	-	-							
75-27-4	Bromodichloromethane	ND	NA	-	-							
75-25-2	Bromoform	ND	NA	-	-							
74-83-9	Bromomethane	ND	1.7	-	-							
75-15-0	Carbon Disulfide	ND	ND	ND	1.49	ND	ND	ND	ND	4.2	-	-
56-23-5	Carbon Tetrachloride	ND	ND	ND	ND	ND	0.428	0.447	0.491	1.3	-	<i>Mon./Mit./&lt;5</i>
108-90-7	Chlorobenzene	ND	0.9	-	-							

**Table 3 - Sub-Slab Soil Vapor Analysis Summary**  
521 West 145th Street, New York, NY

CAS Number	Parameter Name	SV-1	SV-2	SV-3	SV-4	SV-5	IA-1	IA-2	QA-1	USEPA 2001: BASE Indoor Air Concentrations (90th Percentile)	NYSDOH Indoor/Outdoor Air Guidelines Values	NYSDOH Matrix 1/2
	Date	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014	4/17/2014			
	Unit	ua/m <sup>3</sup>	ua/m <sup>3</sup>	ua/m <sup>3</sup>								
75-00-3	Chloroethane	ND	1.1	-	-							
67-66-3	Chloroform	ND	1.1	-	-							
74-87-3	Chloromethane	0.469	0.601	0.774	0.564	0.76	1.07	1.05	1.24	3.7	-	-
542-75-6	cis-1,3-Dichloropropene	ND	2.3	-	-							
156-59-2	cis-1,2-Dichloroethene	ND	1.9	-	-							
110-82-7	Cyclohexane	ND	1.04	2.19	ND	ND	ND	1.20	ND	NA	-	-
75-71-8	Dichlorodifluoromethane	1.93	2.31	2.15	2.32	1.12	1.83	1.34	2.35	16.5	-	-
100-41-4	Ethylbenzene	ND	ND	1.33	ND	0.877	ND	ND	ND	5.7	-	-
64-17-5	Ethanol	18.3	14.2	31.3	16.3	14.9	ND	ND	15.4	210	-	-
141-78-6	Ethyl Acetate	ND	5.4	-	-							
76-14-2	Freon-114	ND	NA	-	-							
142-82-5	Heptane	ND	ND	1.37	ND	ND	ND	ND	ND	NA	-	-
87-68-3	Hexachlorobutadiene	ND	6.8	-	-							
67-63-0	Isopropanol	2.83	1.88	5.51	3.32	1.99	ND	ND	2.2	250	-	-
75-09-2	Methylene Chloride	ND	ND	20.2	ND	ND	ND	ND	14.3	10	60	-
1634-04-4	Methyl Tert-Butyl Ether	ND	11.5	-	-							
110-54-3	n-Hexane	0.885	ND	3.95	ND	ND	ND	ND	0.754	10.2	-	-
1330-20-7	p/m-Xylene	2.08	2.09	4.69	2.69	3.17	ND	ND	ND	22.2	-	-
95-47-6	o-Xylene	0.93	0.93	1.90	1.27	1.44	ND	ND	ND	7.9	-	-
100-42-5	Styrene	ND	1.9	-	-							
127-18-4	Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	0.454	0.448	0.237	15.9	30.0	Mon./Mit./<100
109-99-9	Tetrahydrofuran	0.959	0.667	2.37	0.838	0.882	ND	ND	ND	NA	-	-
108-88-3	Toluene	2.78	2.30	5.65	2.48	2.89	ND	ND	0.867	43	-	-
156-60-5	trans-1,2-Dichloroethene	ND	NA	-	-							
10061-02-6	trans-1,3-Dichloropropene	ND	1.3	-	-							
79-01-6	Trichloroethene (TCE)	ND	4.2	5.0	Mon./Mit./<5							
75-69-4	Trichlorofluoromethane	1.50	1.62	2.10	1.79	1.94	1.49	1.55	1.67	18.1	-	-
593-60-2	Vinyl bromide	ND	NA	-	-							
75-01-4	Vinyl Chloride	ND	<1.9	-	-							
	Helium	0.336	0.17	0.636	ND	0.182	-	-	-	NA	-	-

**Notes:**

ua/m<sup>3</sup> = micrograms per cubic meter

# **APPENDIX A**

Phase I ESA



**AIRTEK ENVIRONMENTAL CORP.**

39-37 29<sup>TH</sup> STREET, L.I.C. NY 11101  
PHONE (718) 937-3720 FAX (718) 937-3721  
WWW.AIRTEKENV.COM

**Phase I Environmental Site Assessment**

**Submitted To:**

M. L. Wilson Boys & Girls Club of Harlem  
25 West 144th Street Fifth Floor  
New York, New York, 10031

**Premises:**

521 West 145<sup>th</sup> Street  
Block 2077, Lot 14  
New York, New York, 10031

**Prepared By:**

Airtek Environmental Corp.  
39-37 29<sup>th</sup> Street  
Long Island City, New York 11101

Airtek Project Number: 10-0013

March 22, 2010

Report by:

Mike S. Zouak, President

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## EXECUTIVE SUMMARY

The M. L. Wilson Boys & Girls Club of Harlem (Boys and Girls Club of Harlem, client) retained Airtek Environmental Corp. (Airtek) to conduct a Phase I Environmental Site Assessment of the property located at 521 West 145th Street (Block 2077, Lot 14), New York, New York 10031 (the subject property). The objective of the assessment was to provide an independent professional opinion regarding recognized environmental conditions, as defined by American Society for Testing and Materials (ASTM), associated with the subject property. This assessment was requested in association with a planned redevelopment.

This assessment was performed under the conditions of, and in accordance with Airtek's Proposal Number 09-346.JL, dated December 31, 2009, using ASTM E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* as a guideline. Any exceptions to, additions to, or deletions from the ASTM guidelines are described in the report. Details of the work performed, sources of information, and findings are presented in the report. Limitations of the assessment are described in Section 1.4.

The subject property comprised a 29,985 square foot lot of land currently owned by M.L. Wilson Boys Club. The lot was improved with an H-shaped, five-story school building not in use at the time of this assessment. The subject property was bounded to the north by West 146th Street, and to the south by West 145th Street. The subject property was located within a residential and light commercial setting.

The subject property is further described as Block 2077, Lot 14. According to records maintained by the New York City Department of Buildings (NYCDOB), the land comprising the subject property is zoned for residential use.

At the time of this report, no environmental lien search was conducted. ASTM E1527-05 defines the review of subject property title records and environmental liens as a user responsibility (ASTM E1527-05 6.2). In addition, this review is required in order to satisfy the scope of "all appropriate inquiry," as defined by the United States Congress (ASTM E1527-05 X1.2.4 and 42 U.S.C. §9601(35)(B)(iii)). Failure to conduct this review is considered a significant data gap, and Airtek recommends conducting such a review in order to satisfy the scope of ASTM E1527-05 and "All Appropriate Inquiry," as defined by CERCLA.

According to NYCDOB records, 17 violations are listed for the subject property. Of these, 13 violations are currently open, including 9 Environmental Control Board (ECB) violations. The open non-ECB violations comprise three emergency violations of an unspecified nature and one violation related to the safety of the subject building. The nine open ECB violations were issued in regards to the sidewalk sheds associated with the subject property. Airtek observed no evidence of recognized environmental conditions among the NYCDOB violations associated with the subject property.

The historical research conducted for this assessment has established the use of the subject property since 1893. An 1893 fire insurance map depicted the subject property as undeveloped. A 1909 fire insurance map depicted the H-shaped building currently improving the subject property. No significant changes to the subject property were noted in subsequent historical records reviewed.

This assessment has revealed evidence of the following *recognized environmental conditions*, as defined by ASTM E1527-05, or part of the scope of "all appropriate inquiry," as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), were revealed during this assessment:

- During the March 9, 2010 site visit, Airtek observed a store room located at the eastern end of the basement. The store room contained numerous bottles, located on shelves, on the floor, and obscured by the debris coating the floor. Bottles were observed intact and broken, with caps and without, containing liquids, pills, powders, and sludge. Labels on the majority of the bottles had either deteriorated completely or were illegible. Airtek observed a bottle of acid, a bottle of sodium bicarbonate, bleach powder, and antibiotics.

This finding is considered a recognized environmental condition because it indicates a likely release of hazardous chemicals on the subject property or structures on the subject property. Airtek recommends contacting a Resource Conservation and Recovery Act (RCRA)-permitted treatment, storage, and disposal facility (TSDF) to arrange for the removal and disposal of miscellaneous

chemical waste located in the basement store room. Once debris has been removed from the room, an inspection of the concrete slab flooring for cracks and gaps should be conducted. Based on this inspection, further subsurface investigation may be warranted.

- During the March 9, 2010 site visit, Airtek observed a large pile of miscellaneous debris occupying the center of the first floor's central span. The nature of the observable debris, which included car tires, a car door, a car seat, furniture, and wood, indicated that part or all of the larger debris pile originated offsite. The majority of the debris pile was obscured with the upper layer of debris.

This finding is considered a recognized environmental condition because it indicates a likely release or material threat of release of hazardous chemicals on the subject property or structures on the subject property. Airtek recommends assessing the contents of the large first floor debris pile with regards to sources of hazardous chemicals or petroleum products which may impact the subject property.

- Fire insurance maps from 1909 through 1968 (see Section 4.4.2) and city directory records from 1927 through 1993 (see Section 4.4.3) depicted an electrical substation, laundry facilities, dry cleaners, and automotive garages adjacent and in the vicinity of the property at various periods in history. In addition, Airtek observed a closed laundry facility south adjacent to the subject property during a March 9, 2010 site visit (Section 2.2). These past uses in proximity to the subject property indicate the potential for storage, use, and release of petroleum products, PCB-containing fluids, and solvents which may have adversely impacted the subject property.

This finding is considered a recognized environmental condition because it indicates a likely past release of hazardous chemicals and/or petroleum products which have impacted the subject property. The absence or presence of these chemicals on the subject property can only be confirmed through further subsurface investigation.

The following environmental conditions, which are not considered to be *recognized environmental conditions* as defined by ASTM E1527-05, or part of the scope of "all appropriate inquiry," as defined by CERCLA, were revealed during this assessment:

- Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Therefore, asbestos-containing materials (ACM) may exist on the subject property.

This finding is not considered a recognized environmental condition because asbestos is not a CERCLA issue. At the time of Airtek's site visit, Airtek staff conducted a survey of the subject property in order to determine the presence and extent of ACM throughout the subject property. The results and conclusions of this survey will be presented in a separate report. Any planned demolition or disturbance of identified onsite ACM materials must be conducted by properly trained and licensed asbestos abatement professionals, in accordance with all appropriate statutes and regulations.

- Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Lead-based paint (LBP) was commonly used for corrosion protection in the 1960s, and in prime, intermediate, and finish coats well into the 1970s. Regulations specifically addressing lead-based paint include Housing and Urban Development (HUD) (1995) guidelines and the Consumer Product Safety Act (1977). Therefore, LBP may exist on subject property surfaces.

This finding is not considered a recognized environmental condition because LBP is not a CERCLA issue. However, it should be assumed until proven otherwise that LBP exists throughout the subject property. Prior to any planned demolition or disturbance of painted materials, any subcontractor or employee working onsite should be made aware of this condition.

- During the March 9, 2010 site visit, Airtek observed pigeon feces and several small piles of coal on the subject property (see Section 5.2).

This finding is not considered a recognized environmental condition because fecal material and coal are not considered CERCLA issues. However, fecal material is a potential biological vector for disease and coal is a combustible material. Therefore, Airtek recommends the appropriate removal of these materials from the subject property.

**Phase I Environmental Site Assessment for  
521 West 145th Street  
Block 2077, Lot 14  
New York, New York 10031**

## **1.0 INTRODUCTION**

This report presents the findings of the Phase I Environmental Site Assessment (ESA) of the property located at 521 West 145th Street (Block 2077, Lot 14), New York, New York 10031 (the subject property). The site reconnaissance was conducted by Mr. Judah Lebow, Project Manager with Airtek, on March 9, 2010 in accordance with the United States Environmental Protection Agency (USEPA)'s "All Appropriate Inquiries" Standard and the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Environmental Site Assessment Process (ASTM Standard E-1527-05) and the scope of work provided to the M. L. Wilson Boys & Girls Club of Harlem (Boys and Girls Club of Harlem, client) by Airtek. At the time of the site visit, Airtek was able to gain access to all areas of the subject property, except for those obstructed or obscured by debris.

### **1.1 Purposes**

The purposes of this Phase I Environmental Site Assessment were:

1. To identify the presence or release of any hazardous substances, hazardous wastes, or petroleum products affecting the subject property;
2. To determine the level of compliance with current environmental standards, laws, regulations and permits (if any) with respect to the subject property;
3. To provide information pertinent to the valuation of the subject property;
4. To evaluate any risk to the health and well-being of the Client's agents, employees, and contractors, as well as to the general public;
5. To identify whether any hazardous substances, hazardous wastes, or petroleum products have been stored, released or disposed of on the subject property; and
6. To identify the need for additional testing to evaluate the scope, location, source and nature of any release of hazardous substances, hazardous wastes, or petroleum products affecting the subject property.

### **1.2 Detailed Scope of Work**

The scope of work for the ESA is in general accordance with the requirements of ASTM Standard E 1527-05. Airtek warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in Airtek proposal 09-346.JL, dated December 31, 2009. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying Recognized Environmental Conditions (RECs). No other warranties are implied or expressed.

### **1.3 Significant Assumptions**

Environmental conditions may exist on the subject property that were not evident based on the available information. Airtek cannot and does not warrant or guarantee that the information provided by these

other sources is accurate or complete. Airtek is not responsible for the quality or content of information from these sources. This assessment employs methodologies intended to provide Boys and Girls Club of Harlem with information relating to the subject property, and does not represent all-inclusive or comprehensive results.

#### **1.4 Limitations and Exceptions**

The findings and conclusions contain all of the limitations inherent in these methodologies referred to in ASTM 1527-05. Specific limitations and exceptions to this ESA are set forth below, if applicable.

##### **1.4.1 Unavailable Documentation**

At the time of this assessment, all requested documents regarding the subject property were made available for review, except for the following:

- Airtek contacted the NYSDEC on January 6, 2010 regarding records of storage tanks or releases of hazardous substances at the subject property. As of the date of this report, the NYSDEC has not responded to Airtek's request. Airtek will forward any responses from the NYSDEC as an addendum should they significantly change the findings of this report.

The unavailability of this document did not prevent an evaluation of recognized environmental conditions with regards to the subject property.

##### **1.4.2 Data Gaps**

Historical subject property use information was obtained for the time period, 1893 to 2010. Several gaps in use information exceeding five years were encountered during this assessment. Additionally, several documents requested as a part of this assessment were not available as of the date of this report (see Section 1.4.1). At the time of the March 9, 2010 site visit, Airtek was able to gain access to all areas of the subject property, except for those obstructed or obscured by debris. Based on general knowledge of the area and known past uses of the subject property, Airtek did not consider these gaps to be significant.

At the time of this report, no environmental lien search was conducted. ASTM E1527-05 defines the review of subject property title records and environmental liens as a user responsibility (ASTM E1527-05 6.2). In addition, this review is required in order to satisfy the scope of "all appropriate inquiry," as defined by the United States Congress (ASTM E1527-05 X1.2.4 and 42 U.S.C. §9601(35)(B)(iii)). Failure to conduct this review is considered a significant data gap.

#### **1.5 Special Terms and Conditions**

The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the client. No subsurface exploratory drilling or sampling was done under the scope of this work. Unless specifically stated otherwise in the report, no chemical analyses have been performed during the course of this ESA.

Some of the information provided in this report is based on personal interviews, research of available documents, records, and maps held by the appropriate government and private agencies. This information is subject to the limits of historical documentation, availability, and accuracy of pertinent records and the personal recollections of those persons contacted.

The scope of work for this investigation consists of a subject property reconnaissance and a review of available information regarding the Site obtained from relevant regulatory agencies. This report summarizes the results of the Site reconnaissance and includes a summary of pertinent regulatory files searched with regard to hazardous materials, hazardous wastes or petroleum products. Data gaps if any are identified and mentioned (see Section 1.4.2).

The field investigation included a Site assessment, observation of neighboring properties and verification of permits and building records as necessary. The review and inspection were performed by Mr. Judah Lebow, Project Manager with Airtek.

Airtek has made a reasonable effort, using commonly accepted industry standards, i.e., ASTM Standard E-1527-05, to perform this Phase I ESA. Airtek's inquiry was limited to interviews, review of available documents and visual observations of readily accessible areas of the subject property. Airtek's findings and recommendations regarding the subject property can be found in Section 8.0 of this report.

## **1.6 Use Reliance**

All reports, both verbal and written, are for the benefit of Boys and Girls Club of Harlem, its successors and assigns. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of Airtek Environmental Corp.

## **2.0 SUBJECT PROPERTY DESCRIPTION**

This section describes the location of the subject property, description of the adjacent properties, and subject property area overview.

### **2.1 Subject Property Location and Legal Description**

The subject property comprised a 29,985 square foot lot of land currently owned by M.L. Wilson Boys Club. The lot was improved with an H-shaped, five-story school building not in use at the time of this assessment. The subject property was bounded to the north by West 146th Street, and to the south by West 145th Street. The subject property was located within a residential and light commercial setting.

The subject property is further described as Block 2077, Lot 14. According to records maintained by the New York City Department of Buildings (NYCDOB), the land comprising the subject property is zoned for residential use.

At the time of this report, no environmental lien search was conducted. ASTM E1527-05 defines the review of subject property title records and environmental liens as a user responsibility (ASTM E1527-05 6.2). In addition, this review is required in order to satisfy the scope of "all appropriate inquiry," as defined by the United States Congress (ASTM E1527-05 X1.2.4 and 42 U.S.C. §9601(35)(B)(iii)). Failure to conduct this review is considered a significant data gap (see Section 1.4.2).

### **2.2 Subject/Adjacent Property General Characteristics**

The area surrounding the subject property consists primarily of residential and light commercial properties. Adjoining properties were observed (from the subject property or from public access areas) for signs of recognized environmental conditions and their potential to pose an environmental concern to the subject property (Figure 2, Appendix B). The uses and features of adjoining properties are described below.

**North (from west to east):** Residences, post office, and Public School 153

**East (from north to south):** Community garden, hotel

**South (from west to east):** Metro Wash Laundromat, residences, offices, beauty salon, and restaurant

**West (from south to north):** Hardware store, residential buildings

Current visible uses of adjoining properties do not appear to present an environmental concern to the subject property, with the exception of the south adjacent Metro Wash Laundromat, which appeared closed at the time of Airtek's March 9, 2010 site visit. Previous use as a laundry facility indicates the potential for use, storage, and release of solvents which may have impacted the subject property.

### **2.3 Current Use of the Property**

The subject property comprised a 29,985 square foot lot of land currently owned by M.L. Wilson Boys Club. The lot is currently improved with an out-of-use five-story school building. The main entrance to the subject property was located along West 145<sup>th</sup> Street, and a secondary entrance was located along West 146<sup>th</sup> Street.

Based on observations made during Airtek' site visit, the following information was ascertained:

- Stormwater runoff from the subject property flows north and south into storm drains located along West 146<sup>th</sup> and 145<sup>th</sup> Streets, respectively.
- The subject property does not currently utilize electricity. When in use, the subject property utilized electricity provided by Con Edison Company.
- The subject property does not currently utilize water services. The subject property formerly utilized water services provided by the NYCDEP.
- The subject property does not currently utilize sewerage services. Sewerage generated on the subject property was formerly discharged to the municipal sewer system.
- The subject property does not currently utilize household or commercial garbage removal services.

### **3.0 USER PROVIDED INFORMATION**

ASTM E 1527 defines "user" as the party seeking to use Practice E 1527 to complete an environmental site assessment of the subject property, and in this case, the user is the Boys and Girls Club of Harlem. ASTM E 1527 specifies that certain tasks associated with identifying potential RECs at the subject property should be performed by the user and provided to the environmental professional. This section documents the information obtained from the user.

Mr. Benjamin Warnke, Principal of Warnke Community Consulting and acting on behalf of the Boys and Girls Club of Harlem, completed an ASTM Practice E 1527-05 User/Client Questionnaire on January 7, 2010, regarding environmental issues at the subject property.

#### **3.1 Recorded Land Title Records**

According to Mr. Warnke, the Boys and Girls Club of Harlem is not aware of any environmental issues relating to recorded land title records.

#### **3.2 Specialized Knowledge**

Mr. Warnke indicated that the Boys and Girls Club of Harlem does not have any knowledge of any Activity and Use Limitations (AULs) such as engineering controls, land use restrictions, or institutional controls that are in place at the subject property or filed or recorded in a registry under federal, tribal, state or local law. Additionally, the Boys and Girls Club of Harlem indicated that it is not aware of any previous uses of the subject property that may pose an environmental concern.

### 3.3 Commonly Known or Reasonably Ascertainable Information

Mr. Warnke was asked if the Boys and Girls Club of Harlem was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.	Yes	_____	No	<u>  X  </u>
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Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.	Yes	_____	No	<u>  X  </u>
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Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.	Yes	_____	No	<u>  X  </u>
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### 3.4 Valuation Reduction for Environmental Issues

Mr. Warnke indicated that the Boys and Girls Club of Harlem believed the purchase price of the property reasonably reflected the fair market value of the property.

### 3.5 Owner, Property Manager, and Occupant Information

Mr. Warnke indicated that the Boys and Girls Club of Harlem is not aware of any owner, property manager, or occupant information material to RECs in connection with the subject property.

### 3.6 Reason for Performing Phase I

Mr. Warnke indicated that this assessment was requested in association with property redevelopment.

### 3.7 Other

No other issues were identified by the Boys and Girls Club of Harlem.

## 4.0 RECORD REVIEW

### 4.1 Standard Environmental Records Sources

Environmental Data Resources, Inc. (EDR) was subcontracted for the task of performing the record search for the subject Site. The following records were reviewed in the EDR Radius Map™ Report:

- 4.1.1 National Priority List (NPL)
- 4.1.2 Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
- 4.1.3 CORRACTS (Corrective Action Report)
- 4.1.4 Resource Conservation and Recovery Information System (RCRIS)
  - Treatment, storage and disposal sites (TSD Facilities)
  - Large quantity generators
  - Small quantity generators
- 4.1.5 Emergency Response Notification System (ERNS)
- 4.1.6 State Hazardous Waste Sites (SHWS)
- 4.1.7 State Solid Waste Facilities/Landfill Sites (SWF/LF)

- 4.1.8 Leaking Underground Storage Tank Incident Reports LTANKS
- 4.1.9 Petroleum Bulk Storage (PBS) Database
- 4.1.10 Chemical Bulk Storage (CBS) Database
- 4.1.11 Major Oil Storage Facilities Database (MOSF)
- 4.1.12 Hazardous Substance Waste Disposal Site Inventory (HSWDS)
- 4.1.13 Spills Information Database
- 4.1.14 Drycleaners
- 4.1.15 Voluntary Cleanup Program (VCP)
- 4.1.16 Manufactured Gas Plants
- 4.1.17 Manifest
- 4.1.18 INST Control
- 4.1.19 Formerly Used Defense Sites (FUDS)
- 4.1.20 Vapor Reopened

The subject property was not listed in any of the databases reviewed as part of the EDR report

#### **4.1.1 National Priority List (NPL)**

NPL is EPA's subset of Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. A review of this list did not reveal any NPL sites located within one-quarter mile of the subject property.

#### **4.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)**

CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). A review of this list did not reveal any CERCLIS sites located within one-quarter mile of the subject property.

#### **4.1.3 CORRACTS (Corrective Action Report)**

CORRACTS identifies hazardous waste handlers with the Resource Conservation and Recovery Act (RCRA) corrective action activity. A review of this database did not reveal any CORRACTS sites located within one-half mile of the subject property.

#### **4.1.4 Resource Conservation and Recovery Information System (RCRIS)**

- **Treatment, storage and disposal sites (TSD Facilities)**
- **Large quantity generators**
- **Small quantity generators**

RCRIS includes selective information on sites that generate, transport, store, treat and/or dispose of hazardous waste as defined by RCRA. A review of the database did not reveal any RCRA-TSD Facilities located within one-half mile of the subject property.

A large quantity generator (LQG) facility is defined as one that generates at least 1,000 kilograms per month (kg/mo) of non-acutely hazardous waste or 1 kg/mo of acutely hazardous waste. A review of the database revealed no LQG facilities within one-quarter mile of the subject property.

A small quantity generator (SQG) facility is defined as one that generates between 100 and 1,000 kg/mo of nonacutely hazardous waste. A review of the database revealed no SQG facilities within one-quarter mile of the subject property.

#### **4.1.5 Emergency Response Notification System (ERNS)**

ERNS records and stores information on reported releases of oil and hazardous substances. A review of this database did not reveal any ERNS records associated with the subject property

#### **4.1.6 State Hazardous Waste Sites (SHWS)**

SHWS records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties.

A review of this database did not reveal any SHWS sites located within one-half mile of the subject property.

#### **4.1.7 State Solid Waste Facilities/Landfill Sites (SWF/LF)**

The SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites. A review of this database revealed no SWF/LF sites located within one-half mile of the subject property.

#### **4.1.8 Leaking Storage Tank Incident Reports (LTANKS)**

LTANKS records contain an inventory of reported leaking storage tank incidents reported from April 1, 1986 through the most recent update. These tanks can be either underground storage tanks or aboveground storage tanks. A review of this database revealed a total of 59 LTANKS sites located within one-half mile of the subject property. Six of these sites are within one eighth mile of the subject property. The facilities are listed with closure dates ranging from January 13, 1995 through to June 1, 2009, indicating the cleanup has been completed at these sites to the satisfaction of the NYSDEC. The remaining facility, located at 1743 Amsterdam Avenue, is associated with a release of less than one gallon of number two fuel oil, as evidenced by a tank tightness test failure. Based on the magnitude of the incident and the distance from the subject property, this release is not thought to pose a significant risk to the environment of the subject property.

#### **4.1.9 Petroleum Bulk Storage (PBS) Database**

The PBS database contains registered facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons, including above ground storage tanks (ASTs) and underground storage tanks (USTs). A review of this data revealed 12 UST sites within one-eighth of a mile from the subject property. Incidents of leaking underground storage tanks (LUSTs) are reported in Section 4.1.8.

Records reviewed by EDR revealed 38 AST sites within one-eighth of a mile from the subject property. 33 of the AST listings did not exhibit any associated violations. Three of the AST sites, located at 528 West 145<sup>th</sup> Street, 540 West 145<sup>th</sup> Street, and 545 West 146<sup>th</sup> Street were listed in the NY Spills database with closure dates of January 10, 1997, December 10, 2002, and November 29, 1993, respectively (see Section 4.1.13). The remaining sites, located at 3544 and 3569 Broadway, were listed in the LTANKS database with associated closure dates of February 26, 2003 and February 13, 2009, respectively (see Section 4.1.8).

#### **4.1.10 Chemical Bulk Storage (CBS) Database**

This database contains facilities that store regulated hazardous substances in above ground storage tanks (ASTs) with capacities of 185 gallons or greater and in underground tanks of any size (USTs). A review of this database did not reveal any CBS UST or CBS AST sites located within one-eighth mile of the subject property.

#### **4.1.11 Major Oil Storage Facilities Database (MOSF)**

This database contains facilities that may be on shore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater. A review of this database did not reveal any MOSF sites located within one-half mile of the subject property.

#### **4.1.12 Hazardous Substance Waste Disposal Site Inventory (HSWDS)**

This list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. The database did not reveal any HSWDS sites within one-half mile of the subject property.

#### **4.1.13 Spills Information Database**

The NYSDEC Spills and Historical Spills databases contains data collected on spills, which are reported to the NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6NYCRR Section 613.8 (from PBS sources), or 6NYCRR Section 595.2 (from CBS sources). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of this list revealed 27 spills reported within one eighth-mile of the subject property. All of the se were listed as having closure dates ranging from November 29, 1993 through August 20, 2009 and are not thought to pose a significant threat to the environment of the subject property.

#### **4.1.14 Drycleaners**

A review of the EDR Drycleaners database did not reveal any drycleaner sites within one-eighth mile from the subject property. A review of the Manifest database revealed three drycleaning facilities within one-eighth mile of the subject property (see Section 4.1.17).

#### **4.1.15 Voluntary Cleanup Program (VCP)**

A review of the EDR report revealed no VCP sites located within one-half mile of the subject property.

#### **4.1.16 Manufactured Gas Plants**

A review of the EDR report did not reveal any Manufactured Gas Plants within one-half mile of the subject property.

#### **4.1.17 Manifest**

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to the Treatment Storage and Disposal (TSD) facility. A review of the Manifest database revealed six Manifest sites within one-eighth mile of the subject property. According to the databases reviewed, no unresolved violations were associated with these sites.

#### **4.1.18 INST Control**

INST Control sites are sites where institutional controls are present in relation to known contamination on-site. A review of the EDR report did not reveal any institutional controls sites within one-half mile of the subject property.

#### **4.1.19 Formerly Used Defense Sites (FUDS)**

Formerly Used Defense Sites (FUDS) are sites where the US Army Corps of Engineers are actively working or planning remediation. No FUDS sites were noted within 1 mile of the subject property.

#### **4.1.20 Vapor Reopened**

Vapor Reopened sites are sites which were previously closed by New York State, but which have been reopened as the threat of vapor infiltration has been reevaluated in recent years. No Vapor Reopened sites were located within one-half mile of the subject property.

The other listed sites are not expected to present an environmental concern to the subject property because they only hold an operating permit (which does not imply a problem), require no further action, exhibit no evidence of regulatory action, or based upon Airtek' review, are too distant and/or topographically downgradient or crossgradient relative to the subject property to reasonably affect it. For more information regarding the above-mentioned sites, please refer to the EDR-Radius Map with GeoCheck® Report included as Appendix 10.5 of this report.

## **4.2 Additional Environmental Record Sources**

### **4.2.1 Building Department**

The NYCDOB maintains records on all properties in the City of New York. According to NYCDOB records, 17 violations are listed for the subject property. Of these, 13 violations are currently open, including 9 Environmental Control Board (ECB) violations. The open non-ECB violations comprise three emergency violations of an unspecified nature and one violation related to the safety of the subject building. The nine open ECB violations were issued in regards to the sidewalk sheds associated with the subject property. Airtek observed no evidence of recognized environmental conditions among the NYCDOB violations associated with the subject property.

Copies of the NYCDOB information can be found in Appendix D, Exhibit D-3.

### **4.2.2 Property Shark**

The website PropertyShark.com maintains records assembled from various public data sources. According to the records reviewed by Airtek, the subject building was constructed in approximately 1902.

Copies of the Property Shark report, which is included in Appendix D, D-3.

### **4.2.3 Fire Department**

Airtek contacted the Fire Department of New York (FDNY) on January 6, 2010 regarding records of storage tanks or releases of hazardous substances at the subject property. In a January 13, 2010 response, the FDNY indicated that they had no records associated with the subject property.

### **4.2.4 New York State Department of Environmental Conservation**

Airtek contacted the NYSDEC on January 6, 2010 regarding records of storage tanks or releases of hazardous substances at the subject property. As of the date of this report, the NYSDEC has not responded to Airtek's request. Airtek will forward any responses from the NYSDEC as an addendum should they significantly change the findings of this report.

### **4.2.5 New York City Department of Environmental Protection**

Airtek contacted the NYCDEP on January 6, 2010 regarding records of storage tanks or releases of hazardous substances at the subject property. In a February 22, 2010 response letter, the NYCDEP stated that they "have not discovered any information relevant to [the] request."

## **4.3 Physical Setting Sources**

### **4.3.1 Topography**

The EDR Historical Topographic Map of Central Park, New York, dated 1995 was reviewed for this ESA. According to the contour lines on the map the property slopes from southeast to northwest. The southeastern corner of the property is located at approximately 125 feet above mean sea level (amsl) and the northwestern corner is located at approximately 120 feet amsl. The subject property is located approximately 1,600 feet east-southeast of the Hudson River. Only significant landmarks are included on the map. No specific topographic attributes, such as retaining walls, creeks, slopes, etc. are shown. No

surface water is depicted as present on or adjacent to the property, nor are production wells or other significant surface features depicted on the topographic maps.

#### **4.3.2 Soils/Geology**

According to the Geotek addendum to the EDR Report, urban fill material, silt loam, loamy sand, sandy loam, and fine sandy loam may be present beneath the subject property, and may be composed of Paleozoic rock of Ordovician age. Soils in the vicinity of the site are similar in composition and age.

#### **4.3.3 Hydrology**

No information was available regarding groundwater quality in the immediate vicinity of the site.

#### **4.3.4 Flood Zone Information**

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map was reviewed to determine if the subject property is located in a flood hazard area. According to the map, the subject property is located in Zone X, which denotes areas determined to be outside of the 500-year floodplain (FEMA Panel #360497-0079F, revised September 5, 2007).

#### **4.3.5 Oil and Gas Exploration**

No oil or gas exploration is known to occur in the region.

### **4.4 Historical Information on the Property**

#### **4.4.1 Aerial Photographs**

Aerial photographs, which include the subject and adjoining properties, were reviewed for this report. Photographs from the years 1954, 1966, 1975, 1984, 1994, and 2006, were available for review and are summarized as follows:

Date: 1954

- The subject property appeared developed with an H-shaped building. West 145<sup>th</sup> and 146<sup>th</sup> Streets appeared in their current configuration. Adjacent properties to the east and west appeared developed as residential structures. Larger, likely commercial structures were visible across West 146<sup>th</sup> Street to the north and West 145<sup>th</sup> Street to the south.

Date: 1966

- No significant changes from the 1954 aerial photograph were observed.

Date: 1975

- A large building, identified on a 1979 fire insurance map as Public School Number 153, was visible to the northeast of the subject property. No other significant changes from the 1966 fire insurance map were observed.

Date: 1984

- No significant changes from the 1975 aerial photograph were observed.

Date: 1994

- No significant changes from the 1984 aerial photograph were observed.

Date: 2006

- No significant changes from the 1994 aerial photograph were observed.

No readily apparent evidence of potential recognized environmental conditions at the subject or adjoining properties was noted in the aerial photographs.

#### **4.4.2 Fire Insurance Maps**

Fire insurance maps typically depict either the locations of manufacturing and industrial facilities within the city limits or potential hazards existing within individual building structures. In many cases, evidence of environmental concern, such as locations of USTs, can be found by reviewing fire insurance maps.

Airtek reviewed fire insurance map depicting the subject and adjacent properties from the complete Sanborn Library collection. Fire insurance maps dated 1893, 1909, 1939, 1950, 1968, 1976, 1977, 1979-1981, 1983, 1986, 1988, 1989, 1991-1996, and 2001-2005 were available for review and depicted the following:

Date: 1893

- The subject property was depicted as undeveloped. West 145<sup>th</sup> and 146<sup>th</sup> Streets appeared in their current configuration, bounding the subject property to the south and north, respectively. Adjacent properties appeared undeveloped, except for several residential properties located across West 146<sup>th</sup> Street.

Date: 1909

- The subject property appeared developed with an H-shaped building, arms open to the north and south, and was labeled as Public School Number 186. Two black rectangular structures were depicted in the basement northwest adjacent to the center of the building. These shapes are often used in fire insurance maps to indicate the position of boilers. A garage improved with a 30-gallon gasoline UST was depicted across West 145<sup>th</sup> Street to the south. A United Electric Light & Power Company substation was shown across West 146<sup>th</sup> Street, northeast of the subject property. North adjacent properties were undeveloped. The remaining adjacent properties were developed as residences.

Date: 1939

- The south adjacent garage was approximately double the size delineated in the 1909 fire insurance map. A laundry appeared approximately 60 feet east of the subject property. The northeast adjacent property previously depicted as an electrical substation appeared as an empty lot. A post office was depicted west of the empty lot, directly across West 146<sup>th</sup> Street from the subject property. Many of the properties identified as residential in the 1909 fire insurance map were shown as residential structures with first-floor stores. No other significant changes from the 1936 fire insurance were observed.

Date: 1950

- No significant changes from the 1936 fire insurance map were observed.

Date: 1968

- The south side of West 145<sup>th</sup> Street was not shown in the 1968 fire insurance map. The laundry facility depicted to the east of the subject property was shown as a store. No significant changes from the 1950 fire insurance map were observed.

Date: 1976

- The south adjacent property identified as a garage in the 1950 fire insurance map was shown as a daycare center. No other significant changes from the 1968 fire insurance map were observed.

Date: 1977

- The south side of West 145<sup>th</sup> Street was not shown in the 1977 fire insurance map. No other significant changes from the 1976 fire insurance map were observed.

Date: 1979

- The northeast adjacent property appeared developed with a large building identified as Public School Number 153. No other significant changes from the 1977 fire insurance map were observed.

Date: 1980

- The south side of West 145<sup>th</sup> Street was not shown in the 1977 fire insurance map. No other significant changes from the 1979 fire insurance map were observed.

Date: 1981

- No significant changes from the 1980 fire insurance map were observed.

Date: 1983

- No significant changes from the 1981 fire insurance map were observed.

Date: 1986

- No significant changes from the 1983 fire insurance map were observed.

Date: 1988

- No significant changes from the 1986 fire insurance map were observed.

Date: 1989

- No significant changes from the 1988 fire insurance map were observed.

Date: 1991

- No significant changes from the 1990 fire insurance map were observed.

Date: 1992

- No significant changes from the 1991 fire insurance map were observed.

Date: 1993

- No significant changes from the 1992 fire insurance map were observed.

Date: 1994

- No significant changes from the 1993 fire insurance map were observed.

Date: 1995

- No significant changes from the 1994 fire insurance map were observed.

Date: 1996

- No significant changes from the 1995 fire insurance map were observed.

Date: 2001

- No significant changes from the 1996 fire insurance map were observed.

Date: 2002

- No significant changes from the 2001 fire insurance map were observed.

Date: 2003

- No significant changes from the 2002 fire insurance map were observed.

Date: 2004

- No significant changes from the 2003 fire insurance map were observed.

Date: 2005

- No significant changes from the 2004 fire insurance map were observed.

Fire insurance maps from 1909 to 2005 depicted two large boilers in the basement of the subject property. Based on observations made during Airtek's March 9, 2010 site visit, Airtek believes these boilers to have been powered by coal.

No readily apparent evidence of potential recognized environmental conditions at the subject or adjoining properties was noted in the fire insurance maps, except for the following:

- Fire insurance maps from 1909 to 1968 depicted a garage improved with a 30-gallon gasoline UST approximately 80 feet south of the subject property. Previous use of this property as an automotive garage with a gasoline tank indicates the potential storage, use, and release of petroleum products and solvents with the potential to impact the subject property.
- A 1909 fire insurance map showed an electrical substation located approximately 80 feet northeast of the subject property. Electrical substations typically contain large electrical transformers employing dielectric fluid contaminated with polychlorinated biphenyls (PCBs). Previous use of this property as an electrical substation indicates the potential use, storage, and release of PCBs with the potential to impact the subject property.
- Fire insurance maps from 1939 to 1950 depicted a laundry facility 60 feet east of the subject property. Previous use of this property indicates the potential use, storage, and release of solvents with the potential to impact the subject property.

**4.4.3 City Directories**

The EDR City Directory Abstract included information from city telephone listings from the following years: 1920, 1923, 1927, 1931, 1934, 1938, 1942, 1947, 1950, 1956, 1958, 1963, 1968, 1973, 1978, 1983, 1988, 1993, 1996, 1998, 2000 and 2006.

521 West 145th Street was listed in 1938, 1942, 1947, 1950, 1956, 1958, 1963, 1968, and 1973. The listings describe the property as a public school.

Adjacent properties were listed as a number of private and commercial tenants. Readily apparent evidence of environmental concerns at the adjoining properties was noted in the city directories reviewed, and is summarized as follows:

<b>Listing Address/Approximate Location from Subject Property</b>	<b>Years Listed</b>	<b>Listed Name</b>
510 West 145 <sup>th</sup> Street / 115 feet southeast	1927-1968	Automotive garage
511 West 145 <sup>th</sup> Street / 70 feet east	1942-1958	Washington Laundry and Cleaners
513 West 145 <sup>th</sup> Street / 40 feet east	1950-1956	1950 – Luster Three Hour Cleaners Inc. 1956 – Flamingo Cleaners
520 West 145 <sup>th</sup> Street / 95 feet southwest	1988-1993	Flash Cleaners
529 West 145 <sup>th</sup> Street / west adjacent	1947-1956	Royal Cleaners and Tailors

The previous use of properties in the vicinity of the subject property for automotive and drycleaning purposes indicates the potential past usage, storage, and release of petroleum products and solvents which may have adversely impacted the environment of the subject property.

**4.4.4 Historical Topographic Maps**

Airtek reviewed historic topographic maps for the subject property and vicinity. Historic topographic maps were provided by EDR and are included in Appendix C, Exhibit C-3. Maps dated 1897, 1947, 1966, 1979, and 1995 were available for review and depicted the following:

**Date: 1897 USGS Quadrangle: Harlem, New York Scale: 1:625,000**

- The subject property appeared improved with unspecified development. West 145<sup>th</sup> and 146<sup>th</sup> Streets appeared in their current configuration, bounding the subject property to the south and north, respectively. Adjacent properties to the east and across West 145<sup>th</sup> Street to the south appeared improved with unspecified development.

**Date: 1947 USGS Quadrangle: Central Park, New York Scale: 1:25,000**

- The subject property was depicted as a school. Adjacent properties appeared improved with unspecified development. No other significant changes from the 1897 topographic map were observed.

**Date: 1966 USGS Quadrangle: Central Park, New York Scale: 1:24,000**

- The subject property was labeled as PS 186. A property located across West 146<sup>th</sup> Street to the northeast of the subject property was labeled as “Electric.” No other significant changes from the 1947 topographic map were observed.

**Date: 1979 USGS Quadrangle: Central Park, New York Scale: 1:24,000**

- No significant changes from the 1966 topographic map were observed.

**Date: 1995 USGS Quadrangle: Central Park, New York Scale: 1:24,000**

- No significant changes from the 1979 topographic map were observed.

No readily apparent evidence of environmental concerns at the subject property or adjoining properties was noted on the topographic maps reviewed.

#### **4.4.5 Additional Historical Record Sources**

No additional historical sources were reviewed.

#### **4.4.6 Prior Assessment Reports**

No other environmental reports or assessments were available for review at the time of this assessment.

## **5.0 SITE RECONNAISSANCE**

### **5.1 Methodology and Limitations**

At the time of the site visit, Airtek was able to gain access to all areas of the subject property, except for those obstructed or obscured by debris. Photographs taken at the time of the ESA are included in Appendix A.

### **5.2 General Observations**

During Airtek's March 9, 2010 site visit, the subject property was improved with an H-shaped school building, with building spans extending from West 146<sup>th</sup> Street to West 146<sup>th</sup> Street along the eastern and western bounds of the property, and a central span the two former spans. Courtyards bounded by West 145<sup>th</sup> and 146<sup>th</sup> Streets occupied the areas between the spans. Airtek accessed the subject property from the southern courtyard. Airtek accessed the subject building from an entrance along the western span which opened onto the southern courtyard. A large pile of debris occupied the center of the southern courtyard.

The subject property was improved with a basement which housed the majority of the structure's physical plant. The basement did not extend to the contours of the overlying floors and was primarily limited to a central span and a section extending beneath the eastern span's southern half. A layer of deteriorated pipe insulation, plaster, bird feces, and miscellaneous debris coated the floor of the basement.

Heating ventilation and cooling (HVAC) equipment including three water circulation pumps and associated belt-driven air handling units (AHUs) were located at northwestern, southwestern, and northeastern portions of the basement. Two insulated steam condensate tanks were located next to the northwestern and southwestern AHUs.

Airtek observed sumps located along a central portion of the basement's northern side and at the southern terminus of the eastern span. Four large coal-fired boilers were located at the center of the basement. A depression was located immediately south of the boilers. At the time of Airtek's site visit, the depression was filled with standing water and debris.

Ceiling-mounted tracks were installed leading from the southern side of the boilers to the southern half of the eastern span. The southern terminus of the basement's eastern span was improved with a crank-operated, chain-driven elevator leading to the sidewalk along West 145<sup>th</sup> Street. Airtek observed three small (less than five gallon) piles of coal pellets along the basement's southeastern span.

A store room was located at the eastern end of the basement and was improved with wall-mounted shelving, some of which had deteriorated and detached from the wall. Airtek observed seven intact bottles located on the shelves. Numerous bottles were located in the floor and an indeterminate number of bottles were obscured by the debris coating the floor. Bottles were observed intact and broken, with caps and without, containing liquids, pills, powders, and sludge. Labels on the majority of the bottles had either deteriorated completely or were illegible. Airtek observed a bottle of acid and a bottle of sodium bicarbonate, bleach powder, and antibiotics.

The remainder of the building's five floors were improved with classrooms, bathrooms, store rooms, and stairwells. A layer of deteriorated pipe insulation, plaster, bird feces, and miscellaneous debris coated areas of the first and subsequent floors. A larger pile of miscellaneous debris occupied the center of the first floor's central span. The nature of the debris, which included car tires, a car door, a car seat, furniture, and wood, indicated that part or all of the larger debris pile originated offsite. Pigeons were seen roosting in various classrooms throughout the building. Airtek observed trees growing out of the fifth floor and through holes in the roof. HVAC towers were located at the northeast, southeast, southwest, northwest and central portions of the subject building's roof. Open water tanks were observed in brick enclosures located at the eastern and western ends of the roof's central span.

### **5.3 Hazardous Substances and Petroleum Products**

The subject property was assessed for signs of storage, use, or disposal of hazardous materials. The assessment consisted of noting evidence (e.g., drums, unusual vegetation patterns, staining) indicating that hazardous materials are currently or were previously located on the subject property.

Airtek observed a store room located at the eastern end of the basement. The store room contained numerous bottles, located on shelves, on the floor, and obscured by the debris coating the floor. Bottles were observed intact and broken, with caps and without, containing liquids, pills, powders, and sludge. Labels on the majority of the bottles had either deteriorated completely or were illegible. Airtek observed a bottle of acid and a bottle of sodium bicarbonate, bleach powder, and antibiotics.

### **5.4 Storage Tanks**

#### **5.4.1 Underground Storage Tanks (USTs)**

The subject property was inspected for evidence of underground storage tanks (USTs) (e.g., vent piping, dispensing equipment, pavement variations).

Airtek observed no evidence of USTs at the time of the site visit.

#### **5.4.2 Aboveground Storage Tanks (ASTs)**

The subject property was inspected for evidence of ASTs (e.g. concrete foundations or saddles, pedestals or steel support structures).

Airtek observed no evidence of ASTs at the time of the site visit.

### **5.5 In-Ground Hydraulic Equipment**

The subject property was inspected for evidence of in-ground hydraulic equipment (e.g. hydraulic elevators or lifts that have hydraulic fluid-containing reservoirs or jacks below ground surface). Although not regulated as USTs, hydraulic equipment of this type can be of concern due to the potential for oil leaks from the hydraulic cylinders. Hydraulic fluid in equipment installed in 1978 or before may contain PCBs.

Airtek observed no evidence of in-ground hydraulic equipment during the site visit.

## **5.6 Polychlorinated Biphenyls (PCBs)**

The subject property was inspected for the presence of liquid-cooled electrical units (transformers, light ballasts, and capacitors), and major sources of hydraulic fluid (elevators and lifts). Such units are notable because they are potential PCB sources.

Airtek observed no evidence of potential PCB sources.

## **5.7 Wastewater and Storm Water Discharge**

As of the date of this report, the subject property does not utilize water or sewerage services. The subject property formerly utilized water services provided by the NYCDEP, and sewerage generated on the subject property was formerly discharged to the municipal sewer system.

Stormwater runoff from the subject property flows north and south into storm drains located along West 146<sup>th</sup> and 145<sup>th</sup> Streets, respectively.

## **5.8 Discharge Sources / Waste sources**

Evidence of industrial, process or other discharge sources (i.e. other than domestic waste water from sinks and toilets) was not observed on the subject property.

As of the date of this report, the subject property does not utilize household or commercial garbage removal services.

## **5.9 Oil/Water Separators, Clarifiers, Sumps, and Trenches**

The subject property was inspected for evidence of oil/water separators, clarifiers, sumps and trenches (e.g. hatches, manholes, patches on the floor slabs). Although not regulated as USTs, these features can be of concern due to the potential for leaks into the subsurface.

Airtek observed a two sumps in the subject property basement, specifically along a central portion of the northern side and at the southern terminus of the eastern span. At the time of Airtek's March 9, 2010 site visit, the sumps appeared out of use and filled with water.

## **5.10 Radiological Hazards**

Airtek observed no evidence of radiological substances or equipment on the subject property

## **5.11 Septic Systems**

The subject property was inspected for evidence of current or former septic systems (e.g. clean out manhole, records, interviews).

Airtek observed no evidence of septic systems during the course of the site walkthrough.

## **5.12 Wells**

Airtek observed no evidence of wells or cisterns on the subject property.

## **5.13 Dry Cleaning Operations**

Airtek observed no dry cleaners on the subject property, and records reviewed indicate no past use of the subject property as a dry cleaning facility.

## **6.0 NON-ASTM ISSUES**

### **6.1 Asbestos-Containing Materials**

Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Therefore, ACM may exist on the subject property.

At the time of Airtek's site visit, Airtek staff conducted a survey of the subject property in order to determine the presence and extent of asbestos-containing materials (ACM) throughout the subject property. The results and conclusions of this survey will be presented in a separate report. Any planned demolition or disturbance of identified onsite ACM materials must be conducted by properly trained and licensed asbestos abatement professionals, in accordance with all appropriate statutes and regulations.

### **6.2 Radon**

Radon is a naturally occurring radioactive gas formed by the decay of uranium in bedrock and soil. The potential adverse health effects associated with radon gas depend on various factors, such as the concentration of the gas and duration of exposure. The concentration of radon gas in a building depends on subsurface soil conditions, the integrity of the building's foundation, and the building's ventilation system.

No formal radon study was conducted on the subject property. However, the New York State Department of Health (NYSDOH) "Measured Basement Screening Radon Levels," dated October, 2008 provides information regarding the general radon levels in the area of the subject property. The report surveyed a total of 102 homes within New York County. Of those homes that were tested, 10.80% were found to have radon level of 4 pico curies per liter (pCi/l) or above. According to U.S. Environmental Protection Agency (EPA) guidance document entitled "A Citizen's Guide to Radon" (August 1986), radon exposures in the range of 4.0 pCi/l "are considered average or slightly above average for residential structures. The report results indicate that Queens County is categorized as having a minor potential for indoor radon problems.

### **6.3 Lead-Based Paint (LBP)**

Lead-based paint (was commonly used for corrosion protection in the 1960s, and in prime, intermediate, and finish coats well into the 1970s. Regulations specifically addressing lead-based paint include Housing and Urban Development (HUD) (1995) guidelines and the Consumer Product Safety Act (1977). These regulations define lead-based paint as containing 0.5% lead by weight (5,000 ppm), and 0.06% lead by weight (600 ppm), respectively, for housing and consumer products. There is no industrial definition. There are specific testing methods for sampling and analyzing lead in paint.

Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Therefore, LBP may exist on subject property surfaces. Prior to any planned demolition or disturbance of painted materials, an LBP study should be conducted by licensed professionals to determine whether and where LBP is present onsite.

### **6.4 Mold Evaluation**

A limited visual inspection for mold growth was performed as part of this investigation. Visible mold growth was noted throughout damp portions of the subject building. Mold growth may be present in areas of the subject building even if mold is not visible.

## **7.0 INTERVIEWS**

### **7.1 Interview with Owner**

On March 17, 2010, Airtek conducted a telephone interview with Ms. Shirley Lewis, Chairperson of the Board of the Boys and Girls Club of Harlem. Ms. Lewis was forthcoming with information for which she

had knowledge. Ms. Lewis has been with the Boys and Girls Club of Harlem since approximately 2003. According to Ms. Lewis, the Boys and Girls Club acquired the subject property in the early 1980s. Ms. Lewis stated that debris deposited in the center of the first floor had originally been located in the southern courtyard, and had since been moved inside the subject building to its current location. Ms. Lewis was not aware of any releases of chemicals or petroleum products on the subject or adjacent properties.

Ms. Lewis was asked if she was aware of any of the following:

Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property. Yes \_\_\_\_\_ No   X  

Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property. Yes \_\_\_\_\_ No   X  

Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products. Yes \_\_\_\_\_ No   X  

## 7.2 Interview with Site Manager

At the time of Airtek's this report, no site manager for the subject property was available for interview.

## 7.3 Interviews with Occupants

At the time of Airtek's site visit, no occupants were available for interview.

## 7.4 Interviews with Others

No other interviews were conducted as part of this assessment

## 8.0 FINDINGS, OPINIONS, CONCLUSIONS, AND RECOMMENDATIONS

Airtek has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 1527-05 of the property located at 521 West 145th Street (Block 2077, Lot 14), New York, New York 10031, the subject property. Any exceptions to, or deletions from, this practice are described in Section 1 of this report.

This assessment has revealed evidence of the following *recognized environmental conditions*, as defined by ASTM E1527-05, or part of the scope of "all appropriate inquiry," as defined by CERCLA, were revealed during this assessment:

- During the March 9, 2010 site visit, Airtek observed a store room located at the eastern end of the basement. The store room contained numerous bottles, located on shelves, on the floor, and obscured by the debris coating the floor. Bottles were observed intact and broken, with caps and without, containing liquids, pills, powders, and sludge. Labels on the majority of the bottles had either deteriorated completely or were illegible. Airtek observed a bottle of acid, a bottle of sodium bicarbonate, bleach powder, and antibiotics.

This finding is considered a recognized environmental condition because it indicates a likely release of hazardous chemicals on the subject property or structures on the subject property. Airtek recommends contacting a Resource Conservation and Recovery Act (RCRA)-permitted treatment, storage, and disposal facility (TSDF) to arrange for the removal and disposal of miscellaneous chemical waste located in the basement store room. Once debris has been removed from the room, an inspection of the concrete slab flooring for cracks and gaps should be conducted. Based on this inspection, further subsurface investigation may be warranted.

- During the March 9, 2010 site visit, Airtek observed a large pile of miscellaneous debris occupying the center of the first floor's central span. The nature of the observable debris, which included car tires, a car door, a car seat, furniture, and wood, indicated that part or all of the larger debris pile originated offsite. The majority of the debris pile was obscured with the upper layer of debris.

This finding is considered a recognized environmental condition because it indicates a likely release or material threat of release of hazardous chemicals on the subject property or structures on the subject property. Airtek recommends assessing the contents of the large first floor debris pile with regards to sources of hazardous chemicals or petroleum products which may impact the subject property.

- Fire insurance maps from 1909 through 1968 (see Section 4.4.2) and city directory records from 1927 through 1993 (see Section 4.4.3) depicted an electrical substation, laundry facilities, dry cleaners, and automotive garages adjacent and in the vicinity of the property at various periods in history. In addition, Airtek observed a closed laundry facility south adjacent to the subject property during a March 9, 2010 site visit (Section 2.2). These past uses in proximity to the subject property indicate the potential for storage, use, and release of petroleum products, PCB-containing fluids, and solvents which may have adversely impacted the subject property.

This finding is considered a recognized environmental condition because it indicates a likely past release of hazardous chemicals and/or petroleum products which have impacted the subject property. The absence or presence of these chemicals on the subject property can only be confirmed through further subsurface investigation.

The following environmental conditions, which are not considered to be *recognized environmental conditions* as defined by ASTM E1527-05, or part of the scope of "all appropriate inquiry," as defined by CERCLA, were revealed during this assessment:

- Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Therefore, ACM may exist on the subject property.

This finding is not considered a recognized environmental condition because asbestos is not a CERCLA issue. At the time of Airtek's site visit, Airtek staff conducted a survey of the subject property in order to determine the presence and extent of ACM throughout the subject property. The results and conclusions of this survey will be presented in a separate report. Any planned demolition or disturbance of identified onsite ACM materials must be conducted by properly trained and licensed asbestos abatement professionals, in accordance with all appropriate statutes and regulations.

- Records reviewed by Airtek indicated that the subject building was constructed in approximately 1902 (see Section 4.2.2). Lead-based paint (LBP) was commonly used for corrosion protection in the 1960s, and in prime, intermediate, and finish coats well into the 1970s. Regulations specifically addressing lead-based paint include Housing and Urban Development (HUD) (1995) guidelines and the Consumer Product Safety Act (1977). Therefore, LBP may exist on subject property surfaces.

This finding is not considered a recognized environmental condition because LBP is not a CERCLA issue. However, it should be assumed until proven otherwise that LBP exists throughout the subject property. Prior to any planned demolition or disturbance of painted materials, any subcontractor or employee working onsite should be made aware of this condition.

- During the March 9, 2010 site visit, Airtek observed pigeon feces and several small piles of coal on the subject property (see Section 5.2).

This finding is not considered a recognized environmental condition because fecal material and coal are not considered CERCLA issues. However, fecal material is a potential biological vector for disease and coal is a combustible material. Therefore, Airtek recommends the appropriate removal of these materials from the subject property.

## 9.0 REFERENCES

### SOURCES

Agency and division/source: M. L. Wilson Boys & Girls Club of Harlem  
Name/title of representative: Ms. Shirley Lewis / Chairperson of the Board  
Location of Agency: 25 West 144th Street Fifth Floor, New York, New York, 10031  
Agency Telephone Number: (212) 926-0832

### REFERENCES

#### Physical Setting

- *EDR Radius Map™ Report*, Environmental Data Resources, Inc., January 7, 2010
- *EDR Historical Topographic Maps*, Environmental Data Resources, Inc., January 7, 2010
- *Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) Map No. #360497-0079F*, revised September 5, 2007, prepared by FEMA

#### State and County Agencies

- *EDR Radius Map™ Report*, Environmental Data Resources, Inc., January 7, 2010
- Property Shark (pshark.com)
- *The EDR City Directory Abstract*, Environmental Data Resources, Inc., January 7, 2010

#### Aerial Photographs

- *The EDR Aerial Photo Decade Package*, Environmental Data Resources, Inc., January 7, 2010

#### Topographic Maps

- *The EDR Historical Topographic Map Report*, Environmental Data Resources, Inc., January 7, 2010

## **APPENDIX A: SITE PHOTOGRAPHS**



<b>Photo No.:</b>	<b>Photo Description:</b> View of subject property from across West 145 <sup>th</sup> Street, facing north	<b>Photo Date:</b> 03/09/2010
1	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of subject property from across West 146 <sup>th</sup> Street, facing south	<b>Photo Date:</b> 03/09/2010
2	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of subject building entrance and southern courtyard, with piled debris visible	<b>Photo Date:</b> 03/09/2010
3	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of staircase leading from first floor to basement	<b>Photo Date:</b> 03/09/2010
4	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> Representative view of basement with building materials in deteriorated condition	<b>Photo Date:</b> 03/09/2010
5	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> Representative view of circulation pump located in basement	<b>Photo Date:</b> 03/09/2010
6	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> Representative view of air handling unit (AHU) located in basement	<b>Photo Date:</b> 03/09/2010
7	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> Representative view of coal-fired boiler, located in basement	<b>Photo Date:</b> 03/09/2010
8	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of standing water located south adjacent to boilers	<b>Photo Date:</b> 03/09/2010
9	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of basement store room floor, with various bottles of unidentified chemicals visible	<b>Photo Date:</b> 03/09/2010
10	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of basement store room shelving	<b>Photo Date:</b> 03/09/2010
11	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of bottle of acid and bottle of sodium bicarbonate, located in basement store room	<b>Photo Date:</b> 03/09/2010
12	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of bottles of bleach powder, located in basement store room	<b>Photo Date:</b> 03/09/2010
13	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of debris pile located in central span of first floor	<b>Photo Date:</b> 03/09/2010
14	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of public toilet located on first floor	<b>Photo Date:</b> 03/09/2010
15	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of classroom located on second floor	<b>Photo Date:</b> 03/09/2010
16	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of stairwell leading from second to third floor, with obstruction visible	<b>Photo Date:</b> 03/09/2010
17	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of auditorium portion of fourth floor central span	<b>Photo Date:</b> 03/09/2010
18	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of fifth floor classrooms, with debris and deteriorated roof visible	<b>Photo Date:</b> 03/09/2010
19	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of heating ventilation and cooling (HVAC) towers on roof, facing south from central span	<b>Photo Date:</b> 03/09/2010
20	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of HVAC tower, located on central span roof	<b>Photo Date:</b> 03/09/2010
21	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of north adjacent Public School 153	<b>Photo Date:</b> 03/09/2010
22	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of east adjacent community garden, located along West 146 <sup>th</sup> Street	<b>Photo Date:</b> 03/09/2010
23	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of eastern adjacent hotel, restaurant, and beauty salon located along West 145 <sup>th</sup> Street	<b>Photo Date:</b> 03/09/2010
24	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of south adjacent laundromat (closed)	<b>Photo Date:</b> 03/09/2010
25	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of south adjacent residences, offices, beauty salon, and restaurant	<b>Photo Date:</b> 03/09/2010
26	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of west adjacent hardware store and beauty salon, located along West 145 <sup>th</sup> Street	<b>Photo Date:</b> 03/09/2010
27	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of west adjacent residential buildings, located along West 146 <sup>th</sup> Street	<b>Photo Date:</b> 03/09/2010
28	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013

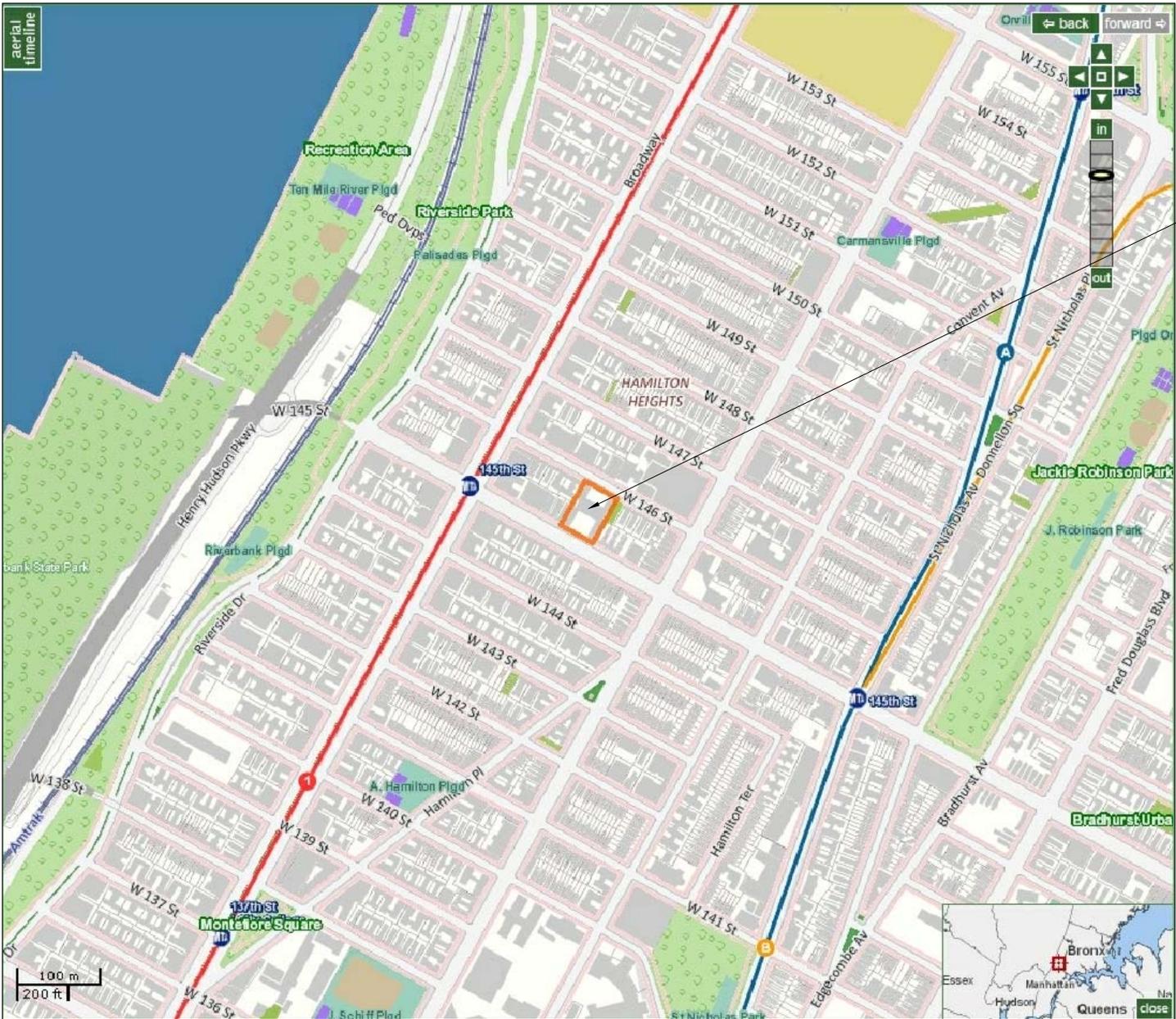


<b>Photo No.:</b>	<b>Photo Description:</b> View of north adjacent residential structures	<b>Photo Date:</b> 03/09/2010
29	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013



<b>Photo No.:</b>	<b>Photo Description:</b> View of north adjacent post office	<b>Photo Date:</b> 03/09/2010
30	<b>Site:</b> 521 West 145th Street, New York, New York, 10031 <b>Client:</b> M. L. Wilson Boys & Girls Club of Harlem	<b>Project No.:</b> 10-0013

## **APPENDIX B: FIGURES**



SUBJECT PROPERTY

Consultant:  
 AIRTEK ENVIRONMENTAL CORP.  
 3647 264 STREET  
 LONG ISLAND CITY, NY 11101  
 TEL: 718/937-3728  
 FAX: 718/938-3721

Project: 10-0013  
 Owner:  
 M. L. Wilson Boys & Girls  
 Club of Harlem

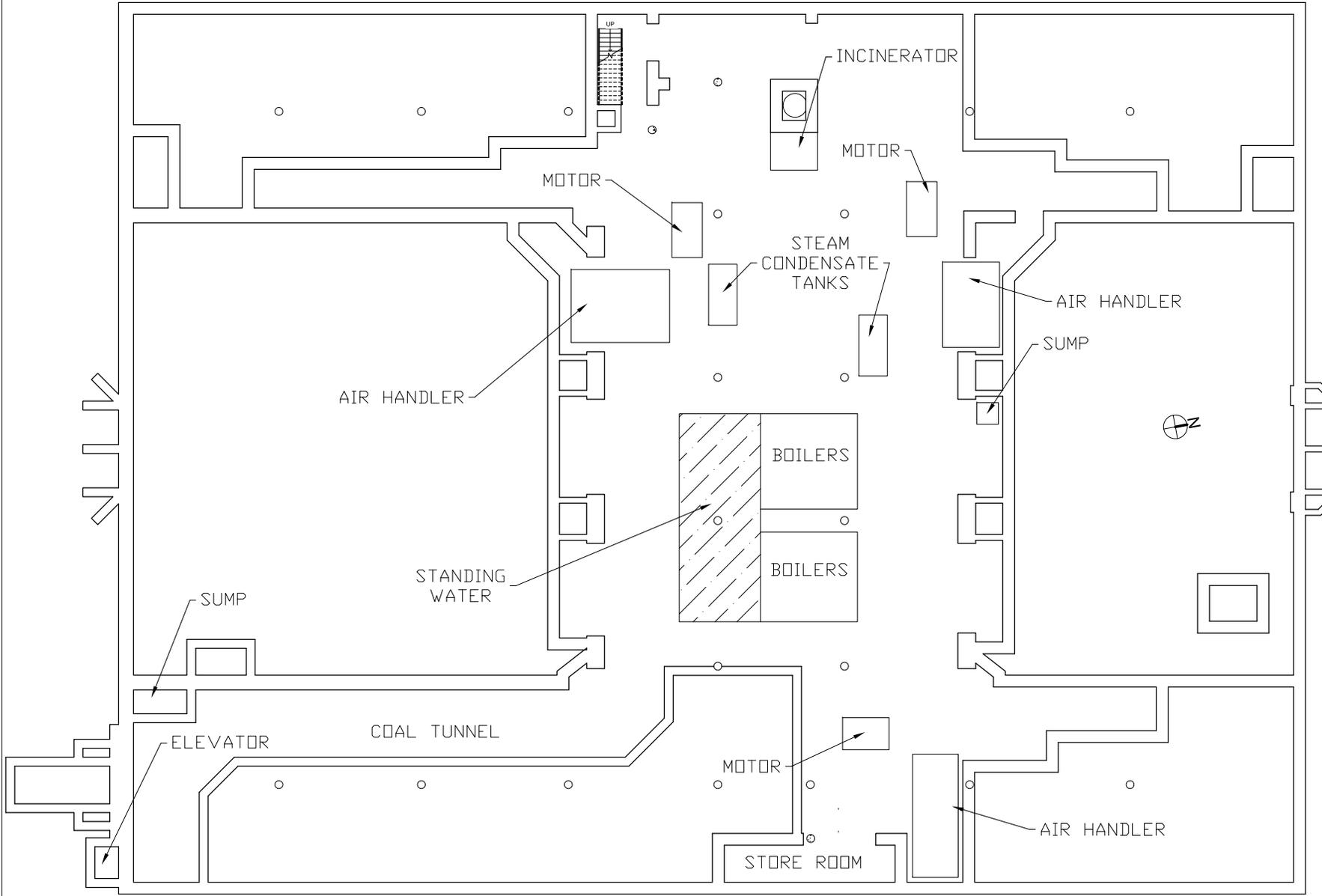
Subject Property Overview  
 Figure 1

521 West 145th Street  
 (former PS186)

Drawn by: MH  
 Check by: JL  
 Scale: NTS  
 Date: 03.10.10

Drawing no. \_\_\_\_\_

FIG 1



**BASEMENT LEVEL**

Consultant:  
**AIRTEK ENVIRONMENTAL CORP.**  
 3647 29th STREET  
 LONG ISLAND CITY, NY 11106  
 TEL: 718/37-3728  
 FAX: 718/37-3721

Project: 10-0013  
 Owner:  
**M. L. Wilson Boys & Girls Club of Harlem**

**Subject Property Detail Figure 2**

**521 West 145th Street (former PS186)**

Drawn by: MH  
 Check by: JL  
 Scale: NTS  
 Date: 03.10.10

Drawing no. \_\_\_\_\_

**FIG 2**

## **APPENDIX C: HISTORICAL RESEARCH DOCUMENTATION**

**C-1: Aerial Photographs**

**C-2: Fire Insurance Maps**

### **C-3: Historical Topographic Maps**

**APPENDIX D: REGULATORY RECORDS DOCUMENTATION**

**D-1: The EDR Radius™ Mapped Database Report**

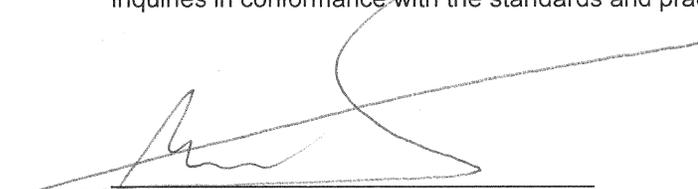
**D-2: The EDR™ City Directory**

**Exhibit D-3: General Public Records**

## APPENDIX E: QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR Part 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



\_\_\_\_\_  
Mike S. Zouak, President

\_\_\_\_\_  
Date

3/22/10

## **APPENDIX B**

### Final Environmental Impact Statement

# West Harlem Rezoning FEIS

## CHAPTER 9: HAZARDOUS MATERIALS

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### A. INTRODUCTION

This chapter assesses the potential for the presence of hazardous materials in soil and/or groundwater at both the projected and potential development sites identified in the reasonable worst-case development scenario (RWCDS) under the proposed West Harlem Rezoning project. The rezoning encompasses an approximately 90-block area in the West Harlem neighborhood in Manhattan, Community District 9. There are a total of 38 development sites, of which 22 are considered projected development sites and 16 are considered potential development sites (refer to Figure 1-7 in Chapter 1, “Project Description”).

As described in the *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether a proposed action would lead to a potential increased exposure of hazardous materials to people or the environment or whether the increased exposure would lead to significant public health impacts or environmental damage. The objective of the hazardous materials assessment is to determine which, if any, of the projected and potential development sites identified as part of the RWCDS may have been adversely affected by current or historical uses at or adjacent to the sites, such that the property would require an (E) designation.

An (E) designated site is an area designated on a zoning map within which no change of use or development requiring a New York City Department of Buildings permit may be issued without approval of the New York City Office of Environmental Remediation (OER). Redevelopment of these sites requires OER review to ensure protection of human health and the environment from any known or suspected hazardous materials associated with the site. Regardless of the type of planned redevelopment, a hazardous materials (E) designation may be placed on a site based on past use. The OER oversees the (E) designation Environmental Review Program. For properties where existing buildings will be converted with no intrusive soil work, the owner will need to contact the OER and provide them with the development plans. OER will issue a Notice of No Objection, which will enable the New York City Department of Buildings to issue the conversion permit. The (E) designation for the site remains and must be satisfied if any future redevelopment involves excavation and/or soil disturbance.

A preliminary screening of potential hazardous materials impacts was performed for all of the 22 projected and 16 potential development sites. This assessment was undertaken to determine whether additional investigations are necessary and whether an (E) designation should be placed on privately-held projected or potential development sites under the Proposed Action to avoid the potential for impacts pertaining to hazardous materials. As discussed below, the hazardous materials assessment presented herein has identified that each of the projected and potential development sites has some associated concern regarding environmental conditions. As a result, the proposed zoning map actions include (E) designations for all projected and potential development sites. Therefore the Proposed Action is not expected to result in significant adverse impacts for hazardous materials.

### B. PRINCIPAL CONCLUSIONS

A preliminary screening of potential hazardous materials impacts was performed for all of the 22 projected and 16 potential development sites. The hazardous materials assessment identified that each of the projected and potential development sites has some associated concern regarding environmental conditions. As a result, the proposed zoning map actions include (E) designations for all projected and

potential development sites. Therefore the Proposed Action is not expected to result in significant adverse impacts for hazardous materials.

With the requirements of the (E) designation on projected and potential development sites, there would be no impact from the potential presence of contaminated materials. The implementation of the preventative and remedial measures outlined above would reduce or avoid the potential that significant adverse hazardous materials impacts would result from potential construction in the rezoning area resulting from the Proposed Action. Following such construction, there would be no potential for significant adverse impacts.

## C. METHODOLOGY

The methodology for the hazardous materials assessments was determined by the current zoning of each development site (i.e., manufacturing, commercial or residential). As per Chapter 24 of Title 15 of the Rules of the City of New York, reviews of the regulatory database and/or Sanborn maps and city directories were used to determine past uses of the property and enable an assessment of whether the lot should receive an (E) designation.

Chapter 24 of Title 15 of the Rules of the City of New York specifies the process for determining if an (E) designation should be placed on a specific site. Section 24-04 describes the preliminary screening process, which includes reviewing historical documentation for past or current uses that may have affected or be affecting a projected or potential development site or an adjacent site. Appendix A of the Hazardous Materials Appendix 5 (Chapter 24 of Title 15 of the Rules of the City of New York) provides a list of types of facilities, activities or conditions which would lead to a site receiving an (E) designation.

The specific methodology was based on the proposed zoning change. The development sites were divided into two groups: 1) sites where the zoning is changing from manufacturing, manufacturing or commercial (with no residential uses) to a zoning designation which allows residential use, and 2) sites that currently allow residential use. The two methodologies are described below.

- For the 28 residentially-zoned or commercially/residentially zoned properties (hereafter referred to as “residential sites”), the potential for environmental impacts from historic uses (primarily petroleum releases associated with underground storage tanks), was assessed via review of a regulatory database encompassing each site and the 400-foot buffer zone surrounding each site.
- For the one commercially-zoned and nine manufacturing-zoned sites (hereafter referred to as “commercial sites” or “manufacturing sites”, respectively), the assessment consisted of a review of the historic Sanborn maps and city directories to identify past historic uses that may have impacted soil and groundwater on the property or adjacent properties.

Specific information sources used in the assessment are described as follows.

### Regulatory Databases

For each of the residential sites, published federal and state environmental databases were reviewed to identify use, generation, storage, treatment, disposal, and/or release of hazardous substances and/or petroleum products, which may have impacted the properties. Environmental Data Resources, Inc. (EDR) of Milford, Connecticut, conducted the search of the regulatory database records and provided the records in the form of regulatory agency database reports. The regulatory databases were reviewed separately for

each site and the 400-foot buffer zone around each site. Where sites were adjacent to each other on the same block, the buffer zone was measured from the center of the clustered sites.

The following table outlines the ASTM standard Federal and State databases reviewed.

<b>Federal and State Regulatory Agency Databases Reviewed</b>
Federal National Priorities List (NPL)
Federal Delisted NPL Site List
NPL LIENS Federal Superfund Liens
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List
Federal CERCLIS No Further Remedial Action Planned (NFRAP) List
Federal Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) List
Federal RCRA non-CORRACTS Treatment, Storage or Disposal (TSD) Facilities List
Federal RCRA Generators Lists (Large, Small, NonGen and Conditionally Exempt)
Federal Institutional Control/Engineering Control Registries
Federal Emergency Response Notification System (ERNS)
VAPOR REOPENED Vapor Intrusion Legacy Site List
New York State Spills (NY Spills)
Inactive Hazardous Waste Disposal Sites in New York State (SHWS)
Hazardous Substance Waste Disposal Site Inventory (HSWDS)
Solid Waste Facility/Landfill (SWF/LF)
Leaking Storage Tanks Incidents Report (LTANKS)
Registered Aboveground/Underground Storage Tanks (ASTs/USTs)
CBS UST Chemical Bulk Storage Database
MOSF UST Major Oil Storage Facilities Database
CBS AST Chemical Bulk Storage Database
Institutional and Engineering Controls (INST CNTRL/ENG CNTRL)
Manufactured Gas Plant Sites (Coal Gas)
Drycleaners Database
Voluntary Cleanup Program (VCP)
Brownfields Cleanup Program

## **Historic Sanborn Fire Insurance Maps**

The Sanborn map review for the commercial and manufacturing sites included an examination of maps for each available decade from the late 1800's through 2005. Historic Sanborn maps were also obtained from EDR.

## **City Directories**

City directories for the project area for the years 1920 through 2006 were obtained from EDR and reviewed to determine potential site tenants/uses which may have resulted in environmental impacts to the commercial and manufacturing sites.

## Limitations

While the Sanborn map and city directory reviews were conducted in accordance with the protocols outlined in the ASTM-E-1527-05 standard, it should be emphasized that, as all of the projected and potential development sites are privately-owned, the scope of this project was limited to collecting and analyzing limited information sufficient to make a determination relevant to a hazardous materials (E) designation. Sanborn and city directory review was limited to the properties and adjacent properties within the boundaries of the rezoning area. The regulatory database review was also conducted in accordance with the protocols outlined in the ASTM-E-1527-05 standard and encompassed the site and a 400-foot buffer zone around each site or cluster of sites. Other elements of a Phase I Environmental Site Assessment (ESA) and the protocols outlined in the CEQR Technical Manual (e.g. reviews of building department and fire department records, a title deed search, and interviews with current and former employees and owners), were not included.

## D. EXISTING CONDITIONS

The rezoning area has been mainly occupied by residential and commercial uses for over 100 years. The general use of the area has not changed much as indicated by Sanborn maps dating from 1902 to 2005 and city directories for the years 1927 through 2006. Around and after the 1930s, commercial and light manufacturing uses including auto repair shops, dry cleaners, printing facilities, paint shops, a plastic manufacturer and metal & aluminum manufacturing facilities appear in the area as indicated by Sanborn maps and city directories. The regulatory database research indicated small quantity generators of hazardous waste, (leaking) underground and aboveground storage tanks, chemical and petroleum spill incidents, hazardous waste transportation, storage, treatment and/or disposal sites, and dry cleaning facilities.

## E. THE FUTURE WITHOUT THE PROPOSED ACTION (NO-ACTION)

In the future without the Proposed Action, given the existing zoning and land use trends in the area, it is anticipated that the rezoning area would experience modest residential, commercial, and community facility growth over the next 10-year period. The RWCDs identifies 17 projected development sites and 15 potential development sites on which new construction or conversion could occur pursuant to existing zoning in the future without the Proposed Action (see Chapter 1, "Project Description"). The current uses of the remaining development sites, which do not currently present a hazard to people or the environment, are expected to continue.

However, any construction involving soil disturbance could potentially create or increase pathways for human exposure to any subsurface hazardous materials present. Since no (E) designations (which require the owner of a property to assess potential hazardous material impacts prior to construction) currently exist on any portion of the rezoning area, such soil disturbance would not necessarily be conducted in accordance with the procedures (e.g., for conducting testing before commencing excavation and implementation of health and safety plans during construction) described in the following section. However, the New York State Department of Environmental Conservation (NYSDEC) regulatory requirements pertaining to any identified petroleum tanks and/or spills, requirements for disturbance and handling of suspect lead-based paint and asbestos-containing materials, and requirements for off-site disposal of soil/fill, would need to be followed. As such, without the Proposed Action, the amount of soil disturbance would be less, but potentially the controls on its performance would not be as stringent as under the Proposed Action, as described below.

## F. THE FUTURE WITH THE PROPOSED ACTION (WITH-ACTION)

In the future with the Proposed Action, there are 22 projected development sites and 16 potential development sites that are assumed to be developed by 2021 under the RWCDS. The analysis below examines projected and potential sites where it could be expected that development in the future with the Proposed Action would have the potential for environmental impacts due to potential presence of hazardous materials. These impacts could include the potential for impacts to the health and safety of workers during construction, the potential for the transport of contaminated soil, or the potential for impact on future residents or employees of individual buildings on these sites.

Appendix A of the Hazardous Materials Appendix 5 (Chapter 24 of Title 15 of the Rules of the City of New York) provides a list of facilities, activities or conditions requiring an (E) designation. If the projected or potential development sites or adjacent properties had indications of uses listed in Appendix A, placement of an (E) designation was recommended. Additionally, if properties within the 400-foot buffer zone surrounding each residential site or cluster of residential sites had indications in the regulatory database of uses listed in Appendix A, placement of an (E) designation was also recommended. A matrix summarizing the findings of the assessment is shown in Table 9-1 at the end of this chapter. In the matrix, the results for the projected and potential development sites are reported separately from findings for the sites included within the 400-foot buffer-zone.

The screening for all sites was conducted by reviewing historical documentation for past or current uses that may have affected or be affecting a projected or potential development site or an adjacent site. The past uses were compared to the list of types of facilities, activities or conditions which would lead to a site receiving an (E) designation given in Appendix A of the Hazardous Materials Appendix 5. Based on this screening, all projected and potential development sites within the proposed West Harlem rezoning area meet the criteria for placement of an (E) designation.

By placing (E) designations on sites where there is a known or suspect environmental concern, the potential for an adverse impact to human health and the environment resulting from the Proposed Action would be reduced or avoided. The (E) designation provides the impetus to identify and address environmental conditions so that significant adverse impacts during site development would be reduced. The New York City OER would provide the regulatory oversight of the environmental investigation and remediation during this process. Building permits are not issued by the Department of Buildings without prior OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the NYC Zoning Resolution (Environmental Requirements).

The (E) designation would require that the fee owner of such a site conduct a testing and sampling protocol and have an approved remediation plan where appropriate, to the satisfaction of the OER. The NYC Department of Buildings will typically issue the foundation permits when OER approves the remedial action work plan – the actual remediation is usually done concurrently with the construction. The remediation plan provided to OER to satisfy the (E) designation must also include a mandatory construction-related health and safety plan, which must also be approved by OER.

The (E) designation requirements related to hazardous materials would apply to the following development sites:

Projected Development Sites:

- Block 2069, Lot 20 (Projected Development Site 1)
- Block 2054, Lot 69 (Projected Development Site 2)
- Block 2078, Lot 55 (Projected Development Site 4)
- Block 2092, Lot 26 (Projected Development Site 5)

Block 2077, Lot 14 (Projected Development Site 6)  
Block 2076, Lot 61 (Projected Development Site 7)  
Block 2076, Lot 45 (Projected Development Site 8)  
Block 2076, Lots 40, 41 (Projected Development Site 9)  
Block 2072, Lot 38 (Projected Development Site 10)  
Block 1988, Lot 14 (Projected Development Site 11)  
Block 1988, Lot 18 (Projected Development Site 12)  
Block 1970, Lot 9 (Projected Development Site 13)  
Block 1967, Lot 85 (Projected Development Site 14)  
Block 1967, Lot 66 (Projected Development Site 15)  
Block 1953, Lot 54 (Projected Development Site 17)  
Block 1966, Lots 78, 80, 81, 82, 83 (Projected Development Site 18)  
Block 1966, Lot 77 (Projected Development Site 19)  
Block 1967, Lots 89, 40, 45, 50, 60 (Projected Development Site 40)  
Block 1966, Lots 41, 95 (Projected Development Site 50)  
Block 2050, Lot 150 (Projected Development Site 53)  
Block 2070, Lot 8 (Projected Development Site 54)  
Block 2070, Lot 12 (Projected Development Site 55)

Potential Development Sites:

Block 2065, Lot 6 (Potential Development Site 20)  
Block 2065, Lot 10 (Potential Development Site 21)  
Block 2078, Lot 17 (Potential Development Site 22)  
Block 2077, Lot 6 (Potential Development Site 23)  
Block 2077, Lot 24 (Potential Development Site 24)  
Block 2091, Lot 36 (Potential Development Site 25)  
Block 2076, Lots 25, 125 (Potential Development Site 26)  
Block 2076, Lots 27, 127 (Potential Development Site 27)  
Block 2051, Lots 56, 57 (Potential Development Site 28)  
Block 2051, Lots 58, 59 (Potential Development Site 29)  
Block 2071, Lots 42, 141 (Potential Development Site 30)  
Block 1968, Lot 16 (Potential Development Site 31)  
Block 1966, Lots 107, 108 (Potential Development Site 32)  
Block 1967, Lots 9, 10, 12 (Potential Development Site 33)  
Block 2092, Lot 21 (Potential Development Site 56)  
Block 2060, Lot 10 (Potential Development Site 57)

The (E) designation text related to hazardous materials is as follows:

**Task 1**

**The applicant must submit to the New York City Office of Environmental Remediation (OER), for review and approval, a Phase 1 Environmental Site Assessment (ESA) of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.**

**If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's**

condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

#### **Task 2**

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from the test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan (CHASP) would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

All demolition or rehabilitation would be conducted in accordance with applicable requirements for disturbance, handling and disposal of suspect lead-paint and asbestos-containing materials. For all projected and potential development sites where no (E) designation is recommended, in addition to the requirements for lead-based paint and asbestos, requirements (including those of the New York State Department of Environmental Conservation (NYSDEC)) should petroleum tanks and/or spills be identified and for off-site disposal of soil/fill would need to be followed.

**TABLE 9-1  
Summary of Environmental Issues for Projected and Potential Development Sites**

Site	Block	Lot	Address	Zoning		Environmental Issue Found On Site*			Descriptions (see code definitions below)/Listed sites within 400-foot buffer zone (or adjacent addresses for Sanborns and City Directories)	Findings within 400 feet at higher elevation	Source	Recommended (e) Designation
				Existing	Proposed	Database	Sanborn	City Directory				
<b>PROJECTED SITES</b>												
1	2069	20	89-97 ST. NICHOLAS PLACE	C8-3	R8A/C2-4	NA	Y	Y	<u>Sanborn:</u> On-site: 1939-2005: Automobile & Gasoline Service Station with UST (2) Adjacent: 1909-2005: Automobile Service Station with UST (2) at 410 West 155th Street <u>City Directory:</u> On-site: Automobile & Gasoline Service Station with UST (2) Adjacent: No data in package		S, CD	Yes
2	2054	69	427 EDGEcombe AVENUE	R7-2	R8A/C2-4	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), 8 NY SPILLS (9), 2 NY LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), RCRA-NonGen (4), NY MANIFEST (4)	8 NY SPILLS, 2 NY LTANKS	DB	Yes
4	2078	55	538 WEST 147 STREET	R7-2	R7A	N	NA	NA	RCRA-CESQG (4), NY HIST LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
5	2092	26	3543 BROADWAY	R8/C1-4	C6-3X IH / C1-4	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), NY HIST LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
6	2077	14	523 WEST 145 STREET	R7-2/C2-4	R8A IH/C2-4/R7A	N	NA	NA	RCRA-CESQG (4), NY LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
7	2076	61	3534 BROADWAY	R8/C1-4	C6-3X IH	N	NA	NA	RCRA-SQG (4), NY HIST LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
8	2076	45	518 WEST 145 STREET	R7-2/C2-4	R8A IH	N	NA	NA	RCRA-CESQG (4), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
9	2076	40	508 WEST 145 STREET	R7-2/C2-4	R8A IH	N	NA	NA	RCRA-CESQG (4), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
		41										Yes
10	2072	38	504 WEST 141 STREET	R7-2	R7A	N	NA	NA	NY TANKS (2,11), NY LTANKS (2), NY SPILLS (9), NY UST (2), NY AST (11), NY HIST UST (2), RCRA-NonGen (4), NY MANIFEST (4)	7 NY SPILLS, 4 NY TANKS	DB	Yes
11	1988	14	521 WEST 134 STREET	R7-2	R7A	N	NA	NA	NY TANKS (2,11), NY LTANKS (2), NY SPILLS (9), NY UST (2), NY AST (11), NY HIST UST (2), RCRA-NonGen (4), NY MANIFEST (4)	5 NY SPILLS, 2 NY LTANKS	DB	Yes
12	1988	18	517 WEST 134 STREET	R7-2	R7A	N	NA	NA	NY TANKS (2,11), NY LTANKS (2), NY SPILLS (9), NY UST (2), NY AST (11), NY HIST UST (2), RCRA-NonGen (4), NY MANIFEST (4)	5 NY SPILLS, 2 NY LTANKS	DB	Yes
13	1970	9	489 WEST 130 STREET	R7-2	R7A	N	NA	NA	RCRA-CESQG (4), NY TANKS (2,11), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
14	1967	85	454 WEST 128 STREET 450-456 WEST 128 STREET	M1-1	MX M1-5/R7-2	NA	N	Y	<u>Sanborn:</u> Adjacent: 1951: Laboratory at 425 West 127th Street, Garage with UST (2) at 469 W 128th Street, 1912: auto storage and carpenter paintshop at 423 W 127th Street. <u>City Directory:</u> On-Site: HERLOT MACH PRODS CO INC, LANDAU N METAL CO, HERZ INDUSTRIALS DEVICES INC, MAYFAIR PRODS MFG CO PLSTCS, MOTHERS FRIEND FAMILY LAUNDRY, PRUDENTIAL STEAM LAUNDRY INC (document 31642031; pg 1265) Adjacent: DT & T AUTO REPAIR at 415 W 127th Street (document 31642031; pg 1205), DEVALERA MFRS ALUMNM PRODS, UNITED REFRIGERATN & TERNS CO INC at 460 W 128th Street (document 31642031; pg 1266)		S,CD	Yes
15	1967	66	415 WEST 127 STREET 415-421 WEST 127 STREET	M1-1	MX M1-5/R7-2	NA	N	Y	<u>Sanborn:</u> Adjacent: 1951: Laboratory at 425 West 127th Street, 1912: auto storage and carpenter paintshop at 423 W 127th Street. <u>City Directory:</u> On-Site: T & T AUTO REPAIR at 415 W 127th Street (document 31642031; pg 1205) Adjacent: STANDARD AUTO PAINTING & UPHL at 125 W 127th Street (document 31642031; pg 1206), HERLOT MACH PRODS CO INC, LANDAU N METAL CO, HERZ INDUSTRIALS DEVICES INC, MAYFAIR PRODS MFG CO PLSTCS, MOTHERS FRIEND FAMILY LAUNDRY at 452 W 128 Street (document 31642031; pg 1265)		S,CD	Yes
17	1953	54	362 WEST 127 STREET	R7-2	R7A	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), NY TANKS (2,11), NY UST (2), NY AST (11), NY CBS AST (4, 11), NY HIST UST (2), NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes

**TABLE 9-1 (cont'd)**

**Summary of Environmental Issues for Projected and Potential Development Sites**

Site	Block	Lot	Address	Zoning		Environmental Issue Found On Site*			Descriptions (see code definitions below)/Listed sites within 400-foot buffer zone (or adjacent addresses for Sanborns and City Directories)	Findings within 400 feet at higher elevation	Source	Recommended (e) Designation
				Existing	Proposed	Database	Sanborn	City Directory				
18	1966	78	412-414 WEST 126 STREET	M1-1	MX M1-5/R7-2	NA	Y	Y	<p><b>Sanborn:</b>                      On-site: 1993-2005: Auto Repair shop                      Adjacent: Garage with UST (2) at 430 W 126th Street  <b>City Directory:</b>                      On-Site: AUTORAMA COLLISION INC, AAMCO TRANSMISSIONS at 412 W 126 Street (document 31642031; pg 1049)                      Adjacent: M E J AUTO REPR CO at 406 W 126 Street (document 31642031; pg 1049), VINNIE AUTO REPAIR at 417 W 126 Street (document 31642031; pg 1051), WATER SERVICE LABS INC CHEMCL ENGRS, CROTON INDUSTRIAL LABS at 423 W 126 Street (document 31642031; pg 1058), LENOX FRENCH CLEANRS at 429 W 125 Street (document 31642031; pg 812),</p>		S,CD	Yes
		80	416 WEST 126 STREET									Yes
		81	418 WEST 126 STREET									Yes
		82	420 WEST 126 STREET									Yes
		83	422 WEST 126 STREET									Yes
19	1966	77	402-404 WEST 126 STREET	M1-1	MX M1-5/R7-2	NA	N	N	<p><b>Sanborn:</b>                      Adjacent: 1993-2005: Auto Repair shop w/ UST (2) at 414 W 126 St.  <b>City Directory:</b>                      Adjacent: M E J AUTO REPR CO at 406 W 126 Street (document 31642031; pg 1049), AMER HOME LAUNDRY at 401 W 126 Street , MORNINGSIDE PRESS at 403 W 126 Street (document 31642031; pg 1048)</p>		S,CD	Yes
40	1967	89	460-482 WEST 128 STREET	M1-1	MX M1-5/R7-2	NA	Y	Y	<p><b>Sanborn:</b>                      On-site: 1951: steel tubing &amp; laboratory, 1912: auto carpet and paint shop                      Adjacent: 1951-2005: Auto Repair shop (475 - 485 W 128th), 1902: coal shed at 443 West 127 Street, 1951-2005: Garage with buried gas tank (451 - 469 W 128th), 1951-1978 + 1988-2005: Department of Sanitation (468 W 126), 1951-2005: Sheet metal &amp; Iron works (470 W 126), 1980-1986: Auto Repair shop (468 W 126th)  <b>City Directory:</b>                      On-Site: DEVALERA MFRS ALUMNM PRODS, UNITED REFRIGERATN &amp; TERNS CO INC, KAM TRUCKING CORP (document 31642031; pg 1266), AMER WET WASH LAUNDRY CO (document 31642031; pg 1067) TUBLAR SVCE CORP STEEL TUBING, SWEETS LABORATORIES INC (document 31642031; pg 1075), GUMAKERS OF AMERICA INC, SWEETS LABORATORIES INC, PLASTIC CHEMICLS CORP, BRONX HYGRADE AUTO PAINTING &amp; TRIMMING CO, JACKOWITZ J M AUTO PNTG, STANDARD AUTO PAINTING &amp; UPHL CO at 423 W 127 Street (document 31642031; pg 1207), AFRICA AUTO REPAIR SHOP at 427 W 127 Street (document 31642031; pg 1207)                      Adjacent: T &amp; T AUTO REPAIR at 415 W 127th Street (document 31642031; pg 1205), CHASE STANLEY CLNG FLUIDS, AFTA SOLVENTS CORP CLNG FLUIDS at 470 W 128 Street (document 31642031; pg 1266), BREEN S GARAGE at 470 West 126th Street (document 31642031; pg 1207), ALUMINIA PRODUCTA at 480 W 128th Street (document 31642031; pg 1267), HERLOT MACH PRODS CO INC, LANDAU N METAL CO, HERZ INDUSTRIALS DEVICES INC, MOTHERS FRIEND FAMILY LAUNDRY, PRUDENTIAL STEAM LAUNDRY INC at 452 W 128 Street (document 31642031; pg 1265), MAYFAIR PRODS MFG CO PLSTCS at 454 W 128 Street (document 31642031; pg 1265).</p>		S,CD	Yes
		40	1361-1369 AMSTERDAM AVENUE, 492-498 WEST 128 STREET, 473-479 WEST 126 STREET									Yes
		45	461-471 WEST 126 STREET									Yes
		50	439-449 WEST 127 STREET									Yes
		60	423-437 WEST 127 STREET, 437 REAR WEST 127 STREET									Yes
50	1966	41	461 WEST 125 STREET, 461 DR M L KING JR BLVD	M1-1	MX M1-5/R7-2	NA	Y	N	<p><b>Sanborn:</b>                      On-site: 1952-2005: Garage with UST (2)                      Adjacent: 2001-2005: autorepair shop at 427 W 126th Street  <b>City Directory:</b>                      Adjacent: LENOX FRENCH CLEANRS at 429 W 125 Street (document 31642031; pg 812), LEDERER A PRINTING at 431 W 125 Street (document 31642031; pg 834), SCHLICHTING CHAS G LAB at 447 W 125 Street (document 31642031; pg 850), DOROTHY PRESS THE STATNRS &amp; PRNTRER at 463 W 125 Street (document 31642031; pg 868), WATER SERVICE LABS INC CHEMCL ENGRS, CROTON INDUSTRIAL LABS at 423 W 126 Street (document 31642031; pg 1058), ALBERTO AUTO REPAIRS at 427 W 126 Street (document 31642031; pg 1059), no info for 474-484 W 125th Street</p>		S,CD	Yes
		95	426-432 WEST 126 STREET, 456 WEST 126 STREET									Yes
53	2050	150	406 W 145 St	R7-2	R6A / C1-4	N	NA	NA	RCRA-CESQG (4), NY HIST TANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes
54	2070	8	30-36 Hamilton Pl 541 W 138 St 560-566 W 139 St	R7-2	R7A / C1-4	Y	NA	NA	On-Site (30 Hamilton): NY AST (11) Buffer Zone: RCRA-CESQG (4), NY HIST TANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Spills, NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes

**TABLE 9-1 (cont'd)**

**Summary of Environmental Issues for Projected and Potential Development Sites**

Site	Block	Lot	Address	Zoning		Environmental Issue Found On Site*			Descriptions (see code definitions below)/Listed sites within 400-foot buffer zone (or adjacent addresses for Sanborns and City Directories)	Findings within 400 feet at higher elevation	Source	Recommended (e) Designation
				Existing	Proposed	Database	Sanborn	City Directory				
55	2070	12	31-35 Hamilton Pl 531-539 W 138 St 530-540 W 139 St	R7-2	R7A / C1-4	Y	NA	NA	On-Site (35 Hamilton): NY AST (11), NY Spills (2) Buffer Zone: RCRA-CESQG (4), NY HIST TANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Spills, NY Hist Spills (2), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes
<b>POTENTIAL SITES</b>												
20	2065	6	475 WEST 150 STREET	R7-2	R7A	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), NY HIST TANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes
21	2065	10	463 WEST 150 STREET	R7-2	R7A	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), NY HIST TANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4), NY DRYCLEANERS (4)		DB	Yes
22	2078	17	523 WEST 146 STREET	R7-2	R7A	N	NA	NA	RCRA-CESQG (4), NY LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
23	2077	6	543 WEST 145 STREET	R7-2	R8A IH	N	NA	NA	RCRA-SQG (4), RCRA-CESQG (4), NY HIST LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
24	2077	24	507 WEST 145 STREET	R7-2	R8A IH	N	NA	NA	RCRA-CESQG (4), NY LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
25	2091	36	3531 BROADWAY	R8	C6-3X IH / C1-4	N	NA	NA	RCRA-SQG (4), NY HIST LTANKS (2), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
26	2076	125	513 WEST 144 STREET	R7-2	R7A	N	NA	NA	NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
		25	515 WEST 144 STREET									Yes
27	2076	27	507 WEST 144 STREET	R7-2	R7A	N	NA	NA	RCRA-CESQG (4), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
		127	509 WEST 144 STREET									Yes
28	2051	56	348 WEST 145 STREET	R7-2	R8A	N	NA	NA	RCRA-SQG (4), RCRA-SQG (4), RCRA-CESQG (4), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
		57	346 WEST 145 STREET									Yes
29	2051	58	344 WEST 145 STREET	R7-2	R8A	N	NA	NA	RCRA-SQG (4), RCRA-SQG (4), RCRA-CESQG (4), NY UST (2), NY AST (11), NY HIST UST (2), NY Hist Spills (9), RCRA-NonGen (4), NY MANIFEST (4), DRYCLEANERS (4)		DB	Yes
		59	342 WEST 145 STREET									Yes
30	2071	42	518 WEST 140 STREET	R7-2	R7A	N	NA	NA	NY TANKS (2,11), NY UST (2), NY AST (11), NY HIST UST (2), RCRA-NonGen (4), NY MANIFEST (4)	7 NY SPILLS, 4 NY LTANKS	DB	Yes
		141	516 WEST 140 STREET									Yes
31	1968	16	451-469 WEST 128 STREET, 460-462 W 129 STREET	M1-1	MX M1-5 / R7-2	NA	Y	Y	<b>Sanborn:</b> <b>On-site:</b> 1951-2005: Garage with buried tank (2) <b>Adjacent:</b> 1912-2005: UST at 435-485 W 129th Street <b>City Directory:</b> <b>On-Site:</b> CONNELL & O CONNOR GARAGE (document 31642031; pg 1264), JUAN AUTO REPR SHOP (document 31642031; pg 1331), BREITBOY GARAGE INC (document 31642031; pg 1332) <b>Adjacent:</b> MOTHERS FRIEND FAMILY LAUNDRY,HERLOT MACH PRODS CO INC, LANDAU N METAL CO, HERZ INDUSTRIALS DEVICES INC, PRUDENTIAL STEAM LAUNDRY INC at 452 W 128 Street (document 31642031; pg 1265), MAYFAIR PRODS MFG CO PLSTCS at 454 W 128th Street (document 31642031; pg 1265), DEVALERA MFRS ALUMNM PRODS, UNITED REFRIGERATN & TERNS CO INC at 460 W 128th Street (document 31642031; pg 1266), CHASE STANLEY CLNG FLUIDS, AFTA SOLVENTS CORP CLNG FLUIDS at 470 W 128 Street (document 31642031; pg 1266), SAUNDERS BROS INC TRUKNG at 453 W 129th Street (document 31642031; pg 1330).		S,CD	Yes

**TABLE 9-1 (cont'd)**

**Summary of Environmental Issues for Projected and Potential Development Sites**

Site	Block	Lot	Address	Zoning		Environmental Issue Found On Site*			Descriptions (see code definitions below)/Listed sites within 400-foot buffer zone (or adjacent addresses for Sanborns and City Directories)	Findings within 400 feet at higher elevation	Source	Recommended (e) Designation
				Existing	Proposed	Database	Sanborn	City Directory				
32	1966	107	1355 AMSTERDAM , VENUE 472 WEST 126 STREET	M1-1	MX M1-5 / R7-2	NA	Y	Y	<b>Sanborn:</b> <b>On-site:</b> 1951-2005: Sheet metal & Ir works <b>Adjacent:</b> 1951-1978 + 1988-2005: Department of Sanitation (468 W 126), 1980-1986: Auto Repair shop (468 W 126th) <b>City Directory:</b> <b>On-Site:</b> BREEN S GARAGE (document 31642031; pg 1075) <b>Adjacent:</b> -, no info for 471-479 W 126th Street		S,CD	Yes
		108	1351-1353 AMSTERDAM AVENUE, 470 WEST 126 STREET									Yes
33	1967	9	429 W 126 STREET	M1-1	MX M1-5 / R7-2	NA	Y (Lot 10)	Y	<b>Sanborn:</b> <b>On-site (Lot 10):</b> 2005: Automobile Service Station <b>Adjacent:</b> 1951-2005: Automobile Service Station with UST (2) at 430-436 West 126th Street / 1976-2003: Automobile Service Station at 416 West 127th Street / 1951: Laboratory at 425 West 127th Street, 1912: auto storage and carpenter paintshop at 423 W 127th Street. <b>City Directory:</b> <b>On-Site:</b> WATER SERVICE LABS INC CHEMCL ENGRS, CROTON INDUSTRIAL LABS at 423 W 126 Street (document 31642031; pg 1058), ALBERTO AUTO REPAIRS at 427 W 126 Street (document 31642031; pg 1059), MITCHELL AUTO BODY SHOP at 418 W 127 Street (document 31642031; pg 1206) <b>Adjacent:</b> MITCHELL AUTO BODY SHOP at 416 W 127 Street (document 31642031; pg 1206)		S,CD	Yes
		10	427 W 126 STREET, 422 W 127 STREET									Yes
		12	423-425 W 126 STREET, 418-420 W 127 STREET									Yes
56	2092	21	621 W 145 St	R8	R6A / C1-4	N	NA	NA	RCRA-SQG (4), NY HIST TANKS (2), NY AST (11), NY Hist Spills (2), RCRA-NonGen (4), NY MANIFEST (4)		DB	Yes
57	2060	10	477 W 145 St	R7-2	R6A / C1-4	N	NA	NA	NY UST (2), NY SPILLS (9), NY AST (11), NY HIST UST (2)	4 NY SPILLS	DB	Yes

DB = Regulatory Database

S = Sanborn Maps

CD = City Directory

N/A = Not applicable

\*Sanborn map and City Directory Review included surrounding properties, when information was available.

**Descriptions (from Hazardous Materials Appendix 5 [Chapter 24 of Title 15 of the Rules of the City of New York])**

- (1) = Incinerators
- (2) = Underground storage tanks (underground storage tanks)
- (3) = Active solid waste landfills
- (4) = Permitted hazardous waste management facilities
- (5) = Inactive hazardous waste facilities
- (6) = Suspected hazardous waste sites
- (7) = Hazardous substance spill locations
- (8) = Areas known to contain fill material
- (9) = petroleum spill locations
- (10) = Any past use identified in Appendix A of Hazardous Materials Appendix 5 (Chapter 24 of Title 15 of the Rules of the City of New York)
- (11) = Above-ground storage tanks (ASTs)

RCRA-LQG: Large quantity generators that generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

RCRA-SQG: Small quantity generators that generate between 100 kg and 1,000 kg of hazardous waste per month.

RCRA-CESQG: exempt small quantity generators, generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

NY LTANKS: Leaking Storage Tank Incident Reports. These can be either leaking USTs or ASTs

NY HIST LTANKS: A listing of leaking underground and aboveground storage tanks before Jan 1, 2002.

NY TANKS: This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

NY CBS AST: Facilities storing hazardous substances listed in 6 NYCRR Part 597, in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

NY CBS: These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

NY Spills: Data collected on spills reported to NYSDEC; includes spills active as of April 1, 1986, as well as spills occurring since this date.

NY Hist Spills: This database contains records of chemical and petroleum spill incidents up to January 1, 2002.

RCRA-NonGen: Sites that generate, transport, store, treat and/or dispose of hazardous waste. Non-Generators do not presently generate hazardous waste.

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

NY DRYCLEANERS: A listing of all registered drycleaning facilities.

## **APPENDIX C**

### Quality Assurance and Quality Control Procedures

## Quality Assurance and Quality Control Procedures (QA/QC)

The following sampling QA/QC protocol is in accordance with the United States Environmental Protection Agency's (USEPA) accepted sampling procedures for hazardous waste streams [Municipal Research Laboratory, 1980, Sampling and Analysis Procedures for Hazardous Material Waste Streams, Office of Emergency and Remedial Response, Cincinnati, Ohio. EPA-600/280-018] and American Society of Testing and Material's (ASTM's) Sampling Procedures.

### Sampling Personnel

The activities associated with the survey, sampling and analysis plan were performed by or under the auspices of a USEPA Office of Emergency and Remedial Response, Certified Sampler for Hazardous Materials. The sample staff (samplers) possessed a minimum of a B.A. Degree in the Earth, Space or Biological Sciences or a B.S. Degree in Engineering. Samplers had a minimum of one (1) year experience in environmental/geological field work. Additionally, all samplers had received mandatory forty-hour Occupational Safety and Health Administration (OSHA) training on working with potentially hazardous materials and appropriate Hazard Communication Program and "Right-To-Know" training.

### Sampling Equipment

Separate QA/QC measures were implemented for each of the instruments used in the performance of the SAP.

### Geoprobe

Prior to arrival on the Site and between sample locations, the probes were decontaminated by washing them with a detergent (Alconox) and potable water solution and rinsing them with distilled water.

### Photo Ionization Detector

Calibration of the PID was conducted prior to sampling using a span gas of known concentration. The PID was a Photovac Micro-Tip, photo ionization detection meter.

### Sample Vessels

All sample vessels were "level A" certified decontaminated containers supplied by a New York State Certified Commercial Laboratory. Samples analyzed for hydrocarbons were placed in containers with Teflon lined caps. All samples were preserved by cooling them to a temperature of approximately four degrees Celsius.

## Sample Documentation

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of custody procedures were followed.

### Sample Identification

Sample identification was executed by use of a sample tag, log book and chain-of-custody form. Said documentation provided the following information: 1) the project code; 2) the sample laboratory number; 3) the sample preservation; 4) instrument used for source sample grabs; 5) the composite medium used for source sample grabs; 6) the date the sample was secured from the source media; 7) the time the sample was secured from the source media; and 8) the person who secured the sample from the source media.

### Chain-of-Custody Procedures

Due to the evidential nature of samples, possession was traceable from the time the samples were collected until they were received by the testing laboratory. A sample was considered under custody if it: was in a person's possession; it was in a person's view, after being in possession; if it was in a person's possession and they locked it up; or, it was in a designated secure area. When transferring custody, the individuals relinquishing and receiving the samples signed, dated and noted the time on the Chain-of- Custody Form.

### Laboratory-Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., were entered in the "remarks" section. The custodian entered the sample tag data into a bound logbook.

The laboratory custodian used the sample tag number, or assigned a unique laboratory number to each sample tag, and assured that all samples were transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples, from the time they were received, until the sample was exhausted or returned to the sample custodian. All identifying data sheets and laboratory records were retained as part of the permanent documentation. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.

## **APPENDIX D**

Laboratory Reports, Alpha Analytical



## ANALYTICAL REPORT

Lab Number:	L1408216
Client:	Impact Environmental 170 Keyland Ct Bohemia, NY 11716
ATTN:	Greg Mendez-Chicas
Phone:	(631) 269-8800
Project Name:	PS186
Project Number:	6627
Report Date:	05/02/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1408216-01	SB-1	521 W. 145TH ST. NEW YORK, NY	04/16/14 10:00
L1408216-02	SB-2	521 W. 145TH ST. NEW YORK, NY	04/16/14 10:45
L1408216-03	SB-3	521 W. 145TH ST. NEW YORK, NY	04/16/14 12:15
L1408216-04	SB-4	521 W. 145TH ST. NEW YORK, NY	04/16/14 13:00
L1408216-05	SB-5	521 W. 145TH ST. NEW YORK, NY	04/16/14 11:30

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

### Case Narrative (continued)

#### Report Submission

This report replaces the report issued on April 27, 2014. At the client's request, the analyses of Herbicides, Total Cyanide, Hexavalent Chromium, and Trivalent Chromium were performed on L1408216-01 through -05. All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Volatile Organics

Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

#### Total Metals

L1408216-01 through -05 have elevated detection limits for all elements, with the exception of mercury, due to the analytical dilutions required by matrix interferences encountered during analysis.

The WG684474-1 Method Blank, associated with L1408216-01 through -05, has a concentration above the reporting limit for iron. Since the associated sample concentrations are greater than 10x the blank concentration for this analyte, no qualification of the results was performed.

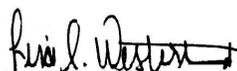
The WG684474-4 MS recoveries for aluminum (703%), calcium (234%), iron (1170%), magnesium (176%), and manganese (187%), performed on L1408216-01, do not apply because the sample concentration is greater than four times the spike amount added.

The WG684474-4 MS recoveries, performed on L1408216-01, are outside the acceptance criteria for potassium (164%) and sodium (140%). A post digestion spike was performed and was within acceptance criteria.

The WG684474-3 Laboratory Duplicate RPD, performed on L1408216-01, is outside the acceptance criteria for zinc (24%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the Laboratory Duplicate.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Lisa Westerlind

Title: Technical Director/Representative

Date: 05/02/14

# ORGANICS

# VOLATILES

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 04/23/14 22:42  
 Analyst: BN  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.2	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.20	1
Chloroform	ND		ug/kg	1.7	0.42	1
Carbon tetrachloride	ND		ug/kg	1.1	0.24	1
Tetrachloroethene	ND		ug/kg	1.1	0.16	1
Chlorobenzene	ND		ug/kg	1.1	0.39	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.7	0.13	1
Ethylbenzene	ND		ug/kg	1.1	0.17	1
Vinyl chloride	ND		ug/kg	2.2	0.16	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.1	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	5.6	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.6	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.6	0.27	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.12	1
p/m-Xylene	ND		ug/kg	2.2	0.36	1
o-Xylene	ND		ug/kg	2.2	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.17	1
Acetone	ND		ug/kg	11	3.5	1
2-Butanone	ND		ug/kg	11	0.40	1
n-Butylbenzene	ND		ug/kg	1.1	0.22	1
sec-Butylbenzene	ND		ug/kg	1.1	0.23	1
tert-Butylbenzene	ND		ug/kg	5.6	0.63	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.6	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.6	0.65	1
1,4-Dioxane	ND		ug/kg	110	20.	1

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-01

Date Collected: 04/16/14 10:00

Client ID: SB-1

Date Received: 04/18/14

Sample Location: 521 W. 145TH ST. NEW YORK, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 04/23/14 23:10  
 Analyst: BN  
 Percent Solids: 93%

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.19	1
Chloroform	ND		ug/kg	1.6	0.40	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.37	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.6	0.12	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Vinyl chloride	ND		ug/kg	2.2	0.15	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	5.4	0.20	1
1,3-Dichlorobenzene	ND		ug/kg	5.4	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	5.4	0.26	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.11	1
p/m-Xylene	ND		ug/kg	2.2	0.35	1
o-Xylene	ND		ug/kg	2.2	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.16	1
Acetone	ND		ug/kg	11	3.3	1
2-Butanone	ND		ug/kg	11	0.38	1
n-Butylbenzene	ND		ug/kg	1.1	0.21	1
sec-Butylbenzene	ND		ug/kg	1.1	0.22	1
tert-Butylbenzene	ND		ug/kg	5.4	0.60	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.4	0.15	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.4	0.62	1
1,4-Dioxane	ND		ug/kg	110	19.	1

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-02

Date Collected: 04/16/14 10:45

Client ID: SB-2

Date Received: 04/18/14

Sample Location: 521 W. 145TH ST. NEW YORK, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	101		70-130

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-03  
 Client ID: SB-3  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 04/23/14 23:37  
 Analyst: BN  
 Percent Solids: 76%

Date Collected: 04/16/14 12:15  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	13	2.6	1
1,1-Dichloroethane	ND		ug/kg	2.0	0.24	1
Chloroform	ND		ug/kg	2.0	0.49	1
Carbon tetrachloride	ND		ug/kg	1.3	0.28	1
Tetrachloroethene	ND		ug/kg	1.3	0.18	1
Chlorobenzene	ND		ug/kg	1.3	0.46	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.15	1
Benzene	ND		ug/kg	1.3	0.16	1
Toluene	ND		ug/kg	2.0	0.15	1
Ethylbenzene	ND		ug/kg	1.3	0.20	1
Vinyl chloride	ND		ug/kg	2.6	0.19	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	0.28	1
Trichloroethene	ND		ug/kg	1.3	0.20	1
1,2-Dichlorobenzene	ND		ug/kg	6.6	0.24	1
1,3-Dichlorobenzene	ND		ug/kg	6.6	0.24	1
1,4-Dichlorobenzene	ND		ug/kg	6.6	0.32	1
Methyl tert butyl ether	ND		ug/kg	2.6	0.14	1
p/m-Xylene	ND		ug/kg	2.6	0.43	1
o-Xylene	ND		ug/kg	2.6	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.20	1
Acetone	ND		ug/kg	13	4.1	1
2-Butanone	ND		ug/kg	13	0.47	1
n-Butylbenzene	ND		ug/kg	1.3	0.26	1
sec-Butylbenzene	ND		ug/kg	1.3	0.27	1
tert-Butylbenzene	ND		ug/kg	6.6	0.74	1
n-Propylbenzene	ND		ug/kg	1.3	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.6	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.6	0.76	1
1,4-Dioxane	ND		ug/kg	130	23.	1

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-03

Date Collected: 04/16/14 12:15

Client ID: SB-3

Date Received: 04/18/14

Sample Location: 521 W. 145TH ST. NEW YORK, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 04/24/14 00:05  
 Analyst: BN  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.28	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.38	1
o-Xylene	ND		ug/kg	2.3	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Acetone	ND		ug/kg	12	3.6	1
2-Butanone	ND		ug/kg	12	0.41	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.8	0.66	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.67	1
1,4-Dioxane	ND		ug/kg	120	20.	1

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-04

Date Collected: 04/16/14 13:00

Client ID: SB-4

Date Received: 04/18/14

Sample Location: 521 W. 145TH ST. NEW YORK, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	103		70-130

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 04/24/14 00:32  
 Analyst: BN  
 Percent Solids: 90%

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.2	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.20	1
Chloroform	ND		ug/kg	1.7	0.41	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
Tetrachloroethene	ND		ug/kg	1.1	0.16	1
Chlorobenzene	ND		ug/kg	1.1	0.39	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	ND		ug/kg	1.7	0.12	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Vinyl chloride	ND		ug/kg	2.2	0.16	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.24	1
Trichloroethene	ND		ug/kg	1.1	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	5.6	0.20	1
1,3-Dichlorobenzene	ND		ug/kg	5.6	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	5.6	0.27	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.12	1
p/m-Xylene	ND		ug/kg	2.2	0.36	1
o-Xylene	ND		ug/kg	2.2	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.17	1
Acetone	ND		ug/kg	11	3.4	1
2-Butanone	ND		ug/kg	11	0.40	1
n-Butylbenzene	ND		ug/kg	1.1	0.22	1
sec-Butylbenzene	ND		ug/kg	1.1	0.23	1
tert-Butylbenzene	ND		ug/kg	5.6	0.62	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.6	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.6	0.64	1
1,4-Dioxane	ND		ug/kg	110	19.	1

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-05

Date Collected: 04/16/14 11:30

Client ID: SB-5

Date Received: 04/18/14

Sample Location: 521 W. 145TH ST. NEW YORK, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	102		70-130

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 04/23/14 22:15  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG684796-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Vinyl chloride	ND		ug/kg	2.0	0.14
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Acetone	ND		ug/kg	10	3.1
2-Butanone	2.4	J	ug/kg	10	0.36
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
1,4-Dioxane	ND		ug/kg	100	17.

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 04/23/14 22:15  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG684796-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG684796-1 WG684796-2								
Methylene chloride	111		107		70-130	4		30
1,1-Dichloroethane	110		106		70-130	4		30
Chloroform	109		104		70-130	5		30
Carbon tetrachloride	116		113		70-130	3		30
1,2-Dichloropropane	109		107		70-130	2		30
Dibromochloromethane	100		96		70-130	4		30
1,1,2-Trichloroethane	99		96		70-130	3		30
Tetrachloroethene	106		101		70-130	5		30
Chlorobenzene	101		97		70-130	4		30
Trichlorofluoromethane	112		108		70-139	4		30
1,2-Dichloroethane	107		102		70-130	5		30
1,1,1-Trichloroethane	113		108		70-130	5		30
Bromodichloromethane	111		106		70-130	5		30
trans-1,3-Dichloropropene	95		91		70-130	4		30
cis-1,3-Dichloropropene	107		104		70-130	3		30
1,1-Dichloropropene	112		109		70-130	3		30
Bromoform	93		90		70-130	3		30
1,1,2,2-Tetrachloroethane	92		88		70-130	4		30
Benzene	110		107		70-130	3		30
Toluene	98		96		70-130	2		30
Ethylbenzene	100		97		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG684796-1 WG684796-2								
Chloromethane	91		86		52-130	6		30
Bromomethane	116		117		57-147	1		30
Vinyl chloride	100		95		67-130	5		30
Chloroethane	103		98		50-151	5		30
1,1-Dichloroethene	111		110		65-135	1		30
trans-1,2-Dichloroethene	112		108		70-130	4		30
Trichloroethene	111		107		70-130	4		30
1,2-Dichlorobenzene	96		90		70-130	6		30
1,3-Dichlorobenzene	96		91		70-130	5		30
1,4-Dichlorobenzene	95		91		70-130	4		30
Methyl tert butyl ether	103		99		66-130	4		30
p/m-Xylene	101		98		70-130	3		30
o-Xylene	101		99		70-130	2		30
cis-1,2-Dichloroethene	112		108		70-130	4		30
Dibromomethane	110		108		70-130	2		30
Styrene	101		98		70-130	3		30
Dichlorodifluoromethane	73		71		30-146	3		30
Acetone	116		109		54-140	6		30
Carbon disulfide	100		98		59-130	2		30
2-Butanone	112		100		70-130	11		30
Vinyl acetate	99		94		70-130	5		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG684796-1 WG684796-2								
4-Methyl-2-pentanone	107		102		70-130	5		30
1,2,3-Trichloropropane	90		86		68-130	5		30
2-Hexanone	94		88		70-130	7		30
Bromochloromethane	116		112		70-130	4		30
2,2-Dichloropropane	108		104		70-130	4		30
1,2-Dibromoethane	99		96		70-130	3		30
1,3-Dichloropropane	98		94		69-130	4		30
1,1,1,2-Tetrachloroethane	101		97		70-130	4		30
Bromobenzene	95		92		70-130	3		30
n-Butylbenzene	96		91		70-130	5		30
sec-Butylbenzene	98		94		70-130	4		30
tert-Butylbenzene	97		94		70-130	3		30
o-Chlorotoluene	92		90		70-130	2		30
p-Chlorotoluene	94		90		70-130	4		30
1,2-Dibromo-3-chloropropane	95		88		68-130	8		30
Hexachlorobutadiene	98		95		67-130	3		30
Isopropylbenzene	101		98		70-130	3		30
p-Isopropyltoluene	97		92		70-130	5		30
Naphthalene	93		88		70-130	6		30
Acrylonitrile	104		100		70-130	4		30
Isopropyl Ether	106		103		66-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG684796-1 WG684796-2								
tert-Butyl Alcohol	103		100		70-130	3		30
n-Propylbenzene	95		92		70-130	3		30
1,2,3-Trichlorobenzene	95		90		70-130	5		30
1,2,4-Trichlorobenzene	96		89		70-130	8		30
1,3,5-Trimethylbenzene	95		91		70-130	4		30
1,2,4-Trimethylbenzene	94		90		70-130	4		30
Methyl Acetate	103		99		51-146	4		30
Ethyl Acetate	104		100		70-130	4		30
Acrolein	114		103		70-130	10		30
Cyclohexane	114		112		59-142	2		30
1,4-Dioxane	119		113		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	111		107		50-139	4		30
1,4-Diethylbenzene	115		109		70-130	5		30
4-Ethyltoluene	114		109		70-130	4		30
1,2,4,5-Tetramethylbenzene	114		107		70-130	6		30
Tetrahydrofuran	105		99		66-130	6		30
Ethyl ether	97		92		67-130	5		30
trans-1,4-Dichloro-2-butene	84		79		70-130	6		30
Methyl cyclohexane	113		110		70-130	3		30
Ethyl-Tert-Butyl-Ether	107		104		70-130	3		30
Tertiary-Amyl Methyl Ether	108		104		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG684796-1 WG684796-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		94		70-130
Toluene-d8	94		94		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	104		102		70-130

# SEMIVOLATILES

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 04/26/14 02:40  
 Analyst: JB  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	38.	1
Hexachlorobenzene	ND		ug/kg	110	35.	1
Fluoranthene	ND		ug/kg	110	34.	1
Naphthalene	ND		ug/kg	190	62.	1
Benzo(a)anthracene	ND		ug/kg	110	36.	1
Benzo(a)pyrene	ND		ug/kg	150	46.	1
Benzo(b)fluoranthene	ND		ug/kg	110	38.	1
Benzo(k)fluoranthene	ND		ug/kg	110	36.	1
Chrysene	ND		ug/kg	110	37.	1
Acenaphthylene	ND		ug/kg	150	35.	1
Anthracene	ND		ug/kg	110	31.	1
Benzo(ghi)perylene	ND		ug/kg	150	39.	1
Fluorene	ND		ug/kg	190	54.	1
Phenanthrene	ND		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	36.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	41.	1
Pyrene	ND		ug/kg	110	36.	1
Dibenzofuran	ND		ug/kg	190	62.	1
Pentachlorophenol	ND		ug/kg	150	40.	1
Phenol	ND		ug/kg	190	55.	1
2-Methylphenol	ND		ug/kg	190	60.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		25-120
Phenol-d6	52		10-120
Nitrobenzene-d5	46		23-120
2-Fluorobiphenyl	57		30-120
2,4,6-Tribromophenol	31		0-136
4-Terphenyl-d14	54		18-120

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 04/26/14 03:06  
 Analyst: JB  
 Percent Solids: 93%

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	37.	1
Hexachlorobenzene	ND		ug/kg	110	33.	1
Fluoranthene	180		ug/kg	110	33.	1
Naphthalene	ND		ug/kg	180	59.	1
Benzo(a)anthracene	80	J	ug/kg	110	35.	1
Benzo(a)pyrene	72	J	ug/kg	140	44.	1
Benzo(b)fluoranthene	100	J	ug/kg	110	36.	1
Benzo(k)fluoranthene	36	J	ug/kg	110	34.	1
Chrysene	90	J	ug/kg	110	35.	1
Acenaphthylene	ND		ug/kg	140	33.	1
Anthracene	ND		ug/kg	110	30.	1
Benzo(ghi)perylene	65	J	ug/kg	140	37.	1
Fluorene	ND		ug/kg	180	51.	1
Phenanthrene	170		ug/kg	110	35.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	35.	1
Indeno(1,2,3-cd)pyrene	60	J	ug/kg	140	40.	1
Pyrene	190		ug/kg	110	35.	1
Dibenzofuran	ND		ug/kg	180	60.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	180	53.	1
2-Methylphenol	ND		ug/kg	180	58.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	59.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		25-120
Phenol-d6	40		10-120
Nitrobenzene-d5	38		23-120
2-Fluorobiphenyl	49		30-120
2,4,6-Tribromophenol	24		0-136
4-Terphenyl-d14	50		18-120

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-03  
 Client ID: SB-3  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 04/26/14 03:31  
 Analyst: JB  
 Percent Solids: 76%

Date Collected: 04/16/14 12:15  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	170	44.	1
Hexachlorobenzene	ND		ug/kg	130	40.	1
Fluoranthene	ND		ug/kg	130	39.	1
Naphthalene	ND		ug/kg	220	71.	1
Benzo(a)anthracene	ND		ug/kg	130	42.	1
Benzo(a)pyrene	ND		ug/kg	170	53.	1
Benzo(b)fluoranthene	ND		ug/kg	130	43.	1
Benzo(k)fluoranthene	ND		ug/kg	130	41.	1
Chrysene	ND		ug/kg	130	42.	1
Acenaphthylene	ND		ug/kg	170	40.	1
Anthracene	ND		ug/kg	130	36.	1
Benzo(ghi)perylene	ND		ug/kg	170	45.	1
Fluorene	ND		ug/kg	220	62.	1
Phenanthrene	ND		ug/kg	130	42.	1
Dibenzo(a,h)anthracene	ND		ug/kg	130	42.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	170	48.	1
Pyrene	ND		ug/kg	130	42.	1
Dibenzofuran	ND		ug/kg	220	72.	1
Pentachlorophenol	ND		ug/kg	170	46.	1
Phenol	ND		ug/kg	220	64.	1
2-Methylphenol	ND		ug/kg	220	69.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	310	70.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		25-120
Phenol-d6	47		10-120
Nitrobenzene-d5	42		23-120
2-Fluorobiphenyl	62		30-120
2,4,6-Tribromophenol	29		0-136
4-Terphenyl-d14	43		18-120

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 04/26/14 03:57  
 Analyst: JB  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	40.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Fluoranthene	ND		ug/kg	120	35.	1
Naphthalene	ND		ug/kg	190	64.	1
Benzo(a)anthracene	ND		ug/kg	120	38.	1
Benzo(a)pyrene	ND		ug/kg	150	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	39.	1
Benzo(k)fluoranthene	ND		ug/kg	120	37.	1
Chrysene	ND		ug/kg	120	38.	1
Acenaphthylene	ND		ug/kg	150	36.	1
Anthracene	ND		ug/kg	120	32.	1
Benzo(ghi)perylene	ND		ug/kg	150	40.	1
Fluorene	ND		ug/kg	190	55.	1
Phenanthrene	ND		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	37.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	43.	1
Pyrene	ND		ug/kg	120	37.	1
Dibenzofuran	ND		ug/kg	190	64.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	57.	1
2-Methylphenol	ND		ug/kg	190	62.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	63.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		25-120
Phenol-d6	49		10-120
Nitrobenzene-d5	46		23-120
2-Fluorobiphenyl	60		30-120
2,4,6-Tribromophenol	26		0-136
4-Terphenyl-d14	61		18-120

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 04/26/14 04:22  
 Analyst: JB  
 Percent Solids: 90%

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	38.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Fluoranthene	ND		ug/kg	110	34.	1
Naphthalene	ND		ug/kg	180	61.	1
Benzo(a)anthracene	ND		ug/kg	110	36.	1
Benzo(a)pyrene	ND		ug/kg	150	45.	1
Benzo(b)fluoranthene	ND		ug/kg	110	37.	1
Benzo(k)fluoranthene	ND		ug/kg	110	35.	1
Chrysene	ND		ug/kg	110	36.	1
Acenaphthylene	ND		ug/kg	150	34.	1
Anthracene	ND		ug/kg	110	31.	1
Benzo(ghi)perylene	ND		ug/kg	150	38.	1
Fluorene	ND		ug/kg	180	53.	1
Phenanthrene	ND		ug/kg	110	36.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	36.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	41.	1
Pyrene	ND		ug/kg	110	36.	1
Dibenzofuran	ND		ug/kg	180	62.	1
Pentachlorophenol	ND		ug/kg	150	40.	1
Phenol	ND		ug/kg	180	55.	1
2-Methylphenol	ND		ug/kg	180	60.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	61.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		25-120
Phenol-d6	51		10-120
Nitrobenzene-d5	44		23-120
2-Fluorobiphenyl	55		30-120
2,4,6-Tribromophenol	31		0-136
4-Terphenyl-d14	43		18-120

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 04/25/14 12:40  
 Analyst: JB

Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG683592-1					
Acenaphthene	ND		ug/kg	130	34.
Hexachlorobenzene	ND		ug/kg	99	31.
Fluoranthene	ND		ug/kg	99	30.
Naphthalene	ND		ug/kg	160	55.
Benzo(a)anthracene	ND		ug/kg	99	32.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	33.
Benzo(k)fluoranthene	ND		ug/kg	99	32.
Chrysene	ND		ug/kg	99	32.
Acenaphthylene	ND		ug/kg	130	31.
Anthracene	ND		ug/kg	99	28.
Benzo(ghi)perylene	ND		ug/kg	130	34.
Fluorene	ND		ug/kg	160	47.
Phenanthrene	ND		ug/kg	99	32.
Dibenzo(a,h)anthracene	ND		ug/kg	99	32.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	37.
Pyrene	ND		ug/kg	99	32.
Dibenzofuran	ND		ug/kg	160	55.
Pentachlorophenol	ND		ug/kg	130	35.
Phenol	ND		ug/kg	160	49.
2-Methylphenol	ND		ug/kg	160	53.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	54.

#### Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 04/25/14 12:40  
 Analyst: JB

Extraction Method: EPA 3546  
 Extraction Date: 04/19/14 13:15

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG683592-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		25-120
Phenol-d6	51		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	54		30-120
2,4,6-Tribromophenol	40		0-136
4-Terphenyl-d14	75		18-120

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG683592-2 WG683592-3								
Acenaphthene	74		72		31-137	3		50
1,2,4-Trichlorobenzene	67		61		38-107	9		50
Hexachlorobenzene	86		80		40-140	7		50
Bis(2-chloroethyl)ether	65		58		40-140	11		50
2-Chloronaphthalene	72		71		40-140	1		50
1,2-Dichlorobenzene	67		58		40-140	14		50
1,3-Dichlorobenzene	64		58		40-140	10		50
1,4-Dichlorobenzene	65		59		28-104	10		50
3,3'-Dichlorobenzidine	56		46		40-140	20		50
2,4-Dinitrotoluene	84		81		28-89	4		50
2,6-Dinitrotoluene	80		70		40-140	13		50
Fluoranthene	84		80		40-140	5		50
4-Chlorophenyl phenyl ether	79		74		40-140	7		50
4-Bromophenyl phenyl ether	84		77		40-140	9		50
Bis(2-chloroisopropyl)ether	68		59		40-140	14		50
Bis(2-chloroethoxy)methane	67		60		40-117	11		50
Hexachlorobutadiene	71		62		40-140	14		50
Hexachlorocyclopentadiene	69		64		40-140	8		50
Hexachloroethane	67		57		40-140	16		50
Isophorone	68		64		40-140	6		50
Naphthalene	68		66		40-140	3		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG683592-2 WG683592-3								
Nitrobenzene	69		68		40-140	1		50
NitrosoDiPhenylAmine(NDPA)/DPA	83		78			6		50
n-Nitrosodi-n-propylamine	67		63		32-121	6		50
Bis(2-Ethylhexyl)phthalate	82		74		40-140	10		50
Butyl benzyl phthalate	80		76		40-140	5		50
Di-n-butylphthalate	82		80		40-140	2		50
Di-n-octylphthalate	83		78		40-140	6		50
Diethyl phthalate	80		77		40-140	4		50
Dimethyl phthalate	80		76		40-140	5		50
Benzo(a)anthracene	83		76		40-140	9		50
Benzo(a)pyrene	80		72		40-140	11		50
Benzo(b)fluoranthene	79		72		40-140	9		50
Benzo(k)fluoranthene	84		76		40-140	10		50
Chrysene	84		78		40-140	7		50
Acenaphthylene	75		72		40-140	4		50
Anthracene	80		79		40-140	1		50
Benzo(ghi)perylene	84		71		40-140	17		50
Fluorene	81		78		40-140	4		50
Phenanthrene	83		78		40-140	6		50
Dibenzo(a,h)anthracene	84		73		40-140	14		50
Indeno(1,2,3-cd)pyrene	82		72		40-140	13		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG683592-2 WG683592-3								
Pyrene	82		79		35-142	4		50
Biphenyl	75		72			4		50
4-Chloroaniline	40		42		40-140	5		50
2-Nitroaniline	77		77		47-134	0		50
3-Nitroaniline	57		47		26-129	19		50
4-Nitroaniline	80		75		41-125	6		50
Dibenzofuran	80		76		40-140	5		50
2-Methylnaphthalene	68		69		40-140	1		50
1,2,4,5-Tetrachlorobenzene	73		70		40-117	4		50
Acetophenone	71		66		14-144	7		50
2,4,6-Trichlorophenol	80		72		30-130	11		50
P-Chloro-M-Cresol	79		75		26-103	5		50
2-Chlorophenol	70		67		25-102	4		50
2,4-Dichlorophenol	77		74		30-130	4		50
2,4-Dimethylphenol	55		56		30-130	2		50
2-Nitrophenol	71		64		30-130	10		50
4-Nitrophenol	103		95		11-114	8		50
2,4-Dinitrophenol	71		61		4-130	15		50
4,6-Dinitro-o-cresol	78		73		10-130	7		50
Pentachlorophenol	74		70		17-109	6		50
Phenol	69		64		26-90	8		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG683592-2 WG683592-3								
2-Methylphenol	69		64		30-130.	8		50
3-Methylphenol/4-Methylphenol	70		69		30-130	1		50
2,4,5-Trichlorophenol	85		79		30-130	7		50
Benzoic Acid	61		53			14		50
Benzyl Alcohol	71		64		40-140	10		50
Carbazole	85		80		54-128	6		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	76		70		25-120
Phenol-d6	73		72		10-120
Nitrobenzene-d5	71		66		23-120
2-Fluorobiphenyl	72		69		30-120
2,4,6-Tribromophenol	85		88		0-136
4-Terphenyl-d14	86		83		18-120

# PCBS

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 04/23/14 11:24  
 Analyst: JW  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/21/14 16:21  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 04/22/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.0	2.84	1	A
Aroclor 1221	ND		ug/kg	36.0	3.32	1	A
Aroclor 1232	ND		ug/kg	36.0	4.22	1	A
Aroclor 1242	ND		ug/kg	36.0	4.41	1	A
Aroclor 1248	ND		ug/kg	36.0	3.04	1	A
Aroclor 1254	ND		ug/kg	36.0	2.96	1	A
Aroclor 1260	ND		ug/kg	36.0	2.74	1	A
Aroclor 1262	ND		ug/kg	36.0	1.79	1	A
Aroclor 1268	ND		ug/kg	36.0	5.22	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	95		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 04/23/14 11:36  
 Analyst: JW  
 Percent Solids: 93%

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/21/14 16:21  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 04/22/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.0	2.77	1	A
Aroclor 1221	ND		ug/kg	35.0	3.23	1	A
Aroclor 1232	ND		ug/kg	35.0	4.10	1	A
Aroclor 1242	ND		ug/kg	35.0	4.29	1	A
Aroclor 1248	ND		ug/kg	35.0	2.96	1	A
Aroclor 1254	ND		ug/kg	35.0	2.88	1	A
Aroclor 1260	ND		ug/kg	35.0	2.67	1	A
Aroclor 1262	ND		ug/kg	35.0	1.74	1	A
Aroclor 1268	ND		ug/kg	35.0	5.08	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	93		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-03  
 Client ID: SB-3  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 04/23/14 11:49  
 Analyst: JW  
 Percent Solids: 76%

Date Collected: 04/16/14 12:15  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/21/14 16:21  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 04/22/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	42.5	3.36	1	A
Aroclor 1221	ND		ug/kg	42.5	3.92	1	A
Aroclor 1232	ND		ug/kg	42.5	4.98	1	A
Aroclor 1242	ND		ug/kg	42.5	5.21	1	A
Aroclor 1248	ND		ug/kg	42.5	3.59	1	A
Aroclor 1254	ND		ug/kg	42.5	3.50	1	A
Aroclor 1260	ND		ug/kg	42.5	3.24	1	A
Aroclor 1262	ND		ug/kg	42.5	2.11	1	A
Aroclor 1268	ND		ug/kg	42.5	6.17	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	86		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 04/23/14 12:01  
 Analyst: JW  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/21/14 16:21  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 04/22/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.2	2.94	1	A
Aroclor 1221	ND		ug/kg	37.2	3.43	1	A
Aroclor 1232	ND		ug/kg	37.2	4.36	1	A
Aroclor 1242	ND		ug/kg	37.2	4.55	1	A
Aroclor 1248	ND		ug/kg	37.2	3.14	1	A
Aroclor 1254	ND		ug/kg	37.2	3.06	1	A
Aroclor 1260	ND		ug/kg	37.2	2.83	1	A
Aroclor 1262	ND		ug/kg	37.2	1.84	1	A
Aroclor 1268	ND		ug/kg	37.2	5.39	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	91		30-150	A
2,4,5,6-Tetrachloro-m-xylene	85		30-150	B
Decachlorobiphenyl	92		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 04/23/14 12:13  
 Analyst: JW  
 Percent Solids: 90%

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/21/14 16:21  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 04/22/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	36.6	2.89	1	A
Aroclor 1221	ND		ug/kg	36.6	3.37	1	A
Aroclor 1232	ND		ug/kg	36.6	4.29	1	A
Aroclor 1242	ND		ug/kg	36.6	4.48	1	A
Aroclor 1248	ND		ug/kg	36.6	3.09	1	A
Aroclor 1254	ND		ug/kg	36.6	3.01	1	A
Aroclor 1260	ND		ug/kg	36.6	2.79	1	A
Aroclor 1262	ND		ug/kg	36.6	1.82	1	A
Aroclor 1268	ND		ug/kg	36.6	5.31	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	92		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 04/23/14 12:26  
Analyst: JW

Extraction Method: EPA 3546  
Extraction Date: 04/21/14 16:21  
Cleanup Method1: EPA 3665A  
Cleanup Date1: 04/22/14  
Cleanup Method2: EPA 3660B  
Cleanup Date2: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-05 Batch: WG683907-1						
Aroclor 1016	ND		ug/kg	32.5	2.56	A
Aroclor 1221	ND		ug/kg	32.5	2.99	A
Aroclor 1232	ND		ug/kg	32.5	3.80	A
Aroclor 1242	ND		ug/kg	32.5	3.97	A
Aroclor 1248	ND		ug/kg	32.5	2.74	A
Aroclor 1254	ND		ug/kg	32.5	2.67	A
Aroclor 1260	ND		ug/kg	32.5	2.47	A
Aroclor 1262	ND		ug/kg	32.5	1.61	A
Aroclor 1268	ND		ug/kg	32.5	4.71	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	85		30-150	A
Decachlorobiphenyl	85		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG683907-2 WG683907-3									
Aroclor 1016	87		90		40-140	3		50	A
Aroclor 1260	80		82		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		86		30-150	A
Decachlorobiphenyl	92		94		30-150	A
2,4,5,6-Tetrachloro-m-xylene	85		88		30-150	B
Decachlorobiphenyl	89		93		30-150	B

# PESTICIDES

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 04/24/14 03:21  
 Analyst: SH  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/22/14 01:48  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 04/23/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.77	0.346	1	A
Lindane	ND		ug/kg	0.737	0.330	1	A
Alpha-BHC	ND		ug/kg	0.737	0.209	1	A
Beta-BHC	ND		ug/kg	1.77	0.671	1	A
Heptachlor	ND		ug/kg	0.885	0.397	1	A
Aldrin	ND		ug/kg	1.77	0.623	1	A
Endrin	ND		ug/kg	0.737	0.302	1	A
Dieldrin	ND		ug/kg	1.10	0.553	1	A
4,4'-DDE	ND		ug/kg	1.77	0.409	1	A
4,4'-DDD	ND		ug/kg	1.77	0.631	1	A
4,4'-DDT	ND		ug/kg	3.32	1.42	1	A
Endosulfan I	ND		ug/kg	1.77	0.418	1	A
Endosulfan II	ND		ug/kg	1.77	0.591	1	A
Endosulfan sulfate	ND		ug/kg	0.737	0.351	1	A
cis-Chlordane	ND		ug/kg	2.21	0.616	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8151A  
 Analytical Date: 05/01/14 15:42  
 Analyst: SS  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 8151A  
 Extraction Date: 04/30/14 12:41  
 Methylation Date: 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	187	10.3	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	94		30-150	A
DCAA	87		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 04/24/14 03:34  
 Analyst: SH  
 Percent Solids: 93%

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/22/14 01:48  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 04/23/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.71	0.335	1	A
Lindane	ND		ug/kg	0.713	0.319	1	A
Alpha-BHC	ND		ug/kg	0.713	0.202	1	A
Beta-BHC	ND		ug/kg	1.71	0.649	1	A
Heptachlor	ND		ug/kg	0.856	0.384	1	A
Aldrin	ND		ug/kg	1.71	0.602	1	A
Endrin	ND		ug/kg	0.713	0.292	1	A
Dieldrin	ND		ug/kg	1.07	0.535	1	A
4,4'-DDE	ND		ug/kg	1.71	0.396	1	A
4,4'-DDD	ND		ug/kg	1.71	0.610	1	A
4,4'-DDT	ND		ug/kg	3.21	1.38	1	A
Endosulfan I	ND		ug/kg	1.71	0.404	1	A
Endosulfan II	ND		ug/kg	1.71	0.572	1	A
Endosulfan sulfate	ND		ug/kg	0.713	0.339	1	A
cis-Chlordane	ND		ug/kg	2.14	0.596	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	46		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	45		30-150	B
Decachlorobiphenyl	58		30-150	B

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

**Lab ID:** L1408216-02  
**Client ID:** SB-2  
**Sample Location:** 521 W. 145TH ST. NEW YORK, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8151A  
**Analytical Date:** 05/01/14 16:02  
**Analyst:** SS  
**Percent Solids:** 93%

**Date Collected:** 04/16/14 10:45  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 8151A  
**Extraction Date:** 04/30/14 12:41  
**Methylation Date:** 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	177	9.76	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	78		30-150	A
DCAA	79		30-150	B

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

**Lab ID:** L1408216-03  
**Client ID:** SB-3  
**Sample Location:** 521 W. 145TH ST. NEW YORK, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8081B  
**Analytical Date:** 04/24/14 03:47  
**Analyst:** SH  
**Percent Solids:** 76%

**Date Collected:** 04/16/14 12:15  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 04/22/14 01:48  
**Cleanup Method1:** EPA 3620B  
**Cleanup Date1:** 04/23/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	2.06	0.403	1	A
Lindane	ND		ug/kg	0.858	0.383	1	A
Alpha-BHC	ND		ug/kg	0.858	0.244	1	A
Beta-BHC	ND		ug/kg	2.06	0.781	1	A
Heptachlor	ND		ug/kg	1.03	0.462	1	A
Aldrin	ND		ug/kg	2.06	0.725	1	A
Endrin	ND		ug/kg	0.858	0.352	1	A
Dieldrin	ND		ug/kg	1.29	0.643	1	A
4,4'-DDE	ND		ug/kg	2.06	0.476	1	A
4,4'-DDD	ND		ug/kg	2.06	0.734	1	A
4,4'-DDT	ND		ug/kg	3.86	1.66	1	A
Endosulfan I	ND		ug/kg	2.06	0.486	1	A
Endosulfan II	ND		ug/kg	2.06	0.688	1	A
Endosulfan sulfate	ND		ug/kg	0.858	0.408	1	A
cis-Chlordane	ND		ug/kg	2.57	0.717	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	125		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	84		30-150	B

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

**Lab ID:** L1408216-03  
**Client ID:** SB-3  
**Sample Location:** 521 W. 145TH ST. NEW YORK, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8151A  
**Analytical Date:** 05/01/14 16:22  
**Analyst:** SS  
**Percent Solids:** 76%

**Date Collected:** 04/16/14 12:15  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 8151A  
**Extraction Date:** 04/30/14 12:41  
**Methylation Date:** 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	220	12.1	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	86		30-150	A
DCAA	31		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 04/24/14 04:00  
 Analyst: SH  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/22/14 01:48  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 04/23/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.77	0.347	1	A
Lindane	ND		ug/kg	0.739	0.330	1	A
Alpha-BHC	ND		ug/kg	0.739	0.210	1	A
Beta-BHC	ND		ug/kg	1.77	0.672	1	A
Heptachlor	ND		ug/kg	0.887	0.398	1	A
Aldrin	ND		ug/kg	1.77	0.624	1	A
Endrin	ND		ug/kg	0.739	0.303	1	A
Dieldrin	ND		ug/kg	1.11	0.554	1	A
4,4'-DDE	ND		ug/kg	1.77	0.410	1	A
4,4'-DDD	ND		ug/kg	1.77	0.632	1	A
4,4'-DDT	3.02	J	ug/kg	3.32	1.43	1	A
Endosulfan I	ND		ug/kg	1.77	0.419	1	A
Endosulfan II	ND		ug/kg	1.77	0.593	1	A
Endosulfan sulfate	ND		ug/kg	0.739	0.352	1	A
cis-Chlordane	ND		ug/kg	2.22	0.618	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	141		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	82		30-150	B

**Project Name:** PS186

**Lab Number:** L1408216

**Project Number:** 6627

**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8151A  
 Analytical Date: 05/01/14 16:42  
 Analyst: SS  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 8151A  
 Extraction Date: 04/30/14 12:41  
 Methylation Date: 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	192	10.6	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	73		30-150	A
DCAA	71		30-150	B



**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 04/24/14 04:13  
 Analyst: SH  
 Percent Solids: 90%

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 04/22/14 01:48  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 04/23/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/kg	1.70	0.332	1	A
Lindane	ND		ug/kg	0.707	0.316	1	A
Alpha-BHC	ND		ug/kg	0.707	0.201	1	A
Beta-BHC	ND		ug/kg	1.70	0.644	1	A
Heptachlor	ND		ug/kg	0.849	0.380	1	A
Aldrin	ND		ug/kg	1.70	0.598	1	A
Endrin	ND		ug/kg	0.707	0.290	1	A
Dieldrin	ND		ug/kg	1.06	0.530	1	A
4,4'-DDE	ND		ug/kg	1.70	0.392	1	A
4,4'-DDD	ND		ug/kg	1.70	0.606	1	A
4,4'-DDT	ND		ug/kg	3.18	1.36	1	A
Endosulfan I	ND		ug/kg	1.70	0.401	1	A
Endosulfan II	ND		ug/kg	1.70	0.567	1	A
Endosulfan sulfate	ND		ug/kg	0.707	0.337	1	A
cis-Chlordane	ND		ug/kg	2.12	0.591	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	106		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	84		30-150	B

**Project Name:** PS186**Lab Number:** L1408216**Project Number:** 6627**Report Date:** 05/02/14**SAMPLE RESULTS**

**Lab ID:** L1408216-05  
**Client ID:** SB-5  
**Sample Location:** 521 W. 145TH ST. NEW YORK, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8151A  
**Analytical Date:** 05/01/14 17:02  
**Analyst:** SS  
**Percent Solids:** 90%

**Date Collected:** 04/16/14 11:30  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 8151A  
**Extraction Date:** 04/30/14 12:41  
**Methylation Date:** 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	183	10.1	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	75		30-150	A
DCAA	74		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B  
 Analytical Date: 04/22/14 11:25  
 Analyst: SH

Extraction Method: EPA 3546  
 Extraction Date: 04/22/14 01:48  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 04/22/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-05 Batch: WG683968-1						
Delta-BHC	ND		ug/kg	1.58	0.310	A
Lindane	ND		ug/kg	0.659	0.294	A
Alpha-BHC	ND		ug/kg	0.659	0.187	A
Beta-BHC	ND		ug/kg	1.58	0.599	A
Heptachlor	ND		ug/kg	0.790	0.354	A
Aldrin	ND		ug/kg	1.58	0.557	A
Endrin	ND		ug/kg	0.659	0.270	A
Dieldrin	ND		ug/kg	0.988	0.494	A
4,4'-DDE	ND		ug/kg	1.58	0.366	A
4,4'-DDD	ND		ug/kg	1.58	0.564	A
4,4'-DDT	ND		ug/kg	2.96	1.27	A
Endosulfan I	ND		ug/kg	1.58	0.374	A
Endosulfan II	ND		ug/kg	1.58	0.528	A
Endosulfan sulfate	ND		ug/kg	0.659	0.314	A
cis-Chlordane	ND		ug/kg	1.98	0.551	A

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	100		30-150	A
Decachlorobiphenyl	69		30-150	B

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8151A  
 Analytical Date: 05/01/14 14:41  
 Analyst: SS

Extraction Method: EPA 8151A  
 Extraction Date: 04/30/14 12:41

Methylation Date: 05/01/14 05:10

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-05 Batch: WG686219-1						
2,4,5-TP (Silvex)	ND		ug/kg	162	8.96	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	77		30-150	A
DCAA	64		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG683968-2 WG683968-3									
Delta-BHC	67		84		30-150	23		30	A
Lindane	69		89		30-150	25		30	A
Alpha-BHC	64		82		30-150	25		30	A
Beta-BHC	74		75		30-150	1		30	A
Heptachlor	68		87		30-150	25		30	A
Aldrin	77		96		30-150	22		30	A
Heptachlor epoxide	79		96		30-150	19		30	A
Endrin	89		104		30-150	16		30	A
Endrin ketone	81		94		30-150	15		30	A
Dieldrin	85		104		30-150	20		30	A
4,4'-DDE	84		99		30-150	16		30	A
4,4'-DDD	86		100		30-150	15		30	A
4,4'-DDT	87		107		30-150	21		30	A
Endosulfan I	88		104		30-150	17		30	A
Endosulfan II	85		96		30-150	12		30	A
Endosulfan sulfate	89		106		30-150	17		30	A
Methoxychlor	74		86		30-150	15		30	A
cis-Chlordane	82		94		30-150	14		30	A
trans-Chlordane	81		98		30-150	19		30	A

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG683968-2 WG683968-3								

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	57		68		30-150	A
Decachlorobiphenyl	92		125		30-150	A
2,4,5,6-Tetrachloro-m-xylene	48		57		30-150	B
Decachlorobiphenyl	66		74		30-150	B

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG686219-2 WG686219-3									
2,4-D	94		111		30-150	17		30	A
2,4,5-T	81		96		30-150	17		30	A
2,4,5-TP (Silvex)	83		99		30-150	18		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	83		97		30-150	A
DCAA	79		92		30-150	B

## METALS

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Percent Solids: 89%

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	4800		mg/kg	8.8	1.8	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	4.4	0.70	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Arsenic, Total	3.9		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Barium, Total	60		mg/kg	0.88	0.26	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Beryllium, Total	0.31	J	mg/kg	0.44	0.09	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.88	0.06	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Calcium, Total	20000		mg/kg	8.8	2.6	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Chromium, Total	10		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Cobalt, Total	4.1		mg/kg	1.8	0.44	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Copper, Total	11		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Iron, Total	11000		mg/kg	4.4	1.8	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Lead, Total	5.2		mg/kg	4.4	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Magnesium, Total	6100		mg/kg	8.8	0.88	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Manganese, Total	320		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.09	0.02	1	04/24/14 09:46	04/24/14 12:26	EPA 7471B	1,7471B	MC
Nickel, Total	10		mg/kg	2.2	0.35	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Potassium, Total	1000		mg/kg	220	35.	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.8	0.26	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Sodium, Total	110	J	mg/kg	180	26.	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.8	0.35	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Vanadium, Total	13		mg/kg	0.88	0.09	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT
Zinc, Total	26		mg/kg	4.4	0.61	2	04/23/14 11:50	04/24/14 12:04	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Percent Solids: 93%

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	6300		mg/kg	8.1	1.6	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Antimony, Total	0.92	J	mg/kg	4.1	0.65	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Arsenic, Total	4.1		mg/kg	0.81	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Barium, Total	61		mg/kg	0.81	0.24	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Beryllium, Total	0.27	J	mg/kg	0.41	0.08	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.81	0.06	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Calcium, Total	5800		mg/kg	8.1	2.4	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Chromium, Total	14		mg/kg	0.81	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Cobalt, Total	5.0		mg/kg	1.6	0.41	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Copper, Total	10		mg/kg	0.81	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Iron, Total	12000		mg/kg	4.1	1.6	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Lead, Total	8.4		mg/kg	4.1	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Magnesium, Total	3300		mg/kg	8.1	0.81	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Manganese, Total	250		mg/kg	0.81	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.08	0.02	1	04/24/14 09:46	04/24/14 12:28	EPA 7471B	1,7471B	MC
Nickel, Total	11		mg/kg	2.0	0.32	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Potassium, Total	630		mg/kg	200	32.	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.6	0.24	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.81	0.16	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Sodium, Total	83	J	mg/kg	160	24.	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.6	0.32	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Vanadium, Total	14		mg/kg	0.81	0.08	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT
Zinc, Total	23		mg/kg	4.1	0.57	2	04/23/14 11:50	04/24/14 12:41	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-03  
 Client ID: SB-3  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Percent Solids: 76%

Date Collected: 04/16/14 12:15  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	4200		mg/kg	10	2.0	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	5.0	0.80	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Arsenic, Total	3.0		mg/kg	1.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Barium, Total	52		mg/kg	1.0	0.30	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Beryllium, Total	0.27	J	mg/kg	0.50	0.10	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	1.0	0.07	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Calcium, Total	16000		mg/kg	10	3.0	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Chromium, Total	8.6		mg/kg	1.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Cobalt, Total	4.3		mg/kg	2.0	0.50	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Copper, Total	9.5		mg/kg	1.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Iron, Total	9700		mg/kg	5.0	2.0	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Lead, Total	4.5	J	mg/kg	5.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Magnesium, Total	6400		mg/kg	10	1.0	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Manganese, Total	270		mg/kg	1.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.10	0.02	1	04/24/14 09:46	04/24/14 12:30	EPA 7471B	1,7471B	MC
Nickel, Total	10		mg/kg	2.5	0.40	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Potassium, Total	1000		mg/kg	250	40.	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	2.0	0.30	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	1.0	0.20	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Sodium, Total	98	J	mg/kg	200	30.	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	2.0	0.40	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Vanadium, Total	12		mg/kg	1.0	0.10	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT
Zinc, Total	20		mg/kg	5.0	0.70	2	04/23/14 11:50	04/24/14 12:45	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Percent Solids: 86%

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	3800		mg/kg	9.1	1.8	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	4.5	0.73	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Arsenic, Total	3.7		mg/kg	0.91	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Barium, Total	55		mg/kg	0.91	0.27	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Beryllium, Total	0.24	J	mg/kg	0.45	0.09	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.91	0.06	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Calcium, Total	8300		mg/kg	9.1	2.7	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Chromium, Total	11		mg/kg	0.91	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Cobalt, Total	4.2		mg/kg	1.8	0.45	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Copper, Total	12		mg/kg	0.91	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Iron, Total	9200		mg/kg	4.5	1.8	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Lead, Total	33		mg/kg	4.5	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Magnesium, Total	4000		mg/kg	9.1	0.91	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Manganese, Total	250		mg/kg	0.91	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.07	0.02	1	04/24/14 09:46	04/24/14 12:31	EPA 7471B	1,7471B	MC
Nickel, Total	11		mg/kg	2.3	0.36	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Potassium, Total	930		mg/kg	230	36.	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.8	0.27	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.91	0.18	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Sodium, Total	120	J	mg/kg	180	27.	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.8	0.36	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Vanadium, Total	12		mg/kg	0.91	0.09	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT
Zinc, Total	43		mg/kg	4.5	0.64	2	04/23/14 11:50	04/24/14 12:49	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil  
 Percent Solids: 90%

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	4200		mg/kg	8.8	1.8	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	4.4	0.70	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Arsenic, Total	3.3		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Barium, Total	73		mg/kg	0.88	0.26	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Beryllium, Total	0.26	J	mg/kg	0.44	0.09	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.88	0.06	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Calcium, Total	4800		mg/kg	8.8	2.6	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Chromium, Total	10		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Cobalt, Total	3.4		mg/kg	1.8	0.44	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Copper, Total	8.5		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Iron, Total	8300		mg/kg	4.4	1.8	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Lead, Total	5.7		mg/kg	4.4	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Magnesium, Total	2900		mg/kg	8.8	0.88	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Manganese, Total	190		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.07	0.02	1	04/24/14 09:46	04/24/14 12:33	EPA 7471B	1,7471B	MC
Nickel, Total	8.9		mg/kg	2.2	0.35	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Potassium, Total	710		mg/kg	220	35.	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.8	0.26	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.88	0.18	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Sodium, Total	83	J	mg/kg	180	26.	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.8	0.35	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Vanadium, Total	11		mg/kg	0.88	0.09	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT
Zinc, Total	24		mg/kg	4.4	0.62	2	04/23/14 11:50	04/24/14 12:53	EPA 3050B	1,6010C	TT



Project Name: PS186  
Project Number: 6627

Lab Number: L1408216  
Report Date: 05/02/14

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-05 Batch: WG684474-1										
Aluminum, Total	1.0	J	mg/kg	4.0	0.80	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Antimony, Total	ND		mg/kg	2.0	0.32	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Arsenic, Total	ND		mg/kg	0.40	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Barium, Total	ND		mg/kg	0.40	0.12	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Beryllium, Total	ND		mg/kg	0.20	0.04	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.40	0.03	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Calcium, Total	ND		mg/kg	4.0	1.2	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Chromium, Total	ND		mg/kg	0.40	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Cobalt, Total	ND		mg/kg	0.80	0.20	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Copper, Total	ND		mg/kg	0.40	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Iron, Total	2.9		mg/kg	2.0	0.80	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Lead, Total	ND		mg/kg	2.0	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Magnesium, Total	ND		mg/kg	4.0	0.40	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Manganese, Total	ND		mg/kg	0.40	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Nickel, Total	ND		mg/kg	1.0	0.16	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Potassium, Total	ND		mg/kg	100	16.	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Selenium, Total	ND		mg/kg	0.80	0.12	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Silver, Total	ND		mg/kg	0.40	0.08	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Sodium, Total	ND		mg/kg	80	12.	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Thallium, Total	ND		mg/kg	0.80	0.16	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Vanadium, Total	ND		mg/kg	0.40	0.04	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT
Zinc, Total	ND		mg/kg	2.0	0.28	1	04/23/14 11:50	04/24/14 11:57	1,6010C	TT

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-05 Batch: WG684562-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	04/24/14 09:46	04/24/14 11:43	1,7471B	MC



**Project Name:** PS186

**Lab Number:** L1408216

**Project Number:** 6627

**Report Date:** 05/02/14

## **Method Blank Analysis Batch Quality Control**

### **Prep Information**

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Digestion Method: EPA 7471B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Westborough Lab Associated sample(s): 01-05 Batch: WG684474-2 SRM Lot Number: 0518-10-02								
Aluminum, Total	85		-		29-171	-		
Antimony, Total	117		-		4-196	-		
Arsenic, Total	104		-		81-119	-		
Barium, Total	96		-		83-118	-		
Beryllium, Total	98		-		83-117	-		
Cadmium, Total	94		-		82-117	-		
Calcium, Total	86		-		83-117	-		
Chromium, Total	97		-		80-119	-		
Cobalt, Total	101		-		83-117	-		
Copper, Total	101		-		83-117	-		
Iron, Total	101		-		51-150	-		
Lead, Total	95		-		80-120	-		
Magnesium, Total	88		-		74-126	-		
Manganese, Total	100		-		83-117	-		
Nickel, Total	99		-		82-117	-		
Potassium, Total	99		-		74-126	-		
Selenium, Total	102		-		80-120	-		
Silver, Total	97		-		66-134	-		
Sodium, Total	100		-		74-127	-		
Thallium, Total	101		-		79-120	-		
Vanadium, Total	98		-		79-121	-		

## Lab Control Sample Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-05 Batch: WG684474-2 SRM Lot Number: 0518-10-02					
Zinc, Total	91	-	82-119	-	
Total Metals - Westborough Lab Associated sample(s): 01-05 Batch: WG684562-2 SRM Lot Number: 0518-10-02					
Mercury, Total	121	-	67-133	-	

## Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684474-4 QC Sample: L1408216-01 Client ID: SB-1												
Aluminum, Total	4800	171	6000	703	Q	-	-		75-125	-		20
Antimony, Total	ND	42.7	41	96		-	-		75-125	-		20
Arsenic, Total	3.9	10.2	14	98		-	-		75-125	-		20
Barium, Total	60.	171	250	111		-	-		75-125	-		20
Beryllium, Total	0.31J	4.27	4.8	112		-	-		75-125	-		20
Cadmium, Total	ND	4.35	4.0	92		-	-		75-125	-		20
Calcium, Total	20000	854	22000	234	Q	-	-		75-125	-		20
Chromium, Total	10.	17.1	29	111		-	-		75-125	-		20
Cobalt, Total	4.1	42.7	44	93		-	-		75-125	-		20
Copper, Total	11.	21.3	35	112		-	-		75-125	-		20
Iron, Total	11000	85.4	12000	1170	Q	-	-		75-125	-		20
Lead, Total	5.2	43.5	47	96		-	-		75-125	-		20
Magnesium, Total	6100	854	7600	176	Q	-	-		75-125	-		20
Manganese, Total	320	42.7	400	187	Q	-	-		75-125	-		20
Nickel, Total	10.	42.7	50	94		-	-		75-125	-		20
Potassium, Total	1000	854	2400	164	Q	-	-		75-125	-		20
Selenium, Total	ND	10.2	9.3	91		-	-		75-125	-		20
Silver, Total	ND	25.6	27	105		-	-		75-125	-		20
Sodium, Total	110J	854	1200	140	Q	-	-		75-125	-		20
Thallium, Total	ND	10.2	9.2	90		-	-		75-125	-		20
Vanadium, Total	13.	42.7	59	108		-	-		75-125	-		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684474-4 QC Sample: L1408216-01 Client ID: SB-1									
Zinc, Total	26.	42.7	65	91	-	-	75-125	-	20
Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684562-4 QC Sample: L1407622-01 Client ID: MS Sample									
Mercury, Total	ND	0.146	0.18	123	Q	-	80-120	-	35

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684474-3 QC Sample: L1408216-01 Client ID: SB-1						
Aluminum, Total	4800	4800	mg/kg	0		20
Antimony, Total	ND	ND	mg/kg	NC		20
Arsenic, Total	3.9	4.4	mg/kg	12		20
Barium, Total	60.	64	mg/kg	6		20
Beryllium, Total	0.31J	0.30J	mg/kg	NC		20
Cadmium, Total	ND	ND	mg/kg	NC		20
Calcium, Total	20000	17000	mg/kg	16		20
Chromium, Total	10.	11	mg/kg	10		20
Cobalt, Total	4.1	4.3	mg/kg	5		20
Copper, Total	11.	11	mg/kg	0		20
Iron, Total	11000	11000	mg/kg	0		20
Lead, Total	5.2	5.7	mg/kg	9		20
Magnesium, Total	6100	6300	mg/kg	3		20
Manganese, Total	320	340	mg/kg	6		20
Nickel, Total	10.	11	mg/kg	10		20
Potassium, Total	1000	1100	mg/kg	10		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Sodium, Total	110J	120J	mg/kg	NC		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
<b>Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684474-3 QC Sample: L1408216-01 Client ID: SB-1</b>					
Thallium, Total	ND	ND	mg/kg	NC	20
Vanadium, Total	13.	14	mg/kg	7	20
Zinc, Total	26.	33	mg/kg	24 Q	20
<b>Total Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG684562-3 QC Sample: L1407622-01 Client ID: DUP Sample</b>					
Mercury, Total	ND	0.05J	mg/kg	NC	35

# **INORGANICS & MISCELLANEOUS**

Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-01  
 Client ID: SB-1  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil

Date Collected: 04/16/14 10:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	10		mg/kg	0.90	0.90	1	-	05/02/14 11:00	107,-	JO
Solids, Total	88.6		%	0.100	NA	1	-	04/21/14 21:21	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.1	0.25	1	04/30/14 15:45	04/30/14 19:51	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.90	0.18	1	04/30/14 17:00	05/01/14 21:01	1,7196A	JT



Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-02  
 Client ID: SB-2  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil

Date Collected: 04/16/14 10:45  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	14		mg/kg	0.86	0.86	1	-	05/02/14 11:00	107,-	JO
Solids, Total	92.7		%	0.100	NA	1	-	04/21/14 21:21	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.0	0.25	1	04/30/14 15:45	04/30/14 19:52	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.86	0.17	1	04/30/14 17:00	05/01/14 21:02	1,7196A	JT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**SAMPLE RESULTS**

**Lab ID:** L1408216-03  
**Client ID:** SB-3  
**Sample Location:** 521 W. 145TH ST. NEW YORK, NY  
**Matrix:** Soil

**Date Collected:** 04/16/14 12:15  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Chromium, Trivalent	8.6		mg/kg	1.0	1.0	1	-	05/02/14 11:00	107,-	JO
Solids, Total	75.5		%	0.100	NA	1	-	04/21/14 21:21	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.3	0.30	1	04/30/14 15:45	04/30/14 19:53	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	1.0	0.21	1	04/30/14 17:00	05/01/14 21:02	1,7196A	JT



Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-04  
 Client ID: SB-4  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil

Date Collected: 04/16/14 13:00  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	11		mg/kg	0.93	0.93	1	-	05/02/14 11:00	107,-	JO
Solids, Total	85.6		%	0.100	NA	1	-	04/21/14 21:21	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.1	0.26	1	04/30/14 15:45	04/30/14 19:53	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.93	0.19	1	04/30/14 17:00	05/01/14 21:02	1,7196A	JT



Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

## SAMPLE RESULTS

Lab ID: L1408216-05  
 Client ID: SB-5  
 Sample Location: 521 W. 145TH ST. NEW YORK, NY  
 Matrix: Soil

Date Collected: 04/16/14 11:30  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	10		mg/kg	0.89	0.89	1	-	05/02/14 11:00	107,-	JO
Solids, Total	89.7		%	0.100	NA	1	-	04/21/14 21:21	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.0	0.24	1	04/30/14 15:45	04/30/14 19:54	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.89	0.18	1	04/30/14 17:00	05/01/14 21:03	1,7196A	JT



Project Name: PS186

Lab Number: L1408216

Project Number: 6627

Report Date: 05/02/14

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG686181-1									
Cyanide, Total	ND	mg/kg	0.83	0.19	1	04/30/14 15:45	04/30/14 19:15	1,9010C/9012B	JO
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG686348-1									
Chromium, Hexavalent	ND	mg/kg	0.80	0.16	1	04/30/14 17:00	05/01/14 20:57	1,7196A	JT

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG686181-2 WG686181-3								
Cyanide, Total	98		102		80-120	4		35
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG686348-2								
Chromium, Hexavalent	104		-		80-120	-		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG686181-4 WG686181-5 QC Sample: L1408798-18 Client ID: MS Sample												
Cyanide, Total	ND	11	11	100		11	100		65-135	0		35
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG686348-5 QC Sample: L1408216-02 Client ID: SB-2												
Chromium, Hexavalent	ND	1340	1200	89		-	-		75-125	-		20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG683939-1 QC Sample: L1408216-01 Client ID: SB-1						
Solids, Total	88.6	89.1	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG686348-4 QC Sample: L1408216-02 Client ID: SB-2						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1408216-01A	Amber 120ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260(14)
L1408216-01B	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-01C	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-02A	Amber 120ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days

Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1408216-02B	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-02C	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-03A	Amber 120ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260(14)
L1408216-03B	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1408216-03C	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-04A	Amber 120ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260(14)
L1408216-04B	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-04C	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-05A	Amber 120ml unpreserved	A	N/A	3.9	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



Project Name: PS186

Project Number: 6627

Lab Number: L1408216

Report Date: 05/02/14

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1408216-05B	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)
L1408216-05C	Amber 250ml unpreserved	A	N/A	3.9	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),HEXCR-7196(30),K-TI(180),NA-TI(180)

\*Values in parentheses indicate holding time in days

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

**Data Qualifiers**

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408216  
**Report Date:** 05/02/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 107 Alpha Analytical - In-house calculation method.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised April 15, 2014

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**The following analytes are not included in our NELAP Scope of Accreditation:**

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# CHAIN OF CUSTODY

IMPACT ENVIRONMENTAL  
 170 Keyland Court, Bohemia, New York 11716  
 (Tel) 631-269-8800 (Fax) 631-269-1599

Page 1 of 1



LAB NAME: Alpha Analytical

RECEIVED DATE:

L1408216

Client Information

Company Name: Impact Environmental  
 Address: 170 Keyland Court  
 City: Bohemia

Project Name: PS186  
 Street: 381 N. 145th Street  
 City: New York  
 State: NY  
 Zip: NY

Project Contact: G. Vander Puijs  
 Phone #: 631-269-8800  
 Fax #: 631-269-1599

Sampler's Name: Greg Hooper - Dyncis

Sampler's Signature: *Greg Hooper*

Sample Information

Sample ID: SB-1, SB-2, SB-3, SB-4, SB-5

IEC Project Code: 6627

Matrix Code: S

Sample Type: G

Sample Date: 11/14/14

Time: 10:45

Total # of bottles: 3

None or Other: X

IC: X

HCL: X

Methanol (USEPA 5035): X

Sodium Bisulfate (EPA 5035): X

Sample Containers: Number of Each Preserved Bottle

Impact Analytical Package A\*

Impact Analytical Package B\*\*

Impact Analytical Package C\*\*\*

VOC 8260 (Analyte List for NY Part 375 and NJ NRDC)

GP82 Analysis

VOCs 8260 (CP51 Analyte List)

X VOCs 8260 (NY PART 375)

X SVOCs 8270 (NY PART 375)

X Pest/PCBS 8081/8082 (NY 375)

Analytical Information

Matrix Codes: L-Liquid, 5-Soil, A-Air, OL-Oil, W-Wipe, PC-Print Chips, SL-Sludge, SD-Solid, DW-Drinking Water, DTS-Distilled

Sample Type: G-Grab, C-Composite, B-Blank

LAB USE ONLY	Sample ID	IEC Project Code	Matrix Code	Sample Type	Sample Date	Time	Total # of bottles	None or Other*	IC	HCL	Methanol (USEPA 5035)	Sodium Bisulfate (EPA 5035)	Sample Type
	01 SB-1	6627	S	G	11/14/14	10:45	3	X	X	X	X	X	G-Grab
	02 SB-2	6627	S	G	11/14/14	10:45	3	X	X	X	X	X	G-Grab
	03 SB-3	6627	S	G	11/14/14	12:15	3	X	X	X	X	X	G-Grab
	04 SB-4	6627	S	G	11/14/14	13:00	3	X	X	X	X	X	G-Grab
	05 SB-5	6627	S	G	11/14/14	11:50	3	X	X	X	X	X	G-Grab
	06												
	07												
	08												
	09												
	10												

END OF RECORD

Turnaround Time (Business Days)

Standard Service: Standard - 5 day

Rush Services: 24 Hour RUSH, 48 Hour RUSH

Relinquished by: [Signature]

Date / Time: 11/18/14 03:00

Received By: [Signature]

Date / Time: 11/18/14 03:00

Relinquished by: [Signature]

Date / Time: 11/18/14 01:50

Received By: [Signature]

Date / Time: 11/18/14 01:50

Relinquished by: [Signature]

REFERENCES: \*Package A (proprietary) - Priority: Polytarans Metals, SVOCs, PCB/Rest and Herbicides - to match all NJ DCSRS & NY Part 375 parameters and detection limits. \*\*Package B (proprietary) - Same as Package A, plus TCLP Metals & TPH. \*\*\*Package C (proprietary) - Same as Package B plus RCRA characteristics and Full TCLP

NOTES/COMMENTS:

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

COOLER INFORMATION: pH: [ ] On Ice [ ] Sample Receipt Discrepancy (attach information)



## ANALYTICAL REPORT

Lab Number:	L1410121
Client:	Impact Environmental 170 Keyland Ct Bohemia, NY 11716
ATTN:	Greg Mendez-Chicas
Phone:	(631) 269-8800
Project Name:	PS186
Project Number:	6627
Report Date:	05/20/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1410121-01	SB-6 (0-2')	521 W. 14STH ST., NY, NY	05/09/14 11:00
L1410121-02	SB-7 (0-2')	521 W. 14STH ST., NY, NY	05/09/14 09:00
L1410121-03	SB-7 (22-23')	521 W. 14STH ST., NY, NY	05/09/14 10:00
L1410121-04	GW-1	521 W. 14STH ST., NY, NY	05/09/14 13:30

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

Sample "GW-1" was received without the container for Total Cyanide analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

The samples were received above the appropriate pH for the Total Metals analysis. The laboratory added additional HNO<sub>3</sub> to a pH <2.

L1410121-04 was field filtered for Dissolved Metals.

#### Volatile Organics

L1410121-01, -02, and -03: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

#### Semivolatile Organics

The L1410121-04 Method Blank, associated with L1410121-04, has a concentration above the reporting limits for bis(2-ethylhexyl)phthalate. The sample was re-extracted with the method required holding time exceeded, and both the sample and method blank were non-detect for this target compound. The results of both extractions are reported, along with the re-extract QC. The original sample result is reported with B qualifier

#### Total Metals

L1410121-01, -02, and -03 have elevated detection limits for all elements, with the exception of mercury, due to the dilutions required by matrix interferences encountered during analysis.

The WG689934-4 MS recoveries for aluminum (269%), iron (1080%), and manganese (0%), performed on L1410121-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG689934-4 MS recoveries, performed on L1410121-01, are outside the acceptance criteria for lead

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

### Case Narrative (continued)

(133%) and potassium (130%). A post digestion spike was performed and was within acceptance criteria. The WG689934-3 Laboratory Duplicate RPDs, performed on L1410121-01, are outside the acceptance criteria for arsenic (22%), calcium (25%), and manganese (52%). The elevated RPDs have been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

#### Dissolved Metals

The WG690122-4 MS recoveries, performed on L1410121-04, are outside the acceptance criteria for antimony (74%), magnesium (4%), and zinc (132%). A post digestion spike was performed and yielded an unacceptable recovery for magnesium (133%) and zinc (133%); antimony was within acceptance criteria. This has been attributed to sample matrix.

The WG690122-4 MS recoveries for calcium (140%) and sodium (48%), performed on L1410121-04, do not apply because the sample concentrations are greater than four times the spike amounts added.

#### Chromium, Hexavalent

At the client's request, L1410121-04 was analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 05/20/14

# ORGANICS

# VOLATILES

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/13/14 17:41  
 Analyst: BN  
 Percent Solids: 82%

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.22	1
Chloroform	ND		ug/kg	1.8	0.45	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.42	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.26	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	6.1	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	6.1	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	6.1	0.29	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.13	1
p/m-Xylene	ND		ug/kg	2.4	0.39	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Acetone	6.3	J	ug/kg	12	3.8	1
2-Butanone	ND		ug/kg	12	0.43	1
n-Butylbenzene	ND		ug/kg	1.2	0.24	1
sec-Butylbenzene	ND		ug/kg	1.2	0.25	1
tert-Butylbenzene	ND		ug/kg	6.1	0.68	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.1	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.1	0.70	1
1,4-Dioxane	ND		ug/kg	120	21.	1

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14**SAMPLE RESULTS**

Lab ID: L1410121-01

Date Collected: 05/09/14 11:00

Client ID: SB-6 (0-2')

Date Received: 05/12/14

Sample Location: 521 W. 14STH ST., NY, NY

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	97		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/13/14 18:07  
 Analyst: BN  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.21	1
Chloroform	ND		ug/kg	1.8	0.44	1
Carbon tetrachloride	ND		ug/kg	1.2	0.25	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.8	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.9	0.22	1
1,3-Dichlorobenzene	ND		ug/kg	5.9	0.22	1
1,4-Dichlorobenzene	ND		ug/kg	5.9	0.28	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.12	1
p/m-Xylene	ND		ug/kg	2.4	0.38	1
o-Xylene	ND		ug/kg	2.4	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Acetone	ND		ug/kg	12	3.7	1
2-Butanone	ND		ug/kg	12	0.42	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.9	0.66	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.9	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.9	0.68	1
1,4-Dioxane	ND		ug/kg	120	20.	1

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14**SAMPLE RESULTS**

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	98		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/14/14 16:59  
 Analyst: BN  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.7	0.21	1
Chloroform	ND		ug/kg	1.7	0.43	1
Carbon tetrachloride	ND		ug/kg	1.2	0.24	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.40	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Benzene	ND		ug/kg	1.2	0.14	1
Toluene	ND		ug/kg	1.7	0.13	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.25	1
Trichloroethene	ND		ug/kg	1.2	0.18	1
1,2-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.8	0.28	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	ND		ug/kg	2.3	0.38	1
o-Xylene	ND		ug/kg	2.3	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Acetone	5.2	J	ug/kg	12	3.6	1
2-Butanone	ND		ug/kg	12	0.41	1
n-Butylbenzene	ND		ug/kg	1.2	0.23	1
sec-Butylbenzene	ND		ug/kg	1.2	0.24	1
tert-Butylbenzene	ND		ug/kg	5.8	0.65	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.8	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.8	0.67	1
1,4-Dioxane	ND		ug/kg	120	20.	1

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14**SAMPLE RESULTS**

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	98		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/15/14 12:31  
 Analyst: PD

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	0.20	J	ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.33	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.75		ug/l	0.50	0.17	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 145TH ST., NY, NY

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	7.2		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Diisopropyl Ether	ND		ug/l	2.0	0.65	1
Tert-Butyl Alcohol	ND		ug/l	10	1.2	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.0	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.0	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	0.83	J	ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.5	0.70	1

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	104		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/13/14 09:20  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG689406-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Vinyl chloride	ND		ug/kg	2.0	0.14
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Acetone	ND		ug/kg	10	3.1
2-Butanone	ND		ug/kg	10	0.36
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
1,4-Dioxane	ND		ug/kg	100	17.

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/13/14 09:20  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG689406-3					

Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	98		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/14/14 08:37  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG689782-3					
Methylene chloride	ND		ug/kg	10	2.0
1,1-Dichloroethane	ND		ug/kg	1.5	0.18
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Vinyl chloride	ND		ug/kg	2.0	0.14
1,1-Dichloroethene	ND		ug/kg	1.0	0.20
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.15
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.18
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.24
Methyl tert butyl ether	ND		ug/kg	2.0	0.10
p/m-Xylene	ND		ug/kg	2.0	0.32
o-Xylene	ND		ug/kg	2.0	0.27
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.15
Acetone	ND		ug/kg	10	3.1
2-Butanone	ND		ug/kg	10	0.36
n-Butylbenzene	ND		ug/kg	1.0	0.20
sec-Butylbenzene	ND		ug/kg	1.0	0.20
tert-Butylbenzene	ND		ug/kg	5.0	0.56
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
1,4-Dioxane	ND		ug/kg	100	17.

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/14/14 08:37  
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG689782-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	95		70-130

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/15/14 11:53  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG689883-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.33
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.17
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/15/14 11:53  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG689883-3					
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Diisopropyl Ether	ND		ug/l	2.0	0.65
Tert-Butyl Alcohol	ND		ug/l	10	1.2
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.0
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.0
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/15/14 11:53  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG689883-3					
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.5	0.70
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	105		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG689406-1 WG689406-2								
Methylene chloride	93		100		70-130	7		30
1,1-Dichloroethane	92		96		70-130	4		30
Chloroform	87		92		70-130	6		30
Carbon tetrachloride	75		80		70-130	6		30
1,2-Dichloropropane	91		95		70-130	4		30
Dibromochloromethane	93		96		70-130	3		30
1,1,2-Trichloroethane	99		103		70-130	4		30
Tetrachloroethene	83		89		70-130	7		30
Chlorobenzene	90		95		70-130	5		30
Trichlorofluoromethane	70		76		70-139	8		30
1,2-Dichloroethane	91		96		70-130	5		30
1,1,1-Trichloroethane	81		86		70-130	6		30
Bromodichloromethane	86		91		70-130	6		30
trans-1,3-Dichloropropene	99		104		70-130	5		30
cis-1,3-Dichloropropene	86		91		70-130	6		30
1,1-Dichloropropene	81		86		70-130	6		30
Bromoform	94		98		70-130	4		30
1,1,2,2-Tetrachloroethane	101		107		70-130	6		30
Benzene	85		90		70-130	6		30
Toluene	89		94		70-130	5		30
Ethylbenzene	87		92		70-130	6		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG689406-1 WG689406-2								
Chloromethane	100		104		52-130	4		30
Bromomethane	90		92		57-147	2		30
Vinyl chloride	80		84		67-130	5		30
Chloroethane	82		88		50-151	7		30
1,1-Dichloroethene	82		87		65-135	6		30
trans-1,2-Dichloroethene	84		90		70-130	7		30
Trichloroethene	82		86		70-130	5		30
1,2-Dichlorobenzene	94		100		70-130	6		30
1,3-Dichlorobenzene	94		99		70-130	5		30
1,4-Dichlorobenzene	95		100		70-130	5		30
Methyl tert butyl ether	87		91		66-130	4		30
p/m-Xylene	88		92		70-130	4		30
o-Xylene	86		91		70-130	6		30
cis-1,2-Dichloroethene	86		91		70-130	6		30
Dibromomethane	88		93		70-130	6		30
Styrene	86		90		70-130	5		30
Dichlorodifluoromethane	78		86		30-146	10		30
Acetone	114		124		54-140	8		30
Carbon disulfide	85		90		59-130	6		30
2-Butanone	93		103		70-130	10		30
Vinyl acetate	97		100		70-130	3		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG689406-1 WG689406-2								
4-Methyl-2-pentanone	86		89		70-130	3		30
1,2,3-Trichloropropane	102		114		68-130	11		30
2-Hexanone	96		106		70-130	10		30
Bromochloromethane	86		88		70-130	2		30
2,2-Dichloropropane	88		93		70-130	6		30
1,2-Dibromoethane	95		100		70-130	5		30
1,3-Dichloropropane	98		102		69-130	4		30
1,1,1,2-Tetrachloroethane	90		93		70-130	3		30
Bromobenzene	95		98		70-130	3		30
n-Butylbenzene	95		102		70-130	7		30
sec-Butylbenzene	89		96		70-130	8		30
tert-Butylbenzene	89		95		70-130	7		30
o-Chlorotoluene	99		105		70-130	6		30
p-Chlorotoluene	97		102		70-130	5		30
1,2-Dibromo-3-chloropropane	94		99		68-130	5		30
Hexachlorobutadiene	87		93		67-130	7		30
Isopropylbenzene	89		94		70-130	5		30
p-Isopropyltoluene	90		97		70-130	7		30
Naphthalene	99		107		70-130	8		30
Acrylonitrile	100		105		70-130	5		30
Diisopropyl Ether	99		103		66-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG689406-1 WG689406-2								
Tert-Butyl Alcohol	95		101		70-130	6		30
n-Propylbenzene	92		98		70-130	6		30
1,2,3-Trichlorobenzene	96		101		70-130	5		30
1,2,4-Trichlorobenzene	98		102		70-130	4		30
1,3,5-Trimethylbenzene	94		99		70-130	5		30
1,2,4-Trimethylbenzene	95		101		70-130	6		30
Methyl Acetate	107		114		51-146	6		30
Ethyl Acetate	100		108		70-130	8		30
Acrolein	110		117		70-130	6		30
Cyclohexane	83		91		59-142	9		30
1,4-Dioxane	79		79		65-136	0		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	86		93		50-139	8		30
p-Diethylbenzene	91		95		70-130	4		30
p-Ethyltoluene	92		98		70-130	6		30
1,2,4,5-Tetramethylbenzene	94		97		70-130	3		30
Tetrahydrofuran	92		101		66-130	9		30
Ethyl ether	76		79		67-130	4		30
trans-1,4-Dichloro-2-butene	105		115		70-130	9		30
Methyl cyclohexane	81		90		70-130	11		30
Ethyl-Tert-Butyl-Ether	94		98		70-130	4		30
Tertiary-Amyl Methyl Ether	90		95		70-130	5		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG689406-1 WG689406-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	108		108		70-130
4-Bromofluorobenzene	103		106		70-130
Dibromofluoromethane	98		98		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG689782-1 WG689782-2								
Methylene chloride	100		104		70-130	4		30
1,1-Dichloroethane	98		101		70-130	3		30
Chloroform	99		101		70-130	2		30
Carbon tetrachloride	106		105		70-130	1		30
1,2-Dichloropropane	100		106		70-130	6		30
Dibromochloromethane	97		103		70-130	6		30
1,1,2-Trichloroethane	99		105		70-130	6		30
Tetrachloroethene	102		103		70-130	1		30
Chlorobenzene	99		102		70-130	3		30
Trichlorofluoromethane	106		106		70-139	0		30
1,2-Dichloroethane	98		103		70-130	5		30
1,1,1-Trichloroethane	102		103		70-130	1		30
Bromodichloromethane	102		105		70-130	3		30
trans-1,3-Dichloropropene	96		100		70-130	4		30
cis-1,3-Dichloropropene	102		106		70-130	4		30
1,1-Dichloropropene	103		104		70-130	1		30
Bromoform	97		103		70-130	6		30
1,1,2,2-Tetrachloroethane	97		104		70-130	7		30
Benzene	100		103		70-130	3		30
Toluene	96		100		70-130	4		30
Ethylbenzene	98		100		70-130	2		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG689782-1 WG689782-2								
Chloromethane	82		83		52-130	1		30
Bromomethane	119		124		57-147	4		30
Vinyl chloride	91		91		67-130	0		30
Chloroethane	91		92		50-151	1		30
1,1-Dichloroethene	101		102		65-135	1		30
trans-1,2-Dichloroethene	100		102		70-130	2		30
Trichloroethene	101		102		70-130	1		30
1,2-Dichlorobenzene	99		104		70-130	5		30
1,3-Dichlorobenzene	100		104		70-130	4		30
1,4-Dichlorobenzene	100		104		70-130	4		30
Methyl tert butyl ether	92		98		66-130	6		30
p/m-Xylene	100		102		70-130	2		30
o-Xylene	101		103		70-130	2		30
cis-1,2-Dichloroethene	101		105		70-130	4		30
Dibromomethane	102		109		70-130	7		30
Styrene	101		105		70-130	4		30
Dichlorodifluoromethane	78		79		30-146	1		30
Acetone	119		129		54-140	8		30
Carbon disulfide	91		92		59-130	1		30
2-Butanone	95		104		70-130	9		30
Vinyl acetate	93		98		70-130	5		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG689782-1 WG689782-2								
4-Methyl-2-pentanone	104		111		70-130	7		30
1,2,3-Trichloropropane	94		100		68-130	6		30
2-Hexanone	96		103		70-130	7		30
Bromochloromethane	106		112		70-130	6		30
2,2-Dichloropropane	101		102		70-130	1		30
1,2-Dibromoethane	98		104		70-130	6		30
1,3-Dichloropropane	97		102		69-130	5		30
1,1,1,2-Tetrachloroethane	99		104		70-130	5		30
Bromobenzene	98		102		70-130	4		30
n-Butylbenzene	100		101		70-130	1		30
sec-Butylbenzene	100		102		70-130	2		30
tert-Butylbenzene	99		101		70-130	2		30
o-Chlorotoluene	97		97		70-130	0		30
p-Chlorotoluene	96		100		70-130	4		30
1,2-Dibromo-3-chloropropane	97		107		68-130	10		30
Hexachlorobutadiene	104		105		67-130	1		30
Isopropylbenzene	101		103		70-130	2		30
p-Isopropyltoluene	100		102		70-130	2		30
Naphthalene	99		107		70-130	8		30
Acrylonitrile	95		105		70-130	10		30
Diisopropyl Ether	98		102		66-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG689782-1 WG689782-2								
Tert-Butyl Alcohol	101		113		70-130	11		30
n-Propylbenzene	98		100		70-130	2		30
1,2,3-Trichlorobenzene	102		108		70-130	6		30
1,2,4-Trichlorobenzene	104		109		70-130	5		30
1,3,5-Trimethylbenzene	98		100		70-130	2		30
1,2,4-Trimethylbenzene	97		100		70-130	3		30
Methyl Acetate	96		103		51-146	7		30
Ethyl Acetate	99		105		70-130	6		30
Acrolein	86		92		70-130	7		30
Cyclohexane	115		114		59-142	1		30
1,4-Dioxane	107		110		65-136	3		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	111		111		50-139	0		30
p-Diethylbenzene	109		112		70-130	3		30
p-Ethyltoluene	106		109		70-130	3		30
1,2,4,5-Tetramethylbenzene	109		113		70-130	4		30
Tetrahydrofuran	97		106		66-130	9		30
Ethyl ether	83		90		67-130	8		30
trans-1,4-Dichloro-2-butene	90		97		70-130	7		30
Methyl cyclohexane	114		113		70-130	1		30
Ethyl-Tert-Butyl-Ether	99		104		70-130	5		30
Tertiary-Amyl Methyl Ether	102		106		70-130	4		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG689782-1 WG689782-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,2-Dichloroethane-d4	95		96		70-130
Toluene-d8	95		94		70-130
4-Bromofluorobenzene	95		96		70-130
Dibromofluoromethane	99		99		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG689883-1 WG689883-2								
Methylene chloride	101		98		70-130	3		20
1,1-Dichloroethane	101		97		70-130	4		20
Chloroform	107		102		70-130	5		20
2-Chloroethylvinyl ether	68	Q	66	Q	70-130	3		20
Carbon tetrachloride	113		108		63-132	5		20
1,2-Dichloropropane	95		92		70-130	3		20
Dibromochloromethane	102		100		63-130	2		20
1,1,2-Trichloroethane	93		94		70-130	1		20
Tetrachloroethene	107		104		70-130	3		20
Chlorobenzene	102		101		75-130	1		20
Trichlorofluoromethane	112		108		62-150	4		20
1,2-Dichloroethane	104		102		70-130	2		20
1,1,1-Trichloroethane	115		112		67-130	3		20
Bromodichloromethane	105		102		67-130	3		20
trans-1,3-Dichloropropene	85		82		70-130	4		20
cis-1,3-Dichloropropene	101		98		70-130	3		20
1,1-Dichloropropene	102		97		70-130	5		20
Bromoform	99		100		54-136	1		20
1,1,2,2-Tetrachloroethane	89		87		67-130	2		20
Benzene	99		96		70-130	3		20
Toluene	101		98		70-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG689883-1 WG689883-2								
Ethylbenzene	103		102		70-130	1		20
Chloromethane	88		78		64-130	12		20
Bromomethane	99		100		39-139	1		20
Vinyl chloride	104		99		55-140	5		20
Chloroethane	107		103		55-138	4		20
1,1-Dichloroethene	102		97		61-145	5		20
trans-1,2-Dichloroethene	100		97		70-130	3		20
Trichloroethene	104		100		70-130	4		20
1,2-Dichlorobenzene	101		99		70-130	2		20
1,3-Dichlorobenzene	103		100		70-130	3		20
1,4-Dichlorobenzene	103		99		70-130	4		20
Methyl tert butyl ether	98		96		63-130	2		20
p/m-Xylene	105		103		70-130	2		20
o-Xylene	106		103		70-130	3		20
cis-1,2-Dichloroethene	102		95		70-130	7		20
Dibromomethane	101		98		70-130	3		20
1,2,3-Trichloropropane	92		90		64-130	2		20
Acrylonitrile	81		79		70-130	3		20
Diisopropyl Ether	87		85		70-130	2		20
Tert-Butyl Alcohol	116		112		70-130	4		20
Styrene	105		103		70-130	2		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG689883-1 WG689883-2								
Dichlorodifluoromethane	95		90		36-147	5		20
Acetone	82		70		58-148	16		20
Carbon disulfide	89		87		51-130	2		20
2-Butanone	53	Q	51	Q	63-138	4		20
Vinyl acetate	83		78		70-130	6		20
4-Methyl-2-pentanone	82		79		59-130	4		20
2-Hexanone	72		70		57-130	3		20
Acrolein	97		96		40-160	1		20
Bromochloromethane	105		102		70-130	3		20
2,2-Dichloropropane	120		110		63-133	9		20
1,2-Dibromoethane	96		97		70-130	1		20
1,3-Dichloropropane	93		92		70-130	1		20
1,1,1,2-Tetrachloroethane	115		112		64-130	3		20
Bromobenzene	105		103		70-130	2		20
n-Butylbenzene	102		97		53-136	5		20
sec-Butylbenzene	103		98		70-130	5		20
tert-Butylbenzene	106		101		70-130	5		20
o-Chlorotoluene	103		99		70-130	4		20
p-Chlorotoluene	105		102		70-130	3		20
1,2-Dibromo-3-chloropropane	80		82		41-144	2		20
Hexachlorobutadiene	102		95		63-130	7		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG689883-1 WG689883-2								
Isopropylbenzene	104		102		70-130	2		20
p-Isopropyltoluene	106		101		70-130	5		20
Naphthalene	86		82		70-130	5		20
n-Propylbenzene	104		100		69-130	4		20
1,2,3-Trichlorobenzene	94		89		70-130	5		20
1,2,4-Trichlorobenzene	94		91		70-130	3		20
1,3,5-Trimethylbenzene	106		102		64-130	4		20
1,2,4-Trimethylbenzene	104		100		70-130	4		20
Methyl Acetate	81		86		70-130	6		20
Ethyl Acetate	88		87		70-130	1		20
Cyclohexane	88		86		70-130	2		20
Ethyl-Tert-Butyl-Ether	94		90		70-130	4		20
Tertiary-Amyl Methyl Ether	86		86		66-130	0		20
1,4-Dioxane	86		85		56-162	1		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	118		114		70-130	3		20
p-Diethylbenzene	106		101		70-130	5		20
p-Ethyltoluene	106		101		70-130	5		20
1,2,4,5-Tetramethylbenzene	105		99		70-130	6		20
Ethyl ether	104		104		59-134	0		20
trans-1,4-Dichloro-2-butene	90		87		70-130	3		20
Methyl cyclohexane	104		98		70-130	6		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG689883-1 WG689883-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		104		70-130
Toluene-d8	96		97		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	107		107		70-130

# SEMIVOLATILES

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 05/16/14 19:12  
 Analyst: JB  
 Percent Solids: 82%

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/14/14 02:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	41.	1
Hexachlorobenzene	ND		ug/kg	120	37.	1
Fluoranthene	54	J	ug/kg	120	36.	1
Naphthalene	ND		ug/kg	200	66.	1
Benzo(a)anthracene	ND		ug/kg	120	39.	1
Benzo(a)pyrene	ND		ug/kg	160	48.	1
Benzo(b)fluoranthene	49	J	ug/kg	120	40.	1
Benzo(k)fluoranthene	ND		ug/kg	120	38.	1
Chrysene	ND		ug/kg	120	39.	1
Acenaphthylene	ND		ug/kg	160	37.	1
Anthracene	ND		ug/kg	120	33.	1
Benzo(ghi)perylene	ND		ug/kg	160	41.	1
Fluorene	ND		ug/kg	200	57.	1
Phenanthrene	ND		ug/kg	120	39.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	38.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	44.	1
Pyrene	59	J	ug/kg	120	39.	1
Dibenzofuran	ND		ug/kg	200	66.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	200	59.	1
2-Methylphenol	ND		ug/kg	200	64.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	65.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		25-120
Phenol-d6	72		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	75		30-120
2,4,6-Tribromophenol	74		0-136
4-Terphenyl-d14	68		18-120

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 05/16/14 19:36  
 Analyst: JB  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/14/14 02:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	40.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Fluoranthene	40	J	ug/kg	120	35.	1
Naphthalene	ND		ug/kg	190	64.	1
Benzo(a)anthracene	ND		ug/kg	120	38.	1
Benzo(a)pyrene	ND		ug/kg	150	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	39.	1
Benzo(k)fluoranthene	ND		ug/kg	120	37.	1
Chrysene	ND		ug/kg	120	38.	1
Acenaphthylene	ND		ug/kg	150	36.	1
Anthracene	ND		ug/kg	120	32.	1
Benzo(ghi)perylene	ND		ug/kg	150	40.	1
Fluorene	ND		ug/kg	190	55.	1
Phenanthrene	ND		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	37.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	43.	1
Pyrene	37	J	ug/kg	120	37.	1
Dibenzofuran	ND		ug/kg	190	64.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	57.	1
2-Methylphenol	ND		ug/kg	190	62.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	63.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	32		25-120
Phenol-d6	68		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	28		0-136
4-Terphenyl-d14	77		18-120

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23)  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8270D  
 Analytical Date: 05/16/14 20:00  
 Analyst: JB  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/14/14 02:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	40.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Fluoranthene	ND		ug/kg	120	35.	1
Naphthalene	ND		ug/kg	190	64.	1
Benzo(a)anthracene	ND		ug/kg	120	38.	1
Benzo(a)pyrene	ND		ug/kg	150	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	39.	1
Benzo(k)fluoranthene	ND		ug/kg	120	37.	1
Chrysene	ND		ug/kg	120	38.	1
Acenaphthylene	ND		ug/kg	150	36.	1
Anthracene	ND		ug/kg	120	32.	1
Benzo(ghi)perylene	ND		ug/kg	150	40.	1
Fluorene	ND		ug/kg	190	55.	1
Phenanthrene	ND		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	37.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	43.	1
Pyrene	ND		ug/kg	120	37.	1
Dibenzofuran	ND		ug/kg	190	64.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	57.	1
2-Methylphenol	ND		ug/kg	190	62.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	63.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	69		25-120
Phenol-d6	66		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	74		0-136
4-Terphenyl-d14	74		18-120

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14TH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 05/16/14 11:44  
 Analyst: RC

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 05/14/14 16:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	7.7	B	ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1
Acetophenone	ND		ug/l	5.0	0.43	1

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 145TH ST., NY, NY

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	100		41-149

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8270D-SIM  
 Analytical Date: 05/16/14 18:52  
 Analyst: MW

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 05/14/14 16:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	0.06	1
2-Chloronaphthalene	ND		ug/l	0.20	0.07	1
Fluoranthene	ND		ug/l	0.20	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.20	0.06	1
Benzo(a)anthracene	ND		ug/l	0.20	0.06	1
Benzo(a)pyrene	ND		ug/l	0.20	0.07	1
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07	1
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07	1
Chrysene	0.06	J	ug/l	0.20	0.05	1
Acenaphthylene	ND		ug/l	0.20	0.05	1
Anthracene	ND		ug/l	0.20	0.06	1
Benzo(ghi)perylene	ND		ug/l	0.20	0.07	1
Fluorene	ND		ug/l	0.20	0.06	1
Phenanthrene	0.13	J	ug/l	0.20	0.06	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08	1
Pyrene	ND		ug/l	0.20	0.06	1
2-Methylnaphthalene	ND		ug/l	0.20	0.06	1
Pentachlorophenol	ND		ug/l	0.80	0.19	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.07	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	87		41-149

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04 RE  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8270D  
 Analytical Date: 05/19/14 13:29  
 Analyst: RC

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 05/18/14 06:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.58	1
Isophorone	ND		ug/l	5.0	0.79	1
Nitrobenzene	ND		ug/l	2.0	0.40	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.1	1
Di-n-butylphthalate	ND		ug/l	5.0	0.77	1
Di-n-octylphthalate	ND		ug/l	5.0	1.2	1
Diethyl phthalate	ND		ug/l	5.0	0.39	1
Dimethyl phthalate	ND		ug/l	5.0	0.33	1
Biphenyl	ND		ug/l	2.0	0.24	1
4-Chloroaniline	ND		ug/l	5.0	0.84	1
2-Nitroaniline	ND		ug/l	5.0	0.96	1
3-Nitroaniline	ND		ug/l	5.0	0.67	1
4-Nitroaniline	ND		ug/l	5.0	0.83	1
Dibenzofuran	ND		ug/l	2.0	0.22	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36	1
Acetophenone	ND		ug/l	5.0	0.43	1

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04 RE  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54	1
2-Chlorophenol	ND		ug/l	2.0	0.58	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.56	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.58	1
2-Nitrophenol	ND		ug/l	10	1.0	1
4-Nitrophenol	ND		ug/l	10	1.1	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4	1
Phenol	ND		ug/l	5.0	0.27	1
2-Methylphenol	ND		ug/l	5.0	0.70	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.68	1
Carbazole	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	85		10-120
4-Terphenyl-d14	91		41-149

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 05/14/14 17:44  
 Analyst: JB

Extraction Method: EPA 3546  
 Extraction Date: 05/14/14 02:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG689386-1					
Acenaphthene	ND		ug/kg	130	34.
Hexachlorobenzene	ND		ug/kg	98	30.
Fluoranthene	ND		ug/kg	98	30.
Naphthalene	ND		ug/kg	160	54.
Benzo(a)anthracene	ND		ug/kg	98	32.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	33.
Benzo(k)fluoranthene	ND		ug/kg	98	31.
Chrysene	ND		ug/kg	98	32.
Acenaphthylene	ND		ug/kg	130	31.
Anthracene	ND		ug/kg	98	27.
Benzo(ghi)perylene	ND		ug/kg	130	34.
Fluorene	ND		ug/kg	160	47.
Phenanthrene	ND		ug/kg	98	32.
Dibenzo(a,h)anthracene	ND		ug/kg	98	32.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	36.
Pyrene	ND		ug/kg	98	32.
Dibenzofuran	ND		ug/kg	160	55.
Pentachlorophenol	ND		ug/kg	130	35.
Phenol	ND		ug/kg	160	48.
2-Methylphenol	ND		ug/kg	160	53.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	54.

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D  
 Analytical Date: 05/14/14 17:44  
 Analyst: JB

Extraction Method: EPA 3546  
 Extraction Date: 05/14/14 02:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG689386-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	95		25-120
Phenol-d6	94		10-120
Nitrobenzene-d5	88		23-120
2-Fluorobiphenyl	87		30-120
2,4,6-Tribromophenol	82		0-136
4-Terphenyl-d14	<b>124</b>	Q	18-120

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM  
 Analytical Date: 05/16/14 13:24  
 Analyst: MW

Extraction Method: EPA 3510C  
 Extraction Date: 05/14/14 16:11

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 04 Batch: WG689606-1					
Acenaphthene	ND		ug/l	0.20	0.06
2-Chloronaphthalene	ND		ug/l	0.20	0.07
Fluoranthene	ND		ug/l	0.20	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.20	0.06
Benzo(a)anthracene	ND		ug/l	0.20	0.06
Benzo(a)pyrene	ND		ug/l	0.20	0.07
Benzo(b)fluoranthene	ND		ug/l	0.20	0.07
Benzo(k)fluoranthene	ND		ug/l	0.20	0.07
Chrysene	ND		ug/l	0.20	0.05
Acenaphthylene	ND		ug/l	0.20	0.05
Anthracene	ND		ug/l	0.20	0.06
Benzo(ghi)perylene	ND		ug/l	0.20	0.07
Fluorene	ND		ug/l	0.20	0.06
Phenanthrene	ND		ug/l	0.20	0.06
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.07
Indeno(1,2,3-cd)Pyrene	ND		ug/l	0.20	0.08
Pyrene	ND		ug/l	0.20	0.06
2-Methylnaphthalene	ND		ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.07

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8270D-SIM  
 Analytical Date: 05/16/14 13:24  
 Analyst: MW

Extraction Method: EPA 3510C  
 Extraction Date: 05/14/14 16:11

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 04 Batch: WG689606-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	95		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	83		10-120
4-Terphenyl-d14	90		41-149

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 05/19/14 11:32  
 Analyst: RC

Extraction Method: EPA 3510C  
 Extraction Date: 05/18/14 06:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG690469-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.21
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.41
1,2-Dichlorobenzene	ND		ug/l	2.0	0.30
1,3-Dichlorobenzene	ND		ug/l	2.0	0.35
1,4-Dichlorobenzene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.48
2,4-Dinitrotoluene	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.89
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.36
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.43
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.60
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.60
Hexachlorocyclopentadiene	ND		ug/l	20	0.58
Isophorone	ND		ug/l	5.0	0.79
Nitrobenzene	ND		ug/l	2.0	0.40
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.34
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	0.93
Butyl benzyl phthalate	ND		ug/l	5.0	1.1
Di-n-butylphthalate	ND		ug/l	5.0	0.77
Di-n-octylphthalate	ND		ug/l	5.0	1.2
Diethyl phthalate	ND		ug/l	5.0	0.39
Dimethyl phthalate	ND		ug/l	5.0	0.33
Biphenyl	ND		ug/l	2.0	0.24
4-Chloroaniline	ND		ug/l	5.0	0.84
2-Nitroaniline	ND		ug/l	5.0	0.96
3-Nitroaniline	ND		ug/l	5.0	0.67
4-Nitroaniline	ND		ug/l	5.0	0.83
Dibenzofuran	ND		ug/l	2.0	0.22
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.36
Acetophenone	ND		ug/l	5.0	0.43

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D  
 Analytical Date: 05/19/14 11:32  
 Analyst: RC

Extraction Method: EPA 3510C  
 Extraction Date: 05/18/14 06:39

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 04 Batch: WG690469-1					
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.78
P-Chloro-M-Cresol	ND		ug/l	2.0	0.54
2-Chlorophenol	ND		ug/l	2.0	0.58
2,4-Dichlorophenol	ND		ug/l	5.0	0.56
2,4-Dimethylphenol	ND		ug/l	5.0	0.58
2-Nitrophenol	ND		ug/l	10	1.0
4-Nitrophenol	ND		ug/l	10	1.1
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	1.4
Phenol	ND		ug/l	5.0	0.27
2-Methylphenol	ND		ug/l	5.0	0.70
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.72
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.75
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.68
Carbazole	ND		ug/l	2.0	0.37

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	78		41-149

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG689386-2 WG689386-3								
Acenaphthene	90		101		31-137	12		50
1,2,4-Trichlorobenzene	78		89		38-107	13		50
Hexachlorobenzene	99		110		40-140	11		50
Bis(2-chloroethyl)ether	75		84		40-140	11		50
2-Chloronaphthalene	88		100		40-140	13		50
1,2-Dichlorobenzene	76		84		40-140	10		50
1,3-Dichlorobenzene	74		84		40-140	13		50
1,4-Dichlorobenzene	74		84		28-104	13		50
3,3'-Dichlorobenzidine	53		89		40-140	51	Q	50
2,4-Dinitrotoluene	106	Q	121	Q	28-89	13		50
2,6-Dinitrotoluene	112		126		40-140	12		50
Fluoranthene	109		125		40-140	14		50
4-Chlorophenyl phenyl ether	95		106		40-140	11		50
4-Bromophenyl phenyl ether	102		115		40-140	12		50
Bis(2-chloroisopropyl)ether	79		89		40-140	12		50
Bis(2-chloroethoxy)methane	78		88		40-117	12		50
Hexachlorobutadiene	80		92		40-140	14		50
Hexachlorocyclopentadiene	90		101		40-140	12		50
Hexachloroethane	78		87		40-140	11		50
Isophorone	85		97		40-140	13		50
Naphthalene	79		92		40-140	15		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG689386-2 WG689386-3								
Nitrobenzene	87		98		40-140	12		50
NitrosoDiPhenylAmine(NDPA)/DPA	103		114			10		50
n-Nitrosodi-n-propylamine	84		94		32-121	11		50
Bis(2-Ethylhexyl)phthalate	96		109		40-140	13		50
Butyl benzyl phthalate	108		121		40-140	11		50
Di-n-butylphthalate	111		125		40-140	12		50
Di-n-octylphthalate	112		125		40-140	11		50
Diethyl phthalate	102		114		40-140	11		50
Dimethyl phthalate	102		112		40-140	9		50
Benzo(a)anthracene	104		119		40-140	13		50
Benzo(a)pyrene	93		103		40-140	10		50
Benzo(b)fluoranthene	83		93		40-140	11		50
Benzo(k)fluoranthene	99		112		40-140	12		50
Chrysene	97		110		40-140	13		50
Acenaphthylene	96		108		40-140	12		50
Anthracene	105		118		40-140	12		50
Benzo(ghi)perylene	92		106		40-140	14		50
Fluorene	99		109		40-140	10		50
Phenanthrene	97		110		40-140	13		50
Dibenzo(a,h)anthracene	96		110		40-140	14		50
Indeno(1,2,3-cd)pyrene	105		120		40-140	13		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG689386-2 WG689386-3								
Pyrene	107		121		35-142	12		50
Biphenyl	87		98			12		50
4-Chloroaniline	65		96		40-140	39		50
2-Nitroaniline	106		120		47-134	12		50
3-Nitroaniline	67		101		26-129	40		50
4-Nitroaniline	102		117		41-125	14		50
Dibenzofuran	93		104		40-140	11		50
2-Methylnaphthalene	85		97		40-140	13		50
1,2,4,5-Tetrachlorobenzene	83		96		40-117	15		50
Acetophenone	78		89		14-144	13		50
2,4,6-Trichlorophenol	110		123		30-130	11		50
P-Chloro-M-Cresol	<b>109</b>	Q	<b>123</b>	Q	26-103	12		50
2-Chlorophenol	85		96		25-102	12		50
2,4-Dichlorophenol	98		112		30-130	13		50
2,4-Dimethylphenol	88		99		30-130	12		50
2-Nitrophenol	83		94		30-130	12		50
4-Nitrophenol	66		97		11-114	38		50
2,4-Dinitrophenol	58		93		4-130	46		50
4,6-Dinitro-o-cresol	94		111		10-130	17		50
Pentachlorophenol	94		<b>113</b>	Q	17-109	18		50
Phenol	79		<b>93</b>	Q	26-90	16		50

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG689386-2 WG689386-3								
2-Methylphenol	88		99		30-130.	12		50
3-Methylphenol/4-Methylphenol	88		100		30-130	13		50
2,4,5-Trichlorophenol	111		125		30-130	12		50
Benzoic Acid	38		75			65	Q	50
Benzyl Alcohol	87		98		40-140	12		50
Carbazole	103		117		54-128	13		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	86		96		25-120
Phenol-d6	89		99		10-120
Nitrobenzene-d5	87		96		23-120
2-Fluorobiphenyl	88		99		30-120
2,4,6-Tribromophenol	97		111		0-136
4-Terphenyl-d14	110		122	Q	18-120

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 04 Batch: WG689606-2 WG689606-3								
Acenaphthene	62		60		37-111	3		40
2-Chloronaphthalene	55		52		40-140	6		40
Fluoranthene	81		79		40-140	3		40
Hexachlorobutadiene	44		40		40-140	10		40
Naphthalene	55		50		40-140	10		40
Benzo(a)anthracene	88		87		40-140	1		40
Benzo(a)pyrene	66		75		40-140	13		40
Benzo(b)fluoranthene	73		78		40-140	7		40
Benzo(k)fluoranthene	70		75		40-140	7		40
Chrysene	77		76		40-140	1		40
Acenaphthylene	68		65		40-140	5		40
Anthracene	75		70		40-140	7		40
Benzo(ghi)perylene	46		70		40-140	41	Q	40
Fluorene	71		66		40-140	7		40
Phenanthrene	69		67		40-140	3		40
Dibenzo(a,h)anthracene	57		76		40-140	29		40
Indeno(1,2,3-cd)Pyrene	49		71		40-140	37		40
Pyrene	82		79		26-127	4		40
2-Methylnaphthalene	59		56		40-140	5		40
Pentachlorophenol	94		96		9-103	2		40
Hexachlorobenzene	73		73		40-140	0		40

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 04 Batch: WG689606-2 WG689606-3								
Hexachloroethane	53		48		40-140	10		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	41		38		21-120
Phenol-d6	32		30		10-120
Nitrobenzene-d5	82		75		23-120
2-Fluorobiphenyl	54		49		15-120
2,4,6-Tribromophenol	82		79		10-120
4-Terphenyl-d14	79		78		41-149

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG690469-2 WG690469-3								
1,2,4-Trichlorobenzene	48		40		39-98	18		30
Bis(2-chloroethyl)ether	67		54		40-140	21		30
1,2-Dichlorobenzene	53		44		40-140	19		30
1,3-Dichlorobenzene	50		41		40-140	20		30
1,4-Dichlorobenzene	51		42		36-97	19		30
3,3'-Dichlorobenzidine	57		46		40-140	21		30
2,4-Dinitrotoluene	90		78		24-96	14		30
2,6-Dinitrotoluene	92		76		40-140	19		30
4-Chlorophenyl phenyl ether	69		60		40-140	14		30
4-Bromophenyl phenyl ether	75		66		40-140	13		30
Bis(2-chloroisopropyl)ether	65		51		40-140	24		30
Bis(2-chloroethoxy)methane	77		62		40-140	22		30
Hexachlorocyclopentadiene	27	Q	22	Q	40-140	20		30
Isophorone	86		70		40-140	21		30
Nitrobenzene	72		59		40-140	20		30
NitrosoDiPhenylAmine(NDPA)/DPA	82		70		40-140	16		30
n-Nitrosodi-n-propylamine	82		65		29-132	23		30
Bis(2-Ethylhexyl)phthalate	111		81		40-140	31	Q	30
Butyl benzyl phthalate	93		80		40-140	15		30
Di-n-butylphthalate	89		78		40-140	13		30
Di-n-octylphthalate	102		86		40-140	17		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG690469-2 WG690469-3								
Diethyl phthalate	84		71		40-140	17		30
Dimethyl phthalate	82		72		40-140	13		30
Biphenyl	54		47			14		30
4-Chloroaniline	51		45		40-140	13		30
2-Nitroaniline	97		78		52-143	22		30
3-Nitroaniline	65		53		25-145	20		30
4-Nitroaniline	86		74		51-143	15		30
Dibenzofuran	66		57		40-140	15		30
1,2,4,5-Tetrachlorobenzene	49		41		2-134	18		30
Acetophenone	82		66		39-129	22		30
2,4,6-Trichlorophenol	88		72		30-130	20		30
P-Chloro-M-Cresol	90		78		23-97	14		30
2-Chlorophenol	76		63		27-123	19		30
2,4-Dichlorophenol	86		70		30-130	21		30
2,4-Dimethylphenol	86		69		30-130	22		30
2-Nitrophenol	86		68		30-130	23		30
4-Nitrophenol	49		44		10-80	11		30
2,4-Dinitrophenol	77		70		20-130	10		30
4,6-Dinitro-o-cresol	82		69		20-164	17		30
Phenol	39		32		12-110	20		30
2-Methylphenol	72		60		30-130	18		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 04 Batch: WG690469-2 WG690469-3								
3-Methylphenol/4-Methylphenol	67		55		30-130	20		30
2,4,5-Trichlorophenol	93		80		30-130	15		30
Benzoic Acid	33		29			13		30
Benzyl Alcohol	71		66			7		30
Carbazole	83		72		55-144	14		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	54		45		21-120
Phenol-d6	39		31		10-120
Nitrobenzene-d5	84		65		23-120
2-Fluorobiphenyl	78		64		15-120
2,4,6-Tribromophenol	80		70		10-120
4-Terphenyl-d14	84		72		41-149

# PCBS

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 05/14/14 13:37  
 Analyst: JW  
 Percent Solids: 82%

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/14 17:54  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 05/14/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 05/14/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.7	3.06	1	A
Aroclor 1221	ND		ug/kg	38.7	3.57	1	A
Aroclor 1232	ND		ug/kg	38.7	4.54	1	A
Aroclor 1242	ND		ug/kg	38.7	4.74	1	A
Aroclor 1248	ND		ug/kg	38.7	3.27	1	A
Aroclor 1254	ND		ug/kg	38.7	3.18	1	A
Aroclor 1260	ND		ug/kg	38.7	2.95	1	A
Aroclor 1262	ND		ug/kg	38.7	1.92	1	A
Aroclor 1268	ND		ug/kg	38.7	5.61	1	A
PCBs, Total	ND		ug/kg	38.7	1.92	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 05/14/14 13:50  
 Analyst: JW  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/14 17:54  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 05/14/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 05/14/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.6	2.97	1	A
Aroclor 1221	ND		ug/kg	37.6	3.47	1	A
Aroclor 1232	ND		ug/kg	37.6	4.41	1	A
Aroclor 1242	ND		ug/kg	37.6	4.60	1	A
Aroclor 1248	ND		ug/kg	37.6	3.17	1	A
Aroclor 1254	ND		ug/kg	37.6	3.09	1	A
Aroclor 1260	ND		ug/kg	37.6	2.86	1	A
Aroclor 1262	ND		ug/kg	37.6	1.86	1	A
Aroclor 1268	ND		ug/kg	37.6	5.45	1	A
PCBs, Total	ND		ug/kg	37.6	1.86	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	84		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 05/14/14 14:03  
 Analyst: JW  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/13/14 17:54  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 05/14/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 05/14/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.1	2.93	1	A
Aroclor 1221	ND		ug/kg	37.1	3.42	1	A
Aroclor 1232	ND		ug/kg	37.1	4.35	1	A
Aroclor 1242	ND		ug/kg	37.1	4.54	1	A
Aroclor 1248	ND		ug/kg	37.1	3.13	1	A
Aroclor 1254	ND		ug/kg	37.1	3.05	1	A
Aroclor 1260	ND		ug/kg	37.1	2.83	1	A
Aroclor 1262	ND		ug/kg	37.1	1.84	1	A
Aroclor 1268	ND		ug/kg	37.1	5.38	1	A
PCBs, Total	ND		ug/kg	37.1	1.84	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	95		30-150	A
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	90		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 145TH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 05/16/14 15:33  
 Analyst: JW

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 05/16/14 01:44  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 05/16/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 05/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	65		30-150	B
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	62		30-150	A

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 05/14/14 15:37  
 Analyst: JW

Extraction Method: EPA 3546  
 Extraction Date: 05/13/14 17:54  
 Cleanup Method1: EPA 3665A  
 Cleanup Date1: 05/14/14  
 Cleanup Method2: EPA 3660B  
 Cleanup Date2: 05/14/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-03 Batch: WG689320-1						
Aroclor 1016	ND		ug/kg	32.6	2.57	A
Aroclor 1221	ND		ug/kg	32.6	3.00	A
Aroclor 1232	ND		ug/kg	32.6	3.82	A
Aroclor 1242	ND		ug/kg	32.6	3.98	A
Aroclor 1248	ND		ug/kg	32.6	2.75	A
Aroclor 1254	ND		ug/kg	32.6	2.68	A
Aroclor 1260	ND		ug/kg	32.6	2.48	A
Aroclor 1262	ND		ug/kg	32.6	1.61	A
Aroclor 1268	ND		ug/kg	32.6	4.72	A
PCBs, Total	ND		ug/kg	32.6	1.61	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	60		30-150	B
Decachlorobiphenyl	63		30-150	A

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
Analytical Date: 05/16/14 16:54  
Analyst: JW

Extraction Method: EPA 3510C  
Extraction Date: 05/16/14 01:44  
Cleanup Method1: EPA 3665A  
Cleanup Date1: 05/16/14  
Cleanup Method2: EPA 3660B  
Cleanup Date2: 05/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 04 Batch: WG690025-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	100		30-150	B
Decachlorobiphenyl	102		30-150	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG689320-2 WG689320-3									
Aroclor 1016	75		76		40-140	1		50	A
Aroclor 1260	74		76		40-140	3		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		62		30-150	A
Decachlorobiphenyl	78		80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		65		30-150	B
Decachlorobiphenyl	75		75		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 04 Batch: WG690025-2 WG690025-3									
Aroclor 1016	79		88		40-140	11		50	A
Aroclor 1260	85		98		40-140	14		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		68		30-150	B
Decachlorobiphenyl	80		94		30-150	B
2,4,5,6-Tetrachloro-m-xylene	57		65		30-150	A
Decachlorobiphenyl	81		96		30-150	A

# PESTICIDES

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 05/17/14 07:30  
 Analyst: SH  
 Percent Solids: 82%

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/15/14 03:47  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/15/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.92	0.377	1	A
Lindane	ND		ug/kg	0.801	0.358	1	A
Alpha-BHC	ND		ug/kg	0.801	0.228	1	A
Beta-BHC	ND		ug/kg	1.92	0.729	1	A
Heptachlor	ND		ug/kg	0.962	0.431	1	A
Aldrin	ND		ug/kg	1.92	0.677	1	A
Endrin	ND		ug/kg	0.801	0.328	1	A
Dieldrin	ND		ug/kg	1.20	0.601	1	A
4,4'-DDE	ND		ug/kg	1.92	0.445	1	A
4,4'-DDD	ND		ug/kg	1.92	0.686	1	A
4,4'-DDT	ND		ug/kg	3.61	1.55	1	A
Endosulfan I	ND		ug/kg	1.92	0.454	1	A
Endosulfan II	ND		ug/kg	1.92	0.643	1	A
Endosulfan sulfate	ND		ug/kg	0.801	0.381	1	A
cis-Chlordane	ND		ug/kg	2.40	0.670	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	57		30-150	B

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14**SAMPLE RESULTS**

**Lab ID:** L1410121-01  
**Client ID:** SB-6 (0-2')  
**Sample Location:** 521 W. 14STH ST., NY, NY  
**Matrix:** Soil  
**Analytical Method:** 1,8151A  
**Analytical Date:** 05/20/14 13:17  
**Analyst:** SH  
**Percent Solids:** 82%

**Date Collected:** 05/09/14 11:00  
**Date Received:** 05/12/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 8151A  
**Extraction Date:** 05/19/14 13:10  
**Methylation Date:** 05/20/14 03:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	202	11.2	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	66		30-150	A
DCAA	64		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 05/17/14 07:44  
 Analyst: SH  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/15/14 03:47  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/15/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.87	0.367	1	A
Lindane	ND		ug/kg	0.780	0.349	1	A
Alpha-BHC	ND		ug/kg	0.780	0.222	1	A
Beta-BHC	ND		ug/kg	1.87	0.710	1	A
Heptachlor	ND		ug/kg	0.936	0.420	1	A
Aldrin	ND		ug/kg	1.87	0.659	1	A
Endrin	ND		ug/kg	0.780	0.320	1	A
Dieldrin	ND		ug/kg	1.17	0.585	1	A
4,4'-DDE	ND		ug/kg	1.87	0.433	1	A
4,4'-DDD	ND		ug/kg	1.87	0.668	1	A
4,4'-DDT	ND		ug/kg	3.51	1.50	1	A
Endosulfan I	ND		ug/kg	1.87	0.442	1	A
Endosulfan II	ND		ug/kg	1.87	0.626	1	A
Endosulfan sulfate	ND		ug/kg	0.780	0.371	1	A
cis-Chlordane	ND		ug/kg	2.34	0.652	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8151A  
 Analytical Date: 05/20/14 13:39  
 Analyst: SH  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 8151A  
 Extraction Date: 05/19/14 13:10  
 Methylation Date: 05/20/14 03:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	193	10.7	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	72		30-150	A
DCAA	72		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8081B  
 Analytical Date: 05/17/14 07:57  
 Analyst: SH  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3546  
 Extraction Date: 05/15/14 03:47  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/15/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.78	0.349	1	A
Lindane	ND		ug/kg	0.743	0.332	1	A
Alpha-BHC	ND		ug/kg	0.743	0.211	1	A
Beta-BHC	ND		ug/kg	1.78	0.676	1	A
Heptachlor	ND		ug/kg	0.892	0.400	1	A
Aldrin	ND		ug/kg	1.78	0.628	1	A
Endrin	ND		ug/kg	0.743	0.305	1	A
Dieldrin	ND		ug/kg	1.12	0.558	1	A
4,4'-DDE	ND		ug/kg	1.78	0.413	1	A
4,4'-DDD	ND		ug/kg	1.78	0.636	1	A
4,4'-DDT	ND		ug/kg	3.34	1.43	1	A
Endosulfan I	ND		ug/kg	1.78	0.422	1	A
Endosulfan II	ND		ug/kg	1.78	0.596	1	A
Endosulfan sulfate	ND		ug/kg	0.743	0.354	1	A
cis-Chlordane	ND		ug/kg	2.23	0.622	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Analytical Method: 1,8151A  
 Analytical Date: 05/20/14 14:00  
 Analyst: SH  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 8151A  
 Extraction Date: 05/19/14 13:10  
 Methylation Date: 05/20/14 03:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	191	10.6	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	58		30-150	A
DCAA	59		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Water  
 Analytical Method: 1,8081B  
 Analytical Date: 05/19/14 08:21  
 Analyst: SH

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 05/16/14 01:43  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	56		30-150	B

**Project Name:** PS186**Lab Number:** L1410121**Project Number:** 6627**Report Date:** 05/20/14**SAMPLE RESULTS**

**Lab ID:** L1410121-04  
**Client ID:** GW-1  
**Sample Location:** 521 W. 14STH ST., NY, NY  
**Matrix:** Water  
**Analytical Method:** 1,8151A  
**Analytical Date:** 05/16/14 13:03  
**Analyst:** SH

**Date Collected:** 05/09/14 13:30  
**Date Received:** 05/12/14  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 8151A  
**Extraction Date:** 05/14/14 00:15  
**Methylation Date:** 05/14/14 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.391	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	104		30-150	A
DCAA	122		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8151A  
 Analytical Date: 05/16/14 11:42  
 Analyst: SH

Extraction Method: EPA 8151A  
 Extraction Date: 05/14/14 00:15

Methylation Date: 05/14/14 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 04 Batch: WG689375-1						
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.391	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	95		30-150	A
DCAA	108		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8081B  
 Analytical Date: 05/17/14 06:49  
 Analyst: SH

Extraction Method: EPA 3546  
 Extraction Date: 05/15/14 03:47  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/15/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG689707-1						
Delta-BHC	ND		ug/kg	1.53	0.300	A
Lindane	ND		ug/kg	0.638	0.285	A
Alpha-BHC	ND		ug/kg	0.638	0.181	A
Beta-BHC	ND		ug/kg	1.53	0.581	A
Heptachlor	ND		ug/kg	0.766	0.343	A
Aldrin	ND		ug/kg	1.53	0.539	A
Endrin	ND		ug/kg	0.638	0.262	A
Dieldrin	ND		ug/kg	0.957	0.479	A
4,4'-DDE	ND		ug/kg	1.53	0.354	A
4,4'-DDD	ND		ug/kg	1.53	0.546	A
4,4'-DDT	ND		ug/kg	2.87	1.23	A
Endosulfan I	ND		ug/kg	1.53	0.362	A
Endosulfan II	ND		ug/kg	1.53	0.512	A
Endosulfan sulfate	ND		ug/kg	0.638	0.304	A
cis-Chlordane	ND		ug/kg	1.91	0.534	A

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	57		30-150	B
Decachlorobiphenyl	55		30-150	A

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B  
 Analytical Date: 05/19/14 07:42  
 Analyst: SH

Extraction Method: EPA 3510C  
 Extraction Date: 05/16/14 01:43  
 Cleanup Method1: EPA 3620B  
 Cleanup Date1: 05/16/14

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 04 Batch: WG690031-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	141		30-150	A
Decachlorobiphenyl	85		30-150	B

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8151A  
 Analytical Date: 05/20/14 07:12  
 Analyst: SH

Extraction Method: EPA 8151A  
 Extraction Date: 05/19/14 13:10

Methylation Date: 05/20/14 03:38

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-03 Batch: WG690677-1						
2,4,5-TP (Silvex)	ND		ug/kg	162	8.94	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	65		30-150	B
DCAA	62		30-150	A

### Lab Control Sample Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 04 Batch: WG689375-2 WG689375-3									
2,4-D	110		116		30-150	5		25	A
2,4,5-T	96		101		30-150	5		25	A
2,4,5-TP (Silvex)	98		104		30-150	6		25	A

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
DCAA	106		113		30-150	A
DCAA	108		109		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG689707-2 WG689707-3									
Delta-BHC	90		98		30-150	9		30	A
Lindane	90		96		30-150	6		30	A
Alpha-BHC	93		100		30-150	7		30	A
Beta-BHC	83		89		30-150	7		30	A
Heptachlor	95		102		30-150	7		30	A
Aldrin	92		100		30-150	8		30	A
Heptachlor epoxide	84		93		30-150	10		30	A
Endrin	86		94		30-150	9		30	A
Endrin ketone	73		77		30-150	5		30	A
Dieldrin	84		93		30-150	10		30	A
4,4'-DDE	84		93		30-150	10		30	A
4,4'-DDD	84		94		30-150	11		30	A
4,4'-DDT	93		99		30-150	6		30	A
Endosulfan I	84		94		30-150	11		30	A
Endosulfan II	81		86		30-150	6		30	A
Endosulfan sulfate	78		82		30-150	5		30	A
Methoxychlor	86		84		30-150	2		30	A
cis-Chlordane	81		91		30-150	12		30	A
trans-Chlordane	83		92		30-150	10		30	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG689707-2 WG689707-3

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	78		83		30-150	A
Decachlorobiphenyl	57		63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		83		30-150	B
Decachlorobiphenyl	58		61		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 04 Batch: WG690031-2 WG690031-3									
Delta-BHC	117		99		30-150	16		20	A
Lindane	134		115		30-150	15		20	A
Alpha-BHC	124		106		30-150	16		20	A
Beta-BHC	110		95		30-150	15		20	A
Heptachlor	98		84		30-150	16		20	A
Aldrin	95		81		30-150	16		20	A
Heptachlor epoxide	132		116		30-150	13		20	A
Endrin	<b>154</b>	Q	134		30-150	14		20	A
Endrin ketone	144		125		30-150	14		20	A
Dieldrin	145		126		30-150	14		20	A
4,4'-DDE	142		122		30-150	15		20	A
4,4'-DDD	136		122		30-150	11		20	A
4,4'-DDT	<b>156</b>	Q	132		30-150	17		20	A
Endosulfan I	145		130		30-150	11		20	A
Endosulfan II	145		125		30-150	15		20	A
Endosulfan sulfate	144		122		30-150	17		20	A
Methoxychlor	139		121		30-150	14		20	A
cis-Chlordane	138		120		30-150	14		20	A
trans-Chlordane	119		104		30-150	13		20	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 04 Batch: WG690031-2 WG690031-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		61		30-150	A
Decachlorobiphenyl	145		137		30-150	A
2,4,5,6-Tetrachloro-m-xylene	55		53		30-150	B
Decachlorobiphenyl	87		87		30-150	B

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG690677-2 WG690677-3									
2,4-D	59		74		30-150	23		30	A
2,4,5-T	52		65		30-150	22		30	A
2,4,5-TP (Silvex)	53		65		30-150	20		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	56		71		30-150	A
DCAA	62		68		30-150	B

## METALS

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**SAMPLE RESULTS**

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Percent Solids: 82%

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	9400		mg/kg	9.5	1.9	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Antimony, Total	0.89	J	mg/kg	4.8	0.76	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Arsenic, Total	24		mg/kg	0.95	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Barium, Total	120		mg/kg	0.95	0.28	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Beryllium, Total	0.58		mg/kg	0.48	0.10	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.95	0.07	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Calcium, Total	1800		mg/kg	9.5	2.8	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Chromium, Total	19		mg/kg	0.95	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Cobalt, Total	7.0		mg/kg	1.9	0.48	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Copper, Total	11		mg/kg	0.95	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Iron, Total	37000		mg/kg	4.8	1.9	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Lead, Total	6.9		mg/kg	4.8	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Magnesium, Total	2000		mg/kg	9.5	0.95	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Manganese, Total	610		mg/kg	0.95	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Mercury, Total	0.03	J	mg/kg	0.09	0.02	1	05/15/14 16:30	05/16/14 11:09	EPA 7471B	1,7471B	MC
Nickel, Total	10		mg/kg	2.4	0.38	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Potassium, Total	490		mg/kg	240	38.	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.9	0.28	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.95	0.19	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Sodium, Total	74	J	mg/kg	190	28.	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.9	0.38	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Vanadium, Total	18		mg/kg	0.95	0.10	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT
Zinc, Total	30		mg/kg	4.8	0.67	2	05/15/14 15:52	05/16/14 11:22	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**SAMPLE RESULTS**

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Percent Solids: 85%

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	7900		mg/kg	9.3	1.9	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	4.6	0.74	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Arsenic, Total	6.8		mg/kg	0.93	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Barium, Total	110		mg/kg	0.93	0.28	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Beryllium, Total	0.43	J	mg/kg	0.46	0.09	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.93	0.07	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Calcium, Total	6200		mg/kg	9.3	2.8	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Chromium, Total	15		mg/kg	0.93	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Cobalt, Total	5.1		mg/kg	1.9	0.46	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Copper, Total	14		mg/kg	0.93	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Iron, Total	15000		mg/kg	4.6	1.9	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Lead, Total	37		mg/kg	4.6	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Magnesium, Total	2900		mg/kg	9.3	0.93	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Manganese, Total	280		mg/kg	0.93	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Mercury, Total	0.05	J	mg/kg	0.09	0.02	1	05/15/14 16:30	05/16/14 11:11	EPA 7471B	1,7471B	MC
Nickel, Total	11		mg/kg	2.3	0.37	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Potassium, Total	1200		mg/kg	230	37.	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.9	0.28	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.93	0.19	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Sodium, Total	130	J	mg/kg	190	28.	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.9	0.37	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Vanadium, Total	20		mg/kg	0.93	0.09	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT
Zinc, Total	33		mg/kg	4.6	0.65	2	05/15/14 15:52	05/16/14 11:41	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**SAMPLE RESULTS**

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil  
 Percent Solids: 86%

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	4100		mg/kg	8.9	1.8	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Antimony, Total	ND		mg/kg	4.4	0.71	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Arsenic, Total	3.2		mg/kg	0.89	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Barium, Total	98		mg/kg	0.89	0.27	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Beryllium, Total	0.25	J	mg/kg	0.44	0.09	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.89	0.06	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Calcium, Total	8900		mg/kg	8.9	2.7	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Chromium, Total	10		mg/kg	0.89	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Cobalt, Total	4.0		mg/kg	1.8	0.44	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Copper, Total	13		mg/kg	0.89	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Iron, Total	10000		mg/kg	4.4	1.8	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Lead, Total	3.7	J	mg/kg	4.4	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Magnesium, Total	3800		mg/kg	8.9	0.89	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Manganese, Total	310		mg/kg	0.89	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Mercury, Total	ND		mg/kg	0.09	0.02	1	05/15/14 16:30	05/16/14 11:13	EPA 7471B	1,7471B	MC
Nickel, Total	9.8		mg/kg	2.2	0.35	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Potassium, Total	980		mg/kg	220	35.	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Selenium, Total	ND		mg/kg	1.8	0.27	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Silver, Total	ND		mg/kg	0.89	0.18	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Sodium, Total	110	J	mg/kg	180	27.	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Thallium, Total	ND		mg/kg	1.8	0.35	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Vanadium, Total	15		mg/kg	0.89	0.09	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT
Zinc, Total	19		mg/kg	4.4	0.62	2	05/15/14 15:52	05/16/14 11:45	EPA 3050B	1,6010C	TT



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**SAMPLE RESULTS**

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Water

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Westborough Lab</b>											
Aluminum, Total	7.97		mg/l	0.200	0.0400	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Antimony, Total	0.00079	J	mg/l	0.00300	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Arsenic, Total	0.00829		mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Barium, Total	1.097		mg/l	0.01000	0.00200	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Beryllium, Total	0.00158		mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Cadmium, Total	0.00045		mg/l	0.00020	0.00005	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Calcium, Total	154.		mg/l	2.00	0.640	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Chromium, Total	0.2111		mg/l	0.00100	0.00020	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Cobalt, Total	0.05580		mg/l	0.00020	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Copper, Total	0.1725		mg/l	0.00100	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Iron, Total	56.9		mg/l	1.00	0.260	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Lead, Total	0.03789		mg/l	0.00100	0.00020	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Magnesium, Total	45.6		mg/l	1.40	0.0486	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Manganese, Total	4.952		mg/l	0.01000	0.00200	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/13/14 10:44	05/13/14 16:28	EPA 7470A	1,7470A	AK
Nickel, Total	0.1997		mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Potassium, Total	11.3		mg/l	0.100	0.0270	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Selenium, Total	0.00274	J	mg/l	0.00500	0.00030	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Silver, Total	0.00032	J	mg/l	0.00040	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Sodium, Total	101.		mg/l	2.00	0.300	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL
Thallium, Total	0.00045	J	mg/l	0.00050	0.00003	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Vanadium, Total	0.04900		mg/l	0.00500	0.00010	1	05/13/14 15:27	05/14/14 12:04	EPA 3005A	1,6020A	KL
Zinc, Total	0.6396		mg/l	0.2000	0.02400	20	05/13/14 15:27	05/14/14 12:01	EPA 3005A	1,6020A	KL

**Dissolved Metals - Westborough Lab**

Aluminum, Dissolved	0.0199		mg/l	0.0100	0.00200	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Antimony, Dissolved	0.00348		mg/l	0.00100	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Arsenic, Dissolved	0.00028	J	mg/l	0.00050	0.00020	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Barium, Dissolved	0.09171		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**SAMPLE RESULTS**

**Lab ID:** L1410121-04  
**Client ID:** GW-1  
**Sample Location:** 521 W. 14STH ST., NY, NY  
**Matrix:** Water

**Date Collected:** 05/09/14 13:30  
**Date Received:** 05/12/14  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Calcium, Dissolved	118.		mg/l	2.00	0.640	20	05/13/14 07:37	05/16/14 16:01	NA	1,6020A	KL
Chromium, Dissolved	0.00194		mg/l	0.00100	0.00020	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Cobalt, Dissolved	0.01206		mg/l	0.00020	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Copper, Dissolved	0.00339		mg/l	0.00100	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Iron, Dissolved	0.143		mg/l	0.0500	0.0130	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00100	0.00020	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Magnesium, Dissolved	37.5		mg/l	0.0700	0.0230	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Manganese, Dissolved	2.082		mg/l	0.01000	0.00200	20	05/13/14 07:37	05/16/14 16:01	NA	1,6020A	KL
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	05/13/14 10:44	05/13/14 17:16	EPA 7470A	1,7470A	AK
Nickel, Dissolved	0.02439		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Potassium, Dissolved	5.42		mg/l	0.100	0.0270	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Selenium, Dissolved	ND		mg/l	0.00500	0.00030	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Sodium, Dissolved	95.2		mg/l	2.00	0.300	20	05/13/14 07:37	05/16/14 16:01	NA	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00003	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Vanadium, Dissolved	ND		mg/l	0.00500	0.00010	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL
Zinc, Dissolved	0.07506		mg/l	0.01000	0.00120	1	05/13/14 07:37	05/16/14 16:05	NA	1,6020A	KL



Project Name: PS186  
Project Number: 6627

Lab Number: L1410121  
Report Date: 05/20/14

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 04 Batch: WG689174-1									
Mercury, Total	ND	mg/l	0.00020	0.00006	1	05/13/14 10:44	05/13/14 16:03	1,7470A	AK

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 04 Batch: WG689193-1									
Mercury, Dissolved	ND	mg/l	0.00020	0.00006	1	05/13/14 10:44	05/13/14 16:44	1,7470A	AK

### Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 04 Batch: WG689270-1									
Aluminum, Total	ND	mg/l	0.0100	0.00200	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Antimony, Total	0.00021 J	mg/l	0.00300	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Arsenic, Total	ND	mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Barium, Total	ND	mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Beryllium, Total	ND	mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Cadmium, Total	ND	mg/l	0.00020	0.00005	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Calcium, Total	ND	mg/l	0.100	0.0320	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Chromium, Total	0.00035 J	mg/l	0.00100	0.00020	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Cobalt, Total	ND	mg/l	0.00020	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Copper, Total	0.00080 J	mg/l	0.00100	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Iron, Total	ND	mg/l	0.0500	0.0130	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Lead, Total	ND	mg/l	0.00100	0.00020	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Magnesium, Total	ND	mg/l	0.0700	0.00243	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Manganese, Total	ND	mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Nickel, Total	ND	mg/l	0.00050	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Potassium, Total	0.0328 J	mg/l	0.100	0.0270	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

### Method Blank Analysis Batch Quality Control

Selenium, Total	ND		mg/l	0.00500	0.00030	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Silver, Total	ND		mg/l	0.00040	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Sodium, Total	ND		mg/l	0.100	0.0150	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Thallium, Total	ND		mg/l	0.00050	0.00003	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Vanadium, Total	ND		mg/l	0.00500	0.00010	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL
Zinc, Total	0.00303	J	mg/l	0.01000	0.00120	1	05/13/14 15:27	05/14/14 09:55	1,6020A	KL

#### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG689773-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	05/15/14 16:30	05/16/14 10:42	1,7471B	MC

#### Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG689934-1										
Aluminum, Total	ND		mg/kg	4.0	0.80	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Antimony, Total	ND		mg/kg	2.0	0.32	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Arsenic, Total	0.11	J	mg/kg	0.40	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Barium, Total	ND		mg/kg	0.40	0.12	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Beryllium, Total	ND		mg/kg	0.20	0.04	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Cadmium, Total	ND		mg/kg	0.40	0.03	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Calcium, Total	ND		mg/kg	4.0	1.2	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Chromium, Total	ND		mg/kg	0.40	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Cobalt, Total	ND		mg/kg	0.80	0.20	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Copper, Total	ND		mg/kg	0.40	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Iron, Total	ND		mg/kg	2.0	0.80	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Lead, Total	ND		mg/kg	2.0	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Magnesium, Total	ND		mg/kg	4.0	0.40	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Manganese, Total	ND		mg/kg	0.40	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

## Method Blank Analysis Batch Quality Control

Nickel, Total	ND		mg/kg	1.0	0.16	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Potassium, Total	ND		mg/kg	100	16.	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Selenium, Total	ND		mg/kg	0.80	0.12	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Silver, Total	ND		mg/kg	0.40	0.08	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Sodium, Total	ND		mg/kg	80	12.	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Thallium, Total	ND		mg/kg	0.80	0.16	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Vanadium, Total	ND		mg/kg	0.40	0.04	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT
Zinc, Total	0.32	J	mg/kg	2.0	0.28	1	05/15/14 15:52	05/16/14 10:53	1,6010C	TT

### Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 04 Batch: WG690122-1										
Aluminum, Dissolved	ND		mg/l	0.0100	0.00200	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Antimony, Dissolved	0.00087	J	mg/l	0.00100	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Arsenic, Dissolved	ND		mg/l	0.00050	0.00020	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Barium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Calcium, Dissolved	ND		mg/l	0.100	0.0320	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Chromium, Dissolved	0.00061	J	mg/l	0.00100	0.00020	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Cobalt, Dissolved	ND		mg/l	0.00020	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Copper, Dissolved	0.00053	J	mg/l	0.00100	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Iron, Dissolved	ND		mg/l	0.0500	0.0130	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Lead, Dissolved	ND		mg/l	0.00100	0.00020	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Magnesium, Dissolved	ND		mg/l	0.0700	0.0230	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Manganese, Dissolved	0.00011	J	mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Nickel, Dissolved	ND		mg/l	0.00050	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Potassium, Dissolved	ND		mg/l	0.100	0.0270	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Selenium, Dissolved	ND		mg/l	0.00500	0.00030	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Silver, Dissolved	ND		mg/l	0.00040	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Sodium, Dissolved	0.0992	J	mg/l	0.100	0.0150	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Thallium, Dissolved	ND		mg/l	0.00050	0.00003	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
Vanadium, Dissolved	ND		mg/l	0.00500	0.00010	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

## Method Blank Analysis Batch Quality Control

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Zinc, Dissolved	0.00605	J	mg/l	0.01000	0.00120	1	05/13/14 07:37	05/16/14 15:47	1,6020A	KL
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### Prep Information

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Digestion Method: NA

## Lab Control Sample Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 Batch: WG689174-2								
Mercury, Total	108		-		80-120	-		
Dissolved Metals - Westborough Lab Associated sample(s): 04 Batch: WG689193-2								
Mercury, Dissolved	107		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 Batch: WG689270-2					
Aluminum, Total	110	-	80-120	-	
Antimony, Total	107	-	80-120	-	
Arsenic, Total	111	-	80-120	-	
Barium, Total	107	-	80-120	-	
Beryllium, Total	112	-	80-120	-	
Cadmium, Total	110	-	80-120	-	
Calcium, Total	108	-	80-120	-	
Chromium, Total	108	-	80-120	-	
Cobalt, Total	109	-	80-120	-	
Copper, Total	108	-	80-120	-	
Iron, Total	105	-	80-120	-	
Lead, Total	110	-	80-120	-	
Magnesium, Total	112	-	80-120	-	
Manganese, Total	107	-	80-120	-	
Nickel, Total	107	-	80-120	-	
Potassium, Total	107	-	80-120	-	
Selenium, Total	118	-	80-120	-	
Silver, Total	102	-	80-120	-	
Sodium, Total	108	-	80-120	-	
Thallium, Total	102	-	80-120	-	
Vanadium, Total	112	-	80-120	-	

## Lab Control Sample Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 Batch: WG689270-2					
Zinc, Total	116	-	80-120	-	
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG689773-2 SRM Lot Number: 0518-10-02					
Mercury, Total	108	-	67-133	-	

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG689934-2 SRM Lot Number: 0518-10-02					
Aluminum, Total	85	-	29-171	-	
Antimony, Total	122	-	4-196	-	
Arsenic, Total	104	-	81-119	-	
Barium, Total	100	-	83-118	-	
Beryllium, Total	104	-	83-117	-	
Cadmium, Total	102	-	82-117	-	
Calcium, Total	95	-	83-117	-	
Chromium, Total	101	-	80-119	-	
Cobalt, Total	102	-	83-117	-	
Copper, Total	101	-	83-117	-	
Iron, Total	94	-	51-150	-	
Lead, Total	99	-	80-120	-	
Magnesium, Total	92	-	74-126	-	
Manganese, Total	102	-	83-117	-	
Nickel, Total	99	-	82-117	-	
Potassium, Total	99	-	74-126	-	
Selenium, Total	102	-	80-120	-	
Silver, Total	102	-	66-134	-	
Sodium, Total	103	-	74-127	-	
Thallium, Total	106	-	79-120	-	
Vanadium, Total	98	-	79-121	-	

## Lab Control Sample Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG689934-2 SRM Lot Number: 0518-10-02					
Zinc, Total	103	-	82-119	-	

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 04 Batch: WG690122-2					
Aluminum, Dissolved	96	-	80-120	-	
Antimony, Dissolved	92	-	80-120	-	
Arsenic, Dissolved	96	-	80-120	-	
Barium, Dissolved	96	-	80-120	-	
Beryllium, Dissolved	99	-	80-120	-	
Cadmium, Dissolved	105	-	80-120	-	
Calcium, Dissolved	99	-	80-120	-	
Chromium, Dissolved	96	-	80-120	-	
Cobalt, Dissolved	98	-	80-120	-	
Copper, Dissolved	95	-	80-120	-	
Iron, Dissolved	98	-	80-120	-	
Lead, Dissolved	102	-	80-120	-	
Magnesium, Dissolved	114	-	80-120	-	
Manganese, Dissolved	97	-	80-120	-	
Nickel, Dissolved	97	-	80-120	-	
Potassium, Dissolved	101	-	80-120	-	
Selenium, Dissolved	103	-	80-120	-	
Silver, Dissolved	94	-	80-120	-	
Sodium, Dissolved	101	-	80-120	-	
Thallium, Dissolved	94	-	80-120	-	
Vanadium, Dissolved	100	-	80-120	-	

## Lab Control Sample Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 04 Batch: WG690122-2					
Zinc, Dissolved	106	-	80-120	-	

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689174-4 QC Sample: L1410076-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00500	100		-	-		75-125	-		20
Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689193-4 QC Sample: L1409934-01 Client ID: MS Sample												
Mercury, Dissolved	ND	0.005	0.00518	104		-	-		75-125	-		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689270-3 WG689270-4 QC Sample: L1410116-02 Client ID: MS Sample									
Aluminum, Total	0.030	2	2.12	104	2.14	106	75-125	1	20
Antimony, Total	0.0049	0.5	0.4533	90	0.4760	94	75-125	5	20
Arsenic, Total	0.0006	0.12	0.1269	105	0.1312	109	75-125	3	20
Barium, Total	0.0275	2	2.052	101	2.071	102	75-125	1	20
Beryllium, Total	ND	0.05	0.05390	108	0.05384	108	75-125	0	20
Cadmium, Total	ND	0.051	0.05684	111	0.05790	114	75-125	2	20
Calcium, Total	146.	10	106	0	Q 122	0	Q 75-125	14	20
Chromium, Total	0.0005J	0.2	0.2039	102	0.2049	102	75-125	0	20
Cobalt, Total	ND	0.5	0.5139	103	0.5174	103	75-125	1	20
Copper, Total	0.0008J	0.25	0.2490	100	0.2514	100	75-125	1	20
Iron, Total	0.231	1	1.23	100	1.26	103	75-125	2	20
Lead, Total	ND	0.51	0.5372	105	0.5424	106	75-125	1	20
Magnesium, Total	30.5	10	40.6	101	39.6	91	75-125	2	20
Manganese, Total	0.02046	0.5	0.5253	101	0.5290	102	75-125	1	20
Nickel, Total	0.0003J	0.5	0.4944	99	0.5086	102	75-125	3	20
Potassium, Total	0.600	10	7.16	66	Q 5.15	46	Q 75-125	33	Q 20
Selenium, Total	ND	0.12	0.132	110	0.136	113	75-125	3	20
Silver, Total	ND	0.05	0.04896	98	0.04937	99	75-125	1	20
Sodium, Total	7.74	10	9.11	14	Q 8.47	7	Q 75-125	7	20
Thallium, Total	ND	0.12	0.1181	98	0.1184	99	75-125	0	20
Vanadium, Total	ND	0.5	0.5353	107	0.5300	106	75-125	1	20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689270-3 WG689270-4 QC Sample: L1410116-02 Client ID: MS Sample									
Zinc, Total	0.0048J	0.5	0.5385	108	0.5550	111	75-125	3	20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689773-4 QC Sample: L1410241-09 Client ID: MS Sample									
Mercury, Total	0.89	0.225	2.7	804	Q	-	80-120	-	35

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689934-4 QC Sample: L1410121-01 Client ID: SB-6 (0-2')									
Aluminum, Total	9400	186	9900	269	Q	-	75-125	-	20
Antimony, Total	0.89J	46.4	41	88		-	75-125	-	20
Arsenic, Total	24.	11.1	37	117		-	75-125	-	20
Barium, Total	120	186	280	86		-	75-125	-	20
Beryllium, Total	0.58	4.64	5.3	102		-	75-125	-	20
Cadmium, Total	ND	4.73	3.9	82		-	75-125	-	20
Calcium, Total	1800	928	2800	108		-	75-125	-	20
Chromium, Total	19.	18.6	36	92		-	75-125	-	20
Cobalt, Total	7.0	46.4	50	93		-	75-125	-	20
Copper, Total	11.	23.2	36	108		-	75-125	-	20
Iron, Total	37000	92.8	38000	1080	Q	-	75-125	-	20
Lead, Total	6.9	47.3	70	133	Q	-	75-125	-	20
Magnesium, Total	2000	928	3000	108		-	75-125	-	20
Manganese, Total	610	46.4	490	0	Q	-	75-125	-	20
Nickel, Total	10.	46.4	52	90		-	75-125	-	20
Potassium, Total	490	928	1700	130	Q	-	75-125	-	20
Selenium, Total	ND	11.1	10	90		-	75-125	-	20
Silver, Total	ND	27.8	28	101		-	75-125	-	20
Sodium, Total	74.J	928	1100	118		-	75-125	-	20
Thallium, Total	ND	11.1	9.7	87		-	75-125	-	20
Vanadium, Total	18.	46.4	64	99		-	75-125	-	20

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689934-4 QC Sample: L1410121-01 Client ID: SB-6 (0-2')									
Zinc, Total	30.	46.4	74	95	-	-	75-125	-	20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG690122-4 QC Sample: L1410121-04 Client ID: GW-1									
Aluminum, Dissolved	0.0199	2	2.07	104	-	-	75-125	-	20
Antimony, Dissolved	0.00348	0.5	0.4072	74	Q	-	75-125	-	20
Arsenic, Dissolved	0.00028J	0.12	0.1343	112	-	-	75-125	-	20
Barium, Dissolved	0.09171	2	2.258	108	-	-	75-125	-	20
Beryllium, Dissolved	ND	0.05	0.05408	108	-	-	75-125	-	20
Cadmium, Dissolved	ND	0.051	0.06074	119	-	-	75-125	-	20
Calcium, Dissolved	118.	10	132	140	Q	-	75-125	-	20
Chromium, Dissolved	0.00194	0.2	0.2120	106	-	-	75-125	-	20
Cobalt, Dissolved	0.01206	0.5	0.5474	107	-	-	75-125	-	20
Copper, Dissolved	0.00339	0.25	0.2654	106	-	-	75-125	-	20
Iron, Dissolved	0.143	1	1.20	120	-	-	75-125	-	20
Lead, Dissolved	ND	0.51	0.5696	112	-	-	75-125	-	20
Magnesium, Dissolved	37.5	10	20.9	4	Q	-	75-125	-	20
Manganese, Dissolved	2.082	0.5	2.678	119	-	-	75-125	-	20
Nickel, Dissolved	0.02439	0.5	0.5622	108	-	-	75-125	-	20
Potassium, Dissolved	5.42	10	18.0	124	-	-	75-125	-	20
Selenium, Dissolved	ND	0.12	0.136	113	-	-	75-125	-	20
Silver, Dissolved	ND	0.05	0.05162	103	-	-	75-125	-	20
Sodium, Dissolved	95.2	10	100	48	Q	-	75-125	-	20
Thallium, Dissolved	ND	0.12	0.1217	101	-	-	75-125	-	20
Vanadium, Dissolved	ND	0.5	0.5464	109	-	-	75-125	-	20

**Matrix Spike Analysis**  
Batch Quality Control

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG690122-4 QC Sample: L1410121-04 Client ID: GW-1									
Zinc, Dissolved	0.07506	0.5	0.6628	132	Q	-	75-125	-	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689174-3 QC Sample: L1410076-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689193-3 QC Sample: L1409934-01 Client ID: DUP Sample						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689773-3 QC Sample: L1410241-09 Client ID: DUP Sample						
Mercury, Total	0.89	0.44	mg/kg	68	Q	35

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689934-3 QC Sample: L1410121-01 Client ID: SB-6 (0-2')					
Aluminum, Total	9400	9400	mg/kg	0	20
Antimony, Total	0.89J	0.86J	mg/kg	NC	20
Arsenic, Total	24.	30	mg/kg	22 Q	20
Barium, Total	120	110	mg/kg	9	20
Beryllium, Total	0.58	0.63	mg/kg	8	20
Cadmium, Total	ND	ND	mg/kg	NC	20
Calcium, Total	1800	1400	mg/kg	25 Q	20
Chromium, Total	19.	20	mg/kg	5	20
Cobalt, Total	7.0	6.2	mg/kg	12	20
Copper, Total	11.	11	mg/kg	0	20
Iron, Total	37000	43000	mg/kg	15	20
Lead, Total	6.9	3.1J	mg/kg	NC	20
Magnesium, Total	2000	1800	mg/kg	11	20
Manganese, Total	610	360	mg/kg	52 Q	20
Nickel, Total	10.	9.4	mg/kg	6	20
Potassium, Total	490	450	mg/kg	9	20
Selenium, Total	ND	ND	mg/kg	NC	20
Silver, Total	ND	ND	mg/kg	NC	20
Sodium, Total	74.J	71J	mg/kg	NC	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
<b>Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689934-3 QC Sample: L1410121-01 Client ID: SB-6 (0-2')</b>					
Thallium, Total	ND	ND	mg/kg	NC	20
Vanadium, Total	18.	18	mg/kg	0	20
Zinc, Total	30.	29	mg/kg	3	20
<b>Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG690122-3 QC Sample: L1410121-04 Client ID: GW-1</b>					
Calcium, Dissolved	118.	119	mg/l	1	20
Manganese, Dissolved	2.082	2.100	mg/l	1	20
Sodium, Dissolved	95.2	95.7	mg/l	1	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 04 QC Batch ID: WG690122-3 QC Sample: L1410121-04 Client ID: GW-1					
Aluminum, Dissolved	0.0199	0.0196	mg/l	2	20
Antimony, Dissolved	0.00348	0.00296	mg/l	16	20
Arsenic, Dissolved	0.00028J	0.00028J	mg/l	NC	20
Barium, Dissolved	0.09171	0.09048	mg/l	1	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	ND	0.00005J	mg/l	NC	20
Chromium, Dissolved	0.00194	0.00184	mg/l	5	20
Cobalt, Dissolved	0.01206	0.01161	mg/l	4	20
Copper, Dissolved	0.00339	0.00323	mg/l	5	20
Iron, Dissolved	0.143	0.140	mg/l	2	20
Lead, Dissolved	ND	ND	mg/l	NC	20
Magnesium, Dissolved	37.5	37.1	mg/l	1	20
Nickel, Dissolved	0.02439	0.02415	mg/l	1	20
Potassium, Dissolved	5.42	5.27	mg/l	3	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20
Thallium, Dissolved	ND	ND	mg/l	NC	20
Vanadium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.07506	0.07298	mg/l	3	20

# **INORGANICS & MISCELLANEOUS**

Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-01  
 Client ID: SB-6 (0-2')  
 Sample Location: 521 W. 145TH ST., NY, NY  
 Matrix: Soil

Date Collected: 05/09/14 11:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	19		mg/kg	0.97	0.96	1	-	05/19/14 10:05	107,-	SD
Solids, Total	82.1		%	0.100	NA	1	-	05/14/14 00:25	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.2	0.28	1	05/14/14 14:00	05/15/14 16:39	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.97	0.19	1	05/14/14 17:45	05/15/14 12:32	1,7196A	JT



Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-02  
 Client ID: SB-7 (0-2')  
 Sample Location: 521 W. 145TH ST., NY, NY  
 Matrix: Soil

Date Collected: 05/09/14 09:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	15		mg/kg	0.94	0.94	1	-	05/19/14 10:05	107,-	SD
Solids, Total	84.6		%	0.100	NA	1	-	05/14/14 00:25	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.1	0.25	1	05/14/14 14:00	05/15/14 16:41	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.94	0.19	1	05/14/14 17:45	05/15/14 12:33	1,7196A	JT



Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-03  
 Client ID: SB-7 (22-23')  
 Sample Location: 521 W. 14STH ST., NY, NY  
 Matrix: Soil

Date Collected: 05/09/14 10:00  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	10		mg/kg	0.93	0.93	1	-	05/19/14 10:05	107,-	SD
Solids, Total	86.0		%	0.100	NA	1	-	05/14/14 00:25	30,2540G	RT
Cyanide, Total	ND		mg/kg	1.1	0.26	1	05/14/14 14:00	05/15/14 16:42	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/kg	0.93	0.19	1	05/14/14 17:45	05/15/14 12:33	1,7196A	JT



Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

## SAMPLE RESULTS

Lab ID: L1410121-04  
 Client ID: GW-1  
 Sample Location: 521 W. 145TH ST., NY, NY  
 Matrix: Water

Date Collected: 05/09/14 13:30  
 Date Received: 05/12/14  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	0.21		mg/l	0.020	0.020	1	-	05/19/14 10:00	107,-	SD
Cyanide, Total	ND		mg/l	0.005	0.001	1	05/14/14 11:00	05/14/14 14:39	1,9010C/9012B	DE
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/13/14 10:40	05/13/14 22:48	1,7196A	JA



Project Name: PS186

Lab Number: L1410121

Project Number: 6627

Report Date: 05/20/14

**Method Blank Analysis  
Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 04 Batch: WG689348-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/13/14 10:40	05/13/14 22:45	1,7196A	JA
General Chemistry - Westborough Lab for sample(s): 04 Batch: WG689417-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	05/14/14 11:00	05/14/14 14:29	1,9010C/9012B	DE
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG689516-1										
Cyanide, Total	ND		mg/kg	0.89	0.21	1	05/14/14 14:00	05/15/14 16:33	1,9010C/9012B	JO
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG689588-1										
Chromium, Hexavalent	ND		mg/kg	0.80	0.16	1	05/14/14 17:45	05/15/14 12:30	1,7196A	JT

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04 Batch: WG689348-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 04 Batch: WG689417-2 WG689417-3								
Cyanide, Total	111		103		80-120	7		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG689516-2 WG689516-3								
Cyanide, Total	97		92		80-120	6		35
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG689588-2								
Chromium, Hexavalent	96		-		80-120	-		20

### Matrix Spike Analysis Batch Quality Control

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689348-4 QC Sample: L1410121-04 Client ID: GW-1												
Chromium, Hexavalent	ND	0.1	0.101	101	-	-	-	-	85-115	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689417-4 WG689417-5 QC Sample: L1410019-09 Client ID: MS Sample												
Cyanide, Total	0.004J	0.2	0.209	104	0.223	112	112	-	80-120	6	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689516-4 WG689516-5 QC Sample: L1410186-02 Client ID: MS Sample												
Cyanide, Total	0.30J	11	11	100	9.8	92	92	-	65-135	12	-	35
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689588-5 QC Sample: L1410121-03 Client ID: SB-7 (22-23')												
Chromium, Hexavalent	ND	1390	1300	93	-	-	-	-	75-125	-	-	20



## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG689348-3 QC Sample: L1410121-04 Client ID: GW-1						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689376-1 QC Sample: L1410121-01 Client ID: SB-6 (0-2')						
Solids, Total	82.1	83.3	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG689588-4 QC Sample: L1410121-03 Client ID: SB-7 (22-23')						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

A Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1410121-01A	Vial Large Septa unpreserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)
L1410121-01B	Amber 250ml unpreserved	A	N/A	3.6	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1410121-02A	Vial Large Septa unpreserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)
L1410121-02B	Amber 250ml unpreserved	A	N/A	3.6	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1410121-03A	Vial Large Septa unpreserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)

\*Values in parentheses indicate holding time in days



Project Name: PS186

Project Number: 6627

Lab Number: L1410121

Report Date: 05/20/14

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1410121-03B	Amber 250ml unpreserved	A	N/A	3.6	Y	Absent	BE-TI(180),NYTCL-8270(14),AS-TI(180),BA-TI(180),AG-TI(180),HERB-APA(14),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TS(7),CU-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),NYTCL-8081(14),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),NYTCL-8082(14),CA-TI(180),CD-TI(180),K-TI(180),NA-TI(180)
L1410121-04A	Vial HCl preserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)
L1410121-04B	Vial HCl preserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)
L1410121-04C	Vial HCl preserved	A	N/A	3.6	Y	Absent	NYTCL-8260(14)
L1410121-04D	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	HERB-APA(7),NYTCL-8081(7)
L1410121-04E	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	HERB-APA(7),NYTCL-8081(7)
L1410121-04F	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1410121-04G	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	NYTCL-8082-1200ML(7)
L1410121-04H	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	NYTCL-8082-1200ML(7)
L1410121-04I	Amber 1000ml unpreserved	A	7	3.6	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1410121-04J	Plastic 1000ml HNO3 preserved	A	<2	3.6	Y	Absent	BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1410121-04K	Plastic 1000ml unpreserved	A	7	3.6	Y	Absent	HEXCR-7196(1),FILTER-MET(1),TRICR-CALC(1)
L1410121-04L	Plastic 250ml NaOH preserved spl	A	>12	3.6	Y	Absent	TCN-9010(14)
L1410121-04X	Plastic 250ml HNO3 preserved	A	<2	3.6	Y	Absent	CU-6020S(180),K-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),BA-6020S(180),NA-6020S(180),NI-6020S(180),PB-6020S(180),TL-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)

\*Values in parentheses indicate holding time in days



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

**Data Qualifiers**

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

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**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1410121  
**Report Date:** 05/20/14

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 107 Alpha Analytical - In-house calculation method.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised April 15, 2014

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**The following analytes are not included in our NELAP Scope of Accreditation:**

### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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**The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:**

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# CHAIN OF CUSTODY

IMPACT ENVIRONMENTAL  
 170 Keyland Court, Bohemia, New York 11716  
 (Tel) 631-269-8800 (Fax) 631-269-1599

Page 1 of 1



LAB NAME: Alpha Analytical  
 RECEIVED DATE: 11/10/21

**Client Information**

Company Name: Impact Environmental  
 Address: 170 Keyland Court  
 City: Bohemia  
 State: NY  
 Zip: 11716

**Project Information**

Project Name: P5186  
 Street: 521 W. 145th St., NY, NY  
 City: Manhattan  
 State: NY  
 Zip: NY

**Analytical Information**

Impact Analytical Package A\*  
 Impact Analytical Package B\*\*  
 Impact Analytical Package C\*\*\*  
 VOC 8260 (Analyte List for NY Part 375 and NJ NRDC)  
 GP82 Analysis  
 VOCs 8260 (CP51 Analyte List)

**Matrix Codes**

1 - Liquid  
 S - Soil  
 A - Air  
 OL - Oil  
 W - Wipe  
 PC - Paint Chips  
 SL - Sludge  
 SD - Solid  
 DW - Drinking Water  
 DISS - Dissolved

Project # 052014  
 City: Bohemia  
 Project Contact: G. Mendenhall  
 Phone #: 631-269-8800  
 Fax #: 631-269-1599  
 Project #: 6627  
 Project Name: G. Mendenhall  
 City: Manhattan  
 State: NY  
 Zip: NY

LAB USE ONLY	Sample ID	IEC Project Code	Matrix Code	Sample Type	Sample Date	Time	Total # of bottles	Sample Containers		Methanol (USEPA 5035)	Sodium Bisulfate (EPA 5035)
								NONE or OTHER*	ICE		
	SB-6 (0-2')	6627	S	G	5/9/14	0900	2				
	SB-7 (0-2')		S	G	5/9/14	1000	2				
	SB-7 (22-23')		S	G	5/9/14	1330	11				
	GU-1		L								

END OF RECORDS

HexCr, TriCr, TCN

**Standard Service**

Standard - 5 day  
 Standard - 4 day  
 Standard - 3 day

**(LAB USE ONLY)**

TAT Approved by: [Signature]

**Data Deliverable Information**

- Results Only (Level-1)
- Results plus Misc. QC (Level-2)
- Results plus ALL QC (Level-3)
- PA QC Package
- NJ QC Package (Level 3M)
- CLP Category A (Level-2)
- CLP Category B (Level-4)
- ASP QC Package (Level-4)
- Other

**REFERENCES**

\*Package A (proprietary) - Priority Pollutants Metals, SVOCs, PCB/pest and Herbicides - to match all NJ DCMS & NY Part 375 parameters and detection limits. \*\*Package B (proprietary) - Same as Package A, plus TCLP Metals & TPH. \*\*\*Package C (proprietary) - Same as Package B plus RCRA characteristics and Full TCLP.

**NOTES/COMMENTS:**

TOGS 1:1:1 Some Clues, Sludge/PCBs, Metals - filtered/filtered  
 HLAB TO FILTER FOR METALS

**Rush Service**

48 Hour RUSH  
 24 Hour RUSH

Relinquished by: [Signature]  
 Date / Time: 5/9/14 1420

Sample custody must be documented below, each time samples change possession, with a signature, date, and time.

Received By: [Signature]  
 Date / Time: 5/9/14 1420

Relinquished By: [Signature]  
 Date / Time: 5/9/14 2015

Received By: [Signature]  
 Date / Time: 5/12/14

Relinquished By: [Signature]  
 Date / Time: 5/12/14 1849

Received By: [Signature]  
 Date / Time: 5/12/14 1045





## ANALYTICAL REPORT

Lab Number:	L1408220
Client:	Impact Environmental 170 Keyland Ct Bohemia, NY 11716
ATTN:	Greg Mendez-Chicas
Phone:	(631) 269-8800
Project Name:	PS186
Project Number:	6627
Report Date:	04/25/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1408220-01	SV-1	521 W. 145TH STREET	04/17/14 13:13
L1408220-02	SV-2	521 W. 145TH STREET	04/17/14 13:18
L1408220-03	SV-3	521 W. 145TH STREET	04/17/14 13:34
L1408220-04	SV-4	521 W. 145TH STREET	04/17/14 13:40
L1408220-05	SV-5	521 W. 145TH STREET	04/17/14 13:26
L1408220-06	IA-1	521 W. 145TH STREET	04/17/14 13:47
L1408220-07	IA-2	521 W. 145TH STREET	04/17/14 13:36
L1408220-08	OA-1	521 W. 145TH STREET	04/17/14 13:50

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

### HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

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**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### Case Narrative (continued)

#### Volatile Organics in Air

Canisters were released from the laboratory on April 15, 2014. The canister certification results are provided as an addendum.

Sample L1408220-03 results for Acetone should be considered estimated due to co-elution with a non-target peak.

#### Helium in Air

Samples L1408220-01 through -05: Prior to sample analysis, the canisters were pressurized with UHP Nitrogen in order to facilitate the transfer of sample to the Gas Chromatograph. The addition of Nitrogen resulted in a dilution of the samples. The reporting limits have been elevated accordingly.

The sample designated SV-4 (L1408220-04) had a RPD for the pre- and post-flow controller calibration check (167% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 3.3 mL/minute; the final flow rate was 0.3mL/minute. The final pressure recorded by the laboratory of the associated canister was -0.1 inches of mercury.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 04/25/14

**AIR**

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-01  
 Client ID: SV-1  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 01:42  
 Analyst: RY

Date Collected: 04/17/14 13:13  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.390	0.200	--	1.93	0.989	--		1
Chloromethane	0.227	0.200	--	0.469	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	9.72	2.50	--	18.3	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	6.00	1.00	--	14.3	2.38	--		1
Trichlorofluoromethane	0.267	0.200	--	1.50	1.12	--		1
Isopropanol	1.15	0.500	--	2.83	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	1.71	0.500	--	5.18	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.270	0.200	--	0.796	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-01  
 Client ID: SV-1  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:13  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.325	0.200	--	0.959	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.251	0.200	--	0.885	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	0.381	0.200	--	1.78	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.738	0.200	--	2.78	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.480	0.400	--	2.08	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-01  
 Client ID: SV-1  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:13  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.214	0.200	--	0.930	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.287	0.200	--	1.41	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	84		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	88		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-02  
 Client ID: SV-2  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 02:14  
 Analyst: RY

Date Collected: 04/17/14 13:18  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.467	0.200	--	2.31	0.989	--		1
Chloromethane	0.291	0.200	--	0.601	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	7.56	2.50	--	14.2	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	10.7	1.00	--	25.4	2.38	--		1
Trichlorofluoromethane	0.288	0.200	--	1.62	1.12	--		1
Isopropanol	0.764	0.500	--	1.88	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	5.55	0.500	--	16.8	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-02  
 Client ID: SV-2  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:18  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.226	0.200	--	0.667	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	0.303	0.200	--	1.04	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	0.229	0.200	--	1.07	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.610	0.200	--	2.30	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.481	0.400	--	2.09	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-02  
 Client ID: SV-2  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:18  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.214	0.200	--	0.930	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.338	0.200	--	1.66	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	90		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-03  
 Client ID: SV-3  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 02:46  
 Analyst: RY

Date Collected: 04/17/14 13:34  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.435	0.200	--	2.15	0.989	--		1
Chloromethane	0.375	0.200	--	0.774	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.352	0.200	--	0.779	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	16.6	2.50	--	31.3	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	13.7	1.00	--	32.5	2.38	--		1
Trichlorofluoromethane	0.374	0.200	--	2.10	1.12	--		1
Isopropanol	2.24	0.500	--	5.51	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	0.995	0.500	--	3.02	1.52	--		1
Methylene chloride	5.81	1.00	--	20.2	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.536	0.200	--	1.58	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-03  
 Client ID: SV-3  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:34  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.803	0.200	--	2.37	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	1.12	0.200	--	3.95	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.295	0.200	--	0.942	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	0.637	0.200	--	2.19	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	0.550	0.200	--	2.57	0.934	--		1
Heptane	0.335	0.200	--	1.37	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	1.50	0.200	--	5.65	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.307	0.200	--	1.33	0.869	--		1
p/m-Xylene	1.08	0.400	--	4.69	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-03  
 Client ID: SV-3  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:34  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.437	0.200	--	1.90	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.446	0.200	--	2.19	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	77		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	92		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-04  
 Client ID: SV-4  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 03:18  
 Analyst: RY

Date Collected: 04/17/14 13:40  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.470	0.200	--	2.32	0.989	--		1
Chloromethane	0.273	0.200	--	0.564	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	8.67	2.50	--	16.3	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.57	1.00	--	10.9	2.38	--		1
Trichlorofluoromethane	0.318	0.200	--	1.79	1.12	--		1
Isopropanol	1.35	0.500	--	3.32	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	6.17	0.500	--	18.7	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.479	0.200	--	1.49	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.236	0.200	--	0.696	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-04  
 Client ID: SV-4  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:40  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.284	0.200	--	0.838	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	0.328	0.200	--	1.53	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.657	0.200	--	2.48	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	0.619	0.400	--	2.69	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-04  
 Client ID: SV-4  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:40  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.293	0.200	--	1.27	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.415	0.200	--	2.04	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	80		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	95		60-140



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-05  
 Client ID: SV-5  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 08:28  
 Analyst: RY

Date Collected: 04/17/14 13:26  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.227	0.200	--	1.12	0.989	--		1
Chloromethane	0.368	0.200	--	0.760	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	7.89	2.50	--	14.9	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	9.13	1.00	--	21.7	2.38	--		1
Trichlorofluoromethane	0.345	0.200	--	1.94	1.12	--		1
Isopropanol	0.811	0.500	--	1.99	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	2.17	0.500	--	6.58	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.322	0.200	--	0.950	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1



**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

### SAMPLE RESULTS

Lab ID: L1408220-05  
 Client ID: SV-5  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:26  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	0.299	0.200	--	0.882	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	0.226	0.200	--	1.06	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.767	0.200	--	2.89	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.202	0.200	--	0.877	0.869	--		1
p/m-Xylene	0.730	0.400	--	3.17	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-05  
 Client ID: SV-5  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:26  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.332	0.200	--	1.44	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.476	0.200	--	2.34	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	95		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-06  
 Client ID: IA-1  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/22/14 23:35  
 Analyst: RY

Date Collected: 04/17/14 13:47  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.370	0.200	--	1.83	0.989	--		1
Chloromethane	0.518	0.200	--	1.07	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	1.28	1.00	--	3.04	2.38	--		1
Trichlorofluoromethane	0.265	0.200	--	1.49	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-06  
 Client ID: IA-1  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:47  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-06

Date Collected: 04/17/14 13:47

Client ID: IA-1

Date Received: 04/18/14

Sample Location: 521 W. 145TH STREET

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	88		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-06  
 Client ID: IA-1  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 04/22/14 23:35  
 Analyst: RY

Date Collected: 04/17/14 13:47  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.068	0.020	--	0.428	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.067	0.020	--	0.454	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	93		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-07  
 Client ID: IA-2  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 00:07  
 Analyst: RY

Date Collected: 04/17/14 13:36  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.271	0.200	--	1.34	0.989	--		1
Chloromethane	0.509	0.200	--	1.05	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	1.87	1.00	--	4.44	2.38	--		1
Trichlorofluoromethane	0.276	0.200	--	1.55	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-07  
 Client ID: IA-2  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:36  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Hexane	ND	0.200	--	ND	0.705	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Cyclohexane	0.349	0.200	--	1.20	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-07

Date Collected: 04/17/14 13:36

Client ID: IA-2

Date Received: 04/18/14

Sample Location: 521 W. 145TH STREET

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	83		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	88		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-07  
 Client ID: IA-2  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 04/23/14 00:07  
 Analyst: RY

Date Collected: 04/17/14 13:36  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.071	0.020	--	0.447	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.066	0.020	--	0.448	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	86		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	93		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-08  
 Client ID: OA-1  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/23/14 00:39  
 Analyst: RY

Date Collected: 04/17/14 13:50  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
Dichlorodifluoromethane	0.476	0.200	--	2.35	0.989	--		1
Chloromethane	0.601	0.200	--	1.24	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	8.16	2.50	--	15.4	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	2.76	1.00	--	6.56	2.38	--		1
Trichlorofluoromethane	0.297	0.200	--	1.67	1.12	--		1
Isopropanol	0.893	0.500	--	2.20	1.23	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	4.13	1.00	--	14.3	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-08  
 Client ID: OA-1  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:50  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Hexane	0.214	0.200	--	0.754	0.705	--		1
Benzene	0.229	0.200	--	0.732	0.639	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.230	0.200	--	0.867	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-08  
 Client ID: OA-1  
 Sample Location: 521 W. 145TH STREET

Date Collected: 04/17/14 13:50  
 Date Received: 04/18/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	75		60-140
Bromochloromethane	85		60-140
chlorobenzene-d5	92		60-140



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

**Lab ID:** L1408220-08  
**Client ID:** OA-1  
**Sample Location:** 521 W. 145TH STREET  
**Matrix:** Air  
**Anaytical Method:** 48,TO-15-SIM  
**Analytical Date:** 04/23/14 00:39  
**Analyst:** RY

**Date Collected:** 04/17/14 13:50  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air by SIM - Mansfield Lab</b>								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	0.078	0.020	--	0.491	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	0.035	0.020	--	0.237	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	79		60-140
bromochloromethane	90		60-140
chlorobenzene-d5	95		60-140



Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 04/22/14 16:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 06-08 Batch: WG684267-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1

Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/22/14 16:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG684270-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/22/14 16:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG684270-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1



Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/22/14 16:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-08 Batch: WG684270-4								
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 06-08 Batch: WG684267-3								
Vinyl chloride	110		-		70-130	-		25
1,1-Dichloroethene	102		-		70-130	-		25
cis-1,2-Dichloroethene	110		-		70-130	-		25
1,1,1-Trichloroethane	102		-		70-130	-		25
Carbon tetrachloride	101		-		70-130	-		25
Trichloroethene	104		-		70-130	-		25
Tetrachloroethene	114		-		70-130	-		25

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG684270-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	96		-		70-130	-		
Propane	73		-		70-130	-		
Dichlorodifluoromethane	72		-		70-130	-		
Chloromethane	101		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	108		-		70-130	-		
Methanol	94		-		70-130	-		
Vinyl chloride	108		-		70-130	-		
1,3-Butadiene	103		-		70-130	-		
Butane	93		-		70-130	-		
Bromomethane	108		-		70-130	-		
Chloroethane	104		-		70-130	-		
Ethyl Alcohol	97		-		70-130	-		
Dichlorofluoromethane	100		-		70-130	-		
Vinyl bromide	104		-		70-130	-		
Acrolein	93		-		70-130	-		
Acetone	105		-		70-130	-		
Acetonitrile	100		-		70-130	-		
Trichlorofluoromethane	112		-		70-130	-		
iso-Propyl Alcohol	104		-		70-130	-		
Acrylonitrile	91		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG684270-3								
Pentane	90		-		70-130	-		
Ethyl ether	84		-		70-130	-		
1,1-Dichloroethene	99		-		70-130	-		
tert-Butyl Alcohol	93		-		70-130	-		
Methylene chloride	96		-		70-130	-		
3-Chloropropene	96		-		70-130	-		
Carbon disulfide	95		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		-		70-130	-		
trans-1,2-Dichloroethene	88		-		70-130	-		
1,1-Dichloroethane	98		-		70-130	-		
Methyl tert butyl ether	91		-		70-130	-		
Vinyl acetate	123		-		70-130	-		
2-Butanone	90		-		70-130	-		
cis-1,2-Dichloroethene	105		-		70-130	-		
Ethyl Acetate	102		-		70-130	-		
Chloroform	108		-		70-130	-		
Tetrahydrofuran	87		-		70-130	-		
2,2-Dichloropropane	88		-		70-130	-		
1,2-Dichloroethane	101		-		70-130	-		
n-Hexane	87		-		70-130	-		
Isopropyl Ether	88		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG684270-3								
Ethyl-Tert-Butyl-Ether	82		-		70-130	-		
1,1,1-Trichloroethane	98		-		70-130	-		
1,1-Dichloropropene	91		-		70-130	-		
Benzene	96		-		70-130	-		
Carbon tetrachloride	99		-		70-130	-		
Cyclohexane	86		-		70-130	-		
Tertiary-Amyl Methyl Ether	85		-		70-130	-		
Dibromomethane	95		-		70-130	-		
1,2-Dichloropropane	95		-		70-130	-		
Bromodichloromethane	94		-		70-130	-		
1,4-Dioxane	94		-		70-130	-		
Trichloroethene	102		-		70-130	-		
2,2,4-Trimethylpentane	89		-		70-130	-		
Methyl methacrylate	93		-		70-130	-		
Heptane	83		-		70-130	-		
cis-1,3-Dichloropropene	102		-		70-130	-		
4-Methyl-2-pentanone	89		-		70-130	-		
trans-1,3-Dichloropropene	85		-		70-130	-		
1,1,2-Trichloroethane	102		-		70-130	-		
Toluene	102		-		70-130	-		
1,3-Dichloropropane	95		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG684270-3								
2-Hexanone	99		-		70-130	-		
Dibromochloromethane	94		-		70-130	-		
1,2-Dibromoethane	103		-		70-130	-		
Butyl Acetate	98		-		70-130	-		
Octane	91		-		70-130	-		
Tetrachloroethene	105		-		70-130	-		
1,1,1,2-Tetrachloroethane	97		-		70-130	-		
Chlorobenzene	108		-		70-130	-		
Ethylbenzene	103		-		70-130	-		
p/m-Xylene	104		-		70-130	-		
Bromoform	92		-		70-130	-		
Styrene	104		-		70-130	-		
1,1,2,2-Tetrachloroethane	111		-		70-130	-		
o-Xylene	107		-		70-130	-		
1,2,3-Trichloropropane	95		-		70-130	-		
Nonane (C9)	88		-		70-130	-		
Isopropylbenzene	100		-		70-130	-		
Bromobenzene	96		-		70-130	-		
o-Chlorotoluene	100		-		70-130	-		
n-Propylbenzene	100		-		70-130	-		
p-Chlorotoluene	98		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 Batch: WG684270-3								
4-Ethyltoluene	93		-		70-130	-		
1,3,5-Trimethylbenzene	104		-		70-130	-		
tert-Butylbenzene	100		-		70-130	-		
1,2,4-Trimethylbenzene	110		-		70-130	-		
Decane (C10)	94		-		70-130	-		
Benzyl chloride	82		-		70-130	-		
1,3-Dichlorobenzene	112		-		70-130	-		
1,4-Dichlorobenzene	110		-		70-130	-		
sec-Butylbenzene	101		-		70-130	-		
p-Isopropyltoluene	92		-		70-130	-		
1,2-Dichlorobenzene	110		-		70-130	-		
n-Butylbenzene	106		-		70-130	-		
1,2-Dibromo-3-chloropropane	100		-		70-130	-		
Undecane	100		-		70-130	-		
Dodecane (C12)	117		-		70-130	-		
1,2,4-Trichlorobenzene	123		-		70-130	-		
Naphthalene	111		-		70-130	-		
1,2,3-Trichlorobenzene	114		-		70-130	-		
Hexachlorobutadiene	125		-		70-130	-		

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 06-08 QC Batch ID: WG684267-5 QC Sample: L1408186-02 Client ID: DUP Sample						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	0.029	0.032	ppbV	10		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Carbon tetrachloride	0.071	0.071	ppbV	0		25
Trichloroethene	0.041	0.039	ppbV	5		25
Tetrachloroethene	0.286	0.306	ppbV	7		25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG684270-5 QC Sample: L1408186-02 Client ID: DUP Sample					
Dichlorodifluoromethane	0.366	0.328	ppbV	11	25
Chloromethane	0.611	0.629	ppbV	3	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC	25
1,3-Butadiene	ND	ND	ppbV	NC	25
Bromomethane	ND	ND	ppbV	NC	25
Chloroethane	ND	ND	ppbV	NC	25
Ethyl Alcohol	ND	ND	ppbV	NC	25
Vinyl bromide	ND	ND	ppbV	NC	25
Acetone	2.84	2.89	ppbV	2	25
Trichlorofluoromethane	0.255	0.273	ppbV	7	25
iso-Propyl Alcohol	ND	ND	ppbV	NC	25
tert-Butyl Alcohol	ND	ND	ppbV	NC	25
Methylene chloride	ND	ND	ppbV	NC	25
3-Chloropropene	ND	ND	ppbV	NC	25
Carbon disulfide	ND	ND	ppbV	NC	25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC	25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG684270-5 QC Sample: L1408186-02 Client ID: DUP Sample					
2-Butanone	ND	ND	ppbV	NC	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	ND	ND	ppbV	NC	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	ND	ND	ppbV	NC	25
Benzene	ND	ND	ppbV	NC	25
Cyclohexane	ND	ND	ppbV	NC	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25
Heptane	ND	ND	ppbV	NC	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	ND	ND	ppbV	NC	25
2-Hexanone	ND	ND	ppbV	NC	25

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG684270-5 QC Sample: L1408186-02 Client ID: DUP Sample					
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	ND	ND	ppbV	NC	25
p/m-Xylene	ND	ND	ppbV	NC	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	ND	ND	ppbV	NC	25
4-Ethyltoluene	ND	ND	ppbV	NC	25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC	25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC	25
Benzyl chloride	ND	ND	ppbV	NC	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

**Lab ID:** L1408220-01      D  
**Client ID:** SV-1  
**Sample Location:** 521 W. 145TH STREET  
**Matrix:** Soil\_Vapor  
**Analytical Method:** 51,3C  
**Analytical Date:** 04/24/14 16:44  
**Analyst:** AR

**Date Collected:** 04/17/14 13:13  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Helium	0.336		%	0.172	--	1.716

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-02 D  
 Client ID: SV-2  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 51,3C  
 Analytical Date: 04/24/14 17:34  
 Analyst: AR

Date Collected: 04/17/14 13:18  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Helium	0.170		%	0.170	--	1.701

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

Lab ID: L1408220-03 D  
 Client ID: SV-3  
 Sample Location: 521 W. 145TH STREET  
 Matrix: Soil\_Vapor  
 Analytical Method: 51,3C  
 Analytical Date: 04/24/14 18:23  
 Analyst: AR

Date Collected: 04/17/14 13:34  
 Date Received: 04/18/14  
 Field Prep: Not Specified  
 Extraction Method:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Helium	0.636		%	0.160	--	1.605

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

**Lab ID:** L1408220-04      D  
**Client ID:** SV-4  
**Sample Location:** 521 W. 145TH STREET  
**Matrix:** Soil\_Vapor  
**Analytical Method:** 51,3C  
**Analytical Date:** 04/24/14 19:12  
**Analyst:** AR

**Date Collected:** 04/17/14 13:40  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Helium	ND		%	0.147	--	1.474

**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**SAMPLE RESULTS**

**Lab ID:** L1408220-05      D  
**Client ID:** SV-5  
**Sample Location:** 521 W. 145TH STREET  
**Matrix:** Soil\_Vapor  
**Analytical Method:** 51,3C  
**Analytical Date:** 04/24/14 20:02  
**Analyst:** AR

**Date Collected:** 04/17/14 13:26  
**Date Received:** 04/18/14  
**Field Prep:** Not Specified  
**Extraction Method:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Fixed Gases by GC - Mansfield Lab						
Helium	0.182		%	0.174	--	1.746

Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 51,3C

Analytical Date: 04/24/14 10:46

Analyst: AR

Parameter	Result	Qualifier	Units	RL	MDL
Fixed Gases by GC - Mansfield Lab for sample(s): 01-05 Batch: WG684907-2					
Methane	ND		%	0.100	--
Helium	ND		%	0.100	--

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 Batch: WG684907-1								
Methane	105		-		80-120	-		
Helium	102		-		80-120	-		

## Lab Duplicate Analysis

Batch Quality Control

Project Name: PS186

Project Number: 6627

Lab Number: L1408220

Report Date: 04/25/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-11 QC Sample: L1408613-02 Client ID: DUP Sample						
Methane	ND	ND	%	NC		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-3 QC Sample: L1408220-01 Client ID: SV-1						
Helium	0.336	0.336	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-4 QC Sample: L1408220-02 Client ID: SV-2						
Helium	0.170	0.172	%	1		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-5 QC Sample: L1408220-03 Client ID: SV-3						
Helium	0.636	0.634	%	0		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-6 QC Sample: L1408220-04 Client ID: SV-4						
Helium	ND	ND	%	NC		5
Fixed Gases by GC - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG684907-7 QC Sample: L1408220-05 Client ID: SV-5						
Helium	0.182	0.182	%	0		5

Project Name: PS186

Project Number: 6627

Serial\_No:04251416:05  
Lab Number: L1408220

Report Date: 04/25/14

### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1408220-01	SV-1	0492	#16 AMB	04/15/14	101193		-	-	-	Pass	3.2	3.2	0
L1408220-01	SV-1	747	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-4.3	-	-	-	-
L1408220-02	SV-2	0373	#16 AMB	04/15/14	101193		-	-	-	Pass	3.1	3.2	3
L1408220-02	SV-2	1036	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-4.2	-	-	-	-
L1408220-03	SV-3	0619	#16 AMB	04/15/14	101193		-	-	-	Pass	3.3	3.7	11
L1408220-03	SV-3	998	6.0L Can	04/04/14	100568	L1406718-04	Pass	-28.5	-8.0	-	-	-	-
L1408220-04	SV-4	0293	#20 AMB	04/15/14	101193		-	-	-	Pass	3.3	0.3	167
L1408220-04	SV-4	1515	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-0.1	-	-	-	-
L1408220-05	SV-5	0151	#16 AMB	04/15/14	101193		-	-	-	Pass	3.2	3.4	6
L1408220-05	SV-5	1038	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-4.7	-	-	-	-
L1408220-06	IA-1	0018	#30 SV	04/15/14	101193		-	-	-	Pass	3.1	3.1	0
L1408220-06	IA-1	1697	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-3.6	-	-	-	-
L1408220-07	IA-2	0632	#16 AMB	04/15/14	101193		-	-	-	Pass	3.2	3.1	3
L1408220-07	IA-2	624	6.0L Can	04/15/14	101193	L1407475-03	Pass	-29.6	-5.8	-	-	-	-
L1408220-08	OA-1	0327	#16 AMB	04/15/14	101193		-	-	-	Pass	3.3	1.9	54

Project Name: PS186

Project Number: 6627

Serial\_No:04251416:05  
Lab Number: L1408220

Report Date: 04/25/14

### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1408220-08	OA-1	951	6.0L Can	04/04/14	100568	L1406718-03	Pass	-28.0	-1.2	-	-	-	-

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/01/14 15:52  
 Analyst: AR

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03 Date Collected: 03/31/14 17:23  
 Client ID: CAN 1820 SHELF 41 Date Received: 04/01/14  
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	111		60-140
Bromochloromethane	113		60-140
chlorobenzene-d5	115		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 04/01/14 15:52  
 Analyst: AR

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-03  
 Client ID: CAN 1820 SHELF 41  
 Sample Location:

Date Collected: 03/31/14 17:23  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	118		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/01/14 16:26  
 Analyst: AR

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04 Date Collected: 03/31/14 17:34  
 Client ID: CAN 1691 SHELF 42 Date Received: 04/01/14  
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	105		60-140
Bromochloromethane	105		60-140
chlorobenzene-d5	109		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 04/01/14 16:26  
 Analyst: AR

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1406718  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1406718-04  
 Client ID: CAN 1691 SHELF 42  
 Sample Location:

Date Collected: 03/31/14 17:34  
 Date Received: 04/01/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	110		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 04/10/14 14:42  
 Analyst: AR

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatiles Organics in Air - Mansfield Lab</b>								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	2.50	--	ND	4.71	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.200	--	ND	0.434	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03 Date Collected: 04/09/14 15:39  
 Client ID: CAN 1866 SHELF 41 Date Received: 04/10/14  
 Sample Location: Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	0.200	--	ND	0.704	--		1
2-Butanone	ND	0.200	--	ND	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.200	--	ND	0.820	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	94		60-140

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 04/10/14 14:42  
 Analyst: AR

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.050	--	ND	0.247	--		1
Chloromethane	ND	0.500	--	ND	1.03	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.020	--	ND	0.053	--		1
Acetone	ND	2.00	--	ND	4.75	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
Halothane	ND	0.050	--	ND	0.404	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.020	--	ND	0.072	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.500	--	ND	2.46	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.500	--	ND	2.74	--		1
p-Isopropyltoluene	ND	0.500	--	ND	2.74	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L1407475  
**Report Date:** 04/25/14

### Air Canister Certification Results

Lab ID: L1407475-03  
 Client ID: CAN 1866 SHELF 41  
 Sample Location:

Date Collected: 04/09/14 15:39  
 Date Received: 04/10/14  
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	106		60-140
chlorobenzene-d5	117		60-140

Project Name: PS186

Lab Number: L1408220

Project Number: 6627

Report Date: 04/25/14

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

**Cooler Information Custody Seal****Cooler**

N/A Present/Intact

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1408220-01A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	FIXGAS(30),TO15-LL(30)
L1408220-02A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	FIXGAS(30),TO15-LL(30)
L1408220-03A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	FIXGAS(30),TO15-LL(30)
L1408220-04A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	FIXGAS(30),TO15-LL(30)
L1408220-05A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	FIXGAS(30),TO15-LL(30)
L1408220-06A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30),TO15-SIM(30)
L1408220-07A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30),TO15-SIM(30)
L1408220-08A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30),TO15-SIM(30)

\*Values in parentheses indicate holding time in days

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

## GLOSSARY

### Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.

**Report Format:** Data Usability Report



**Project Name:** PS186**Lab Number:** L1408220**Project Number:** 6627**Report Date:** 04/25/14**Data Qualifiers**

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** PS186  
**Project Number:** 6627

**Lab Number:** L1408220  
**Report Date:** 04/25/14

## REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.
- 51 Determination of Carbon Dioxide, Methane, Nitrogen and Oxygen from Stationary Sources. Method 3C. Appendix A, Part 60, 40 CFR (Code of Federal Regulations). June 20, 1996.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

Last revised April 15, 2014

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### The following analytes are not included in our NELAP Scope of Accreditation:

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8330A/B:** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 2540D:** TSS

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

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### The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

#### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

#### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

**EPA 200.7:** Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

**SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# AIR ANALYSIS

PAGE 1 OF 1

## CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048  
 TEL: 508-822-9300 FAX: 508-822-3288

### Client Information

Client: Impact Environmental  
 Address: 170 Keeland CT  
Bohemia, NY 11716  
 Phone: 631.269.8800  
 Fax:

### Project Information

Project Name: PS186  
 Project Location: 521 W. 145<sup>th</sup> Street  
 Project #: 6627  
 Project Manager: G. Mendez-Chicas  
 ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)

Date Due: \_\_\_\_\_ Time: \_\_\_\_\_

Date Rec'd in Lab:

### Report Information - Data Deliverables

FAX  
 ADEX  
 Criteria Checker: \_\_\_\_\_  
(Default based on Regulatory Criteria Indicated)  
 Other Formats: \_\_\_\_\_  
 EMAIL (standard pdf report)  
 Additional Deliverables: \_\_\_\_\_  
 Report to: (if different than Project Manager)

ALPHA Job #: L1408220

### Billing Information

Same as Client info PO #: \_\_\_\_\_

### Regulatory Requirements/Report Limits

State/Fed	Program	Criteria

Email: gmendez-chicas@impactenvironmental.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

### All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	ANALYSIS						Sample Comments (i.e. PID)
		Date	Start Time	End Time	Initial Vacuum						Final Vacuum	TO-14A by TO-15	TO-15	TO-15 SIM	APH	FIXED GASES	
08220-01	SV-1	4/16/14	1305	1313	-30.25	-6.82	SV	gmic	6L	7470492	X						2.2 ppm
02	SV-2	4/17/14	1308	1318	-30.28	-6.58				10360373							0.7 ppm
03	SV-3		1310	1334	-27.56	-10.47				9980619							2.3 ppm
04	SV-4		1314	1340	-30.6	-2.26				15150293							3.1 ppm
05	SV-5		1316	1326	-30.11	-7.14				10380181							2.0 ppm
06	IA-1		1319	1347	-30.18	-6.17	AA			16970018							
07	IA-2		1321	1336	-31.40	-8.58				6240632							
08	OA-1		1328	1358	-29.25	-3.30				9510327							
END OF RECORD																	

\*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

Container Type Summa

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Relinquished By: [Signature] Date/Time: 4/18/14 10:30  
[Signature] Date/Time: 4/18/14 1900  
 Received By: [Signature] Date/Time: 4/18/14 10:30  
[Signature] Date/Time: 4/18/14 1900

## **APPENDIX E**

### Soil Boring Log

# SOIL BORING LOG

Client: BGCH Apartments, LLC		Boring No.: SB-7		Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 (631) 269-8800				
Project #: 6627-01-02-2001		Sheet 1 of 2						
Site Location: 521 W. 145th Street, New York, NY		5/9/2014						
Drilling Co: Impact Environmental Closures, Inc.				<i>FORMAT FOR CHARACTERIZATION</i>				
Method: Geoprobe				Ex.1: brown, loose F SILTY-SAND, with some C Gravel				
Personnel: Kurt Pfaffenberger / Greg Mendez-Chicas				Ex.2: grey & brown mottled soft CLAY and brown F SAND, with trace organics				
Total Depth: 30.5		Depth to Water: 28 ft						
depth (feet)	PID (ppm)	Blow Counts	Sample ID	Depth (From-To)	Moisture Content	Recovery	Soil Classification	Remarks
1	2.1		SB-7 (0-2')		Dry	48/60	Concrete Dark brown F-M sand w. concrete, brick, and trace coal (fill)	No odor or staining
2							Light brown silty F-M sand w/ trace coal	
3								
4						48/60		No odor or staining
5					Dry		Dark brown F-M sand w/ trace M (Subrounded) GRAVEL trace SILT	
6	1.1						Grey/reddish F sand w/ little silt	
7						48/60		No odor or staining
8							Light brown silty clay	
9								
10					Dry	48/60		No odor or staining
11							Brown F-sand w/ some silt and trace F (subrounded) GRAVEL	
12	1.4							
13						48/60		No odor or staining
14							Brown/greyish clayey silt	
15								
16	2.0				Moist	36/60		No odor or staining
17								
18								
19								
20								

TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50 %

# SOIL BORING LOG

Client: BGCH Apartments, LLC				Boring No.: SB-7		Impact Environmental Closures, LLC 170 Keyland Court Bohemia, NY 11716 (631) 269-8800		
Project #: 6627-01-02-2001				Sheet 2 of 2				
Site Location: 521 W. 145th Street, New York, NY				Date: 5/9/14				
depth (feet)	PID (ppm)	Blow Counts	Sample ID	Depth (From-To)	Moisture Content	Recovery	Soil Classification	Remarks
21					Moist	36/40	Brown F-M sand w/ little M (subrounded) GRAVEL	No odor or staining
22	0.7							
23			SB-7 (22-23')					
24								
25					Moist	24/60	Light brown to grey F-M sand w/ decomposed rock (schist)	No odor or staining
26	0.5							
27					Wet			
28								
29							Water @ 28 feet	"GW-1" water sample collected / screen set at 26.5'-30.5'
30					Wet			
31								
32								
33							REFUSAL - End of Boring @ 30.5 feet bgs	
34								
35								
36								
37								
38								
39								
40								

TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50%