
REMEDIAL INVESTIGATION REPORT

for

**546 West 44th Street
New York, New York**

**NYC VCP Site Number: 14CVCP162M
E-Designation Number: 13EH-N396M**

Prepared For:

**CREF 546 West 44th Street, LLC
1980 Post Oak Boulevard, Suite 1600
Houston, TX 77056**

Prepared By:

**Langan Engineering, Environmental, Surveying
and Landscape Architecture, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001**



**Joel B. Landes
Professional Engineer License No. 076348**

**August 5, 2013
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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, Joel B. Landes, am a NYS registered professional engineer. I have primary direct responsibility for implementation of the Remedial Investigation for the Site at 546 West 44th Street (NYCOER Project No. 14CVCP162M). 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 that is known to me.

Joel B. Landes

NYS PE No. 076348

August 5, 2013



Name

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 the Rules of the City of New York (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 546 West 44th Street in the West Clinton section of the Borough of Manhattan, New York. The Site is identified as Block 1072, Lot 50 on the New York City Tax Map. The Site is approximately 0.63-acres (27,615 square feet) and is bounded by West 44th Street to the north, a six-story public school under construction to the to the east, West 43rd Street to the south, and a seven-story industrial building to the west. Maps showing the regional location of the Site and a tax map are provided as Figures 1 and 2.

Currently, the Site is used as a commercial parking lot and is improved with a two-story garage building with a basement in the southwestern portion of the Site and an asphalt-paved parking lot over the remainder of the Site.

Summary of Proposed Redevelopment Plan

The future use of the Site will be residential and will include two 14-story residential towers fronting West 43rd Street and West 44th Street, developed as a single building and connected at the cellar level, with a landscaped area at cellar grade, a landscaped area at sidewalk grade and a covered breezeway at sidewalk grade between the two proposed buildings. The current zoning designation is R-9 according to the New York City Department of City Planning (DCP) zoning maps. The proposed Site use of multifamily residential (Zoning Use Group 2) is consistent with existing zoning for the property. The proposed development will include a total of 220,924 SF of floor area, as defined by the NYC Zoning Resolution. The proposed towers will include 298 residential units of which 77 units will be low income inclusionary housing.

The proposed construction requires the demolition of existing on-site structures and the excavation of a portion of the lot to a depth of approximately 12 feet below grade. The proposed development plan is provided as Figure 3 and architectural plans are included as Appendix B.

Summary of Past Uses of Site and Areas of Concern

According to a Phase I Environmental Site Assessment (ESA), prepared by IVI Assessment Services, Inc. and dated October 2012, the Site was developed prior to 1890 with low-rise commercial buildings. By 1911, the Site was used as a stone yard on the Northern portion of the Site and for dwellings and commercial spaces including a scene painter, a wagon house, a factory, and a laundry facility on the remainder of the Site. The existing 2-story garage building was constructed in 1920 and has been the only on-site structure since at least 1980. The Site was occupied by the following auto-related uses since circa 1968:

- Auto repair facility (circa 1968 to circa 1977);
- Trucking business, which consisted of truck parking and a truck repair facility (circa 1977 to circa 1987); and
- Parking garage and paved parking (circa 1987 to present).

The surrounding area has been primarily occupied by various commercial, industrial and manufacturing entities. Surrounding properties to the west included a candy manufacturing facility and a storage facility. Properties to the north included a parking lot, a taxi terminal, and a metal works facility. Properties to the south included a fire engine company, low rise residential dwellings with street level retail space, a film laboratory, and The Armory Apartments. Properties to the east included a garage, a five-story residential dwelling, factories, and a NYC Public Library. Multiple fuel oil and gasoline storage tanks were noted in historical Sanborn Maps and State Petroleum Bulk Storage listings on properties in the surrounding area.

The following Areas of Concern (AOCs) for the Site were identified during previous investigations:

1. Potential On-Site Petroleum UST;
2. Historic Urban Fill Material;
3. Historic Site Use;
4. Open spill (NYSDEC Spill No. 1103225) located adjacent and cross-gradient to the Site; and
5. Historic Use of Adjoining and Surrounding Properties.

AOC 1 – Potential On-Site Petroleum UST

According to historical records, an underground storage tank (UST) may be present at the Site in the northeast corner of the existing building. The geophysical surveys conducted during a

previous investigation and during the RI identified a significant anomaly at this location consistent with the size and shape of a UST. The potential presence of a UST is considered an REC as soil, groundwater, and/or soil vapor at the Site may have been adversely impacted by leaks or spills from the tank.

AOC 2 – Historic Urban Fill Material

The Site elevation was increased by filling along the eastern shoreline of the Hudson River between 1865 and 1897 with fill material of unknown origin. Previous Site investigations characterized the fill as a heterogeneous mix of fine to coarse sand, silt, gravel, and brick fragments. Laboratory analysis of historic fill samples documented in previous Site investigation reports confirmed the presence of semi volatile organic compounds (SVOC), specifically polycyclic aromatic hydrocarbons (PAH), and metals at concentrations exceeding NYSDEC Title 6 of the New York Code, Rules, and Regulations (NYCRR) Part 375 Soil Cleanup Objectives (SCO) in historic fill.

AOC 3 – Historic Site Use

The Site was utilized for auto and truck related sales, repair and parking businesses since prior to 1968 through 2006. Use of the Site as auto and truck repair facilities may have impacted the Site subsurface with petroleum, gasoline, solvents, or other hazardous substances that are typically used at these types of facilities.

AOC 4 – Regulatory Listing and Historic Use at Adjoining and Surrounding Properties

Known and suspected contaminants for this AOC are related to the following:

- Active Spill Listing – An open off-site New York State Department of Environmental Conservation (NYSDEC) Spill site (NYSDEC Spill No 1103225) is located adjacent to the east and cross-gradient of the Site at 521 West 43rd Street (public school under construction) and may have impacted Site groundwater and/or soil vapor. The spill was related to a petroleum release.
- Historic Use – Adjoining and surrounding properties were historically occupied by automobile service stations and a garage with petroleum bulk storage. Historical operations at these facilities typically included the use of petroleum compounds, solvents, and other commercial and industrial compounds that may have migrated to the Site and impacted groundwater and/or soil vapor.

Summary of the Work Performed under the Remedial Investigation

Previous investigations performed at the Site included the following scope of work:

1. As part of the Limited Phase II ESA, six soil borings were conducted. Two soil samples were analyzed for VOCs, SVOCs (polycyclic aromatic hydrocarbons [PAH] only), metals pesticides, and PCBs, and two soil samples were analyzed for VOCs and SVOCs (PAHs only). As part of the Soil Composition Letter investigation, eight soil borings were conducted, and eight soil samples were collected and analyzed for VOCs and SVOCs (CP-51 list only).
2. As part of the Limited Phase II ESA, two groundwater samples were collected and analyzed for VOCs and SVOCs (PAHs only).
3. As part of the Limited Phase II ESA, two sub-slab soil vapor samples and two indoor air samples were collected and analyzed for VOCs.

To supplement existing Site data, Langan performed an RI that included the following scope of work:

1. Conducted a geophysical survey on April 29, 2013, to identify physical obstructions and subsurface utilities and structures;
2. Installed and screened seven soil borings (B7 through B13) across the Site, and collected 11 soil samples for laboratory analysis from the soil borings to evaluate soil quality between April 29 and May 1, 2013;
3. Installed four groundwater monitoring wells across the Site to evaluate groundwater depth and flow direction and collected one groundwater sample (because of poor well recovery at other wells) for laboratory analysis to evaluate groundwater quality;
4. Installed five soil vapor probes throughout the Site and collected one ambient air and five soil vapor samples for laboratory analysis.

Summary of Environmental Findings at the Site

1. Surface elevation of the property ranges from approximately elevation (el.) 16.0 to el. 17.7¹.
2. Depth to weathered bedrock/bedrock is approximately 1 to 34 feet below sidewalk grade. Bedrock is shallow in the northeastern portion of the Site and dips to the west and south.

¹ Survey prepared by Roguski Land Survey, P.C. and dated February 20, 2012. Datum is Borough President of Manhattan Datum (BPM D) which is 2.75 feet above mean sea level at Sandy Hook New Jersey as defined by the United States Geologic Survey (USGS NGVD 1929).

3. The stratigraphy of the Site, from the surface down, consists of approximately 1 to 20 feet of historic urban fill material underlain by bedrock (in the northeast) or by sand, silt, and bedrock (in the northwest and southwest).
4. Groundwater was measured during the RI at elevations ranging from el. 0.52 to el. 4.39. Depth to groundwater was measured during the RI at approximately 12.7 to 16.5 feet below sidewalk grade. Groundwater at the Site appears to be perched above the varying bedrock interface in many areas of the Site with true groundwater located between approximately 15 and 16.5 feet below sidewalk grade (based on the groundwater measurements obtained from two surveyed geotechnical observation wells). Inferred groundwater flow is generally to the south based on previous investigations conducted by Langan at the adjoining city block to the north of the Site.
5. Soil/fill samples collected and analyzed as a part of the 2013 RI were compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted-Residential Use SCOs. Soil/ fill samples showed no VOCs above Track 1 Unrestricted Use SCOs. The only chlorinated VOC detected was tetrachloroethene which was detected only at trace levels (maximum 0.0018 parts per million [ppm]). Concentrations of one pesticide, dieldrin, and one PCB, aroclor 1260, exceeded Unrestricted Use SCOs in one surficial fill material sample, but were well below Track 2 Restricted Residential Use SCOs. No other PCBs or pesticides were detected, and the Site history does not indicate use of pesticides or PCB-containing equipment. Seven SVOCs, all polycyclic aromatic hydrocarbons (PAHs) which are commonly identified in historic fill material, were detected above Track 1 Unrestricted Use SCOs in three of eleven fill samples. Of these PAHs, benzo(a)anthracene (maximum 5.2 ppm), benzo(a)pyrene (maximum 3.7 ppm), benzo(b)fluoranthene (maximum 3.7 ppm), chrysene (maximum 6.5 ppm), dibenzo(a,h)anthracene (maximum 0.57 ppm), and indeno(1,2,3-cd)pyrene (maximum 1.5 ppm) were also detected above Track 2 Restricted Residential Use SCOs. Nine metals were detected above Track 1 Unrestricted Use SCOs in seven of eleven samples. Of these metals, arsenic (maximum 44 ppm), barium (maximum 560 ppm), lead (maximum 820 ppm), and mercury (maximum 1.2 ppm) were also identified above Track 2 Restricted Residential Use SCOs. These results are consistent with results from historic fill sites throughout New York City.
6. Only one groundwater sample was collected in the southwestern portion of the Site during the RI because of poor well recovery at the other locations (likely because most wells were installed in perched groundwater). Results were compared to applicable groundwater quality standards (GQS) which are the NYSDEC Division of Water Technical and Operational Guidance Series 1.1.1 Ambient Water Quality Standards for

groundwater class GA. The groundwater sample collected during the RI showed two metals, magnesium and manganese, above the GQSs in the groundwater sample. Three VOCs, acetone (1.1 µg/L), chloroform (0.79 µg/L), and tetrachloroethene (0.5 µg/L), were detected in the groundwater sample, but at concentrations below GQSs. SVOCs, PCBs, and pesticides were not detected in the groundwater sample.

7. Soil vapor samples collected during the RI identified chlorinated and petroleum-related VOCs at generally low-to-moderate concentrations. Petroleum-related VOCs were detected at generally low concentrations and included benzene (maximum 15.5 µg/m³), toluene (max 45.2 µg/m³), ethylbenzene (max 29.6 µg/m³), and xylenes (max 152.1 µg/m³). The chlorinated VOC tetrachloroethene (PCE) was identified in five of six soil vapor samples at concentrations ranging from 4.87 µg/m³ to 943 µg/m³. The maximum concentration of PCE falls within the monitor/mitigate range established by New York State Department of Health (NYSDOH) Vapor Intrusion Matrices. Trichloroethene (TCE) was detected in two of six soil vapor samples at a maximum concentration of 6.13 µg/m³, which is within the monitoring range established by NYSDOH. The maximum concentrations of chlorinated VOCs were identified in the northeast corner of the existing building. PCE was also detected at trace concentrations in select soil samples and in the groundwater sample from the corresponding boring/monitoring well location, at concentrations below regulatory criteria. Contaminant concentrations in soil vapor may be attributed to the historic auto and truck repair use at the Site or to the historic uses of surrounding properties.

Data collected during the RI is sufficient to delineate the distribution of contaminants in soil, groundwater and soil vapor at the Site.

1.0 SITE BACKGROUND

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. (Langan) was retained by CREF 546 West 44th Street, LLC to complete a Remedial Investigation (RI) for the development of the property located at 546 West 44th Street in New York, New York (The "Site"). Figure 1 shows the Site location. New York City tax maps identify the Site as Block 1072, Lot 50 (Figure 2). The proposed development consists of two 14-story residential buildings fronting West 43rd and West 44th Street, each with a partial cellar, and a landscaped area at cellar grade, a landscaped area at sidewalk grade and a covered breezeway at sidewalk grade between the two proposed buildings. An E-Designation for Hazardous Materials (Hazmat) and Noise (E-268) was placed on the Site pursuant to the West Clinton Rezoning Action Number (CEQR # 11DCP068M) to render the Site protective of hazardous materials and noise. The E-Designations require coordination with the New York City Office of Environmental Remediation (OER) to satisfy environmental requirements relating to hazardous materials and noise. Additionally, the Volunteer intends to enroll in the New York City Voluntary Cleanup Program (NYC VCP) to investigate and remediate the Site.

The RI work was performed between April 29 and May 8, 2013. This Remedial Investigation Report (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 proposed use of the property pursuant to RCNY§ 43-1407(f).

1.1. Site Location and Current Usage

The Site is located at 546 West 44th Street, New York, New York and is in the West Clinton section of Manhattan. The Site is identified as Block 1072, Lot 50 on the New York City Tax Map. The Site has an area of approximately 27,615 square feet (sq.ft.) and is bounded by West 44th Street to the north, a six-story building under construction to the to the east, West 43rd Street to the south, and a seven-story industrial building to the west. Maps showing the regional location of the Site and a tax map are provided as Figures 1 and 2.

Currently, the Site is used for parking and is improved with a two-story garage building with a basement in the southwestern portion of the Site and an asphalt-paved parking lot over the remainder of the Site.

1.2. Proposed Redevelopment Plan

The proposed future use of the Site will consist of residential use and will include two 14-story residential buildings fronting West 43rd Street and West 44th Street, each with a partial cellar, and a landscaped area at cellar grade, a landscaped area at sidewalk grade and a covered breezeway at sidewalk grade between the two proposed buildings. The layout of the site development is presented in Figure 3 and additional proposed development plans are provided in Appendix B. The current zoning designation is R-9. The proposed use is consistent with existing zoning for the property.

1.3. Description of Surrounding Properties

The Site is located in an urban setting that is characterized by manufacturing, residential and commercial buildings. Surrounding property usage is summarized in the below table:

<i>Direction</i>	<i>Adjacent Properties</i>	<i>Surrounding Properties</i>
North	West 44 th Street and multi-story residential buildings	Multi-story residential buildings with ground-level commercial space and commercial buildings
South	West 43 rd Street and multi-story residential buildings	Multi-story residential buildings with ground-level commercial space
East	One six-story building currently under construction (Public School: Beacon High School)	Multi-story residential buildings with ground-level commercial space
West	One seven-story commercial building occupied by Manhattan Mini Storage	Multi-story residential buildings with ground-level commercial space, parking lots, and manufacturing buildings

Land use within a half-mile of the Site is highly urbanized and includes residential and commercial buildings, an Amtrak easement, the sub-grade Lincoln Tunnel, cross streets, parkland, day care centers, and school facilities. The nearest ecological receptor is the Hudson River, approximately 0.27 miles west of the Site. The nearest sensitive receptor is immediately adjoining the Site to the east, Beacon High School, which is a public school currently under construction. Figure 4 shows the surrounding land usage and sensitive environmental receptors.

2.0 SITE HISTORY

2.1. Past Uses and Ownership

According to a Phase I Environmental Site Assessment (ESA), prepared by IVI Assessment Services, Inc. and dated October 2012, the Site was reportedly developed with low-rise manufacturing and commercial buildings before 1980. The northern part of the Site was reportedly used as a stone yard circa 1900. The existing building was constructed in 1920 and has been the only on-site structure shown in readily-available historic Sanborn Maps since circa 1968. The Site was reportedly used for auto-related uses since circa 1968:

- Auto repair facility - circa 1968 to circa 1977;
- Trucking business, which consisted of truck parking and a truck repair facility - circa 1977 to circa 1987; and
- Parking garage and parking lot - circa 1987 through present.

2.2. Previous Investigations

Previous reports were provided to Langan for review as part of this RIR. These reports are summarized below and are included in Appendix A. This section summarizes our interpretation of the findings from the following reports:

- Phase I Environmental Site Assessment (ESA), prepared by IVI Assessment Services, Inc. of White Plains, NY (IVI) and dated October 2012
- Limited Phase II Environmental Site Assessment prepared by IVI and dated November 2012
- Soil Composition letter report, prepared by Environmental Consulting & Management Services, Inc. (ECMS) and dated December 4, 2012
- Geotechnical Investigation and Foundation Recommendations preliminary report, prepared by Geotechnical Engineering Services, P.C. (GES) and dated December 5, 2012
- Geotechnical Engineering Report, prepared by Langan and dated April 26, 2013

2.2.1. Phase I ESA

Our review of the Phase I ESA identified the following on-site environmental findings:

- The Site was utilized for auto related sales, repair and parking businesses since prior to 1968 through 2006.

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- A gasoline tank is shown at the northeast corner of the subject building on the 1930 through 2005 Sanborn fire insurance maps, and the Phase I ESA assumed the tank to still be present.
 - Two 4,000-gallon gasoline USTs were reportedly installed at the Site between 1977 and 1987 and removed in 1999 (Petroleum Bulk Storage [PBS] registration No. 2-296473). According to the Phase I ESA, a closure report was prepared for the two 4,000-gallon USTs by Don Carlo Environmental Services, Inc.; however, this report was not included in the Phase I ESA report or provided for our review to confirm the following information provided in the Phase I ESA:
 - the two USTs were in good condition,
 - field screening did not indicate impacted soil surrounding the USTs,
 - post closure samples were collected and analyzed for volatile organic compounds (VOC) via U.S. EPA method 8021,
 - the analytical results indicated that VOC concentrations were below the regulatory limits per U.S. EPA Star Memo #1 and NYSDEC NYCRR Part 375 Soil Cleanup Objectives (SCO), and
 - the excavation area was reportedly backfilled with clean fill.
 - Two drums partially filled with unknown waste were identified on the Site.
 - One 1,000-gallon above ground storage tank (AST) and three 180-gallon ASTs were reportedly removed from the Site in 2011 (PBS registration No. 2-296473).
 - The Site was assigned an E-Designation (CEQR No. 11DCP068M) for hazmat and noise by the New York City Department of City Planning.
 - The Phase I ESA also identified the potential presence of asbestos-containing materials and lead-based paint within the garage structure on the Site.

Our review of the Phase I ESA identified the following off-site environmental findings:

- NYSDEC Spill No. 1103225 is reported as open at the adjacent site located at 521 West 43rd Street. The July 2010 Phase II Environmental Site Investigation (ESI) report for this adjacent site reportedly indicated the presence of sub-slab vapor, soil, and groundwater contamination. Light non-aqueous phase liquid (LNAPL) was also reportedly identified on a water table perched above bedrock.

2.2.2. Limited Phase II ESA

The Limited Phase II ESA included a geophysical survey; completion of six soil borings and two sub-slab soil vapor points; and laboratory analysis of four soil, two groundwater (one sample

was collected from an off-site well in the West 44th Street sidewalk adjoining the Site), and five vapor samples (two sub-slab, two indoor air, and one ambient air). The Limited Phase II ESA identified the following:

- The geophysical survey identified the presence of one anomaly in the basement of the subject building that corresponds to where historical Sanborn maps indicated the gasoline tank was located.
- Subsurface conditions at the Site consist of fill underlain by sand and gravel, underlain by silty sand, gravel, and clay. Refusal was encountered between 3 and 23 below grade surface (bgs).
- Groundwater was encountered at 16 ft bgs.
- Field screening did not indicate evidence of impacted soil.
- Four soil samples were reportedly analyzed for VOCs and semi volatile organic compounds (SVOC) (polycyclic aromatic hydrocarbons [PAH] only), and two of the soil samples were further analyzed for polychlorinated biphenyls (PCB), pesticides, and metals. Multiple PAH and metals were detected at concentrations exceeding NYSDEC Unrestricted Use SCOs in two soil samples (B-3 and B-6). One VOC, acetone, was detected in one sample (B-6) at a concentration exceeding the NYSDEC Unrestricted Use SCO. No other compounds were detected above NYSDEC Unrestricted Use SCOs in any of the soil samples.
- Two groundwater samples (one on-site and one off-site) were collected and analyzed for VOCs and SVOCs (PAHs only). Two VOCs, chloroform and naphthalene, were detected at concentrations exceeding Division of Water Technical and Operational Guidance Series [TOGS] 1.1.1, Ambient Water Quality Standards [AWQS] for Class GA groundwater in the off-site monitoring well (MW-1) located in the sidewalk north of the Site.
- Two sub-slab soil vapor samples, two indoor air samples, and one ambient air sample were collected and analyzed for VOCs via EPA TO-15. Several VOCs, including but not limited to tetrachloroethene (PCE) and trichloroethene (TCE), were identified in the sub-slab vapor samples. PCE and TCE were detected at concentrations exceeding New York State Department of Health (NYSDOH) Air Guideline Values (AGV) in the two sub-slab soil vapor samples (SS-1 and SS-2). PCE concentrations ranged from 91.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in SS-1 to 841 $\mu\text{g}/\text{m}^3$ in SS-2. TCE concentrations ranged from non detect in SS-1 to 29 $\mu\text{g}/\text{m}^3$ in SS-2. PCE and TCE were not detected in the two indoor air samples. When applying the highest detected PCE and TCE concentrations to decision matrices included in the NYSDOH guidance, the outcome recommended is "monitor", given that PCE and TCE were not detected in indoor air samples.

2.2.3. Soil Composition Letter Report

An auger rig was used to advance eight soil borings to bedrock in eight locations across the Site. The environmental investigation was conducted concurrently with the geotechnical investigation performed by GES.

- No odors, staining, or photoionization detector (PID) readings were reportedly detected during field activities.
- Soil samples were reportedly collected from the groundwater or bedrock interface from each boring location and were analyzed for VOCs and SVOCs (NYSDEC CP-51 List only).
- Four compounds were detected in soil samples (pyrene, fluoranthene, toluene and p-isopropyltoluene) at concentrations below the Unrestricted Use SCOs.

2.2.4. Geotechnical Investigation and Foundation Recommendations

The geotechnical investigation was conducted concurrently with the environmental investigation performed by ECMS and consisted of eight geotechnical borings extending to depths ranging from 12.5 to 39 feet bgs. Two groundwater observation wells were installed in two of the soil borings.

- Subsurface conditions at the Site generally consist of a layer of uncontrolled fill underlain by loose sand, sand, weather bedrock, and bedrock. The uncontrolled fill extends to a depth of 1 to 20 feet bgs and consists of sand, silt, gravel, and some concrete and rock fragments. The loose sand layer was encountered between approximately 10 to 16 feet bgs in one boring location (TB-4) in the northwestern part of the Site and consists primarily of fine to medium micaceous sand with trace amounts of silt and fine to medium gravel. The sand layer was encountered in the western part of the Site below the fill or loose sand and consists primarily of fine to coarse sand with variable amounts of silt and fine to medium gravel. The sand layer extends to the top of the weather bedrock at depths of approximately 25 to 33 feet bgs. Weathered bedrock was encountered in most of the borings and generally consists of severely to completely weathered soft mica schist. Bedrock was encountered between 1.5 feet bgs in the northeast corner of the Site and 35 feet bgs in the northwest corner of the Site.
- Groundwater levels were measured by GES in the two observation wells (TB-2 and TB-7) between approximately 9.5 and 13 feet bgs.
- The quality of the bedrock at the Site ranges from intermediate rock (Class 1C) to medium hard and hard rock (Class 1B and 1A, respectively).

2.2.5. Geotechnical Engineering Study

The geotechnical investigation was performed by Langan and consisted of four geotechnical borings extending to depths ranging from 9 to 40 feet bgs. Two groundwater observation wells, LB-1 (OW) and LB-4 (OW), were installed in two of the soil borings.

- The generalized subsurface profile consists of uncontrolled fill material overlying rock or natural sand. Where encountered, the natural sand is underlain by rock. In general, the top of sound rock slopes down from a depth of about 3 ft at the east side of the site to a depth of over 35 ft at the west side of the site.
- Groundwater in observation wells TB-2 and TB-7, which were installed as part of the geotechnical investigation performed by ECMS, was measured perched near top of rock at depths of about 10 feet and 13 feet below ground surface, respectively. Groundwater in observation wells LB-1(OW) and LB-4(OW) was measured within the overburden material, above the top of rock at a depth of about 16 feet below sidewalk grade at LB-1 (OW) and 6 feet below ground surface at LB-4(OW) in the basement of the existing building.

2.3 Site Inspection

A Site inspection was performed on April 4, 2013, by Patrick Diggins of Langan under the direction of a QEP, Joel B. Landes, P.E. to observe current Site conditions and identify areas of concern. The Site was utilized by Central Parking System as a commercial parking. A two-story garage building with a basement was observed in the southwestern portion of the Site and an asphalt-paved parking lot covered the remainder of the Site. Cars and small trucks were parked in the parking area and in the garage building (including the basement).

2.4 Areas of Concern

The AOCs identified for this Site include:

1. Potential On-Site Petroleum UST;
2. Historic Urban Fill Material;
3. Historic Site Use;
4. Open spill (NYSDEC Spill No. 1103225) located adjacent and cross-gradient to the Site; and
5. Historic Use of Adjoining and Surrounding Properties.

AOC 1 – Potential On-Site Petroleum UST

According to historical records, an underground storage tank (UST) may be present at the Site in the northeast corner of the existing building. The geophysical surveys conducted during a previous investigation and during the RI identified a significant anomaly at this location consistent with the size and shape of a UST. The potential presence of a UST is considered an REC as soil, groundwater, and/or soil vapor at the Site may have been adversely impacted by leaks or spills from the tank.

AOC 2 – Historic Urban Fill Material

The Site elevation was increased by filling along the eastern shoreline of the Hudson River between 1865 and 1897 with fill material of unknown origin. Previous Site investigations characterized the fill as a heterogeneous mix of fine to coarse sand, silt, gravel, and brick fragments. Laboratory analysis of historic fill samples documented in previous Site investigation reports confirmed the presence of semi volatile organic compounds (SVOC), specifically polycyclic aromatic hydrocarbons (PAH), and metals at concentrations exceeding NYSDEC Title 6 of the New York Code, Rules, and Regulations (NYCRR) Part 375 Soil Cleanup Objectives (SCO) in historic fill.

AOC 3 – Historic Site Use

The Site was utilized for auto and truck related sales, repair and parking businesses since prior to 1968 through 2006. Use of the Site as auto and truck repair facilities may have impacted the Site subsurface with petroleum, gasoline, solvents, or other hazardous substances that are typically used at these types of facilities.

AOC 4 – Regulatory Listing and Historic Use at Adjoining and Surrounding Properties

Known and suspected contaminants for this AOC are related to the following:

- Active Spill Listing – An open off-site New York State Department of Environmental Conservation (NYSDEC) Spill site (NYSDEC Spill No 1103225) is located adjacent to the east and cross-gradient of the Site at 521 West 43rd Street (public school under construction) and may have impacted Site groundwater and/or soil vapor. The spill was related to a petroleum release.
- Historic Use – Adjoining and surrounding properties were historically occupied by automobile service stations and a garage with petroleum bulk storage. Historical operations at these facilities typically included the use of petroleum compounds, solvents, and other commercial and industrial compounds that may have migrated to the Site and impacted groundwater and/or soil vapor.

Phase 1 Report is presented in Appendix A.

3.0 PROJECT MANAGEMENT

3.1 Project Organization

The NYS registered professional engineer responsible for preparation of this RIR is Joel B. Landes, P.E.

3.2 Health and Safety

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

Material encountered during the RI was managed in accordance with applicable laws and regulations. Excess purge water generated during the RI was containerized in one steel, DOT-approved, 55-gallon drum. The drum is securely stored at the Site pending off-site disposal.

4.0 REMEDIAL INVESTIGATION ACTIVITIES

Langan implemented the NYCOER-approved Remedial Investigation Work Plan (RIWP – dated April 9, 2013) between April 29 and May 8, 2013. The objectives of the remedial investigation were to supplement existing Site data to evaluate whether soil, groundwater, and soil vapor at the Site have been impacted by historical and current uses at the Site and at adjacent and surrounding properties and in order to develop a Remedial Action Plan. Langan conducted the RI in general accordance with NYSDEC NYCRR Title 6 Part 375, NYSDEC Technical Guide 10 (DER-10) Technical Guidance for Site Investigation and Remediation (May 2010), and NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006).

The RI included the following activities:

- A geophysical investigation of the Site to locate subsurface utilities and screen the location of the previously identified gasoline tank within the building;
- Advancement of seven soil borings;
- Installation of four permanent monitoring wells;
- Visual and PID screening of soil and collection of soil samples from each boring for laboratory analysis;
- Survey and gauging of monitoring wells to evaluate groundwater flow and contour;
- Collection of one groundwater sample from one existing monitoring well; and
- Installation of five soil vapor-survey points and the collection of four subslab and subsurface soil vapor samples and one ambient air sample.

During field activities, complications in implementing the remedial investigation arose. Deviations in proposed investigation locations and number of samples collected from the NYCOER-approved RIWP included the following:

- Monitoring well MW-2, which was proposed next to the former USTs in the southeastern portion of the basement of the existing building, was relocated at B8 because refusal was encountered at 2 feet bgs, and no water was observed during drilling activities at the proposed location.
- Monitoring well MW-3, which was proposed next to the suspected UST in the northeastern portion of the basement of the existing building (in soil boring B11A), was relocated in soil boring B11B next to SV-5 because refusal was encountered at 3 feet bgs and no water was observed during drilling activities at the proposed location.
- No groundwater sample was collected from monitoring wells MW-3 and MW-5 because the wells were dry at the time of sampling.

- No groundwater sample was collected from monitoring wells MW-1, MW-2, MW-4, and one of the on-site existing geotechnical observation wells (LB-1(OW)) because the wells were not recharging after development or purging.
- A groundwater sample was collected from one of the on-site existing geotechnical observation wells (LB-4(OW)) installed by Langan because none of the wells installed as part of the RIWP yielded sufficient volume of groundwater to collect samples.
- A duplicate groundwater sample was not collected because there was not enough volume in the geotechnical observation well (LB-4(OW)) to yield a second sample.

4.1 Geophysical Investigation

Prior to commencement of the ground-intrusive investigation, the New York City One-Call center was contacted by the drillers to identify subsurface utility services entering the Site. A site-wide geophysical survey had previously been completed as part of the Limited Phase II ESA dated November 2012 to investigate for the presence of USTs. On April 29, 2013, Nova Geophysical Services (Nova) of Douglaston, New York conducted a geophysical investigation under the supervision of a Langan field geologist. The survey used ground penetrating radar (GPR) and electromagnetic detector (EM) to locate buried utilities in the vicinity of each proposed boring location. Borings were relocated as necessary to avoid subsurface utilities and anomalies (other subsurface impediments). In addition, Nova screened the location of the previously identified gasoline tank within the basement of building to confirm its location. The findings of the geophysical studies are presented in Section 5.2. A copy of the Geophysical Report is provided as Appendix C.

4.2 Soil Investigation

The soil investigation included seven environmental soil borings (B7 through B13) completed on April 29 and May 1, 2013, by Laurel Environmental Associates, Ltd. (Laurel) of Huntington Station, New York under the supervision of a Langan field geologist. All borings were advanced until refusal to the top of bedrock using a track-mounted Geoprobe™ 6610DT drill rig. Boring depths ranged from 2 to 23.4 feet bgs. Soil boring B11A was off-set at B11B in the northwest corner of the existing building because refusal was encountered at 3 feet bgs in soil boring B11A and a monitoring well could not be installed. Following soil sample collection, all boreholes were backfilled with non-grossly impacted soil cuttings and/or sand, grouted, and restored with concrete, asphalt, or material consistent with the surroundings. Soil boring locations are shown on Figure 5.

4.2.1. Soil Sampling Methodology

Soil samples were collected continuously to completion depth in 5-foot macrocore[®] sample barrels with dedicated acetate liners. Soil samples retrieved from each boring were visually classified for soil type, grain size and texture. Each sample was screened for visual, olfactory and instrumental evidence of anthropogenic impacts. Instrument screening for the presence of VOC was performed with a PID equipped with a 10.6 electron-volt lamp. Boring logs that document these observations are included as Appendix D.

One to two discrete (grab) soil samples were collected from each soil borings for laboratory analysis. One surface soil sample was collected from the 0-2 feet bgs interval from each soil boring. One subsurface soil sample was collected from the 2-foot interval beneath the proposed final development depth (i.e. 12 to 14 feet bgs interval) to document the environmental quality of remnant soils following site development. Bedrock was encountered between 2.5 and 10 feet bgs in the eastern and southern portions of the Site during the remedial investigation; therefore, the subsurface soil samples were collected from the bedrock interface, instead of the 2-foot interval beneath the proposed maximum excavation depth, in soil boring B9. Soil sample depths are detailed on Table 1.

4.2.2. Environmental Soil Sampling Analytical Program

Eleven grab soil samples were collected from the seven soil borings (B7 through B13) and were analyzed for the following 6 NYCRR Part 375 parameters:

- VOC via EPA method 8260B;
- Semi volatile organic compounds (SVOC) via EPA method 8270C;
- Polychlorinated biphenyls (PCB) via EPA method 8082A;
- Pesticides via EPA method 8081B;
- Metals by EPA method 6010B/7000 series; and
- Total cyanide via EPA method 9013A/90110C.

Soil samples were collected into laboratory-supplied containers, including EnCore[™] samplers for VOC samples, and were picked up and delivered via courier service to Alpha Analytical (Alpha), a New York State Department of Health Environmental Laboratory Accreditation Program (ELAP)-certified laboratory in Westborough, Massachusetts, under standard chain-of-custody protocol. A sample log showing soil samples and corresponding analysis is provided as Table 1. The laboratory certification is provided in Appendix E. Laboratory analytical data packages and chain-of-custody documentation are provided in Appendix F.

4.3 Groundwater Investigation

Four soil borings were converted into permanent monitoring wells (MW-2 through MW-5). The following soil borings and monitoring wells were collocated: B8/MW-2, B11B/MW-3, B12/MW-4, and B13-MW-5. Moisture was observed at these locations during drilling activities. The monitoring wells were installed in general accordance with the procedures set forth in the RIWP. Total well depths ranged from 1.5 to 12 feet bgs. Monitoring well locations are shown on Figure 5.

4.3.1. Monitoring Well Construction

The monitoring wells were constructed with 2-inch-diameter, threaded, flush-joint, polyvinyl chloride (PVC) casing and with up to 10 feet of 0.01-inch slot screens. The monitoring wells were screened across the water-table interface or on the top of bedrock. Clean sand (Morie #2) was used to fill the annulus around the well screen to a height of approximately 1 to 2 feet above the top of the screened interval. The remainder of the annular space was filled with hydrated bentonite to near the ground surface. The remaining borehole annulus was filled using clean sand (Morie #2). The monitoring wells were finished with a locking well cap and flush-mounted metal manhole covers. Monitoring well construction logs are provided in Appendix G.

4.3.2. Monitoring Well Development

The monitoring wells were developed after installation on May 2, 2013, at least 24 hours following their installation. Prior to development, monitoring wells were gauged using an interface probe. Monitoring wells MW-3 and MW-5 were dry and could not be developed. The wells were developed via pumping with a submersible Monsoon pump at a maximum pumping rate of 1 gallon per minute (gpm). The wells were considered developed when a minimum of three well volumes was removed.

4.3.3. Groundwater Sampling

An attempt to collect groundwater samples was made on May 8, 2013, at the minimum of one week after the monitoring wells were developed. Prior to purging and sampling, monitoring wells were gauged using a Solinst[®] 122 oil/water interface probe. Monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5 were dry or did not recharge after development or purging and; therefore the wells could not be sampled. As a result, Langan attempted to sample the two geotechnical wells, LB-1(OW) and LB-4(OW), installed on April 3 and 8, 2013 by Langan; however, monitoring well LB-1(OW) did not recharge after purging and could similarly not be sampled. Monitoring well LB-4(OW) did recharge and a groundwater sample was collected.

The monitoring wells were purged and sampled using low-flow purging techniques to minimize drawdown using a peristaltic pump with dedicated polyethylene tubing at a rate of 1-liter per minute or less. Water-quality parameters (pH, temperature, specific conductance, turbidity, ORP, and DO) were measured and recorded at approximately 5-minute intervals. Measurements were collected until the parameters stabilized for at least three consecutive readings.

Because of poor well recharge and because some well were dry well, Langan was able to collect only one groundwater sample from an existing geotechnical well. The groundwater sample was collected into laboratory-supplied glassware from monitoring well LB-4(OW) in the southwest corner of the existing building and was delivered via courier service to Alpha under standard chain-of-custody protocol. The groundwater sample was analyzed for the following parameters:

- Target compound list (TCL) VOC via EPA method 8260B.
- TCL SVOC via EPA method 8270C;
- PCB via EPA method 8082A;
- Pesticides via EPA method 8081B;
- Total and dissolved metals by EPA method 6010B/7000 series; and
- Total cyanide via EPA method 9013A/90110C.

A sample log showing the groundwater sample and corresponding analysis is provided as Table 1. Groundwater sampling logs are provided as Appendix H. Laboratory analytical data packages and chain-of-custody documentation are provided in Appendix E.

4.4 Soil Vapor Investigation

Five soil vapor samples (SV3 to SV7) and one ambient air sample (AMBIENT) were collected for laboratory analysis during this RI to evaluate the presence of volatile constituents in soil vapor. Soil vapor and ambient air sampling locations are shown in Figure 5. The soil vapor points were installed on April 29 and May 1, 2013, and sampled on May 2, 2013, in accordance with the RIWP. Soil vapor points were advanced with a Geoprobe[®] drill rig above the observed groundwater interface or to the top of bedrock. Soil vapor point SV-3 was installed at approximately 2 feet bgs; SV-5 was installed at approximately 3 feet bgs; SV-6 was installed at approximately 6 feet bgs; and SV-4 and SV-7 were installed at approximately 9 feet bgs. The points were constructed with double woven stainless steel soil vapor sampling mesh attached to Teflon tubing. The annulus around the probe/tubing was filled with sand (Morie #2) to

approximately six inches above the screen. The remaining annular space was backfilled to grade with hydrated bentonite.

After allowing the bentonite seal to set, a presample tracer gas test was performed using helium. The helium-tracer test is a quality assurance and quality control (QA/QC) measure to confirm the integrity of the implant seals by evaluating whether surface outdoor air intrusion is impacting the soil-vapor sample (i.e., to confirm that no "short circuiting" is occurring). None of the soil vapor sample locations failed the helium-tracer gas test, indicating that all seals were intact.

With the seal confirmed, a MultiRAE was attached to the polyethylene tubing, and a total volume of at least three times that of the tubing and screen setup was purged, taking into account the volume purged during the helium-tracer gas test. The purged soil vapor was also monitored with the PID and the value was recorded. After purging was complete, a laboratory-supplied 6-liter Summa® canister with a flow controller was attached to the polyethylene tubing. Each Summa® canister arrived from the laboratory with approximately 29 to 30 inches of mercury vacuum. Each 6-liter sample was collected over approximately 2 hours. The soil vapor samples were transported from the Site to Alpha by a laboratory-provided courier for analysis of VOC via EPA method TO-15. Subslab vapor-point construction and sampling logs are presented in Appendix I.

5.0 FIELD OBSERVATIONS AND ANALYTICAL RESULTS

This section summarizes the field observations and laboratory analytical results for the Site for the samples collected during the RI. Soil analytical results are compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (SCO) and Restricted Residential SCOs. Groundwater analytical results are compared to New York State 6 NYCRR Part 703.5 New York State Department of Conservation Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for Class GA groundwater. Soil vapor results are compared to monitoring and mitigation ranges established by the New York State Department of Health (NYSDOH) Soil Vapor Intrusion Guidance Matrices.

Investigation locations for the Site include the following:

- RI – Seven soil borings, four monitoring wells, and five soil vapor points
- Limited Phase II ESA – six soil borings, one temporary monitoring well, and two soil vapor points
- Soil Composition Letter – eight soil borings

Samples collected from these investigation locations include:

- Soil
 - RI – Eleven samples analyzed for VOCs, SVOCs, metals, pesticides, and PCBs
 - Limited Phase II ESA – Two samples analyzed for VOCs, SVOCs (polycyclic aromatic hydrocarbons [PAH] only), metals pesticides, and PCBs and two samples analyzed for VOCs and SVOCs (PAHs only)
 - Soil Composition Letter – Eight samples analyzed for VOC and SVOC (CP-51 list only)
- Groundwater
 - RI – One sample analyzed for VOCs, SVOCs, total and dissolved metals, pesticides, and PCBs
 - Limited Phase II ESA – Two samples analyzed for VOCs and SVOCs (PAHs only)
- Soil Vapor
 - RI – Five sample analyzed for VOCs
 - Limited Phase II ESA – Two samples analyzed for VOCs
- Indoor Air: Limited Phase II ESA – Two samples analyzed for VOCs

Soil, groundwater, and soil vapor data collected during the Limited Phase II ESA and the Soil Composition Letter are discussed in Section 2.2 and presented in the previous reports provided in Appendix A. Copies of the laboratory analytical data reports for data generated during the RI are provided in Appendix E. Summaries of the soil, groundwater, soil vapor, and QA/QC sample analytical result detections for samples collected during the RI are provided in the following tables:

- Table 3: Soil Sample Detection Summary
- Table 4: Groundwater Sample Detection Summary
- Table 5: Soil Vapor Sample Detection Summary

5.1 Geology and Hydrogeology

Provided below is a description of the stratigraphic layers and hydrogeology observed in the Site subsurface during the RI and previous investigation. Subsurface profiles presenting the inferred occurrence of historic fill, potentially native soil and bedrock across the Site are presented as Figures 5 to 7 of the Geotechnical Engineering Study prepared by Langan (April 2013) provided in Appendix A. A groundwater contour map is provided as Figure 6.

5.1.1. Historic Fill

The Site surface soil is a historic fill layer generally composed of sand and gravel of assorted colors, with varying amounts of silt, brick and concrete fragments. This layer extends up to approximately 20 feet bgs and is underlain by sand, silt, and/or bedrock.

5.1.2. Sand and Silt Layers

The fill layer is underlain by a layer of coarse to fine sand of assorted colors, with varying amounts of gravel, silt, and mica in the western portion of the Site. The sand layer was encountered immediately below the fill layer with thickness ranging from about 4 to 20 feet. A layer of gray silt with some clay, and trace amounts of fine sand and fibers was encountered within the sand layer in the northwestern portion of the Site. The thickness of the gray silt pocket is approximately 2 feet.

5.1.3. Weathered Bedrock and Bedrock

The fill or the sand layers are underlain by weathered bedrock or sound bedrock. The top of weathered bedrock was encountered at depths ranging from about 1 to 34 bgs. The thickness of the weathered bedrock ranged from approximately 1 to 7 feet and consists of intact rock as well as residual soil, which display the parent rock's structure. Sound bedrock was encountered at depths ranging from about 1 to 35 feet bgs. The bedrock is grey to white quartz-mica schist

of the Hartland Formation. Top of sound bedrock slopes down from a depth of approximately 3 feet bgs in the eastern portion of the Site to a depth of approximately 35 feet bgs in the western portion of the Site.

5.1.4. Hydrogeology

Groundwater underlying the Site was measured at approximately 12.7 feet to 16.5 feet below sidewalk grade, which corresponds to approximately elevation² (el.) 0.52 feet to el. 4.39 feet, based on gauging of the RI wells and the two geotechnical observation wells installed by Langan. No free product was observed during gauging and sampling activities. The measured groundwater elevation was determined to be highest in the northern portion of the Site and was determined to be lower toward the south and west across the majority of the Site, with some possible redirection toward the east along the northern Site border. Inconsistent measured groundwater elevations and apparent redirections are likely related to the presence of perched groundwater above the bedrock. The presence of perched groundwater above bedrock was further validated by the lack of recharge of monitoring wells completed above bedrock as part of the RI.

To evaluate true groundwater depth and elevation, we consulted the geotechnical engineer within Langan that prepared the April 2013 Geotechnical Engineering Study. This study included the completion of two observation wells, LB-1(OW) and LB-4(OW), to depths of 40 and 23 feet bgs, respectively. Depths to groundwater in these wells was measured within the overburden material, above the top of rock at a depth of approximately 16 feet below sidewalk grade at LB-1(OW) and 6 feet below ground surface at LB-4(OW) in the basement of the existing building, both corresponding to about el 2. When compared to groundwater measurements from previous investigations, both the Langan 2013 Geotechnical Engineering Study and previous studies identified groundwater between approximately 15 and 16.5 feet below sidewalk grade.

With respect to groundwater flow, based on previous and extensive geotechnical investigations in the neighborhood by Langan, on-site groundwater is inferred to flow from north to south following bedrock and toward a former stream bed located to the south of the Site, instead of toward the Hudson River.

Groundwater elevation data recorded during the RI are summarized in Table 2. A groundwater elevation iso-contour map was not prepared based on data collected during the RI because of the presence of perched groundwater on the Site.

² Elevations are with respect to the Borough President of Manhattan Datum (BPMD), which is 2.75 feet above mean sea level at Sandy Hook, New Jersey in 1929, as defined by the United States Geologic Survey (USGS NGVD 1929 Datum).

5.2 Geophysical Survey Findings

The geophysical survey identified one major anomaly consistent with a UST filled with concrete (possibly abandoned in place) in the northeast corner of the basement of the existing building. The location of this anomaly was consistent with where historic Sanborn Maps indicated a tank to be present and where similar anomalies were detected during previous studies. In addition, the geophysical surveys identified several scattered minor anomalies and underground utilities in the surveyed areas and near some of the proposed boring locations. Boring locations were adjusted prior to drilling to avoid the identified underground utilities and scattered anomalies. The geophysical report, which includes a map of the surveyed areas, is provided in Appendix C.

5.3 Soil Findings

5.3.1. Field Screening

Field screening did not indicate impacted soil in the borings in the northern portion of the Site (B7, B12, and B13), which is consistent with previous investigations. Elevated total organic vapors (TOV) concentrations were detected in soil borings B8, B9, B-10, and B11 in the southern portion of the Site. PID readings ranged from 14.5 parts per million (ppm) to 2,281 ppm, with the highest reading recorded in B10. Langan did not observe staining or odors in any of the soil borings.

5.3.2. Soil Analytical Results

The following is a summary of SCO exceedances organized by sample type, sample depth (surface/bedrock samples versus samples collected from development depth) and analytical parameter. Compounds with detections exceeding the Unrestricted Use SCOs are listed below, while those compounds with detections that also exceed the Restricted Residential Use SCOs are in **bold**. Soil analytical exceedances are shown on Figure 7.

Surficial and Bedrock Interface Soil Samples

VOCs – No VOC exceedances of the Unrestricted Use and Restricted Residential Use SCOs were identified in the surficial and bedrock interface soil samples.

SVOCs –

- **benzo(a)anthracene**
- **benzo(a)pyrene**
- **benzo(b)fluoranthene**
- benzo(k)fluoranthene
- **chrysene**
- **dibenzo(a,h)anthracene**
- **indeno(1,2,3-cd)Pyrene**

Multiple SVOCs were detected in soil at concentrations above the Unrestricted Use and Restricted Residential Use SCOs at B9, B10, and B13. Total SVOC concentrations ranged from non-detect in boring B8 (5 to 7 feet bgs) and B12 (11 to 13 feet bgs) to 69.94 mg/kg in boring B10 (0 to 2 feet bgs). These exceedances are attributed to fill material that was identified from surface grade to the top of bedrock and up to approximately 20 feet bgs at the Site.

Metals –

- **arsenic**
- **barium**
- cadmium
- chromium (trivalent)
- cooper
- **lead**
- **mercury**
- selenium
- zinc

Multiple metals were detected in soil at concentrations above the Restricted Residential Use SCOs across the Site. Metal concentration ranges included: arsenic (1.6 to 44 mg/kg), barium (79 to 560 mg/kg), lead (20 to 820 mg/kg), and mercury (0.05 to 1.2 mg/kg). These site-wide metal exceedances are attributed to fill material that was identified from surface grade to the top of bedrock and up to approximately 20 feet bgs.

PCBs –

- aroclor 1260

One PCB, aroclor 1260 (0.425 ppm) was detected at a concentration above the Unrestricted Use SCOs in boring B7 (0 to 2 feet bgs); however, there were no PCBs identified above the Restricted Residential SCOs in any of the surficial and bedrock interface soil samples.

Pesticides –

- dieldrin

One pesticide, dieldrin at 10 ppb was detected at a concentration above the Unrestricted Use SCOs in boring B7 (0 to 2 feet bgs); however, there were no pesticides identified above the Restricted Residential SCOs in any of the surficial and bedrock interface soil samples.

Projected Endpoint

Because of shallow bedrock at the Site, only two soil samples were collected from proposed development depth in soil borings B8 (5 to 7 feet bgs), which is located in the basement of the existing building, and B12 (11 to 13 feet bgs) in the western portion of the Site.

VOCs – No VOC exceedances of the Unrestricted Use and the Restricted Residential Use SCOs were identified in endpoint soil samples.

SVOCs – No SVOC detections were identified in endpoint soil samples.

Metals –

- cooper

One metal, cooper, collected in the native soil at development depth exceeded its Unrestricted SCO in boring B12 (11 to 13 feet bgs); this metal was detected at a concentration slightly above the Eastern USA background concentration range³. There were no metal exceedances of the Restricted Residential Use SCOs identified in other projected endpoint soil samples below the proposed cellar depth.

PCBs – No PCB detections were identified in projected endpoint soil samples.

Pesticides – No pesticide exceedances of the Unrestricted Use and Restricted Residential Use SCOs were identified in projected endpoint soil samples.

5.4 Groundwater Chemistry

One groundwater sample was collected from an existing geotechnical well, LB-4(OW), and was analyzed for VOCs, SVOCs, metals (filtered and unfiltered), PCBs and pesticides during the RI. A summary of the RI groundwater sample laboratory detections is presented in Table 4. Groundwater sample locations and exceedances are presented in Figure 5. Complete laboratory analytical reports are provided in Appendix I. Although only one sample was collected during the RI because of poor well recharge, data collected during the RI and previous investigations is sufficient to delineate the distribution of contaminants in groundwater at the Site. Compounds with detections exceeding NYSDEC TOGS AWQS GQs for Class GA groundwater are listed below:

VOCs – No VOC exceedances of GQs were identified in the groundwater sample. Three VOCs, acetone (1.1 µg/L), chloroform (0.79 µg/L), and tetrachloroethene (0.5 µg/L), were detected in the groundwater sample, but at concentrations below GQs.

SVOCs – No SVOC detections were identified in the groundwater sample.

Metals (filtered and unfiltered) –

- magnesium

³ NYSDEC Technical and Administrative Guidance Memorandum 4046 lists the Eastern USA Background concentration for copper at 1-50 ppm.

- manganese

Metal AWQS exceedances are likely associated with the dissolved naturally occurring mineral constituents from regional soil or quality of the fill.

PCBs – No PCB detections were identified in the groundwater sample.

Pesticides – No pesticide detections were identified in the groundwater sample.

5.5 Soil Vapor Chemistry

Five soil vapor samples and one ambient air sample were collected during the RI. A summary of soil vapor and ambient air analytical results are presented in Table 5. Soil vapor sample locations and results are presented in Figure 6. Soil vapor analytical results for applicable chlorinated VOCs were compared to monitoring and mitigation ranges established by NYSDOH Final Guidance on Soil Vapor Intrusion (October 2006) Matrices 1 and 2, which are established for carbon tetrachloride, trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE) only. Matrices 1 and 2 of the NYSDOH guidance are used to evaluate vapor mitigation options and to make decisions on appropriate actions to address exposures. The matrix evaluation requires sub-slab and indoor air data. Indoor air samples were not collected as part of this investigation; however, the matrices provide a soil vapor concentration above which monitoring and/or mitigation is required, regardless of indoor air concentrations.

Soil vapor samples collected during the RI identified chlorinated and petroleum-related VOCs at generally low-to-moderate concentrations. Petroleum-related VOCs were detected at generally low concentrations and included benzene (maximum 15.5 $\mu\text{g}/\text{m}^3$), toluene (maximum 45.2 $\mu\text{g}/\text{m}^3$), ethylbenzene (maximum 29.6 $\mu\text{g}/\text{m}^3$), and xylenes (maximum 152.1 $\mu\text{g}/\text{m}^3$). The chlorinated VOC PCE was identified in five of six soil vapor samples at concentrations ranging from 4.87 $\mu\text{g}/\text{m}^3$ to 943 $\mu\text{g}/\text{m}^3$. The maximum concentration of PCE falls within the monitor/mitigate range established by NYSDOH Vapor Intrusion Matrices. TCE was detected in two of six soil vapor samples at a maximum concentration of 6.13 $\mu\text{g}/\text{m}^3$, which is within the monitoring range established by NYSDOH. The maximum concentrations of chlorinated VOCs were identified in the northeast corner of the existing building. PCE was also detected at trace concentrations in select soil samples and in the groundwater sample from the corresponding boring/monitoring well location, at concentrations below regulatory criteria. Contaminant concentrations in soil vapor may be attributed to the historic auto and truck repair use at the Site or to the historic uses of surrounding properties. Data collected during the RI and previous investigations is sufficient to delineate the distribution of contaminants in soil vapor at the Site.

A detailed summary of the sample results compared to the Decision Matrices is provided below.

Carbon Tetrachloride

- Carbon tetrachloride was detected in one of the soil vapor samples, SV7, at a concentration of 1.52 $\mu\text{g}/\text{m}^3$.
- Based on a conservative comparison of the soil vapor results, NYSDOH Decision Matrix 1 recommends no further action if the indoor air concentrations are less than 0.25 $\mu\text{g}/\text{m}^3$ to take reasonable and practical actions to identify sources and reduce exposures if the indoor air concentrations are greater than 0.25 $\mu\text{g}/\text{m}^3$.

1,1,1-TCA

- 1,1,1-TCA was detected was detected in one of the soil vapor sample, SV6, at a concentration of 4.62 $\mu\text{g}/\text{m}^3$.
- For the soil vapor concentration detected in SV6, NYSDOH Decision Matrix 2 recommends “no further action” if the indoor air concentrations are less than 3.0 $\mu\text{g}/\text{m}^3$ to “take reasonable and practical actions to identify sources and reduce exposures” if the indoor air concentrations are greater than 3.0 $\mu\text{g}/\text{m}^3$.

PCE

- PCE concentrations in the soil vapor samples range from 4.87 $\mu\text{g}/\text{m}^3$ in SV4 to 943 $\mu\text{g}/\text{m}^3$ in SV5.
- For the PCE concentrations detected in soil vapor concentration on the Site, NYSDOH Decision Matrix 2 recommends the following:
 - SV-3 (PCE = 47.3 $\mu\text{g}/\text{m}^3$): “No further action” if the indoor air concentrations are less than 3.0 $\mu\text{g}/\text{m}^3$ to “take reasonable and practical actions to identify sources and reduce exposures” if the indoor air concentrations are greater than 3.0 $\mu\text{g}/\text{m}^3$.
 - SV-4 (PCE = 4.87 $\mu\text{g}/\text{m}^3$): “No further action” if the indoor air concentrations are less than 3.0 $\mu\text{g}/\text{m}^3$ to “take reasonable and practical actions to identify sources and reduce exposures” if the indoor air concentrations are greater than 3.0 $\mu\text{g}/\text{m}^3$.
 - SV-5 (PCE = 943 $\mu\text{g}/\text{m}^3$): “Monitoring” to determine whether indoor air or soil vapor concentrations have changed if the indoor air concentration is less than 3.0 $\mu\text{g}/\text{m}^3$. If the indoor air concentration is greater than 3.0 $\mu\text{g}/\text{m}^3$, NYSDOH

recommends "mitigation" to minimize current or potential exposures associated with soil vapor intrusion.

- SV-6 (PCE = 14.7 $\mu\text{g}/\text{m}^3$): "No further action" if the indoor air concentrations are less than 3.0 $\mu\text{g}/\text{m}^3$ to "take reasonable and practical actions to identify sources and reduce exposures" if the indoor air concentrations are greater than 3.0 $\mu\text{g}/\text{m}^3$.
- SV-7 (PCE = 20.5 $\mu\text{g}/\text{m}^3$): "No further action" if the indoor air concentrations are less than 3.0 $\mu\text{g}/\text{m}^3$ to "take reasonable and practical actions to identify sources and reduce exposures" if the indoor air concentrations are greater than 3.0 $\mu\text{g}/\text{m}^3$.

TCE

- TCE concentrations in the soil vapor samples range from non-detect in SV3, SV4, and SV6 to 6.13 $\mu\text{g}/\text{m}^3$ in SV5.
- For the TCE concentrations detected in soil vapor concentration on the Site, NYSDOH Decision Matrix 1 recommends the following:
 - SV-5 (TCE = 6.13 $\mu\text{g}/\text{m}^3$): "No further action" if the indoor air concentration are less than 0.25 $\mu\text{g}/\text{m}^3$, "monitoring" to determine whether indoor air or soil vapor concentrations have changed if the indoor air concentration is greater than 0.25 $\mu\text{g}/\text{m}^3$ but less than 5.0 $\mu\text{g}/\text{m}^3$, to "mitigation" to minimize current or potential exposures associated with soil vapor intrusion if the indoor air concentration is greater than 5.0 $\mu\text{g}/\text{m}^3$.
 - SV-7 (TCE = 4.86 $\mu\text{g}/\text{m}^3$): "No further action" if the indoor air concentrations are less than 0.25 $\mu\text{g}/\text{m}^3$ to "take reasonable and practical actions to identify sources and reduce exposures" if the indoor air concentrations are greater than 0.25 $\mu\text{g}/\text{m}^3$.

5.6 Quality Control Samples

Duplicate soil sample analytical results are included with parent samples in Table 3 and the ambient air analytical results are shown with soil vapor sample results in Table 5. No duplicate groundwater sample was collected because of poor well recharge that did not yield enough volume to collect a duplicate sample.

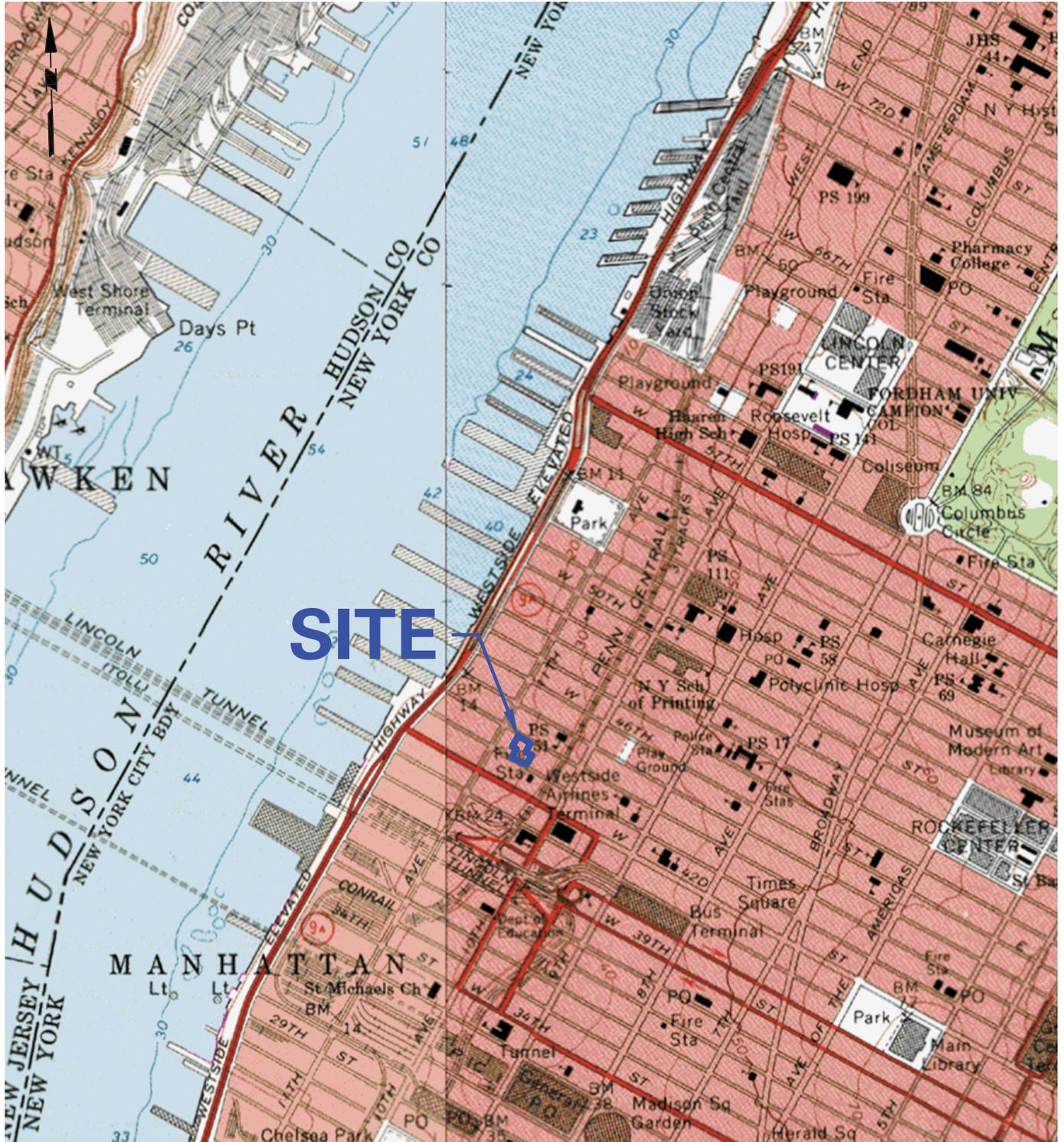
5.7 Prior Activity

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.

5.8 Impediments to Remedial Action

Possible impediments to remedial action at the property include adjacent buildings, streets, and sidewalks.

FIGURES



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Project

546 WEST 44th STREET

BLOCK No. 1072, LOT No. 50
MANHATTAN

NEW YORK

NEW YORK

Drawing Title

**SITE LOCATION
MAP**

Project No.
170229701

Date
04/01/2013

Scale
NTS

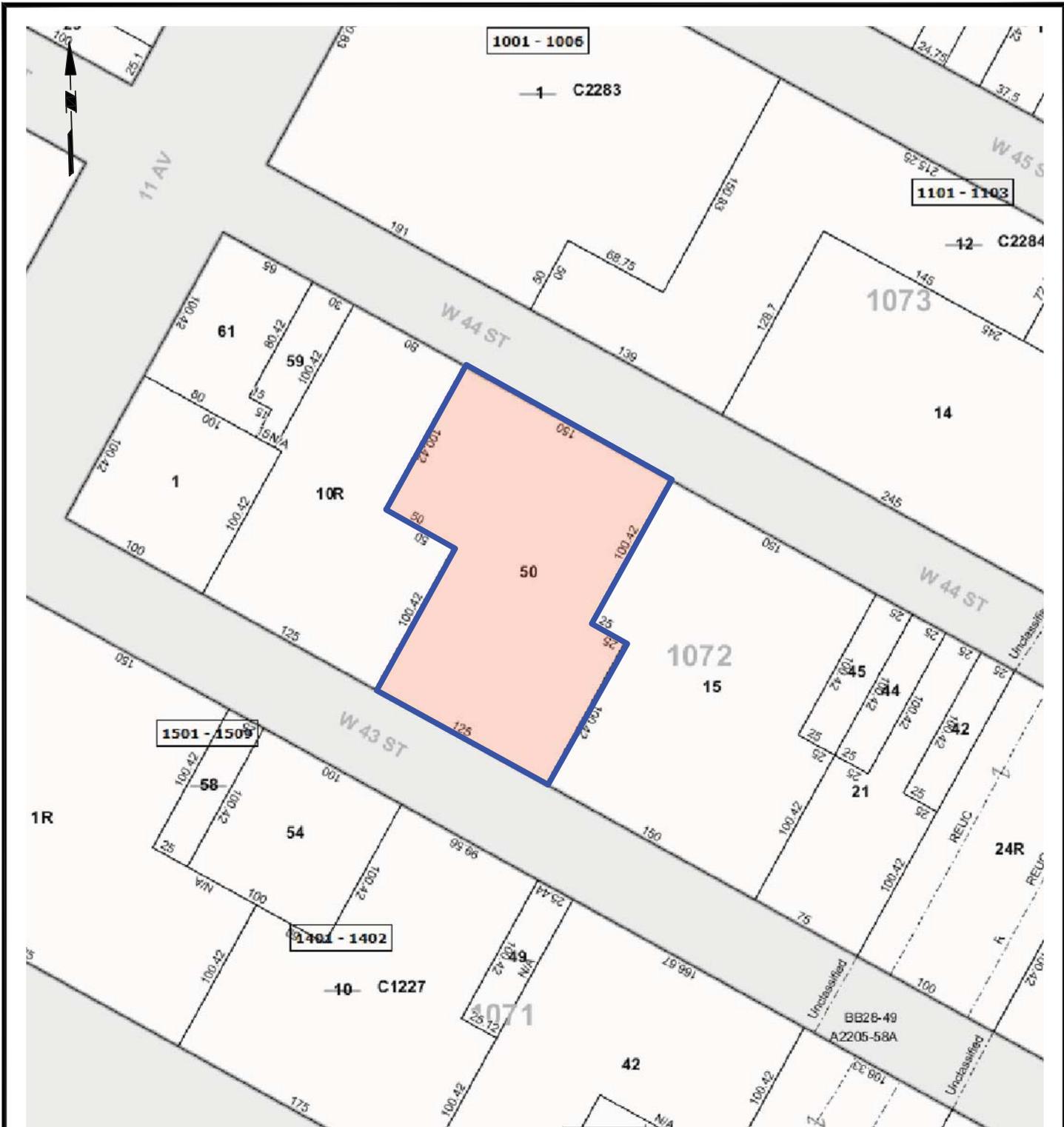
Drawn By
EB

Submission Date

Figure No.

1

Sheet 1 of 8



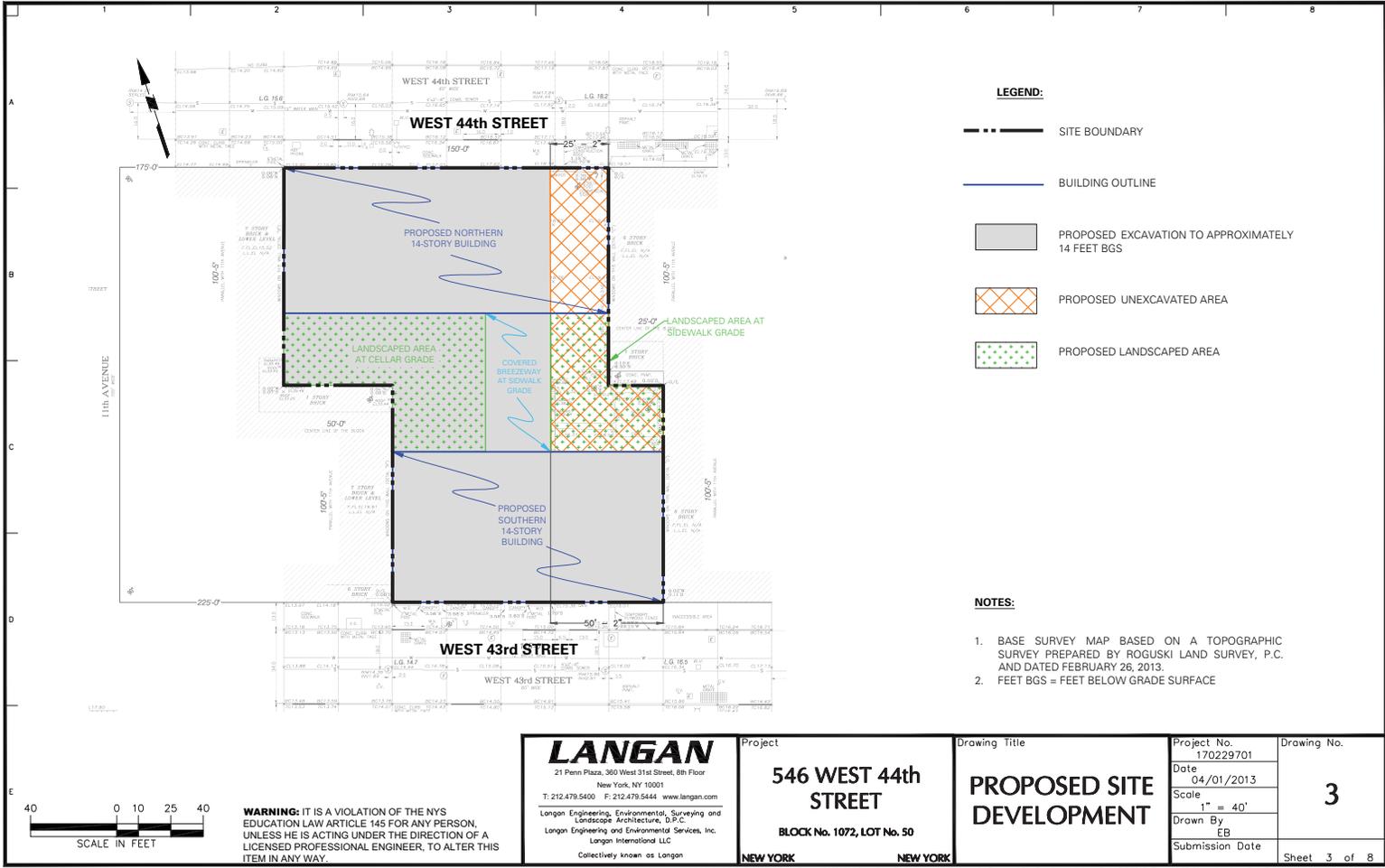
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LEGEND:



SITE BOUNDARY

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	<p>546 WEST 44th STREET</p> <p>BLOCK No. 1072, LOT No. 50 MANHATTAN</p> <p>NEW YORK NEW YORK</p>	<p>TAX MAP</p>	170229701	<p>2</p>	
			Date		05/31/2013
			Scale		NTS
			Drawn By		EB
Submission Date		Sheet 2 of 8			



LEGEND:

-  SITE BOUNDARY
-  BUILDING OUTLINE
-  PROPOSED EXCAVATION TO APPROXIMATELY 14 FEET BGS
-  PROPOSED UNEXCAVATED AREA
-  PROPOSED LANDSCAPED AREA

NOTES:

1. BASE SURVEY MAP BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROGUSKI LAND SURVEY, P.C. AND DATED FEBRUARY 26, 2013.
2. FEET BGS = FEET BELOW GRADE SURFACE

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Project

**546 WEST 44th
 STREET**
 BLOCK No. 1072, LOT No. 50

NEW YORK

NEW YORK

Drawing Title

**PROPOSED SITE
 DEVELOPMENT**

Project No.
170229701

Date
04/01/2013

Scale
1" = 40'

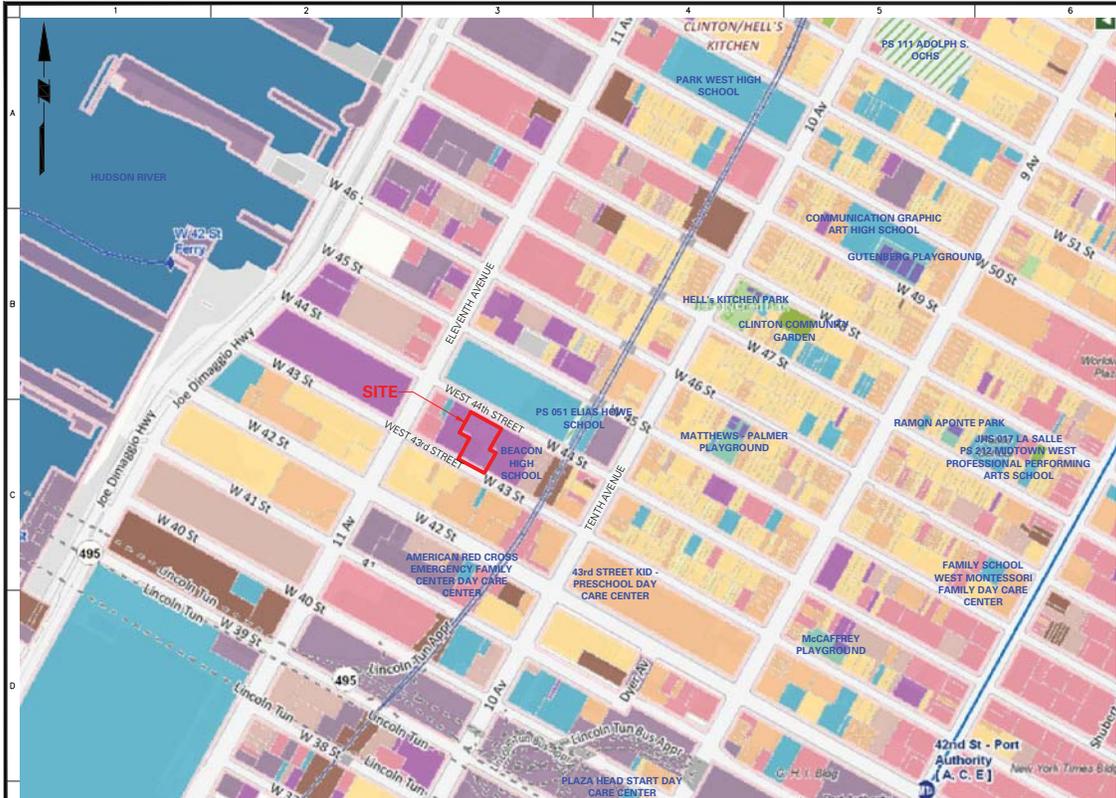
Drawn By
EB

Submission Date

Drawing No.

3

Sheet 3 of 8



LEGEND:

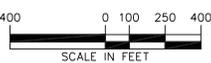
- SITE BOUNDARY
- HUDSON RIVER SENSITIVE RECEPTORS

LAND USE LEGEND

- 1 & 2 FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MIXED USE
- OPEN SPACE & OUTDOOR RECREATION
- COMMERCIAL
- INSTITUTIONS
- INDUSTRIAL
- PARKING
- TRANSPORTATION/UTILITIES
- VACANT LOTS

NOTES

- 1. BASE MAP TAKEN FROM WWW.OASISNYC.NET



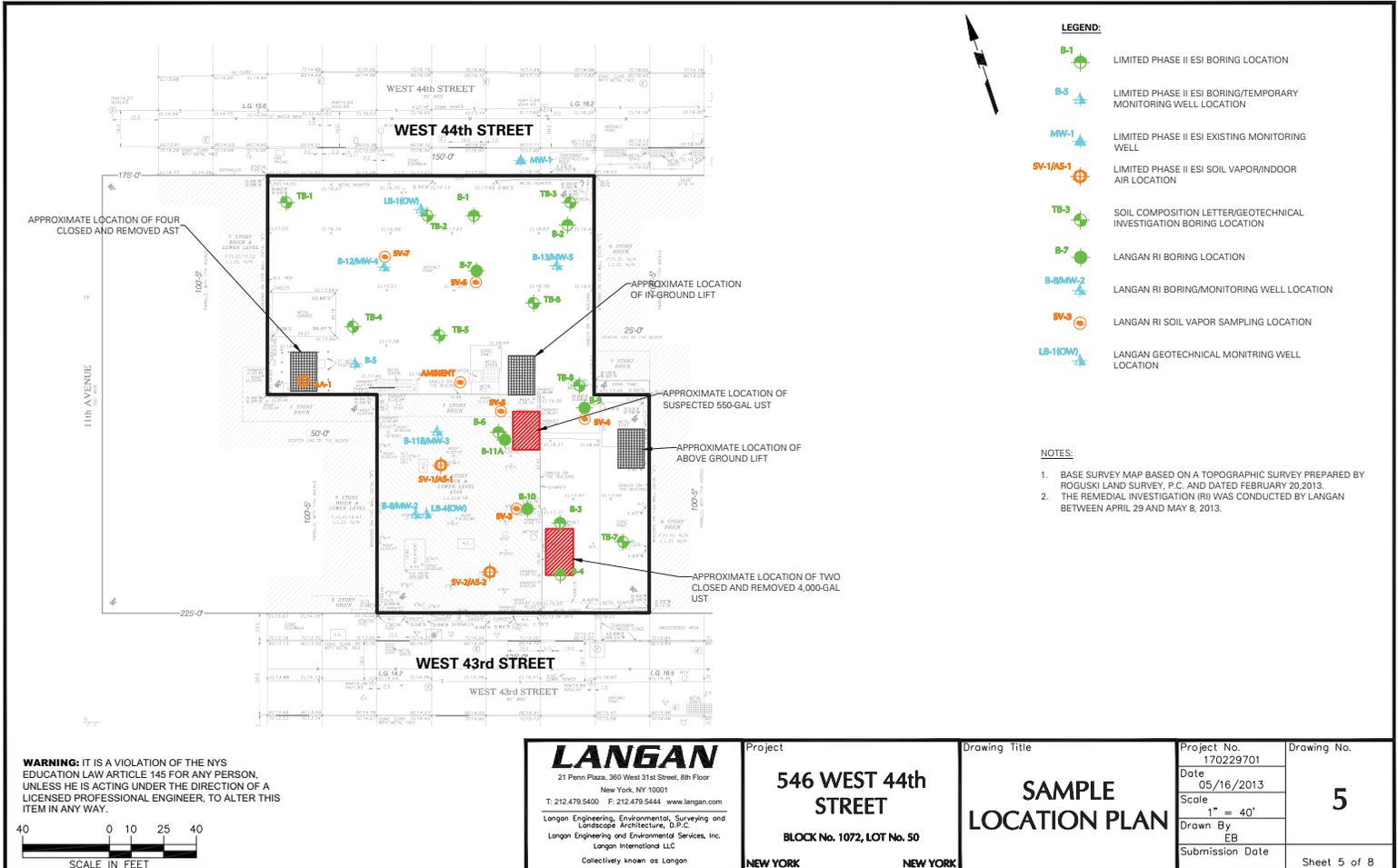
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Project
546 WEST 44th STREET
 BLOCK No. 1072, LOT No. 50
 NEW YORK NEW YORK

Drawing Title
AREA LAND USAGE MAP

Project No. 170229701	Drawing No. 4
Date 05/03/2013	
Scale 1" = 400'	
Drawn By EB	
Submission Date	Sheet 4 of 8



- LEGEND:**
- B-1 LIMITED PHASE II ESI BORING LOCATION
 - B-5 LIMITED PHASE II ESI BORING/TEMPORARY MONITORING WELL LOCATION
 - MW-1 LIMITED PHASE II ESI EXISTING MONITORING WELL
 - SV-1/AS-1 LIMITED PHASE II ESI SOIL VAPOR/INDOOR AIR LOCATION
 - TB-3 SOIL COMPOSITION LETTER/GEOTECHNICAL INVESTIGATION BORING LOCATION
 - B-7 LANGAN RI BORING LOCATION
 - B-8/MW-2 LANGAN RI BORING/MONITORING WELL LOCATION
 - SV-3 LANGAN RI SOIL VAPOR SAMPLING LOCATION
 - LB-1(CW) LANGAN GEOTECHNICAL MONITORING WELL LOCATION

- NOTES:**
1. BASE SURVEY MAP BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROGUSKI LAND SURVEY, P.C. AND DATED FEBRUARY 20, 2013.
 2. THE REMEDIAL INVESTIGATION (RI) WAS CONDUCTED BY LANGAN BETWEEN APRIL 29 AND MAY 8, 2013.

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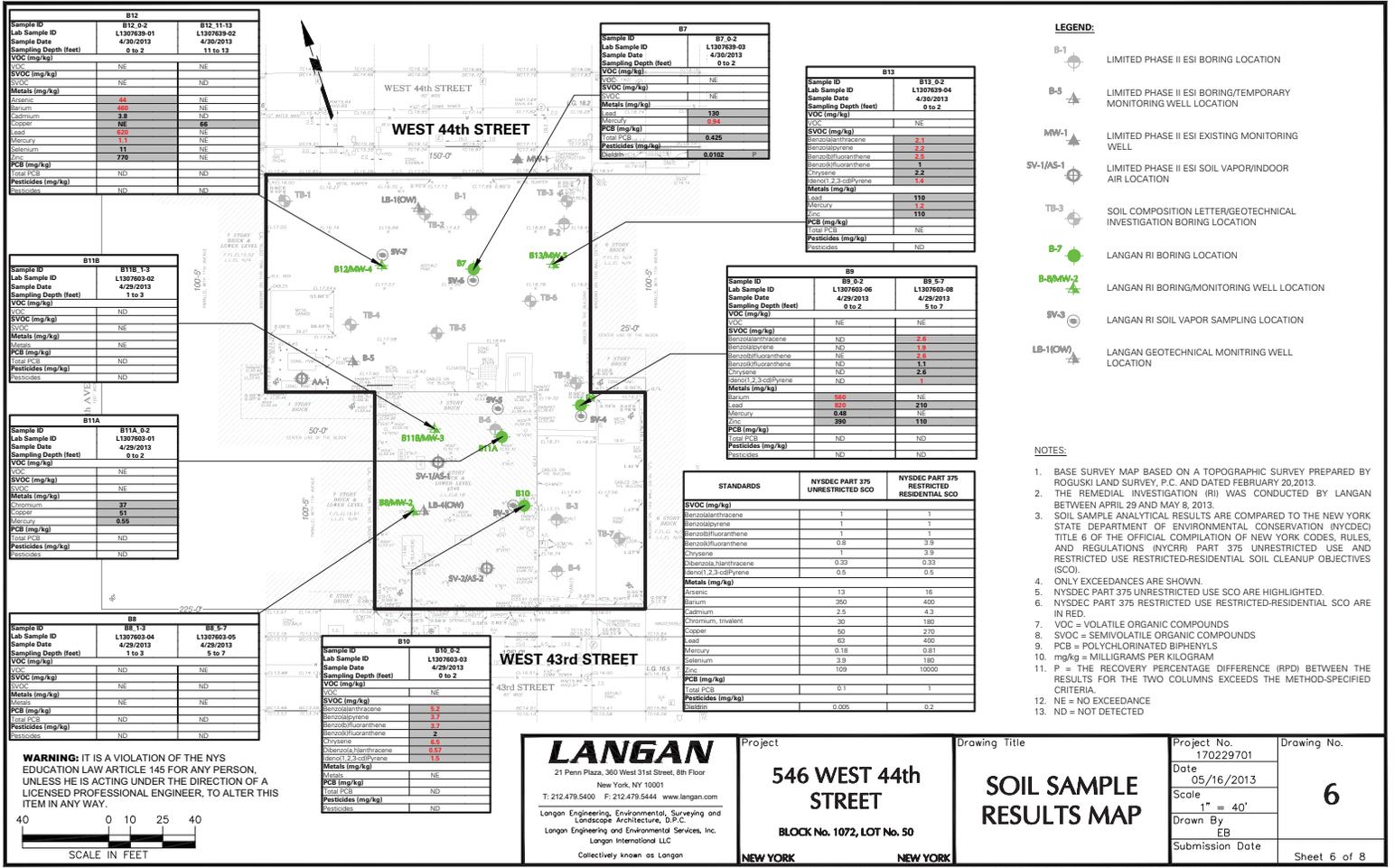


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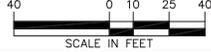
Project
546 WEST 44th STREET
 BLOCK No. 1072, LOT No. 50
 NEW YORK NEW YORK

Drawing Title
SAMPLE LOCATION PLAN

Project No. 170229701	Drawing No. 5
Date 05/16/2013	
Scale 1" = 40'	
Drawn By EB	
Submission Date	Sheet 5 of 8



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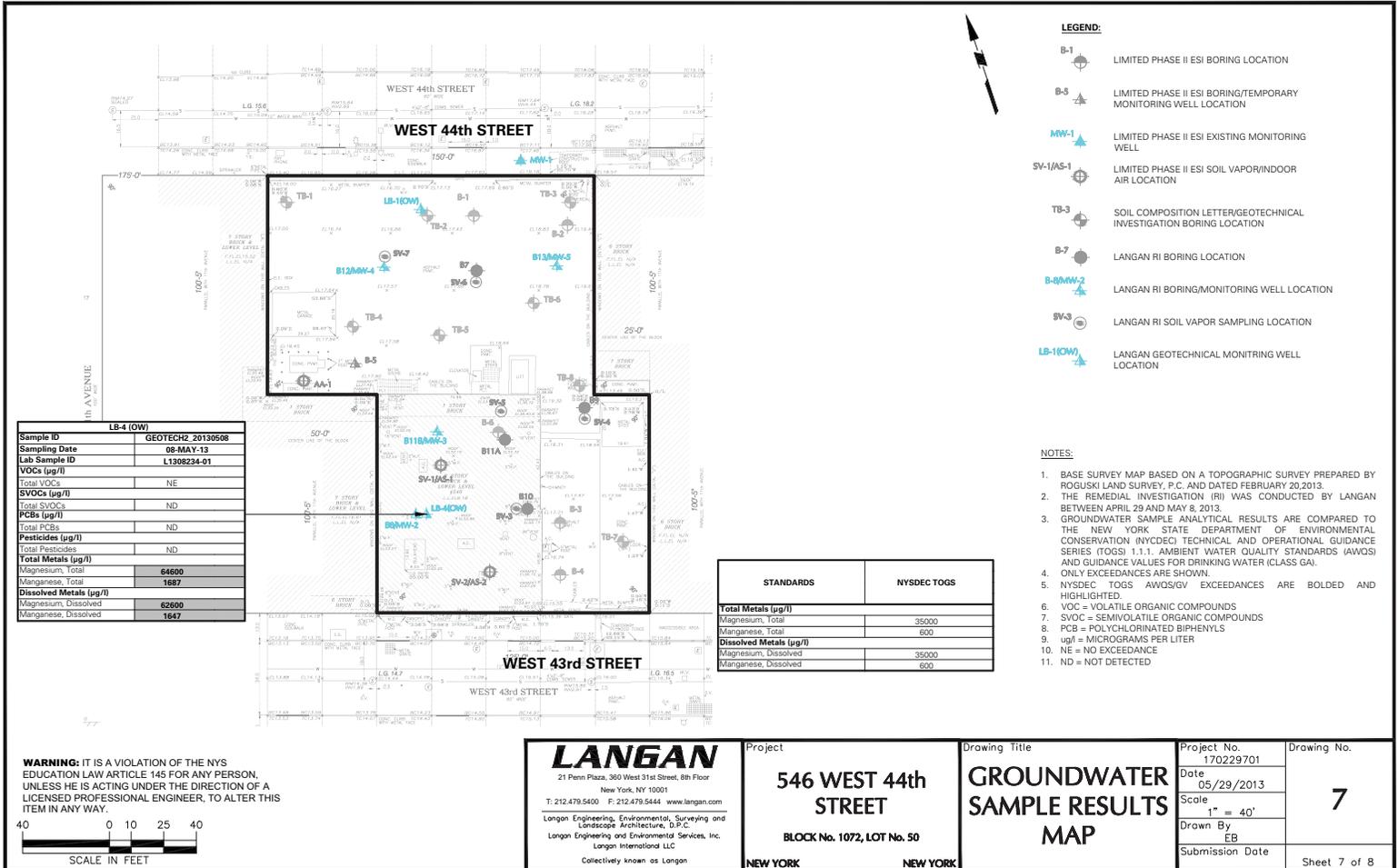
Project
546 WEST 44th STREET
BLOCK No. 1072, LOT No. 50
 NEW YORK NEW YORK

Drawing Title
SOIL SAMPLE RESULTS MAP

Project No. 170229701	Drawing No. 6
Date 05/16/2013	
Scale 1" = 40'	
Drawn By EB	
Submission Date	Sheet 6 of 8

- LEGEND:**
- B-1 LIMITED PHASE II ESI BORING LOCATION
 - B-5 LIMITED PHASE II ESI BORING/TEMPORARY MONITORING WELL LOCATION
 - MW-1 LIMITED PHASE II ESI EXISTING MONITORING WELL
 - SV-1/AS-1 LIMITED PHASE II ESI SOIL VAPOR/INDOOR AIR LOCATION
 - TB-3 SOIL COMPOSITION LETTER/GEOTECHNICAL INVESTIGATION BORING LOCATION
 - B-7 LANGAN RI BORING LOCATION
 - B-3/MW-2 LANGAN RI BORING/MONITORING WELL LOCATION
 - SV-3 LANGAN RI SOIL VAPOR SAMPLING LOCATION
 - LB-1(CW) LANGAN GEOTECHNICAL MONITORING WELL LOCATION
- NOTES:**
1. BASE SURVEY MAP BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROGUSKI LAND SURVEY, P.C. AND DATED FEBRUARY 20, 2013.
 2. THE REMEDIAL INVESTIGATION (RI) WAS CONDUCTED BY LANGAN BETWEEN APRIL 29 AND MAY 8, 2013.
 3. SOIL SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYDEC) TITLE 6 OF THE OFFICIAL COMPILATION OF NEW YORK CODES, RULES, AND REGULATIONS (NYCRR) PART 375 UNRESTRICTED USE AND RESTRICTED USE RESTRICTED-RESIDENTIAL SOIL CLEANUP OBJECTIVES (SCO).
 4. ONLY EXCEEDANCES ARE SHOWN.
 5. NYDEC PART 375 UNRESTRICTED USE SCO ARE HIGHLIGHTED.
 6. NYDEC PART 375 RESTRICTED USE RESTRICTED-RESIDENTIAL SCO ARE IN RED.
 7. VOC = VOLATILE ORGANIC COMPOUNDS
 8. SVOC = SEMI-VOLATILE ORGANIC COMPOUNDS
 9. PCB = POLYCHLORINATED BIPHENYLS
 10. mg/kg = MILLIGRAMS PER KILOGRAM
 11. P = THE RECOVERY PERCENTAGE DIFFERENCE (RPD) BETWEEN THE RESULTS FOR THE TWO COLUMNS EXCEEDS THE METHOD-SPECIFIED CRITERIA.
 12. NE = NO EXCEEDANCE
 13. ND = NOT DETECTED

STANDARDS	NYDEC PART 375 UNRESTRICTED SCO		NYDEC PART 375 RESTRICTED RESIDENTIAL SCO	
	SVOC (mg/kg)	Metals (mg/kg)	SVOC (mg/kg)	Metals (mg/kg)
Benzo(a)anthracene	1	1	1	1
Benzo(a)pyrene	1	1	1	1
Benzo(b)fluoranthene	0.8	3.9	0.8	3.9
Chrysene	1	3.9	1	3.9
Diene(1,2,3-cd)pyrene	0.33	0.33	0.33	0.33
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	0.5
Metals (mg/kg)				
As	13	16	13	16
Barium	350	400	350	400
Cadmium	2.5	4.3	2.5	4.3
Chromium, Invariant	30	180	30	180
Copper	50	270	50	270
Lead	63	400	63	400
Manganese	0.18	0.81	0.18	0.81
Selenium	3.9	180	3.9	180
Zinc	109	10000	109	10000
Total PCB	0.1	1	0.1	1
Pesticides (mg/kg)				
Endrin	0.005	0.2	0.005	0.2



LB-4 (OW)	
Sample ID	GEOTECH2_20130508
Sampling Date	08-MAY-13
Lab Sample ID	L1308234-01
VOCs (µg/l)	
Total VOCs	NE
SVOCs (µg/l)	
Total SVOCs	ND
PCBs (µg/l)	
Total PCBs	ND
Pesticides (µg/l)	
Total Pesticides	ND
Total Metals (µg/l)	
Magnesium, Total	64600
Manganese, Total	1687
Dissolved Metals (µg/l)	
Magnesium, Dissolved	62600
Manganese, Dissolved	1647

STANDARDS	NYSDEC TOGS
Total Metals (µg/l)	
Magnesium, Total	35000
Manganese, Total	600
Dissolved Metals (µg/l)	
Magnesium, Dissolved	35000
Manganese, Dissolved	600

- LEGEND:**
- B-1 LIMITED PHASE II ESI BORING LOCATION
 - B-5 LIMITED PHASE II ESI BORING/TEMPORARY MONITORING WELL LOCATION
 - MW-1 LIMITED PHASE II ESI EXISTING MONITORING WELL
 - SV-1/AS-1 LIMITED PHASE II ESI SOIL VAPOR/INDOOR AIR LOCATION
 - TB-3 SOIL COMPOSITION LETTER/GEOTECHNICAL INVESTIGATION BORING LOCATION
 - B-7 LANGAN RI BORING LOCATION
 - B-8/MW-2 LANGAN RI BORING/MONITORING WELL LOCATION
 - SV-3 LANGAN RI SOIL VAPOR SAMPLING LOCATION
 - LB-1(CW) LANGAN GEOTECHNICAL MONITORING WELL LOCATION

- NOTES:**
- BASE SURVEY MAP BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROGUSKI LAND SURVEY, P.C. AND DATED FEBRUARY 20, 2013.
 - THE REMEDIAL INVESTIGATION (RI) WAS CONDUCTED BY LANGAN BETWEEN APRIL 29 AND MAY 8, 2013.
 - GROUNDWATER SAMPLE ANALYTICAL RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1, AMBIENT WATER QUALITY STANDARDS (AWQS) AND GUIDANCE VALUES FOR DRINKING WATER (CLASS GA).
 - ONLY EXCEEDANCES ARE SHOWN.
 - NYSDEC TOGS AWQS/SV EXCEEDANCES ARE BOLDED AND HIGHLIGHTED.
 - VOC = VOLATILE ORGANIC COMPOUNDS
 - SVOC = SEMIVOLATILE ORGANIC COMPOUNDS
 - PCB = POLYCHLORINATED BIPHENYLS
 - µg/l = MICROGRAMS PER LITER
 - NE = NO EXCEEDANCE
 - ND = NOT DETECTED

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Project
546 WEST 44th STREET
 BLOCK No. 1072, LOT No. 50
 NEW YORK NEW YORK

Drawing Title
GROUNDWATER SAMPLE RESULTS MAP

Project No.	170229701	Drawing No.	7
Date	05/29/2013		
Scale	1" = 40'		
Drawn By	EB		
Submission Date		Sheet 7 of 8	

SV6	
Sample ID	SV6_20130501
Lab Sample ID	L1307771-04
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Total VOCs	NE

SV7	
Sample ID	SV7_20130501
Lab Sample ID	L1307771-05
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Total VOCs	NE

SV5	
Sample ID	SV5_20130501
Lab Sample ID	L1307771-03
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Tetrachloroethene	943
Trichloroethene	6.13

SV3	
Sample ID	SV3_20130501
Lab Sample ID	L1307771-01
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Total VOCs	NE

AMBIENT	
Sample ID	AMBIENT
Lab Sample ID	L1307771-06
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Total VOCs	NE

SV4	
Sample ID	SV4_20130501
Lab Sample ID	L1307771-02
Sample Date	5/1/2013
VOC ($\mu\text{g}/\text{m}^3$)	
Total VOCs	NE

STANDARDS	NYSDOH AGV
VOC ($\mu\text{g}/\text{m}^3$)	
Tetrachloroethene	100
Trichloroethene	5

- LEGEND:**
- B-1 LIMITED PHASE II ESI BORING LOCATION
 - B-5 LIMITED PHASE II ESI BORING/TEMPORARY MONITORING WELL LOCATION
 - MW-1 LIMITED PHASE II ESI EXISTING MONITORING WELL
 - SV-1/AS-1 LIMITED PHASE II ESI SOIL VAPOR/INDOOR AIR LOCATION
 - TB-3 SOIL COMPOSITION LETTER/GEOTECHNICAL INVESTIGATION BORING LOCATION
 - B-7 LANGAN RI BORING LOCATION
 - B-8/MW-2 LANGAN RI BORING/MONITORING WELL LOCATION
 - SV-3 LANGAN RI SOIL VAPOR SAMPLING LOCATION
 - LB-1(CW) LANGAN GEOTECHNICAL MONITORING WELL LOCATION

- NOTES:**
- BASE SURVEY MAP BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROGUSKI LAND SURVEY, P.C. AND DATED FEBRUARY 20, 2013.
 - THE REMEDIAL INVESTIGATION (RI) WAS CONDUCTED BY LANGAN BETWEEN APRIL 29 AND MAY 8, 2013.
 - SAMPLE RESULTS WERE COMPARED TO THE NEW YORK STATE DEPARTMENT OF HEALTH (NYSDOH) AIR GUIDELINE VALUES (AGV).
 - ONLY EXCEEDANCES ARE SHOWN.
 - CONCENTRATIONS EXCEEDING NYSDOH AGV ARE HIGHLIGHTED.
 - VOC = VOLATILE ORGANIC COMPOUND
 - $\mu\text{g}/\text{m}^3$ = MICROGRAMS PER CUBIC METER
 - NE = NO EXCEEDANCE

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Project
546 WEST 44th STREET
BLOCK No. 1072, LOT No. 50

NEW YORK NEW YORK

Drawing Title
SOIL VAPOR SAMPLE RESULTS MAP

Project No.	170229701	Drawing No. 8
Date	05/29/2013	
Scale	1" = 40'	
Drawn By	EB	
Submission Date		Sheet 8 of 8

TABLES

Table 1
Remedial Investigation
Comprehensive Sample Summary
 546 West 44th Street
 New York, New York
 Langan Project No. 170229701

Boring Location	Sample ID	Sample Date	Laboratory Sample ID	Investigation	Sample Matrix	Start Depth (feet bgs)	End Depth (feet bgs)	Refusal Depth (feet bgs)	Sample Type (soil only)	Parent Sample (for duplicate samples only)	Analysis
April 2013 Remedial Investigation by Langan											
B7	B7 0-2	4/30/2013	L1307639-03	RI	Soil	0	2	6	Surficial/Top of Bedrock	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B8	B8 1-3	4/29/2013	L1307603-04	RI	Soil	1	3	12	Surficial	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
	B8 5-7	4/29/2013	L1307603-05	RI	Soil	5	7		Endpoint (Basement)	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B9	B9 0-2	4/29/2013	L1307603-06	RI	Soil	0	2	10	Surficial	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
	DUP01	4/29/2013	L1307603-07	RI	Soil	0	2		Surficial	B9 0-2	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
	B9 5-7	4/29/2013	L1307603-08	RI	Soil	5	7		Fill	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B10	B10 0-2	4/29/2013	L1307603-03	RI	Soil	0	2	2	Surficial/Top of Bedrock	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B11A	B11A 0-2	4/29/2013	L1307603-01	RI	Soil	0	2	3	Surficial/Top of Bedrock	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B11B	B11B 1-3	4/29/2013	L1307603-02	RI	Soil	1	3	4	Surficial/Top of Bedrock	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B12	B12 0-2	4/30/2013	L1307639-01	RI	Soil	0	2	23	Surficial	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
	B12 11-13	4/30/2013	L1307639-02	RI	Soil	11	13		Endpoint	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
B13	B13 0-2	4/30/2013	L1307639-04	RI	Soil	0	2	2.5	Surficial/Top of Bedrock	-	6 NYCRR VOC, SVOC, metals, PCB, and pesticides
November 2012 Limited Phase II ESI by IVI											
B-3	B-3	10/23/2012	-	Phase II ESI	Soil	9.5	9.5	9.5	Top of Bedrock	-	TCL VOC, SVOC (PAHs only), metals, PCB, and pesticides
B-4	B-4	10/23/2012	-	Phase II ESI	Soil	13	13	13	Top of Bedrock	-	TCL VOC, SVOC (PAHs only)
B-5	B-5	10/23/2012	-	Phase II ESI	Soil	15	15	15	Endpoint	-	TCL VOC, SVOC (PAHs only)
B-6	B-6	10/23/2012	-	Phase II ESI	Soil	2.5	2.5	2.5	Top of Bedrock	-	TCL VOC, SVOC (PAHs only), metals, PCB, and pesticides
December 2012 Soil Composition Letter by ECMS											
TB-1	TB-1	11/16/2012	-	Composition Letter	Soil	16	16	35	Endpoint	-	CP-51 List VOC, SVOC
TB-2	TB-2	11/16/2012	-	Composition Letter	Soil	12	12	12	Endpoint/Top of Bedrock	-	CP-51 List VOC, SVOC
TB-3	TB-3	11/16/2012	-	Composition Letter	Soil	1.5	1.5	1.5	Surficial/Top of Bedrock	-	CP-51 List VOC, SVOC
TB-4	TB-4	11/16/2012	-	Composition Letter	Soil	16	16	25	Endpoint	-	CP-51 List VOC, SVOC
TB-5	TB-5	11/16/2012	-	Composition Letter	Soil	12	12	12	Endpoint/Top of Bedrock	-	CP-51 List VOC, SVOC
TB-6	TB-6	11/16/2012	-	Composition Letter	Soil	1.5	1.5	1.5	Surficial/Top of Bedrock	-	CP-51 List VOC, SVOC
TB-7	TB-7	11/16/2012	-	Composition Letter	Soil	10	10	10	Top of Bedrock	-	CP-51 List VOC, SVOC
TB-8	TB-8	11/16/2012	-	Composition Letter	Soil	7.5	7.5	7.5	Top of Bedrock	-	CP-51 List VOC, SVOC
April 2013 Remedial Investigation											
LB-4 (QW)	GEOTECH2_20130508	5/8/2013	L1308234-01	RI	Groundwater	-	-	-	-	-	TCL VOC, SVOC, metals, PCB, and pesticides
November 2012 Limited Phase II ESI by IVI											
B-5	B-5	10/23/2012	-	Phase II ESI	Groundwater	-	-	-	-	-	TCL VOC, SVOC (PAHs only)
MW-1	MW-1	10/23/2012	-	Phase II ESI	Groundwater	-	-	-	-	-	TCL VOC, SVOC (PAHs only)
April 2013 Remedial Investigation											
SV3	SV3_20130501	5/1/2013	L1307771-01	RI	Soil Vapor	-	-	-	-	-	VOC via EPA method TO-15
SV4	SV4_20130501	5/1/2013	L1307771-02	RI	Soil Vapor	-	-	-	-	-	VOC via EPA method TO-15
SV5	SV5_20130501	5/1/2013	L1307771-03	RI	Soil Vapor	-	-	-	-	-	VOC via EPA method TO-15
SV6	SV6_20130501	5/1/2013	L1307771-04	RI	Soil Vapor	-	-	-	-	-	VOC via EPA method TO-15
SV7	SV7_20130501	5/1/2013	L1307771-05	RI	Soil Vapor	-	-	-	-	-	VOC via EPA method TO-15
AMBIENT	AMBIENT	5/1/2013	L1307771-06	RI	Ambient Air	-	-	-	-	-	VOC via EPA method TO-15
November 2012 Limited Phase II ESI by IVI											
IA-1	IA-1	10/23/2012	-	Phase II ESI	Indoor Air	-	-	-	-	-	VOC via EPA method TO-15
SS-1	SS-1	10/23/2012	-	Phase II ESI	Sub-slab	-	-	-	-	-	VOC via EPA method TO-15
IA-2	IA-2	10/23/2012	-	Phase II ESI	Indoor Air	-	-	-	-	-	VOC via EPA method TO-15
SS-2	SS-2	10/23/2012	-	Phase II ESI	Sub-slab	-	-	-	-	-	VOC via EPA method TO-15
AA-1	AA-1	10/23/2012	-	Phase II ESI	Ambient Air	-	-	-	-	-	VOC via EPA method TO-15

Table 2
Remedial Investigation
Groundwater Elevations
546 West 44th Street
New York, New York
Langan Project No. 170229701

Monitoring Well ID	Well Location	Latitude ¹	Longitude ¹	Top of Casing Elevation ² (feet)	Gauging Date	Depth to Water (Feet Below Grade Surface)	Depth to Water (Approx. Feet Below Sidewalk Grade)	Groundwater Elevation ² (feet)
On-Site Wells								
MW-1	Sidewalk	40.761613	73.996329	17.662	5/8/2013	14.80	14.80	2.86
MW-2	Basement	40.761282	73.996757	8.524	5/8/2013	8.00	16.50	0.52
MW-3	Basement	40.761366	73.996670	8.503	5/8/2013	Dry		
MW-4	Parking Lot	40.761581	73.996614	17.409	5/8/2013	15.01	15.01	2.40
MW-5	Parking Lot	40.761477	73.996362	18.842	5/8/2013	Dry		
LB-1(OV)	Parking Lot	40.761622	73.996514	17.092	5/8/2013	12.70	12.70	4.39
LB-4(OV)	Basement	40.761281	73.996752	8.549	5/8/2013	5.61	14.11	2.94

Notes:

1. The horizontal datum is referenced to the North American Datum of 1983 (NAD83), New York State Plane Coordinate System, Long Island Zone.
2. The vertical datum is referenced to the Borough President Manhattan Datum (BPMMD).

Table 3
Remedial Investigation
Soil Sample Detection Summary
546 West 44th Street
New York, New York
Langan Project No. 170229701

LOCATION SAMPLING DATE LAB SAMPLE ID	Part 375 Unrestricted Use SCOs	Part 375 Restricted Residential Use	B7 0-2 4/20/2013 L1307638-03	B8 1-3 4/29/2013 L1307638-04	B8 5-7 4/29/2013 L1307638-05	B9 0-2 4/29/2013 L1307638-07	DUP01 4/29/2013 L1307638-07	B9 5-7 4/29/2013 L1307638-08	B10 0-2 4/29/2013 L1307638-03	B11A 0-2 4/29/2013 L1307638-01	B11B 1-3 4/29/2013 L1307638-02	B12 0-2 4/30/2013 L1307638-01	B12 11-13 4/30/2013 L1307638-02	B13 0-2 4/30/2013 L1307638-04
Volatiles Organic Compounds (mg/kg)														
2-Butanone	0.12	100	0.011 U	0.84 U	0.0019 J	0.011 U	0.012 U	0.015 U	0.012 U	0.016 U	0.012 U	0.015 U	0.013 U	0.013 U
Acetone	0.05	100	0.0034 J	0.84 U	0.0079 J	0.011 U	0.012 U	0.0068 J	0.012 U	0.0068 J	0.012 U	0.015 U	0.013 U	0.0059 J
Bromomethane	-	-	0.0083 J	0.17 U	0.0024 U	0.0023 U	0.0025 U	0.003 U	0.0024 U	0.0033 U	0.0024 U	0.0016 J	0.0011 J	0.0027 U
Chloroform	0.37	49	0.0016 U	0.13 U	0.0018 U	0.0017 U	0.0018 U	0.0023 U	0.0018 U	0.0025 U	0.0018 U	0.0022 U	0.001 J	0.002 U
Ethylbenzene	1	41	0.0011 U	0.084 U	0.0012 U	0.0011 U	0.00083 J	0.0015 U	0.0012 U	0.0016 U	0.0012 U	0.0015 U	0.0013 U	0.0013 U
p-Xylene	-	-	0.0022 U	0.17 U	0.0024 U	0.0023 U	0.0018 J	0.003 U	0.0024 U	0.0033 U	0.0024 U	0.0029 U	0.0026 U	0.0027 U
m-Xylene	-	-	0.0022 U	0.17 U	0.0024 U	0.0023 U	0.0037 J	0.003 U	0.0024 U	0.0033 U	0.0024 U	0.0029 U	0.0026 U	0.0027 U
Tetrachlorethene	1.3	19	0.0011 U	0.084 U	0.0012 U	0.0011 U	0.0012 U	0.0015 U	0.00098 J	0.0018 U	0.0012 U	0.001 J	0.0013 U	0.0013 U
Toluene	0.7	100	0.0047 J	0.13 U	0.0018 U	0.0017 U	0.0018 U	0.0023 U	0.0018 U	0.0025 U	0.0018 U	0.0022 U	0.002 U	0.0054 J
Total Xylenes	0.25	100	ND	ND	ND	ND	0.0055	ND	ND	ND	ND	ND	ND	ND
Semi Volatile Organic Compounds (mg/kg)														
2-Methylnaphthalene	-	-	0.43 U	0.23 U	0.27 U	2.2 U	0.87 U	0.25 J	0.25 J	0.21 U	0.21 U	0.22 U	0.22 U	0.43 U
Acenaphthene	20	100	0.87 J	0.16 U	0.18 U	1.5 U	0.58 U	0.26 J	1.2 U	0.14 U	0.14 U	0.045 J	0.15 U	0.22
Acenaphthylene	100	100	0.82 J	0.16 U	0.18 U	1.5 U	0.15 J	0.8 U	0.63 U	0.14 U	0.14 U	0.047 J	0.15 U	0.11 J
Anthracene	100	100	0.23 U	0.12 U	0.14 U	1.1 U	0.13 J	1.3 J	2.3 U	0.11 U	0.11 U	0.1 J	0.11 U	0.89
Benzolanthracene	1	1	0.73 U	0.12 U	0.14 U	1.1 U	0.3 J	2.6 J	5.2 J	0.11 U	0.037 J	0.4 U	0.11 U	2.1
Benzofluoranthene	1	1	0.72 U	0.16 U	0.18 U	1.5 U	0.36 J	1.9 J	3.7 J	0.14 U	0.14 U	0.39 U	0.15 U	2.2
Benzokjfluoranthene	1	1	0.92 U	0.05 J	0.14 U	0.42 J	0.57 J	2.6 J	3.7 J	0.11 U	0.043 J	0.5 U	0.11 U	2.5
Benzolghiperylene	100	100	0.48 U	0.16 U	0.18 U	1.5 U	0.34 J	0.85 U	2.1 U	0.14 U	0.14 U	0.26 U	0.15 U	1.3
Benzokjfluoranthene	0.8	3.9	0.32 U	0.12 U	0.14 U	1.1 U	0.2 J	1.1 U	2.1 U	0.11 U	0.11 U	0.22 U	0.11 U	1
Bis(2-Ethylhexyl)phthalate	-	-	0.15 J	0.19 U	0.23 U	1.8 U	0.73 U	0.38 U	0.78 U	0.18 U	0.18 U	0.19 U	0.18 U	0.36 U
Carbazole	-	-	0.079 J	0.19 U	0.23 U	1.8 U	0.73 U	0.64 U	0.46 J	0.18 U	0.18 U	0.063 J	0.18 U	0.33 J
Chrysene	1	3.9	0.75 J	0.12 U	0.14 U	1.1 U	0.36 J	2.6 J	6.5 J	0.11 U	0.041 J	0.43 J	0.11 U	2.2
Dibenzokjfluoranthene	0.33	0.33	0.1 J	0.12 U	0.14 U	1.1 U	0.44 U	0.31 U	0.57 J	0.11 U	0.11 U	0.065 J	0.11 U	0.32
Dibenzofuran	-	-	0.36 U	0.19 U	0.23 U	1.8 U	0.73 U	0.69 U	0.26 J	0.18 U	0.18 U	0.19 U	0.18 U	0.18 J
Fluoranthene	100	100	1.6 U	0.052 J	0.14 U	0.57 J	0.57 J	6.3 U	10 U	0.054 J	0.075 J	0.97 J	0.11 U	4.9 J
Fluorene	30	100	0.36 U	0.19 U	0.23 U	1.8 U	0.73 U	0.79 U	1.1 U	0.18 U	0.18 U	0.19 U	0.18 U	0.32 J
Indeno(1,2,3-cd)Pyrene	0.5	0.5	0.48 U	0.18 U	0.18 U	1.5 U	0.38 J	1.1 U	1.5 U	0.14 U	0.14 U	0.28 U	0.15 U	1.4
Naphthalene	12	100	0.36 U	0.19 U	0.23 U	1.8 U	0.73 U	0.74 J	1.8 U	0.18 U	0.18 U	0.19 U	0.18 U	0.36 U
Phenanthrene	100	100	1.2 U	0.12 U	0.14 U	1.1 U	0.32 J	7.8 U	15 U	0.046 J	0.053 J	0.65 J	0.11 U	3.8 U
Pyrene	100	100	1.6 U	0.053 J	0.14 U	0.51 J	0.44 J	4.9 U	14 U	0.06 J	0.074 J	0.88 J	0.11 U	4.4 U
Total SVOCs	-	-	0.525	0.155	ND	1.5	4.12	36.63	69.94	0.16	0.28	5.3	ND	25.07
Metals (mg/kg)														
Aluminum, Total	-	-	8800	8800	13000	11000	15000	14000	12000	17000	7700	6300	13000	16000
Antimony, Total	-	-	2 J	1.5 J	1.8 J	2 J	3 J	1.9 J	2 J	3.3 J	1.4 J	9.8 J	2.9	2.5
Arsenic, Total	13	16	5.2	1.6	2.5	7.9	11	2.5	4.5	2.3	2.4	44	2.9	3.6
Barium, Total	350	400	110	110	79	560	490	180	120	210	85	460	140	170
Beryllium, Total	2.2	7.2	0.44	0.34	0.63	0.58	1.1	0.72	0.42	0.58	0.38	0.33	0.51	0.44
Cadmium, Total	7.5	43	0.07 J	0.45 U	0.54 U	0.47 U	0.27 J	0.42 U	0.04 U	0.06 J	0.04 J	3.8	0.42	0.42 U
Calcium, Total	-	-	64000	11000	30000	16000	39000	17000	20000	19000	20000	6000	1600	2600
Chromium, Hexavalent	1	110	0.9 U	0.94 U	1.1 U	0.91 U	0.89 U	0.88 U	0.95 U	0.88 U	0.87 U	0.23 J	0.42 J	0.4 J
Chromium, Trivalent	30	180	18	13	18	23	50	25	20	37	12	14	23	29
Chromium, Total	-	-	18	13	18	23	50	25	20	37	12	14	23	29
Cobalt, Total	-	-	6.8	5.4	8.2	5.9	7.2	7.9	7	12	6.4	4	8.4	7.3
Copper, Total	50	270	37	10	16	29	52	20	23	32	32	66	34	34
Iron, Total	-	-	17000	13000	19000	14000	23000	15000	18000	22000	10000	16000	18000	22000
Lead, Total	63	400	130	20	38	80	810	210	43	25	43	60	60	110
Magnesium, Total	-	-	7600	5200	3100	4200	2900	5800	5200	7900	2700	2200	4500	8200
Manganese, Total	1600	2000	300	290	200	140	180	180	120	160	190	200	120	120
Mercury, Total	0.18	0.81	0.84	0.05 J	0.15 U	0.48	0.89	0.1	0.17	0.06 J	0.06 J	1.1	0.12	1.2
Nickel, Total	30	310	16	11	14	15	20	18	15	27	15	13	18	28
Potassium, Total	-	-	3600	4800	1500	1300	1400	5200	4500	10000	3400	1900	4400	8500
Selenium, Total	3.9	180	0.88 U	0.16 J	0.34 J	0.88 U	0.86 U	0.84 U	0.92 U	0.84 U	0.14 J	11	0.42 J	0.84 U
Silver, Total	2	180	0.12 J	0.45 U	0.54 U	0.34 J	0.11 J	0.42 U	0.46 U	0.42 U	0.42 U	0.53	0.42 U	0.42 U
Sodium, Total	-	-	560	690	730	1100	1100	400	930	900	1000	200	340	340
Thallium, Total	-	-	1.9	1.6	1.7	1.1	2.2	1.9	1.9	2.1	1.1	2	1.9	2.6
Vanadium, Total	-	-	24	21	27	33	33	36	31	47	22	18	32	45
Zinc, Total	109	10,000	100	40	40	390	340	110	67	79	55	770	63	110
Polychlorinated Biphenyls (mg/kg)														
Aroclor 1260	-	-	0.425	0.0384 U	0.0445 U	0.0362 U	0.0354 U	0.0358 U	0.0393 U	0.0344 U	0.0348 U	0.0375 U	0.0373 U	0.0116 J
Total PCBs	0.1	1	0.425	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0116
Pesticides (mg/kg)														
Disdin	0.005	0.2	0.0102 P	0.00117 U	0.027 U	0.00112 U	0.0219 U	0.00107 U	0.00116 U	0.00106 U	0.00103 U	0.00114 U	0.00109 U	0.00103 U

Notes:
1. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) title 6 of the official compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use and Restricted Residential Soil Cleanup Objectives (SCOs).
2. Only compounds with detections are shown in table.

3. NYSDEC Part 375 Unrestricted Use SCD exceedances are in bold and highlighted.
4. NYSDEC Part 375 Restricted Residential Use SCD exceedances are in red.
5. mg/kg = milligrams per kilogram.
6. DUP01 is a duplicate sample of B8 0-2.

Qualifiers:
J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration.
U = Analyte included in the analysis, but not detected.
P = The Recovery Percentage Difference (RPD) between the results for the two columns exceeds the method-specified.
ND = Not Detected
-- = Not available

Table 4
Remedial Investigation
Groundwater Sample Detection Summary
546 West 44th Street
New York, New York
Langan Project No. 170229701

LOCATION SAMPLE ID SAMPLING DATE LAB SAMPLE ID	NYSDEC TOGS	LB - 4 (OW) GEOTECH2_20130508 08-MAY-13 L1308234-01
VOCs (µg/l)		
Acetone	50	1.1 J
Chloroform	7	0.79 J
Tetrachloroethene	5	0.5
SVOCs (µg/l)		
Total SVOCs	-	ND
PCBs (µg/l)		
Total PCBs	-	ND
Pesticides (µg/l)		
Total Pesticides	-	ND
Total Metals (µg/l)		
Aluminum, Total	-	49.9
Antimony, Total	6	0.88
Arsenic, Total	50	0.76
Barium, Total	2000	82.13
Cadmium, Total	10	0.12 J
Calcium, Total	-	248000
Chromium, Total	100	0.54 J
Cobalt, Total	-	2.38
Copper, Total	1000	2.85
Cyanide, Total	400	13
Iron, Total	600	116
Lead, Total	50	21.85
Magnesium, Total	35000	64600
Manganese, Total	600	1687
Nickel, Total	200	2.56
Potassium, Total	-	38800
Selenium, Total	20	18.6
Silver, Total	100	0.37 J
Sodium, Total	-	167000
Vanadium, Total	-	0.71 J
Zinc, Total	5000	2.51 J
Dissolved Metals (µg/l)		
Aluminum, Dissolved	-	16.3
Antimony, Dissolved	6	0.94 J
Arsenic, Dissolved	50	0.74
Barium, Dissolved	2000	77.76
Cadmium, Dissolved	10	0.12 J
Calcium, Dissolved	-	232000
Chromium, Dissolved	100	0.24 J
Cobalt, Dissolved	-	2.1
Copper, Dissolved	1000	2.63
Iron, Dissolved	600	40.6 J
Lead, Dissolved	50	16.09
Magnesium, Dissolved	35000	62600
Manganese, Dissolved	600	1647
Nickel, Dissolved	200	2.31
Potassium, Dissolved	-	35500
Selenium, Dissolved	20	16.5
Silver, Dissolved	100	0.27 J
Sodium, Dissolved	-	160000
Vanadium, Dissolved	-	0.41 J
Zinc, Dissolved	5000	12.24 J

Notes:

1. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYCDEC) Technical and Operational Guidance Series (TOGS) 1.1.1. Ambient Water Quality Standards (AWQS) and Guidance Values for drinking water (Class GA)
2. Only compounds with detections are shown in table.
3. **NYSDEC TOGS AWQS/GV exceedances are in BOLD and highlighted.**
4. µg/l= micrograms per liter
5. VOCs = Volatile Organic Compounds
6. SVOCs = Semi-volatile Organic Compounds
7. PCBs = Polychlorinated Biphenyls

Qualifiers:

J = Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration.

ND = Not Detected

Table 5
Remedial Investigation
Soil Vapor Sample Detection Summary
546 West 44th Street
New York, New York
Langan Project No. 170229701

Location		SV3	SV4	SV5	SV6	SV7	AMBIENT
Client Sample ID	NYSDOH AGV	SV3_20130501	SV4_20130501	SV5_20130501	SV6_20130501	SV7_20130501	AMBIENT
Sampling Date		5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013
Lab Sample ID		L1307771-01	L1307771-02	L1307771-03	L1307771-04	L1307771-05	L1307771-06
VOC (µg/m³)							
1,1,1-Trichloroethane	-	2.18 U	1.09 U	2.18 U	4.62	1.09 U	1.09 U
1,2,4-Trimethylbenzene	-	25.5	19	30.6	29.8	57	11.7
1,3,5-Trimethylbenzene	-	12.3	7.82	12.3	12.8	25.2	3.47
1,3-Butadiene	-	0.885 U	0.761	0.885 U	1.95	0.442 U	1.08
2,2,4-Trimethylpentane	-	1.87 U	0.934 U	2.15	0.934 U	0.934 U	54.2
2-Butanone	-	9.73	5.04	4.9	7.49	8.67	1.79
2-Hexanone	-	1.64 U	0.82 U	1.64 U	0.82 U	2.25	0.82 U
4-Ethyltoluene	-	7.57	5.56	7.62	8.65	17.3	3.21
4-Methyl-2-pentanone	-	9.1	1.24	1.79	0.82 U	0.82 U	0.82 U
Acetone	-	156	112	60.1	276	401	2.87
Benzene	-	6.07	2.39	1.67	8.53	15.5	10.1
Bromodichloromethane	-	2.88 U	1.34 U	2.88 U	1.34 U	18.4	1.34 U
Carbon disulfide	-	34.9	31.5	23.4	12.4	1.95	0.623 U
Carbon tetrachloride	-	2.52 U	1.26 U	2.52 U	1.26 U	1.52	1.26 U
Chloroform	-	30.7	1.02	44	3.44	474	0.977 U
Chloromethane	-	0.826 U	0.413 U	0.826 U	1.15	0.413 U	1.24
Cyclohexane	-	1.51	0.95	1.38 U	5.47	1.04	9.98
Dichlorodifluoromethane	-	3.02	2.9	3.34	3.17	2.64	2.77
Ethanol	-	9.42 U	4.71 U	9.42 U	4.71 U	5.22	102
Ethylbenzene	-	21.2	7.56	29.6	25.3	18.9	8.12
Heptane	-	26.4	2.32	2.79	9.84	7.17	16.2
Isopropanol	-	2.46 U	1.23 U	2.46 U	1.28	1.23 U	1.76
Methylene chloride	60	6.95 U	11.7	6.95 U	16.8	3.47 U	3.51
n-Hexane	-	25.3	2.4	2.24	15.4	2.13	24.8
o-Xylene	-	36.7	13.9	52.6	41.4	31.6	10.7
p/m-Xylene	-	62.1	28.6	99.5	89.9	58.2	29.3
Propylene	-	17.2	9.28	1.72 U	18.4	2.75	7.88
Styrene	-	1.7 U	0.852 U	1.7 U	0.852 U	1.39	0.852 U
Tetrachloroethene	100	47.3	4.87	943	14.7	20.5	1.36 U
Toluene	-	18.7	14	12.3	19.3	34.2	45.2
Trichloroethene	5	2.15 U	1.07 U	6.13	1.07 U	4.86	1.07 U
Trichlorofluoromethane	-	2.25 U	1.49	2.25 U	1.72	1.89	1.44
Total VOCs	-	616.09	318.67	1404.82	661.88	1247.65	385.69

Notes:

- Sample results were compared to the New York State Department of Health (NYSDOH) Air Guideline Values (AGV).
- Only detections are shown.
- Concentrations above NYSDOH AGV are in bold and highlighted.**
- µg/m³ = micrograms per cubic meter.
- * = Criteria not available

Qualifiers:

U = Analyte included in the analysis, but not detected.

APPENDIX A

PHASE I ENVIRONMENTAL SITE ASSESSMENT

546 West 44th Street
New York, New York 10036



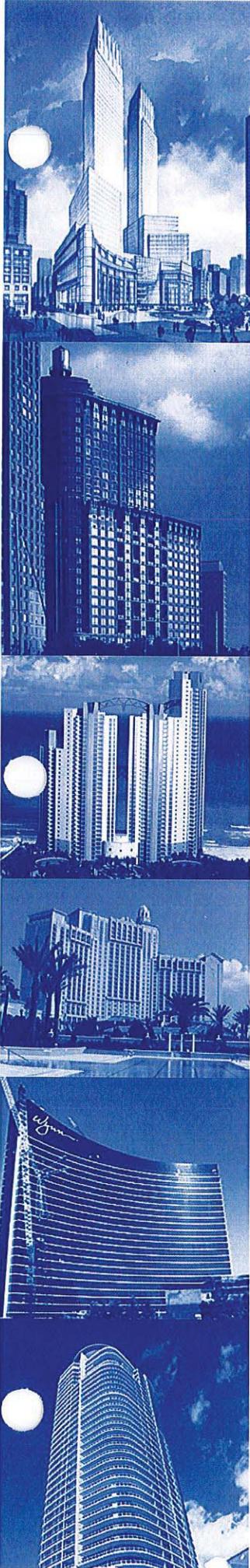
Prepared for:
Pasha Group, LLC
Brooklyn, New York

October 3, 2012
IVI Project No.: PC20901774



IVI Assessment Services, Inc.

THIS REPORT IS THE PROPERTY OF IVI AND PASHA GROUP, LLC AND WAS PREPARED FOR A SPECIFIC USE, PURPOSE, AND RELIANCE AS DEFINED WITHIN THE AGREEMENT BETWEEN IVI AND PASHA GROUP, LLC AND WITHIN THIS REPORT. THERE SHALL BE NO THIRD PARTY BENEFICIARIES, INTENDED OR IMPLIED, UNLESS SPECIFICALLY IDENTIFIED HEREIN.





PROPERTY CONDITION & ENVIRONMENTAL
DUE-DILIGENCE

IVI ASSESSMENT SERVICES, INC.

55 West Red Oak Lane
White Plains, New York 10604
(914) 694-9600 (tel)
(914) 694-1335 (fax)
www.ivi-intl.com

October 3, 2012

Mr. Marvin Mitchell
Pasha Group, LLC
157 Congress Street, Apt 1
Brooklyn, New York 11201-6184
Karen.wiedenmann@cushwake.com

Re: Phase I Environmental Site Assessment
546 West 44th Street
New York, New York 10036
IVI Project No.: PC20901774

Dear Mr. Mitchell:

IVI Assessment Services, Inc. ("IVI") is pleased to submit this copy of our Phase I Environmental Site Assessment on the above-referenced property. This report outlines the findings of IVI's site reconnaissance, historical land use research, review of governmental records, interviews, and our Pre-Survey Questionnaire.

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 312 and 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*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Please contact the undersigned at **914.694.9600 (x-5070)** or by email at maria.sinnamon@ivi-intl.com should you have any questions.

Sincerely,

IVI Assessment Services, Inc.

Maria Sinnamon
Environmental Professional

NEW YORK · ATLANTA · AUSTIN · CHICAGO · LAS VEGAS
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This report documents IVI's findings from our Phase I Environmental Site Assessment on the property located at 546 West 44th Street, New York, New York (the "Subject"). The property, which is situated in an urban area characterized by residential and commercial retail development, consists of a 0.63-acre parcel improved with a 92-year-old (built in 1920) two-story garage. Historically, the Subject site was developed with several low rise buildings in the late 1800's through the early 1900's. The existing building was constructed in 1920 and by 1980 was the only structure on-site. Prior to 1977 the Subject was identified as utilized for an auto repair shop, a garage, and auto sales. From 1977 to 1987 the Subject was the location of a trucking business with automotive repair only conducted on the trucks associated with the on-site trucking business. In 1978, two 4,000 gallon gasoline underground storage tanks were installed to fuel the trucks associated with the on-site trucking business. The tanks were no longer in use after 1988 and were removed in 1999. In 1988, the trucking business moved and the Subject building operated as a public parking garage. An illegal body shop operated on part of the upper level of the Subject building for approximately three and a half years. From 2003 to 2006 the basement was leased to a transmission repair business. From 2006 to 2011 the entire Subject property was leased to United Rentals International (URI) for construction equipment rental and material sales. The Subject site currently operates as public parking for URI by Central Parking Corp.

The purpose of this Phase I Environmental Site Assessment was to assess existing site conditions and render an opinion as to the identified or potential presence of recognized environmental conditions in connection with the property within the scope and limitations of ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05 and the limitations identified herein. Exceptions to or deletions from the scope of work are described in Section 2.0.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

Historical Usage and Former Underground Storage Tanks

Automotive repair and fueling was historically conducted on the Subject. Prior to 1977 the Subject was utilized for automotive repair. From 1977 to 1987, the Subject was the location of a trucking business with automotive repair only conducted on the trucks associated with the on-site trucking business. In 1978, two 4,000 gallon gasoline underground storage tanks were installed to fuel the trucks associated with the on-site trucking business. In addition, an illegal body shop operated on part of the upper level of the Subject building for approximately three and a half years after 1987 and from 2003 to 2006 the basement was leased to a transmission repair business. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts.

Based on our review of a report titled *Closure Report for Underground Storage Gasoline Tank Property Located at 541 West 43rd Street, NYC, NY 10036* (the "Report") prepared by DCES, the two 4,000 gallon gasoline USTs were removed from the Subject during 1999. The report indicated that post closure soil testing was conducted. The post-tank removal samples did not exhibit concentrations of contamination warranting remediation. The removed tanks have a closed status with regulatory authorities and are considered a historic REC. However, due to the "E" Designation placed on the Subject, as discussed further below, the area of these two former gasoline USTs will need to be further investigated prior to any new construction or change in use of the Subject taking place. Further, based on our review of historical Sanborn Maps, a 550 gallon gasoline UST is identified within the northeastern portion of the Subject building, though the exact location was not depicted. No further information pertaining to this UST was discovered through this assessment and there is the potential for it to remain on-site. It is unknown if the soils and/or groundwater beneath the Subject have been impacted by the UST.

Based on the above, IVI considers the historical usage of the site a REC. In addition, due to the past site use a vapor encroachment condition cannot be ruled out. IVI recommends a subsurface investigation be conducted to determine the disposition of the 550 gallon gasoline UST and determine if historic automotive repair activities, fueling operations, and underground storage tanks have impacted the subsurface.

Adjacent Property with RECs

IVI observed a monitoring well adjacent to the north of the Subject site within the sidewalk along West 44th Street. IVI additionally observed an additional monitoring well in the sidewalk further east along West 44th Street. The wells were fitted with secured caps and are associated with the eastern adjacent property, the New York City Public Library Annex Property Spills site located at 521 West 43rd Street (Spill No. 1103225).

Spill No. 1103225 was reported for this eastern adjacent site on May 11, 2011. The site is proposed to be a new primary/intermediate public school and high school. Currently the building is a six-story storage building with basement owned by the New York Public Library. During a Phase I in September 2010 RECs identified for this site included: historical structures which could potentially result in historical fill material from demolition under the building; historical usages including varnish and machinery storage, a garage with a 550 gallon gasoline UST, motor repair shop, and other manufacturing operations; the existence of two No. 2 fuel oil ASTs with identified staining; staining within the building likely from equipment leaks; and the site inclusion as a RCRA Large Quantity Generator.

A Phase II investigation was performed at the site in July 2010. Sub-slab vapor samples identified petroleum and chlorinated solvent compounds exceeding standards. Eighteen soil borings were advanced in the site building and sidewalk. During soil sampling observations of petroleum impacts were observed. Five metals (arsenic, cadmium, total cadmium, lead, and mercury) were detected in soil samples at concentration greater than Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, Light Non-Aqueous

Phase Liquid (LNAPL) was identified on groundwater (perched water above bedrock). Fingerprint analysis indicated that a LNAPL sample exhibited characteristics of an unknown motor oil and a non-calibrated fuel type. Two bedrock groundwater monitoring wells were installed in the sidewalks outside the building. Sampling of these wells did not identify volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), metals, cyanide, PCBs or pesticides above the Class GA Values in groundwater collected from the bedrock aquifer.

Given the proximity and upgradient hydrogeological relationship to the Subject there is the potential for this open Spills site to have impacted the Subject including the potential for the LNAPL on groundwater to have migrated to the Subject. In addition, due to the detection of sub-slab vapor concentrations of petroleum and chlorinated solvent compounds exceeding standards from this adjacent site and the presence of LNAPL there is a potential for a vapor encroachment condition (VEC) at the Subject and a VEC cannot be ruled out. IVI recommends that the above recommended subsurface investigation be expanded to include investigating potential impacts from the eastern adjacent Spills site located at 521 West 43rd Street.

In addition, the following items of environmental concern were identified which warrant mention:

New York City Little "E" Designation

Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an "E" Designation has been declared on the Subject (Block 1072, Lot 50). An "E" Designation is a New York City zoning map designation that indicates the presence of environmental requirements pertaining to potential Hazardous Materials Contamination, Window/Wall Noise Attenuation, or Air Quality impacts on a particular tax lot. In the case of the Subject, it pertains to potential Hazardous Materials Contamination and Window/Wall Noise Attenuation. "E" Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action.

More specifically, an E-268 designation related to the West Clinton Rezoning, of which the Subject is a part of, has been placed on the Subject property effective June 14, 2011. According to the Negative Declaration for the West Clinton Rezoning, created by the City Planning Commission and dated January 3, 2011, The New York City Department of Planning (DCP) and Manhattan Community Board 4 (CB 4) are proposing zoning map and text amendments affecting all or portion of 18 blocks in the West Clinton neighborhood in Manhattan, Community District 4. The proposed action will include a zoning map amendment changing M1-5, M2-3, and M3-2 zoning districts to R8, R8A/C2-5, R9, R9/C2-5 and M2-4 zoning districts. The Subject was previously zoned M1-5 and is currently zoned R9. One of the objectives of the proposed actions is to provide new opportunities for residential development, including new affordable housing,

in the West Clinton neighborhood. Within the Negative Declaration document the Subject was identified as Projected Development Site 4 and the Subject's "E" designation pertains to hazardous materials and window/wall noise attenuation.

Hazardous Materials – Phase I and Phase II Testing Protocol

The Subject is identified under the E-268 designation under Hazardous Materials that includes a Phase I and Phase II Testing Protocol. Historical records indicate that automobile repair has been conducted on the Subject intermittently since construction of the existing building in 1920. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts. In addition, underground storage tanks (USTs) were formerly in-use on the Subject. Two 4,000 gallon USTs were removed from the Subject in 1999 and historical Sanborn Maps identify a 550 gallon UST in the northeastern portion of the building. As such, there is the potential for USTs to remain on-site. An in-ground automobile lift also remains on-site located on the northern façade of the building. There is the potential for on-site USTs and automobile lifts to have impacted the subsurface.

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 is avoided. The "E" designation provides New York City Office of Environmental Remediation (OER) with a mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development. The Subject's "E" Designation pertaining to hazardous materials ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the "E" Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Office of Environmental Remediation (OER) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). More specifically, the fee owner of the lot restricted by the "E" designation must submit to the OER, for review and approval, a Phase IA 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 the protocol is received from the OER. A written report with findings and a summary of the data must be submitted to the OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such tests results, a determination will be 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. These requirements for the "E" Designation also include a mandatory construction-related health and safety plan, which must also be approved by the OER. However, until any new construction or change in use takes place, the Owner/Operator may continue to use the property in any legal

manner, as they did before the “E” Designation, for as long as they would like. In the event that any new construction or change in use takes place, IVI would recommend that all the environmental requirements of the “E” Designation be satisfied.

Drums for Storing Waste

IVI observed two partially filled 55-gallon drums in the area of the former ASTs’ concrete pads located adjacent to the building to the northwest. The contents of the drums, which were unlabeled, are not known. The drums are stored on an impervious surface, and were observed to be in satisfactory condition. Since these drums do not appear to be in use on-site, IVI recommends that the contents be characterized and disposed of following applicable local, state, and federal regulations.

Asbestos-Containing Material (ACM)

Based on the age of the Subject building, the potential on-site use of ACMs exists, although the Subject building was gut renovated in 2006, thereby reducing the amount of ACM. However, it is noted that although unlikely due to the age of the improvements, the non-friable materials, such as resilient floor finish assemblies, mastics, caulking, and roofing materials, may contain asbestos. No asbestos surveys were provided for our review and as such, there is the potential for ACM to also exist in inaccessible locations such as behind walls, above ceilings, and beneath visible flooring. The observed non-friable materials were in good condition and the potential for fiber release is low. As such, no further action is recommended at this time. However, in the event that building maintenance, renovation, or demolition requires the removal or disturbance of the suspect ACM, these materials should be characterized for asbestos by a reliable method. All activities involving ACM should be conducted in accordance with governmental regulations.

Lead Based Paint (LBP)

Since the Subject was constructed prior to the Consumer Product Safety Commission’s 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Testing would be required in order to determine whether LBP exists. Notwithstanding, the extensive interior renovations conducted on the Subject building in 2006 reduce the likelihood that LBP exists. Painted surfaces observed were in satisfactory condition. IVI recommends that all painted surfaces be handled in accordance with the OSHA Lead in Construction (CFR Part 1926.62) and EPA Renovate Right regulations and RCRA guidelines.

2.1 General

IVI was retained by Pasha Group, LLC (“Client” or “User”) to prepare a Phase I Environmental Site Assessment, in conformance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05 on the Subject in accordance with our Agreement dated September 18, 2012.

2.2 Purpose and Scope

2.2.1 Purpose

The purpose of this report is to identify Recognized Environmental Conditions in connection with the property, using the methodology recommended by ASTM International in order for a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser defenses to CERCLA liability and/or to help understand potential environmental conditions that could materially impact the operation of the business associated with the Subject. Specifically, this methodology is referred to as *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* Designation: E 1527-05.

The term Recognized Environmental Condition is defined by ASTM Standard E 1527-05 as “...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.”

2.2.2 Scope

In general, the scope of this assessment consisted of reviewing readily available information and environmental data relating to the property; interviewing readily available persons knowledgeable about the site; reviewing readily available maps, aerial photographs and records maintained by federal, state, and local regulatory agencies; and conducting a site visit.

Of importance, the client is advised that federal, state, and local laws may impose environmental assessment obligations beyond the scope of this practice. Client is also notified that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the Subject that are not addressed in this practice and that may pose risks of civil and/or criminal sanctions for non-compliance.

The specific scope of this assignment included the following:

2.2.2.1 Performing a site reconnaissance to characterize on-site conditions and assess the site’s location with respect to surrounding property uses and natural surface features. In addition, IVI conducted a reconnaissance of the surrounding roads and readily accessible adjacent properties to identify obvious potential environmental conditions on neighboring properties. Photographs taken as part of the site reconnaissance are provided in Appendix A.

The site visit was conducted on September 24, 2012, by Jessica Mosbey representing IVI and represented by Mario Andre, a representative of Central Parking. It was sunny and the temperature was approximately 70° F at the time of our site survey. IVI conducted the site reconnaissance in a systematic manner focusing initially on the exterior, which was surveyed in a grid pattern. IVI also surveyed a representative sampling of the interior spaces in a systematic manner.

2.2.2.2 Interviewing persons familiar with the property to obtain information on present and previous on-site activities potentially resulting in the environmental degradation of the site or adjoining properties. A Pre-Survey Questionnaire to be filled out and returned to IVI by someone knowledgeable about the site was provided to Marvin Mitchell, Managing Member of Pasha Group LLC. A completed copy of the Pre-Survey Questionnaire is provided in Appendix B.

The following table presents a summary of the individuals contacted or to whom requests for documentation were made as part of this assessment:

Name	Affiliation	Telephone No.
Rena Bryant	New York City Department of Health	(212) 788 - 5013
Records Access Officer	New York City Department of Environmental Protection (NYCDEP)	(718) 595 - 6530



Building Information System (BIS)	New York City Department of Buildings	(212) 312 - 8062
Fawzy I. Abdelsadek	New York State Department of Environmental Conservation (NYSDEC)	(718) 482 - 4949
Bureau of Fire Prevention	New York City Fire Department	(718) 999 - 2442
Karen Wiedenmann	New York Capital Markets Group, Cushman & Wakefield, Inc. – Executive Director	(212) 841 – 5097
Mario Andre	Subject Property	(917) 586 - 3944
Marvin Mitchell	Subject Property	(718) 624-3859

- 2.2.2.3 If provided, reviewing of information such as previously prepared appraisals, building plans and specifications, and environmental reports.
- 2.2.2.4 Reviewing readily available historical documents, such as topographic maps, aerial photographs, city directories, Sanborn Fire Insurance Maps and atlases, to identify previous activities on and in the vicinity of the Subject. Copies of these documents are included in Appendix C.
- 2.2.2.5 Reviewing readily available environmental databases maintained by federal, state, and local agencies within the approximate minimum search distances as described within the Regulatory Review Section 6.0 of this report. A copy of the Computerized Environmental Report, provided by Environmental Data Resources, Inc. can be referenced in Appendix D.
- 2.2.2.6 Conducting a visual survey of readily accessible common areas to identify the presence of the most obvious and common types of suspect asbestos containing materials (ACM). The basis for “suspect” determination is taken from the materials listed in Appendix G of the United States Environmental protection Agency (USEPA) publication Managing Asbestos in Place (also known as the Green Book). All building materials listed within Appendix G of the Green Book are considered to be suspect ACMs at the Subject. This screening is not intended to be used for demolition, abatement, renovation, or repair work.

THIS LIMITED SURVEY IS NOT TO BE CONSTRUED AS A COMPREHENSIVE ASBESTOS SURVEY, WHICH OFTEN ENTAILS DESTRUCTIVE TESTING OR THE SURVEY OF AREAS BEHIND WALLS, ABOVE CEILINGS, IN TENANT



SPACES AND IN OTHER TYPICALLY INACCESSIBLE AREAS. MOREOVER, IVI DOES NOT WARRANT THAT ALL ACMs AT THE SUBJECT HAVE BEEN IDENTIFIED.

- 2.2.2.7 Reviewing published radon occurrence maps to determine whether the site is located in an area with a propensity for elevated radon concentrations.
- 2.2.2.8 An analysis of mold and/or mold issues was beyond the scope of this report.
- 2.2.2.9 Assessing the age of the Subject to determine whether it is predisposed to contain lead-based paint. During our walkthrough survey, IVI noted the condition of the paint observed. Note, a compliance audit for lead paint was not conducted.
- 2.2.2.10 Testing, if any, was designed solely to meet the requirements of the client's scope of work, not to meet any local, State or Federal regulations and shall not be utilized as such.

2.3 Data Gaps

According to § 3.3.20 of ASTM Standard E 1527-05 a data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts to gather same. Data gaps may result from incompleteness in any of the activities required by the ASTM Standard. The following data gaps occurred in connection with this report:

Data Gap	Explanation	Significance of Gap
Site History	History not conducted back to a time when the site was undeveloped land (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as aerial photographs, historic topographic maps, city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.

2.0 INTRODUCTION

546 West 44th Street
New York, New York

Data Gap	Explanation	Significance of Gap
Site History	Site history not conducted in 5-year intervals (See § 5)	Low - not likely to alter Report's conclusions due to IVI's search of standard historical sources of information such as aerial photographs, historic topographic maps, city directory abstracts, Sanborn Fire Insurance Maps, reviews of previous investigations and interviews with knowledgeable individuals who were familiar with the property.
Former Owner or Operator Interview	Unable to interview former site owner or operator due to inability to locate	Low - not likely to alter Report's conclusions
Governmental Records	FOIAs not returned (See § 8.6)	Unknown - However, if receipt of FOIAs alters the Report's conclusion, the client will be notified

3.0 SALIENT ASSIGNMENT INFORMATION

546 West 44th Street
New York, New York

Salient Assignment Information	
IVI Project No.:	PC20901774
Project Name:	546 West 44th Street
Street Address:	546 West 44th Street
City, State and Zip:	New York, New York 10036
Primary Use:	Garage
Year Built and Age of Improvements:	1920; 92 years-old
Site Area:	0.63 Acres
Building Size:	7,500 SF
Reported Number of Units:	One Unit
Number of Buildings:	One



4.1 Property Location

The Subject is located at 546 West 44th Street in the Borough of Manhattan, New York City, New York and is identified on local tax maps as Block 1072, Lot 50. According to the review of the New York City Department of Buildings, Building Information System (BIS), the address range for the Subject site includes 533-541 West 43rd Street and 534-546 West 44th Street. Please refer to the Site Plan and maps provided within Appendix C.

4.2 Surrounding Land Use

The Subject property is located in an urban setting characterized by residential and commercial retail development. The following is a tabulation of surrounding property usage:

Direction	Adjacent Properties	Surrounding Properties
North	Beyond West 44 th Street is 592 11 th Avenue, a 7-story building currently under construction.	Surrounding properties to the north include commercial and residential development.
South	Beyond West 43 rd Street are 529 West 42 nd Street, a 9-story residential building with street level retail space; 550 West 43 rd Street, a 22-story residential building; and 552 West 43 rd Street, a 8-story mixed use building.	Surrounding properties to the south include commercial and residential development.
East	Abutting the Subject to the east is 530 West 44 th Street, a 6-story building currently under construction.	Surrounding properties to the east include commercial and residential development. A Hess gasoline station is located at the corner of 10 th Avenue and West 44 th Street.
West	Abutting the Subject to the west is 543 West 43 rd Street, Manhattan Mini Storage, a 7-story building.	Surrounding properties to the west include commercial and residential development.

4.3 Physical Site Setting

4.3.1 Size and Shape of Parcel

The property is irregular in shape and 0.63-acres in size and exhibits road frontage to the north along West 44th Street and to the south along West 43rd Street.



4.3.2 Topography

The site is essentially level and at the same approximate topographic gradient as the surrounding properties. The topography of the area is best described as gently sloping. According to the United States Geological Survey (USGS) *Central Park, N.Y.-N.J. 7.5 Minute Series* topographic map, the Subject's topographic elevation is approximately 18' above mean sea level (msl).

4.3.3 Surface Waters and Wetlands**Surface Waters**

There are no surface water bodies or streams on or adjacent to the Subject. The closest open surface water to the Subject is the Hudson River, which is located approximately 0.20 mile to the west.

Wetlands

IVI did not observe any areas suspected to be wetlands on-site.

4.3.4 Soils, Geology and Groundwater**Soils**

The soils at the site are classified as Urban Land. Urban Land complex are those soils in which the soil's original structure and content have been so altered by human activities that it has lost its original characteristics and is thus unidentifiable.

Geology

There are no predominant geological surface features such as rock outcroppings on the Subject. The bedrock at the site is Precambrian in age, approximately one billion years old, and consists of gneiss and schists that are a part of the Manhattan Prong, a portion of the Appalachian Piedmont. The older of the Manhattan Prong sequence found in central Manhattan is the Manhattan Schist which is overlain by the Hartland Formation, a granulite. Both units are of very high metamorphic grade having been metamorphosed at a great depth in the earth's crust and later thrust to the surface during the Appalachian mountain building episode, about 350 million years ago.

Groundwater

Under natural, undisturbed conditions, shallow groundwater flow generally follows the topography of the land surface and on this basis; the topography suggests that groundwater flow across the site is in a westerly direction. However, localized conditions can alter flow direction and thus the presumed flow may not coincide with the actual in the Subject area. Shallow groundwater in the vicinity of the site is anticipated to be encountered at a depth of approximately 66' below ground surface.

4.4 Site Improvements**4.4.1 Utilities**

The Subject is served with the following utilities:

Water:	New York City Department of Environmental Protection (NYCDEP)
Sanitary Sewer:	NYCDEP
Storm Sewer:	NYCDEP
Electric:	Consolidated Edison (Con Ed)
Natural Gas:	Consolidated Edison

Potable water is provided to the Subject via underground tunnels and pipes by the City of New York, which derives it from surface reservoirs in the Croton, Catskill, and Delaware watersheds.

Stormwater runoff collected by roof drains is discharged into the municipal stormwater management system.

4.4.2 Building Description

The Subject is improved with an approximately 92-year-old, two-story garage building. Site improvements include the Subject building, two prefabricated metal sheds, and ancillary site work. The main building basement features poured concrete and masonry walls with superstructures of masonry construction. Exterior walls feature brick siding. The flat roof is covered with a smooth-surface built-up roofing system.

Interior finishes include floor coverings of resilient floor tile, ceramic tile, and bare concrete; walls of painted gypsumboard and interior painted brick; and ceilings typically consist of a suspended system with inlaid acoustical ceiling tiles, plaster with a textured finish, and open exposed underside of ceiling.

Heating is provided by a gas-fired boiler located in the basement and additionally the Subject building is provided with heat and cooling via rooftop package units. Further, a A/C condenser unit is located along the eastern side of the building reportedly for ground level office space. The Subject is not provided with vertical transportation systems.

The two sheds are of prefabricated metal construction. Sidings and roofs consist of corrugated metal.

4.5 Current Property Use

The Subject is developed with a two-story garage and is additionally used as a parking lot for Central Parking. Currently, the facility is only used for parking purposes in the paved driveway areas and not within the building. Based on the operations currently conducted at the Subject, significant quantities of hazardous waste are not generated. The current on-site activities are not suspected to have degraded the environmental quality of the Subject site.

4.6 Environmental Permits

The following environmental permits have been issued or are required at the Subject:

Petroleum Bulk Storage:

The New York State Department of Environmental Conservation (NYSDEC) requires that all facilities with PBS capacity over 1,100 gallons to register each aboveground storage tank (AST) and underground storage tank (UST).

UST

The Subject site is identified to have had two 4,000 gallon gasoline USTs removed from the site in 1999. These tanks were registered with the NYSDEC under Permit No. 2-296473. These tanks appear to have additionally been registered under Permit No. 2-603858. Please refer to Section 5.6 and 7.2 for further information regarding same.

AST

The former tenant of the Site, United Rentals (North America), Inc. was included in the AST database with NYSDEC Permit No. 2-610875. This tenant was reported to have formerly been served by a 1,000 gallon AST, and three (3) 180 gallon ASTs, which were all removed in 2011. Please refer to Section 7.2 for further information regarding same.

4.7 Plans and Specifications

IVI reviewed the following Site Survey as a part of our review:

- *Survey of Property Situated in: 546 West 44th Street, Borough of Manhattan, County of New York, City of New York, State of New York* prepared by Fehringer Surveying, P.C.

Based on the review of this document, IVI identified a monitoring well located along West 44th Street adjacent to the north of the Subject. Refer to Sections 6.2 and 7.8 for further discussion regarding this monitoring well associated with the eastern adjacent property.

5.1 Historical Summary

Historically, the Subject site was developed with several low rise buildings in the late 1800's through the early 1900's, which were utilized as dwellings, a factory, and for various commercial and retail purposes. A stone yard was also identified on the northern portion of the Subject in the early 1900s. The existing building was constructed in 1920 and by 1968 was the only structure on-site. Prior to 1977 the Subject was identified as utilized for an auto repair shop, a garage, and auto sales.

The Subject property was purchased by the current owner, Marvin Mitchell, in 1977 as a location for his father's trucking business. Automotive repair was conducted onsite from 1977 to 1987 only on the trucks associated with the on-site trucking business. In 1978, two 4,000 gallon gasoline underground storage tanks were installed to fuel the trucks associated with the on-site trucking business. The tanks were no longer in use after 1988 and were removed in 1999. In 1988, the trucking business moved and the Subject building operated as a public parking garage. An illegal body shop operated on part of the upper level of the Subject building for approximately three and a half years. From 2003 to 2006 the basement was leased to JAZ Transmissions (transmission repair). From 2006 to 2011 the entire Subject property was leased to United Rentals International (URI) for construction equipment rental and material sales. The Subject site currently operates as public parking for URI by Central Parking Corp.

5.2 Topographic Maps

IVI reviewed the USGS *Central Park, N.Y.-N.J. 7.5 Minute Series* topographic map of the Subject area, which is based on aerial photography taken in 1966, and last revised in 1995. The topographic map does not identify individual buildings or development on the Subject property due to the concentration of structures in the highly urbanized Manhattan area, but rather shows the area in red tint denoting urbanized land use, and identifies only landmarks as distinct structures. Nevertheless, the topographic map does not identify any industrial complexes, landfills or wetlands on or adjacent to the Subject site.

5.3 Historical Maps**Sanborn Fire Insurance Maps (Sanborn Maps)**

IVI had a search conducted for Sanborn Maps, which reference the property. The findings of this review are summarized below:

Year	Subject Property	Adjacent and Surrounding Properties
1890	The Subject site is depicted with multiple lots that are developed with multiple low rise structures along West 43 rd and West 44 th Street. Structures are noted to be commercial and grocery stores.	Adjacent and immediate surrounding properties are depicted to be developed with low rise structures.
1899	At least two of the structures on West 44 th Street have been razed.	Similar to the previously reviewed 1890 Sanborn Map.
1911	Properties along West 44 th Street are noted to be a stone yard, and 4 and 5-story dwellings. Properties along West 43 rd Street are noted to be 1-5 story structures with street level retail spaces and include a scene painter, wagon house, factory, laundry facility, and a dwelling.	Adjacent properties are depicted to be low rise dwellings with street level retail spaces and office space, Engine Co. No. 2, a kindling wood factory and a piano factory.
1930	The existing structure is depicted to have been developed in 1920 and is identified as Park & Tilford and utilized as a garage and auto repair shop. A 550 gallon buried tank is identified in the northeastern section of the building. Additional structures along West 43 rd Street include two 5-story buildings with street level retail space at 533 West 43 rd Street, occupied by a scene painter. Improvements along West 44 th Street continue to be depicted as a stone yard, and four low rise dwellings.	Adjacent to the west is identified as Park & Tilford Candy Manufacturing facility built in 1919/1920. Adjacent to the east includes a garage (with a buried 550 gallon tank), and a 5-story dwelling. To the south is depicted to be Lane Yard Facility, a fire engine company, and low rise dwellings with street level retail space.
1950	Only three structures are depicted on the Subject site and the other structures appear to have been razed. The remaining structures include the existing structure, a 5-story building at 533 West 43 rd Street, and a 4-story structure are 540 West 44 th Street.	The eastern adjacent property is identified as a factory and office. The southern adjacent property is noted to be US Government occupied, a film laboratory, and vacant. The northern adjacent property is an auto parking lot with a Taxi terminal located on the corner of 44 th Street and 11 th Avenue. This terminal is served by five gasoline tanks located to the northwest. Additional northern adjacent properties include a metal works facility.
1968	Only the existing structure and the 5-story building at 533 West 43 rd Street are depicted. The northern portion of the site is noted to be used for parking. The existing structure is now labeled as Auto Sales & Service.	The formerly depicted taxi terminal to the north appears to have been razed. The northern adjacent property appears to be undeveloped.



Year	Subject Property	Adjacent and Surrounding Properties
1980	Only the existing structure is depicted. The northern portion of the site is noted to be used for parking.	The northern adjacent property is identified to be used as parking.
1985	Similar to the previously reviewed 1980 Sanborn Map.	The southern adjacent property is identified as The Armory Apartments.
1990	Similar to the previously reviewed 1985 Sanborn Map.	Similar to the previously reviewed 1985 Sanborn Map.
1996	Similar to the previously reviewed 1990 Sanborn Map.	The eastern adjacent property is identified as the NY City Library. The western adjacent property is identified as mini storage.
2001	Similar to the previously reviewed 1996 Sanborn Map except that the southeastern portion of the property is noted to be used for parking.	Similar to the previously reviewed 1996 Sanborn Map.
2005	Similar to the previously reviewed 2001 Sanborn Map.	Similar to the previously reviewed 2001 Sanborn Map.

The Subject was identified as an auto repair shop and with a 550 gallon gasoline underground storage tank (UST) from 1930 to 2005. There is the potential for former auto repair operations and the UST, which has the potential to remain onsite, to have impacted the Subject. The Subject’s former use represents a REC.

The 1950 Sanborn Map identified a terminal with five gasoline tanks located to the northwest of the Subject. Groundwater flow across this site is suspected to be towards the west, away from the Subject. As such, it is not suspected that these former tanks have had a significant negative environmental impact on the Subject.

An adjacent property to the east was identified with a 550 gallon UST on the 1930 Sanborn Map. This site is an open Spills site identified as 521 West 43rd Street and has to potential to have negatively impacted the Subject. Refer to Section 6.2 for further discussion.

5.4 Aerial Photographs

Inasmuch as the Subject has been sufficiently covered by other standard historic information sources, historic aerial photographs were not consulted as part of this assessment. However, IVI reviewed a current aerial photographs provided by Google Earth. The following is a synopsis of the aerial photograph reviewed:

Year	Subject Property	Adjacent and Surrounding Properties
2012	The Subject site appears to be developed with the existing improvements.	The adjacent and immediate surrounding properties appear to be developed with the



Year	Subject Property	Adjacent and Surrounding Properties
		existing improvements.

5.5 Chain-of-Ownership

IVI reviewed information regarding the ownership of the Subject, obtained from Property Shark. Inasmuch as the chain of ownership only provides the names of the previous owners and little information, if any, about the actual uses or occupancies of the property, this information was consulted in conjunction with other standard historical sources. The title information is summarized below:

Title Holders	Year of Transfer
Marvin Mitchell, Eleanor Mitchell, Kira Wizner, Hilary Mitchell	2/3/2006
Marvin Mitchell, Pasha Group LLC	4/6/1999

5.6 Previous Reports

IVI reviewed a previous environmental document related to the Subject. The information obtained was not verified for accuracy by IVI and a critique of the document was beyond the scope of this assessment.

- Closure Report for Underground Storage Gasoline Tank, Property Located at 541 West 43rd Street, NYC, NY 10036* dated May 1999 prepared by Don Carlo Environmental Services Inc. (DCES) on behalf of Marvin Mitchell. According to this report, DCES supervised and monitored the removal/closure of two 4,000 gallon gasoline tanks at the Subject site. These tanks were located along the eastern façade of the Subject building. It appeared that the tanks were not used for more than ten years and the gas pump was no longer connected.

The tanks were pumped out and emptied on April 21, 1999 of gasoline and water by AB Environmental of Long Island, NY. Excavated soil was stockpiled onsite and observed accordingly for any discoloration or organic odor. Samples were collected using a Photoionization detector (PID), and no reading of organic vapor was identified in samples collected from the excavated stockpile taken within the sub-surface perimeter of the gasoline tank grave.

Visual assessment of the tanks did not identify any holes. The tanks were removed and according to field soil testing and visual observation and site assessment it was concluded that there was no migration of contamination present in the soil taken from the parameter of the tank grave location and area of excavation.

Post closure sampling was conducted within the tank graves and soil samples were analyzed for Volatile Organic Compounds (VOC) EPA 8021 (test for gasoline containing materials). Analytical results indicated that VOC concentrations were below the regulatory limits per EPA Star Memo #1 and NYSDEC 6 NYCRR Part 360. Tank graves were then filled with clean fill.

5.7 City Directories

Historical City Directories obtained by EDR were reviewed for 546 West 44th Street. The address range search included 537 – 557 West 44th Street. These directories provide site occupant listings by address. This review yielded the following information:

Year	Subject Property	Surrounding Properties
1920	546 W 44 th Street: Residential listings	Not included in research source.
1927	Subject address along 44 th Street not included in research source.	West 44th Street: (539) Residential listings, (541) Residential listings, (543) Residential listings, (545) Residential listing, (556) Residential listing, (557) Residential listing
1931	546 W 44 th Street: Residential listings 542 W 44 th Street: Residential listings 544 W 44 th Street: Residential listings	West 44th Street: (537) Residential listings, (539) Residential listings, (541) Residential listings, (542) Residential listings, (543) Residential listings, (548) Residential listing, (549) Residential listing, (551) Residential listing, (552) Residential listing, (553) Residential listing (555) Residential listing, (557) Residential listing
1938	540 W 44 th Street: Ferris & Rosborough Inc. Truckmen	West 44th Street: (548) Park & Tilford Distillers Inc., (556) Acme Ornamental Bronze & Iron Works
1942	Subject address along 44 th Street not included in research source.	West 44th Street: (548) Park & Tilford Distillers Inc., (556) Koss L Paint Shop
1947	Subject address along 44 th Street not included in research source.	West 44th Street: (548) Park & Tilford Distillers Inc.



Year	Subject Property	Surrounding Properties
1956	Subject address along 44 th Street not included in research source.	West 44th Street: (555) Residential listing, (556) L&M Transportation Co.
1963	Subject address along 44 th Street not included in research source.	West 44th Street: (553) L&M Transportation Co.
1978	Subject address along 44 th Street not included in research source.	West 44th Street: (549) Residential listing
1983	Subject address along 44 th Street not included in research source.	West 44th Street: (550) Residential listing
2006	540 West 44 th Street: Allstate Auto Rental Leasing 546 W 44 th Street: No current listing.	West 44th Street: (551) Ali Auto Transmission
2007	540 West 44 th Street: Allstate Auto Rental Leasing	Not included in research source.
2012	540 West 44 th Street: Central Parking System	West 44th Street: (551) Ali Auto Transmission

Refer to Appendix F for a copy of the City Directory Abstract.

5.8 Interviews

According to Mario Andre, a representative of Central Parking, who has been involved with the Subject for the past two years, the Subject site has historically been used for garage and parking usages and the previous tenant included United Rentals who vacated the property two years ago. Further, Mr. Andre informed IVI that formerly there was at least two aboveground storage tanks (ASTs) located adjacent to the building on concrete pads which have since been removed (when United Rentals vacated the property). Mr. Andre was unaware of any former underground storage tanks at the site.

According to Mr. Marvin Mitchell, the current property owner, he purchased the property in 1977 as a location for his father’s trucking business. At that time the Subject building was a vacant, unheated garage with a small office space on the first level up from the street. No evidence of auto repair, gasoline vending, or tanks was apparent onsite. In 1978, two 4,000 gallon gasoline underground storage tanks were installed on the eastern side of the Subject building so the trucks associated with the on-site trucking business could continue to operate if there was another gasoline shortage. The gasoline was never for sale to the public. The trucks were also serviced on the lower level by an employed mechanic.



In approximately 1988 the trucking business moved from the building and it was once again operated as a public garage. The garage operator briefly had a body shop (approximately three and a half years) on a portion of the upper level and was told it was in violation of NYC Codes. The body shop was subsequently removed and the facility once again was only a parking lot and garage. The UST's were no longer in use.

In 1999, the USTs were removed as detailed by Don Carlo Environmental Services. Soil testing revealed no environmental issues. The UST removal was conducted in compliance with NYC and all other regulations. Refer to Section 5.6 for discussion of the Subject's UST closure report.

In January 2003 the basement was leased to JAZ Transmissions (a Lee Mules Franchise). They filed an Alteration Type 2 Work Permit with the New York City Department of Buildings (NYDOB), #103347344, approved on January 23, 2003 for concrete pads and miscellaneous internal partitions. JAZ Transmissions was evicted for non-payment in August 2006.

On March 1, 2006, the entire Subject property was leased to United Rentals International (URI) for construction equipment rental and material sales. URI filed an Alteration Type 1 Work Permit with NYCDOB, #1044001960, approved on April 11, 2006. The alternation was for a gut renovation. All existing interior partitions were removed and the space was completely reconfigured. The two outdoor hydraulic lifts were installed as part of this renovation. A few years later URI installed above ground storage tanks for their equipment. These tanks were removed when URI left the Subject site. Refer to Section 7.2 for further discussion of the Subject's above ground storage tanks. The Subject is currently operated as public parking for URI by Central Parking Corp. under an operating agreement.

5.9 Municipal Records

Tax Assessor Records

According to the tax assessor records reviewed, the Subject building was constructed in 1950 on a 0.63-acre parcel and is identified on local tax maps as Block 1072, Lot 50. The Subject building is a two-story structure which has all public utilities. The current owner is identified as Pasha Group LLC. Refer to Section 5.5 Chain of Ownership for a tabulation of historical owners.

Building Department Records

IVI reviewed building permits and records for the Subject on the New York City Department of Building, Building Information System (BIS). Based on the review of the BIS, the Subject site is identified on local tax maps as Block 1072,

Lot 50. The Subject site is identified as a Little “E” Designated site for Hazardous Materials and Noise. Refer to Section 6.2 for further information on the Subject’s “E” Designation. Certificates of Occupancies (C of O) were identified pertaining to the Subject site. This review yielded the following information:

Year	Subject Property
1921	533 West 43 rd Street: Single Story Structure occupied by a scenic studio plus cellar.
1921	537 -41 West 43 rd Street: 2-Story plus basement structure used for garage and service station.
1934	540 West 44 th Street: 2-story structure used for storage of lumber.
1950	534-536 West 44 th Street and 536 West 43 rd Street: Parking Lot for more than five vehicles
1950	542-546 West 44 th Street: Parking Lot for more than five vehicles
1954	535 West 43 rd Street and 532-46 West 44 th Street: Parking Lot for more than five vehicles

IVI reviewed Permit Job No. 10201811 dated March 1999 for the removal of two 4,000 gallon gasoline USTs. IVI reviewed Permit Job No. 04762972 dated May 2007 for the installation of one (1) double walled 1,000 gallon diesel AST. Refer to Section 7.2 for further discussion of the Subject’s storage tanks.

In addition work permits for interior renovations were reviewed. An Alteration Type 2 Work Permit (#103347344) was issued on January 23, 2003 for interior partitions, two new bathrooms, and minor mechanical work. An Alternation Type 1 Work Permit (#1044001960) was issued on April 11, 2006 to change a portion of the existing parking lot and garage to contractor’s equipment rental use. An Alternation Type 2 Work Permit (#104460673) was issued on August 17, 2006 for structural modifications in the cellar and first through second floors. The job description included general construction including drywall partitions on the cellar, first through second floors.

5.10 Internet Search

IVI conducted a cursory internet search for the Subject’s name and address using the Google search engine on October 1, 2012. No environmentally related information was identified on the first page of the Google search engine.

6.0 REGULATORY REVIEW

546 West 44th Street
New York, New York

A copy of regulatory database information contained within a Computerized Environmental Report (CER) provided by Environmental Data Resources, Inc. (EDR) appears in Appendix D. The CER is a listing of sites identified on select federal and state standard source environmental databases within the approximate minimum search distance specified by ASTM Standard Practice for Environmental Site Assessments E 1527-05. IVI reviewed each environmental database to determine if certain sites identified in the CER are suspected to represent a material negative environmental impact to the Subject. The following table lists the number of sites by regulatory database within the prescribed minimum search distance appearing in the CER.

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
Federal National Priorities List (NPL) Site List	One-Mile	1
Federal Delisted NPL Site List	One-Half Mile	0
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	One-Half Mile	1
Federal CERCLIS No Further Remedial Action Planned (NFRAP) Sites	One-Half Mile	0
Federal Resource Conservation and Recovery Information System (RCRIS) Treatment, Storage, and Disposal (TSD) List	One-Half Mile	0
Federal RCRIS Generators List	On-Site and Adjoining Properties	2
Federal Corrective Action Tracking System (CORRACTS)	One-Mile	0
Federal Emergency Response Notification System (ERNS) List	On-Site	0
Federal Institutional/Engineering Control Registries	On-Site	0
New York and Tribal Lists of NPL Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Mile	0
New York and Tribal Lists of CERCLIS Equivalent Hazardous Waste Sites Identified for Investigation and/or Remediation	One-Half Mile	0
New York and Tribal Landfills or Solid Waste Facilities List	One-Half Mile	2
New York and Tribal Petroleum Bulk Storage Tank List	On-Site and Adjoining Properties	6
New York and Tribal Leaking UST/Spill List	One-Half Mile	117
New York and Tribal Institutional/Engineering Control Registries	On-Site	0

Databases Reviewed	Approximate Minimum Search Distance (AMSD)	Number of Sites Within AMSD
New York and Tribal Voluntary Cleanup Sites	One-Half Mile	1
New York and Tribal Brownfields Sites	One-Half Mile	1

The CER identified 20 "Orphan Sites". "Orphan Sites" are those sites that could not be mapped or "geocoded" due to inadequate address information. Refer to the CER for a list of these "Orphan Sites". IVI attempted to locate these sites via a review of street maps, vehicular reconnaissance and/or interviews with people familiar with the area. "Orphan Sites" that were identified in this manner were analyzed in their respective regulatory database below.

A description of the databases reviewed by IVI and an analysis of sites identified within the prescribed search area are presented below.

6.1 Federal Databases

NPL

The NPL database is a listing of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund"). A site must be on the NPL to receive money from the Trust Fund for Remedial Action.

Analysis/Comment: The CER identified the following NPL site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Hudson River PCBS	0.20	West	Downgradient	Active

The Hudson River PCBs site is a 40-mile stretch of the Hudson River between Mechanicville and Fort Edward New York. General Electric discharged an estimated 1.1 million pounds of PCBs into this stretch of river. The State has identified 40 "hot spots" defined as sediments contaminated with greater than 50 parts per million (ppm). Also included in the site are five remnant areas, which are river sediments exposed when the level of the river was lowered due to the removal of the Fort Edward Dam. The State has taken initial measures to stabilize the remnant areas from erosion. In September 1980, Congress passed an amendment to the Clean Water Act (CWA) that includes the Hudson River PCB Reclamation Demonstration Project. The EPA issued a final Environmental

Impact Statement in October 1982 evaluation various dredging alternatives for a demonstration project. The EPA has prepared a feasibility study to evaluate alternative remedial actions under CERCLA.

The Hudson River PCBs NPL site is located a sufficient distance from the Subject so as not to be reasonably suspected of having impacted same. As such, it is unlikely that contamination originating at this site has encroached upon the Subject.

Delisted NPL Site List

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the National Contingency Plan (55 FR 8845, March 8, 1990). Sites that have been deleted from the NPL remain eligible for further Superfund-financed remedial action in the unlikely event that conditions in the future warrant such action. Partial deletions can also be conducted at NPL sites.

Analysis/Comment: The CER did not identify Delisted NPL sites within the AMSD.

CERCLIS

CERCLIS is the USEPA’s system for tracking potential hazardous-waste sites within the Superfund program. A site’s presence on CERCLIS does not imply a level of federal activity or progress at a site, nor does it indicate that hazardous conditions necessarily exist at the location. Within one year of being entered into CERCLIS, the USEPA performs a preliminary assessment of a site. Based upon the results of the preliminary assessment, the USEPA may conduct additional investigation, which could lead to a site being listed on the NPL.

Analysis/Comment: The CER identified the following CERCLA site within the AMSD:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Hudson River PCBS	0.20	West	Downgradient	Active

Refer to the above NPL section for additional information.



CERCLIS No Further Remedial Action Planned (NFRAP) Sites

As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” (NFRAP) have been removed from the CERCLIS list. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to warrant Federal Superfund Action or NPL consideration.

Analysis/Comment: The CER did not identify CERCLA NFRAP sites within the AMSD.

RCRIS TSD

The RCRIS TSD contains information pertaining to those facilities that treat, store, or dispose of hazardous waste. While these facilities represent some form of hazardous waste activity, they are most significant if determined to be out of compliance or to have violations.

Analysis/Comment: The CER did not identify RCRIS TSD facilities within the AMSD.

RCRIS Generators

IVI reviewed the list of sites, which have filed notification with the USEPA in accordance with RCRA requirements. These sites include generators of hazardous waste regulated under RCRA. Under RCRA, hazardous waste generators are classified by the quantity of hazardous waste generated in a calendar month into the following categories: Large Quantity Generator (LQG), greater than 1,000 kilograms (kg); Small Quantity Generator (SQG), 100 to 1,000 kg; and Conditionally-Exempt Small Quantity Generator (CESQG), less than 100 kg. RCRA Generators, while they represent some form of hazardous waste activity, are most significant if they are determined to have Class I Violations or to be non-compliant.

Analysis/Comment: The CER identified the following RCRA Generator located within the AMSD:

Property Name/ Address	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Gotham West 530 West 45 th Street	North	Crossgradient	Compliant/No Violations

The northern adjacent property, Gotham West, located at 530 West 45th Street, currently under construction was included on the RCRA-LQG database with Facility Id No. NYR000183178. The site is reported to generate a waste stream



that includes lead. Inclusion of a site on the RCRA Generator list does not necessarily constitute environmental contamination, but instead merely indicates that a hazardous waste stream was or is generated. In any event, inasmuch as no violations or compliance infractions were identified in connection with the above-referenced RCRA site, it is not suspected that contamination origination at this site, if any exists, has encroached upon the Subject.

Property Name/ Address	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
New York Public Library Annex 521 West 43 rd Street	East	Upgradient	Compliant/No Violations

The eastern adjacent property, the New York Public Library Annex, located at 521 West 43rd Street was included on the RCRA – SQG database with Facility Id No. NYR000105007. Refer to the below PBS section for further information regarding this site.

Corrective Action Tracking System (CORRACTS)

CORRACTS is a list of facilities that are found to have had hazardous waste releases and require RCRA corrective action activity, which can range from site investigations to remediation.

Analysis/Comment: The CER did not identify CORRACTS sites within the AMSD.

ERNS

The ERNS is a database of notifications of oil discharges and hazardous substance releases made to the Federal government. These notifications are used by “On-Scene Coordinators” to determine an emergency response and release prevention. When a call is made to the National Response Center or one of the 10 USEPA Regions, a report is created containing all of the release information that the caller provided. This report is transferred to an appropriate agency to evaluate the need for a response and the records are electronically transferred to the ERNS database. As such, if a reported release of oil or a hazardous substance is deemed to require a response, it should also be listed in the appropriate federal or state environmental database such as CERCLIS, state equivalent CERCLIS, or state leaking underground storage tank or spills lists.

Analysis/Comment: The CER did not identify the Subject on the ERNS database.

Federal Institutional Control/Engineering Control Registries

These Federal registries contain listings of those sites which have either engineering and/or institutional controls in place. Engineering controls include various physical control devices such as fences, caps, building slabs, paved areas, liners and treatment methods to eliminate pathways for regulated substances to enter the environment or affect human health. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions (Activity and Use Limitations) are generally required as part of institutional controls.

Analysis/Comment: The CER did not identify the Subject on the Federal Institutional or Engineering Control registries.

6.2 New York State Department of Environmental Conservation (NYSDEC) and Tribal Databases

Registry of Inactive Hazardous Waste Disposal Sites (IHWDS) and Tribal NPL Equivalent State Hazardous Waste Sites (SHWS)

The IHWDS and Tribal NPL Equivalent SHWS list is an inventory of toxic sites listed by New York and/or Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

Analysis/Comment: The CER did not identify IHWDS and/or Tribal NPL Equivalent Hazardous Waste sites within the AMSD.

Vapor Intrusion Legacy Site List

"Vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying or adjacent buildings. The subsurface source can either be contaminated groundwater or contaminated soil which releases vapors into the pore spaces in the soil. Improvements in analytical techniques and knowledge gained from site investigations in New York and other states has led to an increased awareness of soil vapor as a medium of concern and of the potential for exposures from the soil vapor intrusion pathway. Based on this additional information, the NYSDEC is currently re-evaluating pre-2003 remedial decisions on IHWDS where chlorinated hydrocarbons were released to determine the possibility of vapor intrusion at the sites. The Vapor Intrusion Legacy Site List is a database of these sites.

Analysis/Comment: The CER did not identify Vapor Intrusion Legacy sites within a mile of the Subject.

New York and Tribal CERCLIS Equivalent Hazardous Waste Sites

The State HWS is an inventory of dumps, landfills, and other toxic sites listed by Environmental and Health Authorities. The Tribal NPL Equivalent HWS list is an inventory of toxic sites listed by Tribal Environmental and Health Authorities. These sites are either under remediation, or are currently under evaluation for further action, if necessary.

Analysis/Comment: The CER did not identify New York and/or Tribal CERCLIS Equivalent Hazardous Waste sites within the AMSD.

New York and/or Tribal Solid Waste Facilities (SWF) List

The SWF list is an inventory of landfills, incinerators, transfer stations, and other sites that manage solid wastes.

Analysis/Comment: The CER identified the following SWF sites the AMSD.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Con Ed 12 th Avenue	0.204	Northwest	Crossgradient	Inactive – C&D Processing
Con Edison 12 th Ave and 45 th Street	0.204	Northwest	Crossgradient	Inactive – C&D Processing

The above-tabulated SWF sites are inactive construction and demolition debris processing facilities. Given the crossgradient hydrogeologic position from the Subject in conjunction with the significant distance from the Subject, it is not suspected that these sites have had a negative environmental impact on same.

Petroleum Bulk Storage (PBS) Tanks List and/or Tribal Registered Storage Tanks (RST) Facility List

The PBS Tank list is an inventory of registered liquid bulk storage tanks maintained either by the county or the NYSDEC. Inclusion of a site on the PBS Tank list does not necessarily constitute environmental contamination, but instead merely indicates the presence of registered bulk storage tanks.

Analysis/Comment: The CER identified the following PBS Tank sites within the AMSD:

Property Name/ Address	Distance	Direction	Facility Id No.	Regulatory Status
43 rd Parking Corp	On-Site	On-Site	UST - 2-296473	Closed

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Property Name/ Address	Distance	Direction	Facility Id No.	Regulatory Status
541 W 43 rd St				
Marvin Mitchell 541 West 43 rd Street	On-site	On-Site	UST - 2-603858	Closed
United Rentals (North America) Inc. 540 West 44 th Street	On-site	On-site	AST - 2-610875	Closed

The Subject is identified to have had two 4,000 gallon gasoline USTs removed from the site in 1999. These tanks were registered with the NYSDEC under Permit No. 2-296473. These tanks appear to have additionally been registered under Permit No. 2-603858. These tanks have a closed regulatory status with the NYSDEC. A tank closure report for these tanks indicated that post-tank removal samples did not exhibit concentrations of contamination warranting remediation. Please refer to Section 5.6 and 7.2 for further discussion regarding same.

The former tenant of the Subject, United Rentals (North America), Inc. was included in the AST database with NYSDEC Permit No. 2-610875. This tenant was reported to have formerly been served by a 1,000 gallon AST and three 180 gallon ASTs all removed in 2011. These tanks have a closed regulatory status. Please refer to Section 7.2 for further discussion regarding same.

Property Name/ Address	Distance	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
FDNY Rescue Co 1 530 West 43 rd St	Adjacent	South-southeast	Crossgradient	Closed

The south-southeastern adjacent property located at 530 West 43rd Street was included on the UST database with Facility Id No. 20-600574. The facility was formerly served by two 500 gallon USTs that were closed in place in 1996. This registered storage tank site has an Closed regulatory status. This site is not listed on other environmental databases indicative of contamination such as the leaking underground storage tank list or the inventory of State Hazardous Waste Sites. Since the registered storage tank list is only an inventory of storage tanks, and does not necessarily indicate subsurface contamination, in the absence of additional information, it is not suspected that registered storage tank sites with an Closed status have had a negative environmental impact on the Subject.

Property Name/ Address	Distance	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
PRC 550 West 43 rd St	Adjacent	South-southwest	Crossgradient	Closed

The south-southwestern adjacent property located at 550 West 43rd Street was included on the UST database with Facility Id No. 2-370258. The facility was formerly served by one 7,500 gallon UST that was closed/removed in 1999. This facility was additionally included on the Spills database with Spill No. 0008570 due to an equipment failure in October 2000 and the release of fuel oil when a contractor digging at the site struck a possible oil line. Reportedly, prior to the construction of the existing 23-story building, a 5 story building with a 6 foot deep cellar was demolished. No bedrock was encountered during excavations nor was contamination reported. No tank was reported to have been removed and the new building was completed in 2003. Since construction activities dug approximately 2 to 3 feet below the previous basement depth, if contamination existed it was likely removed during construction activities. As such, the spill was closed with the NYSDEC on May 4, 2010. As such, it is not suspected that this site has had a significant negative environmental impact on the Subject.

Property Name/ Address	Distance	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Annex Building 521 West 43 rd Street	Adjacent	East	Upgradient	In Service

The eastern adjacent property, formerly occupied by the New York Public Library Annex building, located at 521 West 43rd Street, was included on the UST database with Facility Id No. 2-456985. The site is reported to be served by one 1,400 gallon UST and one 10,000 gallon UST. These tanks were not identified on any other database indicative of a contamination condition, however, the site itself was identified on the Spills database with an open status. Refer to Spills Section below for further discussion.

New York Leaking Underground Storage Tanks (LUST) and Spill Lists

The LUST list is an inventory of spills and leaks, both active and inactive reported to regulatory authorities. They include stationary and non-stationary source spills reported to state and federal agencies, including remediated and contaminated leaking UST sites. The Spills list is a compilation of data collected on spills and reported to the NYSDEC pursuant to either Article 12 of the Navigation Law, or 6 NYCRR Section 595.2.

Analysis/Comment: The CER identified 117 LUST/Spill sites within the prescribed search radius. Of the 117 sites, 68 are located over one-eighth mile away from the Subject and based on the dense urban setting of the Subject are therefore not considered of significant environmental concern. Of the remaining 49 LUST/Spill sites, 47 have been granted a "Case Closed" status by the NYSDEC. A closed regulatory status is granted to those sites that do not exhibit

levels of contamination requiring clean-up, have been remediated to the satisfaction of the NYSDEC, or are not suspected to represent a significant threat to human health or the environment. Absent additional information to the contrary, sites with a closed regulatory status are not suspected to have had a significant negative environmental impact on the Subject. As such, IVI does not suspect these sites of having had a negative environmental impact upon the Subject. The remaining two sites are summarized below:

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Annex Building 521 West 43 rd Street	Adjacent	East	Upgradient	Active

The above tabulated site was included on the Spill database with Spill No. 1103225 reported on May 11, 2011. The site is proposed to be a new primary/intermediate public school and high school. Currently the building is a six-story storage building with basement owned by the New York Public Library and this existing building will be converted to a seven-story school building. The existing foundation is planned to remain in place. During a Phase I in September 2010 RECs identified for this site included: historical structures which could potentially result in historical fill material from demolition under the building; historical usages including varnish and machinery storage, a garage with a 550 gallon gasoline UST, motor repair shop and other manufacturing operations; the existence of two No. 2 fuel oil ASTs with identified staining; staining within the building likely from equipment leaks; and the site inclusion as a RCRA Large Quantity Generator.

A Phase II investigation was performed at the site in July 2010. Sub-slab vapor samples identified petroleum and chlorinated solvent compounds exceeding standards. Eighteen soil borings were advanced in the site building and sidewalk. During soil sampling observations of petroleum impacts were observed. Five metals (arsenic, cadmium, total cadmium, lead, and mercury) were detected in soils samples at concentration greater than Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, Light Non-Aqueous Phase Liquid (LNAPL) was identified on groundwater (perched water above bedrock). Fingerprint analysis indicated that a LNAPL sample exhibited characteristics of an unknown motor oil and a non-calibrated fuel type. Two bedrock groundwater monitoring wells were installed in the sidewalks outside the building. IVI observed a monitoring well adjacent to the north of the Subject site within the sidewalk along West 44th Street, and additionally observed an additional monitoring well in the sidewalk further east along West 44th Street. These monitoring wells are assumed to be the two bedrock groundwater monitoring wells associated with this east adjacent property. Sampling of these wells did not identify volatile organic

compounds (VOC's), semi-volatile organic compounds (SVOC's), metals, cyanide, PCBs or pesticides above the Class GA Values in groundwater collected from the bedrock aquifer.

The Spills database indicated that construction concerns at the building include confirmation of vapor mitigation and indoor ambient sampling. Construction at the site was underway at the time of IVI's site reconnaissance. According to the Spills database, a Remedial Action Plan exists for the proposed (Beacon) High School along with a proposed work plan as of May 2012. Given the proximity and upgradient hydrogeologic status, there is the potential for this open Spills site to have impacted the Subject and IVI considers this eastern adjacent property to be a REC. In addition, there is a potential for a vapor encroachment condition (VEC) at the Subject and a VEC cannot be ruled out.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
Mobile Oil Corp SS #QDL 561 11 th Avenue	0.106	West- southwest	Downgradient	Active

The above tabulated site was listed on the Spills database with Spill Number 8806783 reported on November 14, 1988. Records indicate that twelve 550 gallon USTs and one (1) 4,000 gallon UST were closed or removed from this site. In April 2003 a proposed Work Plan for on-site and off-site investigations was scheduled. It appears that a Remedial Investigation Plan was completed and a Soil Vapor Extraction System was put into place by the Spring of 2006 and shut down by March 2008. Remedial work is ongoing at the site.

This site is located to the west of the Subject site at a downgradient hydrogeologic position and at a lower topographic elevation than the Subject site. Groundwater is anticipated to flow to the west, away from the Subject site and towards the Hudson River. Based on the above, and on the dense urban development of the area, it is unlikely that contamination existing at this site has migrated onto the Subject. As such, it is not suspected that this site has had a significant negative environmental impact on the Subject.

New York and Tribal Institutional Control/Engineering Control Registries

According to the NYSDEC website, Institutional Controls shall mean any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a brownfield site.

Engineering Control shall mean any physical barrier or method employed to actively or passively contain, stabilize, or monitor hazardous waste or petroleum, restrict the movement of hazardous waste or petroleum to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to hazardous waste or petroleum. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

- If an IC/EC is used as a component of a site cleanup plan, the Remedial Work Plan must include: a complete description of the IC/ECs and the mechanisms that will be used to implement, maintain, monitor, and enforce such restrictions and controls, both by the applicant and by any state and local government, and an evaluation of the reliability, viability, and costs of the long-term implementation, maintenance, monitoring, and enforcement of any IC/EC.
- Financial assurance for the long-term maintenance, monitoring, and enforcement of IC/ECs may be required.
- Any EC must be used in conjunction with an IC.
- The final remediation report must include a certification that any IC/ECs are included in an environmental easement that has been duly recorded.
- An annual certification that the IC/ECs are in place and protective of public health and the environment must be submitted to the NYSDEC.
- The NYSDEC must create, update, and maintain a data base available to the public of sites using IC/ECs.
- Any proposal for a change in site use must include an evaluation of the impacts of the change on the viability, reliability, and effectiveness of any IC/ECs.

Analysis/Comment: The CER did not identify the Subject on the New York and Tribal Institutional or Engineering Control registries.

New York and Tribal Voluntary Cleanup Program Sites

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. New York's Voluntary Cleanup Program is a cooperative approach among the NYSDEC, lenders, developers and prospective purchasers to investigate and/or remediate contaminated sites. Under the VCP, a volunteer performs remedial activities pursuant to one or more NYSDEC approved work plans. The volunteer agrees to remediate the site to a level which is protective of public health and the environment for the present or intended use of the property. Investigation and remediation is carried out under the oversight of the NYSDEC and the New York State Department of Health (DOH) and the

volunteer pays the State's oversight costs. When the volunteer completes work, a release from liability from the NYSDEC is provided with standard reservations. Once the required remedial actions have been completed, the NYSDEC issues a letter declaring that it agrees that the volunteer has met their obligations and that, barring an event triggering a reopener, the Department does not contemplate further action will need to be taken at the site. Non-PRP volunteers also receive a release that covers natural resource damages. All of the volunteer's successors and assigns (except the site's PRPs) benefit from the release given to the volunteer. The NYSDEC's release binds only itself, and does not bind private parties harmed, does not bind the State's Attorney General, the State's Comptroller, and does not bind the USEPA.

The Release is subject to the following reservations for further investigation or remediation the NYSDEC deems necessary due to:

- Off-site migration of contamination causing significant impacts if the Volunteer is a PRP;
- Environmental conditions or information related to the Site that were unknown when the Release was issued and that indicate that site conditions under the Contemplated Use are not sufficiently protective of human health and the environment;
- Failure to comply with the VCA (e.g., not completing OM&M, not paying State costs, not maintaining use restrictions, etc.);
- Fraud committed by the Volunteer in entering into or implementing the VCA;
- A release, discharge or threat thereof after the effective date of the VCA; or
- A change of use where the new use requires a lower level of residual contamination.

Analysis/Comment: The CER identified the following VCP site within the AMSD.

Property Name/ Address	Distance (Mile)	Direction	Presumed Hydrogeologic Relationship	Regulatory Status
CE – W 42 nd St – River Place 1 640 West 42 nd Street	0.178	West	Downgradient	Closed

The River Place 1 site is located at 640 West 42nd Street and was historically used from the 1860's to the 1920's as a manufactured gas plant (MGP). Gas was produced through the heating of coal and some petroleum products. These activities lead to contamination at the site. Source areas of contamination were the main components of the MGP including the gas holders. Remediation at this site is complete. Prior to remediation the contaminants of concern were benzene, toluene, ethylbenzene, xylene, and polycyclic aromatic hydrocarbons in the soil



and groundwater. Currently direct contact exposure are prevented since the site is covered with a building, pavement and landscaped areas. Soil gas and indoor air sampling showed no evidence of soil vapor intrusion. Based on the above, combined with the intervening distance and downgradient position from the Subject, IVI does not suspect this site to have had a significant negative environmental impact on the Subject.

New York and Tribal Brownfield Sites

According to the NYSDEC website, brownfields are abandoned, idled, or under-used properties where expansion or redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. The impediments to contaminated site redevelopment in New York are complex. The existing liability scheme may hold all owners of contaminated property liable for cleanup costs, regardless of when or how the property was acquired. The potential cost of cleanup, which may not be known for certain at the time of purchase, is also a deterrent to parties wishing to build, relocate, or expand businesses. Lenders have been reluctant to extend credit for the purchase and cleanup of contaminated sites, fearing future liability issues.

A Brownfield Cleanup Agreement (BCA) is required for all parties who wish to participate in the Brownfield Cleanup Program. By executing a BCA, an Applicant makes a commitment to undertake certain remedial activities under the NYSDEC's oversight.

Analysis/Comment: The CER identified six Brownfield sites within the AMSD. Of the six sites, all are located hydrogeologically crossgradient or downgradient from the Subject and are located over one-eighth mile away from the Subject and based on the dense urban setting of the Subject, are of a significant distance not to be considered of significant environmental concern. As such it is not suspected that these sites have had a significant negative environmental impact on the Subject.

New York City Building Information System

The City Environmental Quality Review (CEQR) designation "E" on New York City Zoning Maps indicates that environmental requirements pertaining to potential hazardous material contamination or noise or air quality impacts have been established on one or more tax lots. These "E" designations function as indicators of the environmental review that must be conducted when the lots are developed in accordance with the regulations of the rezoned district.

New York City Zoning Resolution § 11-15 provides that the New York City Department of Buildings (NYCDOB) may not issue a building permit for work on a tax lot labeled with an "E" due to potential hazardous material contamination, if the building permit would allow: (1) a development; (2) an enlargement, extension or change of use involving a residential or community facility use; or (3) an enlargement that disturbs the soil. The NYCDOB identifies haz-mat "E" lots on its Building Information System ("BIS").

An "E" designation for potential hazardous material contamination may be satisfied and removed from a zoning map following receipt of a report from the NYC Office of Environmental Remediation (OER) stating that the environmental requirements for the lot have been met. These requirements may include subsurface investigations and/or remediation of contamination to the satisfaction of the OER.

Analysis/Comments: Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an "E" Designation has been declared on the Subject (Block 1072, Lot 50). An "E" Designation is a New York City zoning map designation that indicates the presence of environmental requirements pertaining to potential Hazardous Materials Contamination, Window/Wall Noise Attenuation, or Air Quality impacts on a particular tax lot. In the case of the Subject, it pertains to potential Hazardous Materials Contamination, and Window/Wall Noise Attenuation. E-Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action.

More specifically, an E-268 designation related to the West Clinton Rezoning, of which the Subject is a part of, has been placed on the Subject property effective June 14, 2011. According to the Negative Declaration for the West Clinton Rezoning, created by the City Planning Commission and dated January 3, 2011, The New York City Department of Planning (DCP) and Manhattan Community Board 4 (CB 4) are proposing zoning map and text amendments affecting all or portion of 18 blocks in the West Clinton neighborhood in Manhattan, Community District 4. The proposed action will include a zoning map amendment changing M1-5, M2-3, and M3-2 zoning districts to R8, R8A/C2-5, R9, R9/C2-5 and M2-4 zoning districts. The Subject was previously zoned M1-5 and is currently zoned R9. One of the objectives of the proposed actions is to provide new opportunities for residential development, including new affordable housing, in the West Clinton neighborhood. Within the Negative Declaration document the Subject was identified as Projected Development Site 4 and the Subject's "E" designation pertains to hazardous materials and window/wall noise attenuation.

Hazardous Materials – Phase I and Phase II Testing Protocol

The Subject is identified under the E-268 designation under Hazardous Materials that includes a Phase I and Phase II Testing Protocol. Historical records indicate that automobile repair has been conducted on the Subject intermittently since construction of the existing building in 1920. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts. In addition, underground storage tanks (USTs) were formerly in-use on the Subject. Two 4,000 gallon USTs were removed in 1999 and historical Sanborn Maps identify a 550 gallon gasoline UST in the northeastern section of the building. As such, there is the potential for USTs to remain on-site. An in-ground automobile lift also remain on-site located on the northern façade of the building. There is the potential for on-site USTs and automobile lifts to have impacted the subsurface.

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 is avoided. The “E” designation provides New York City Office of Environmental Remediation (OER) with a mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development. The Subject’s “E” Designation pertaining to hazardous materials ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the “E” Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Office of Environmental Remediation (OER) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). More specifically, the fee owner of the lot restricted by the “E” designation must submit to the OER, for review and approval, a Phase 1A 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 the protocol is received from the OER. A written report with findings and a summary of the data must be submitted to the OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such tests results, a determination will be 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. These requirements for the “E” Designation also include a mandatory construction-related health and safety plan, which must also be approved by the OER. However, until any new construction or change in use takes place, the Owner/Operator may continue to use the property in any legal manner, as they

did before the “E” Designation, for as long as they would like. In the event that any new construction or change in use takes place, IVI would recommend that all the environmental requirements of the “E” Designation be satisfied.

Noise

According to the Negative Declaration, the E-Designation related to noise would be to ensure an acceptable interior noise environment should future development occur on the Subject. Future residential/commercial uses must provide a closed window condition with a minimum of 33 dBA window/wall attenuation on all facades to maintain an interior noise level of 45 dBA. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes but is not limited to, central air conditioning.

6.3 EDR Proprietary Databases

EDR Historic Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Analysis/Comment: The CER did not identify the Subject on the historical auto stations database. However, based on the review of historical Sanborn Maps, the Subject operated as an auto service station since the 1920’s until prior to 1977. Refer to Section 5.0 for further discussion.

EDR Historic Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Analysis/Comment: The CER did not identify the Subject or any adjacent properties on the historical cleaners database.

EDR Manufactured Gas Plants

This database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to the 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of wastes. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Analysis/Comment: The CER did not identify the Subject or any adjacent properties on the manufactured gas plant database.

7.1 Chemical Storage and Usage

With the exception of chemicals customarily used for routine building maintenance and cleaning, IVI did not observe any hazardous chemicals stored on-site. For the most part, the maintenance chemicals are stored in the maintenance closet. Of note, floor drains were not observed in the vicinity of the chemical storage areas. In addition, housekeeping was generally considered satisfactory. The chemicals, which are stored in their original containers, do not appear to represent an impact to the environmental quality of the Subject provided that they are used as intended, properly handled, and the regulations pertaining to their usage are followed.

7.2 Bulk Storage Tanks**Underground Storage Tanks (USTs)**

Tanks per the following schedule were either removed and/or abandoned the subject site:

Location	Tank Disposition	Capacity (Gallons)	Product	Date Removed	Testing Conducted	Contamination Identified
Eastern Façade of Building	Removed	4,000	Gasoline	1999	Yes	No
Eastern Façade of Building	Removed	4,000	Gasoline	1999	Yes	No
Northeastern section of building	Unknown	550	Gasoline	Unknown	Unknown	Unknown

Based on our review of a report titled *Closure Report for Underground Storage Gasoline Tank Property Located at 541 West 43rd Street, NYC, NY 10036* (the "Report") prepared by DCES, two 4,000 gallon gasoline USTs were removed from the site during 1999. The report indicated that post closure soil testing was conducted. The post-tank removal samples did not exhibit concentrations of contamination warranting remediation. Refer to Section 5.6 for further discussion. The removed tanks have a closed status with regulatory authorities.

Further, based on our review of historical Sanborn Maps, a 550 gallon gasoline UST is identified in the northeastern portion of the building, though the exact location was not depicted. No further information pertaining to this UST was discovered through this assessment. There is the potential for the UST to remain on-site and it is unknown if the soils and/or groundwater beneath the Subject have been impacted by the UST. This tank represents a REC to the Subject.

Aboveground Storage Tanks (ASTs)

No active ASTs were observed and IVI did not identify any equipment, which should require such tanks. However, visual indicators of former site ASTs, including concrete pads and signage in the area of the former ASTs, were observed. Further, according to the site contact, the former site tenant, United Rentals, maintained at least two ASTs located adjacent to the northwestern corner of the Subject building. According to review of the CER and NYSDEC website, former tanks included a 1,000 gallon AST, and three (3) 180 gallon ASTs and were registered with the NYSDEC under Permit No. 2-610875. All ASTs were removed in 2011. The removed tanks have a closed status with regulatory authorities. Residual evidence of staining, spillage or leakage was not observed in the former AST areas and as such IVI has no environmental concerns regarding these former tanks.

7.3 Site Waste and Wastewater**Solid Waste**

Non-hazardous solid waste is disposed of in dumpsters and is removed from the Subject on a regular basis by the municipality. Potential sources of contamination, such as waste oil or automobile batteries, were not observed in the vicinity of the dumpsters.

Sanitary Sewage

Sanitary sewage disposal is provided by the NYCDEP. IVI did not observe any sources of wastewater or liquid discharge into the sewer other than sanitary sewage.

Hazardous/Automotive Waste

No hazardous waste was observed or reported to be generated on the Subject. Furthermore, IVI's review of the USEPA's database of sites regulated under RCRA did not identify the Subject as a generator of hazardous waste.

However, historical records indicate that automobile repair has been conducted on the Subject intermittently since construction of the existing building in 1920. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts. IVI considers the historical site usage of the Subject, including the potential generation of automobile wastes, a REC.

7.4 Stained Soil, Stained Pavement, or Stressed Vegetation

There was no evidence of significant soil staining, stained pavement, or stressed vegetation observed on-site.

7.5 Liquid Discharges

No visible evidence of liquid discharges, suspected to represent an environmental concern were observed during our survey.

7.6 Pools of Liquid

IVI did not observe significant standing surface water or pools containing liquids likely to be hazardous substances or petroleum products.

7.7 Pits, Ponds, or Lagoons

No pits, ponds or lagoons suspected of containing hazardous substances or petroleum products were identified on-site.

7.8 Wells

IVI observed a monitoring well adjacent to the north of the Subject site within the sidewalk along West 44th Street. IVI additionally observed an additional monitoring well in the sidewalk further to the east along West 44th Street. The wells are fitted with secured caps. Refer to Section 6.2 Spills Section regarding the New York City Public Library Annex Property listing located at 521 West 43rd Street. IVI suspects that the monitoring wells observed are associated with this Spills site.

7.9 On-Site Fill

Based on our observations, other than typical engineered fill used in foundation construction, it does not appear that a significant amount of fill has been imported onto the Subject.

7.10 Drums and Containers for Storing Waste

IVI observed two partially filled 55-gallon drums in the area of the former ASTs' concrete pads located adjacent to the building to the northwest. The contents of the drums, which were unlabeled, are not known. The drums are stored on an impervious surface, and were observed to be in satisfactory condition.

7.11 Floor Drains and Sumps

IVI did not identify any floor drains or sumps that were stained, emitting foul odors, or connected to an on-site sewage disposal system, or located adjacent to chemical storage areas.

7.12 Odors

IVI did not identify strong, pungent, or noxious odors suspected to represent an environmental concern.

7.13 Air Emissions

IVI did not identify processes or equipment that emit noticeable vapors or fumes.

7.14 Polychlorinated Biphenyls (PCBs)

No electrical transformers, capacitors, hydraulic systems or other potentially PCB-containing equipment were observed on-site.

Hydraulic Lifts

One aboveground lift was located inside a metal shed on the eastern side of the Subject. There is a below grade hydraulic lift on the northern façade of the Subject building. These lifts were installed in 2006 by the former tenant, United Rentals International, and after the 1979 ban on the manufacturing of PCBs. As such, it is unlikely that the hydraulic fluid contains PCBs. In addition, no leaks or staining were observed associated with the hydraulic lifts.

7.15 Asbestos-Containing Material (ACM)

Based on the age of the Subject building, the potential on-site use of ACMs exists, although the Subject building was gut renovated in 2006, thereby reducing the amount of ACM. However, it is noted that although unlikely due to the age of the improvements, the non-friable materials, such as resilient floor finish assemblies, mastics, caulking, and roofing materials, may contain asbestos. No asbestos surveys were provided for our review and as such, there is the potential for ACM to also exist in inaccessible locations such as behind walls, above ceilings, and beneath visible flooring. The observed non-friable materials were in good condition and the potential for fiber release is low.

7.16 Lead-in-Drinking Water

Based on our conversations with utility personnel, the water at the Subject is not expected to contain elevated levels of lead.

7.17 Radon

Based on a review of the New York State Department of Health *Measured Basement Screening Radon Levels by Town* dated October 2011, radon concentrations in Manhattan County average 2.15 picocuries per liter (pCi/L), which is below the 4.0 pCi/L action level established by the USEPA. Based solely on this data, it is unlikely that radon represents an environmental concern at this time.

7.18 Lead-Based Paint (LBP)

Since the Subject was constructed prior to the Consumer Product Safety Commission's 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Testing would be required in order to determine whether LBP exists. Notwithstanding, the extensive interior renovations conducted on the Subject building in 2006 reduce the likelihood that LBP exists. Painted surfaces observed were in satisfactory condition.

8.1 Questionnaires

IVI sent a Pre-Survey Questionnaire and an AAI User Questionnaire to the site contact and the User, respectively. The purpose of these questionnaires was to disclose any previous or existing hazardous waste or toxic material conditions, which may not have been apparent at the time of our site reconnaissance and to satisfy the User interview all appropriate inquiry requirements.

The completed questionnaires are attached hereto as Appendix B. The Questionnaires identified the following recognized environmental conditions in connection with the Subject:

- Auto repair usage in the 1980's and 2003-2006
- Two (2) 4,000 gallon gasoline USTs removed in 1999

8.2 User

8.2.1 Title Records

IVI was provided with a copy of a Title Report prepared by Royal Abstract effective date August 10, 2012. According to this abstract, the Subject site is identified as Block 1072, Lot 50 and is owned by the Pasha Group LLC.

8.2.2 Environmental Clean Up Liens and Activity and Use Limitations (AULs)

Pasha Group, LLC had no knowledge of any environmental liens against the Subject that have been filed or recorded under federal, tribal, state or local law. Moreover, Pasha Group, LLC was not aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in-place at the Subject or have been filed or recorded under federal, tribal, state or local law.

8.2.3 Specialized Knowledge

Pasha Group, LLC had no specialized knowledge of recognized or potential recognized environmental conditions in connection with the Subject.

8.2.4 Relationship of Purchase Price to Fair Market Value Due to Contamination in Connection with the Subject

Pasha Group, LLC has indicated they are unaware of any environmental conditions in connection with the Subject that have resulted in the diminution of its purchase price in relation to its Fair Market Value.

8.2.5 Common Knowledge or Reasonably Ascertainable Information

Pasha Group, LLC had no common knowledge of recognized or potential recognized environmental conditions in connection with the Subject.

8.2.6 Purpose for Conducting the Phase I Environmental Site Assessment

The purpose of conducting this Phase I Environmental Site Assessment was for the acquisition of the parcel.

8.2.7 Proceedings Involving the Property

The User had no knowledge of pending, threatened, or past litigation, administrative proceedings, or notices from governmental agencies regarding violations of environmental laws regarding hazardous substances or petroleum products.

8.3 Key Site Manager**8.3.1 Historic Site Use**

According to Mario Andre a representative of Central Parking, who has been involved with the property for the past two years, the Subject site has historically been used for garage and parking usages and the previous tenant included United Rentals who vacated the property two years ago.

8.3.2 Proceedings Involving the Property

Mr. Andre had no knowledge of pending, threatened, or past litigation, administrative proceedings, or notices from governmental agencies regarding violations of environmental laws regarding hazardous substances or petroleum products.

8.4 Occupants

IVI was escorted through the Subject site by Mario Andre, a representative of Central Parking, the current tenant. Refer to the above sections for further information. In addition, IVI interviewed Mr. Marvin Mitchell, the current property owner, who purchased the property in 1977. Refer to Section 5.8 for further discussion.

8.5 Past Owners

IVI was unable to locate the site's former owner.

8.6 Local Regulatory Agency Interviews and/or File Reviews

Fire Department

IVI has sent a request to the New York City Fire Department for environmental information pertaining to the Subject property. As of this writing, the Fire Department has not responded to our request. Should receipt of a response from the Fire Department change the conclusions of this report, the Client will be notified in writing by IVI.

Health Department

IVI has sent a request to the New York City Health Department for environmental information pertaining to the subject property. As of this writing, the Health Department has not responded to our request. Should receipt of a response from the Health Department change the conclusions of this report, the Client will be notified in writing by IVI.

Tax Assessor

According to the tax assessor records reviewed, the Subject building was constructed in 1950 on a 0.63-acre parcel and is identified on local tax maps as Block 1072, Lot 50. The Subject building is a two-story structure which has all public utilities. The current owner is identified as Pasha Group LLC.

Building Department Records

IVI reviewed building permits and records for the Subject on the New York City Department of Building, Building Information System (BIS). Refer to Section 5.9 for further discussion.

Department of Planning and Zoning

Based on the review of the New York City Planning Commission Zoning Map, the Subject site is Zoned R-9.

9.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

546 West 44th Street
New York, New York

IVI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E1527-05 of the property located at 546 West 44th Street, New York, New York. Any exceptions to, or deletions from, the standard practice are described within Section 2.0 of this report.

This assessment has revealed no evidence of recognized environmental conditions (RECs) in connection with the Subject except for the following:

Historical Usage and Former Underground Storage Tanks

Automotive repair and fueling was historically conducted on the Subject. Prior to 1977 the Subject was utilized for automotive repair. From 1977 to 1987, the Subject was the location of a trucking business with automotive repair only conducted on the trucks associated with the on-site trucking business. In 1978, two 4,000 gallon gasoline underground storage tanks were installed to fuel the trucks associated with the on-site trucking business. In addition, an illegal body shop operated on part of the upper level of the Subject building for approximately three and a half years after 1987 and from 2003 to 2006 the basement was leased to a transmission repair business. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts.

Based on our review of a report titled *Closure Report for Underground Storage Gasoline Tank Property Located at 541 West 43rd Street, NYC, NY 10036* (the "Report") prepared by DCES, the two 4,000 gallon gasoline USTs were removed from the Subject during 1999. The report indicated that post closure soil testing was conducted. The post-tank removal samples did not exhibit concentrations of contamination warranting remediation. The removed tanks have a closed status with regulatory authorities and are considered a historic REC. However, due to the "E" Designation placed on the Subject, as discussed further below, the area of these two former gasoline USTs will need to be further investigated prior to any new construction or change in use of the Subject taking place. Further, based on our review of historical Sanborn Maps, a 550 gallon gasoline UST is identified within the northeastern portion of the Subject building, though the exact location was not depicted. No further information pertaining to this UST was discovered through this assessment and there is the potential for it to remain on-site. It is unknown if the soils and/or groundwater beneath the Subject have been impacted by the UST.

Based on the above, IVI considers the historical usage of the site a REC. In addition, due to the past site use a vapor encroachment condition cannot be ruled out. IVI recommends a subsurface investigation be conducted to determine the disposition of the 550 gallon gasoline UST and determine if historic automotive repair activities, fueling operations, and underground storage tanks have impacted the subsurface.

Adjacent Property with RECs

IVI observed a monitoring well adjacent to the north of the Subject site within the sidewalk along West 44th Street. IVI additionally observed an additional monitoring well in the sidewalk further east along West 44th Street. The wells were fitted with secured caps and are associated with the eastern adjacent property, the New York City Public Library Annex Property Spills site located at 521 West 43rd Street (Spill No. 1103225).

Spill No. 1103225 was reported for this eastern adjacent site on May 11, 2011. The site is proposed to be a new primary/intermediate public school and high school. Currently the building is a six-story storage building with basement owned by the New York Public Library. During a Phase I in September 2010 RECs identified for this site included: historical structures which could potentially result in historical fill material from demolition under the building; historical usages including varnish and machinery storage, a garage with a 550 gallon gasoline UST, motor repair shop, and other manufacturing operations; the existence of two No. 2 fuel oil ASTs with identified staining; staining within the building likely from equipment leaks; and the site inclusion as a RCRA Large Quantity Generator.

A Phase II investigation was performed at the site in July 2010. Sub-slab vapor samples identified petroleum and chlorinated solvent compounds exceeding standards. Eighteen soil borings were advanced in the site building and sidewalk. During soil sampling observations of petroleum impacts were observed. Five metals (arsenic, cadmium, total cadmium, lead, and mercury) were detected in soil samples at concentration greater than Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, Light Non-Aqueous Phase Liquid (LNAPL) was identified on groundwater (perched water above bedrock). Fingerprint analysis indicated that a LNAPL sample exhibited characteristics of an unknown motor oil and a non-calibrated fuel type. Two bedrock groundwater monitoring wells were installed in the sidewalks outside the building. Sampling of these wells did not identify volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), metals, cyanide, PCBs or pesticides above the Class GA Values in groundwater collected from the bedrock aquifer.

Given the proximity and upgradient hydrogeological relationship to the Subject there is the potential for this open Spills site to have impacted the Subject including the potential for the LNAPL on groundwater to have migrated to the Subject. In addition, due to the detection of sub-slab vapor concentrations of petroleum and chlorinated solvent compounds exceeding standards from this adjacent site and the presence of LNAPL there is a potential for a vapor encroachment condition (VEC) at the Subject and a VEC cannot be ruled out. IVI recommends that the above recommended subsurface investigation be expanded to include investigating potential impacts from the eastern adjacent Spills site located at 521 West 43rd Street.

9.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

546 West 44th Street
New York, New York

In addition, the following items of environmental concern were identified which warrant mention:

New York City Little “E” Designation

Based on our review of the New York City Department of Buildings (NYCDOB) Buildings Information System (BIS) and New York City Zoning Maps, an “E” Designation has been declared on the Subject (Block 1072, Lot 50). An “E” Designation is a New York City zoning map designation that indicates the presence of environmental requirements pertaining to potential Hazardous Materials Contamination, Window/Wall Noise Attenuation, or Air Quality impacts on a particular tax lot. In the case of the Subject, it pertains to potential Hazardous Materials Contamination and Window/Wall Noise Attenuation. “E” Designations are established on the Zoning Map by the Department of City Planning (DCP) and City Council as a part of a zoning change/action.

More specifically, an E-268 designation related to the West Clinton Rezoning, of which the Subject is a part of, has been placed on the Subject property effective June 14, 2011. According to the Negative Declaration for the West Clinton Rezoning, created by the City Planning Commission and dated January 3, 2011, The New York City Department of Planning (DCP) and Manhattan Community Board 4 (CB 4) are proposing zoning map and text amendments affecting all or portion of 18 blocks in the West Clinton neighborhood in Manhattan, Community District 4. The proposed action will include a zoning map amendment changing M1-5, M2-3, and M3-2 zoning districts to R8, R8A/C2-5, R9, R9/C2-5 and M2-4 zoning districts. The Subject was previously zoned M1-5 and is currently zoned R9. One of the objectives of the proposed actions is to provide new opportunities for residential development, including new affordable housing, in the West Clinton neighborhood. Within the Negative Declaration document the Subject was identified as Projected Development Site 4 and the Subject’s “E” designation pertains to hazardous materials and window/wall noise attenuation.

Hazardous Materials – Phase I and Phase II Testing Protocol

The Subject is identified under the E-268 designation under Hazardous Materials that includes a Phase I and Phase II Testing Protocol. Historical records indicate that automobile repair has been conducted on the Subject intermittently since construction of the existing building in 1920. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts. In addition, underground storage tanks (USTs) were formerly in-use on the Subject. Two 4,000 gallon USTs were removed from the Subject in 1999 and historical Sanborn Maps identify a 550 gallon UST in the northeastern portion of the building. As such, there is the potential for USTs to remain on-site. An in-ground automobile lift also remains on-site located on the northern façade of the building. There is the potential for on-site USTs and automobile lifts to have impacted the subsurface.

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 is avoided. The “E” designation provides New York City Office of Environmental Remediation (OER) with a mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development. The Subject’s “E” Designation pertaining to hazardous materials ensures that sampling and remediation take place where hazardous material contamination may exist. Before any new construction or change in use can take place on the property, the environmental requirements of the “E” Designation need to be satisfied. It requires that testing and sampling protocol and remediation (where appropriate) be conducted to the satisfaction of the New York City Office of Environmental Remediation (OER) prior to the issuance of any permit by the New York City Department of Buildings (NYCDOB). More specifically, the fee owner of the lot restricted by the “E” designation must submit to the OER, for review and approval, a Phase 1A 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 the protocol is received from the OER. A written report with findings and a summary of the data must be submitted to the OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such tests results, a determination will be 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. These requirements for the “E” Designation also include a mandatory construction-related health and safety plan, which must also be approved by the OER. However, until any new construction or change in use takes place, the Owner/Operator may continue to use the property in any legal manner, as they did before the “E” Designation, for as long as they would like. In the event that any new construction or change in use takes place, IVI would recommend that all the environmental requirements of the “E” Designation be satisfied.

Drums for Storing Waste

IVI observed two partially filled 55-gallon drums in the area of the former ASTs’ concrete pads located adjacent to the building to the northwest. The contents of the drums, which were unlabeled, are not known. The drums are stored on an impervious surface, and were observed to be in satisfactory condition. Since these drums do not appear to be in use on-site, IVI recommends that the contents be characterized and disposed of following applicable local, state, and federal regulations.

Asbestos-Containing Material (ACM)

Based on the age of the Subject building, the potential on-site use of ACMs exists, although the Subject building was gut renovated in 2006, thereby reducing the amount of

9.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

546 West 44th Street
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ACM. However, it is noted that although unlikely due to the age of the improvements, the non-friable materials, such as resilient floor finish assemblies, mastics, caulking, and roofing materials, may contain asbestos. No asbestos surveys were provided for our review and as such, there is the potential for ACM to also exist in inaccessible locations such as behind walls, above ceilings, and beneath visible flooring. The observed non-friable materials were in good condition and the potential for fiber release is low. As such, no further action is recommended at this time. However, in the event that building maintenance, renovation, or demolition requires the removal or disturbance of the suspect ACM, these materials should be characterized for asbestos by a reliable method. All activities involving ACM should be conducted in accordance with governmental regulations.

Lead Based Paint (LBP)

Since the Subject was constructed prior to the Consumer Product Safety Commission's 1978 ban on the sale of LBP to consumers and the use of LBP in residences, there is a potential that LBP may have been applied at the Subject. Testing would be required in order to determine whether LBP exists. Notwithstanding, the extensive interior renovations conducted on the Subject building in 2006 reduce the likelihood that LBP exists. Painted surfaces observed were in satisfactory condition. IVI recommends that all painted surfaces be handled in accordance with the OSHA Lead in Construction (CFR Part 1926.62) and EPA Renovate Right regulations and RCRA guidelines.

- 10.1** This report has been prepared in compliance with the ASTM standard entitled “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” E1527-05.
- 10.2** The observations described in this report were made under the conditions stated herein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services within the constraints imposed by the client. The work described in this report was carried out in accordance with the Terms and Conditions of the contract.
- 10.3** In preparing this report, IVI has relied on certain information provided by federal, state, and local officials and other parties referenced therein, and on information contained in the files of governmental agencies, that were readily available to IVI at the time of this assessment. Although there may have been some degree of overlap in the information provided by these various sources, IVI did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment. Observations were made of the site and of the structures on the site as indicated in this report. Where access to portions of the site or to structures on the site was unavailable or limited, IVI renders no opinion as to the presence of direct or indirect evidence relating to petroleum substances, hazardous substances, or both, in that portion of the site and structure. In addition, IVI renders no opinion as to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the ground surface, interior walls, floors, ceiling or a structure is obstructed by objects or materials, including snow, covering on or over these surfaces.
- 10.4** As part of this assessment, IVI submitted requests for information via the Freedom of Information Act (FOIA) to various governmental agencies. As of the preparation of this report these requests may not have been fulfilled. The conclusions of this report are subject to change upon receipt of a response from these FOIA requests.
- 10.5** IVI does not represent that the site referred to herein contains no petroleum or hazardous or toxic substances or other conditions beyond those observed by IVI during the site walkthrough.
- 10.6** IVI has produced this document under an agreement between IVI and Pasha Group, LLC. All terms and conditions of that agreement are included within this document by reference. Any reliance upon this document, or upon IVI’s performance of services in preparing this document, is conditioned upon the relying party’s acceptance and acknowledgement of the limitations, qualifications, terms, conditions and indemnities set forth in that agreement, and property ownership/management disclosure limitations, if any. It is not to be relied upon by any party other than Pasha Group, LLC nor used for any purpose other than that specifically stated in our Agreement or within this Report’s Introduction section without IVI’s advance and express written consent. The Phase I report is only valid if completed within 180 days of an acquisition or the transaction necessitating the report.
- 10.7 TIME LIMITATION TO ENACT CLAIM AGAINST IVI** If in the opinion of the client, or any third party claiming reliance on IVI’s report or services, that IVI was negligent or in breach of contract, such aforementioned parties shall have one year from the date of IVI’s site visit to make a claim.
- 10.8** Unless specifically identified within Section 2, Chinese drywall, indoor air quality and any other non-ASTM scope issues as identified in ASTM E1527-05, Section 13.1.5, are excluded from the scope of this assessment.

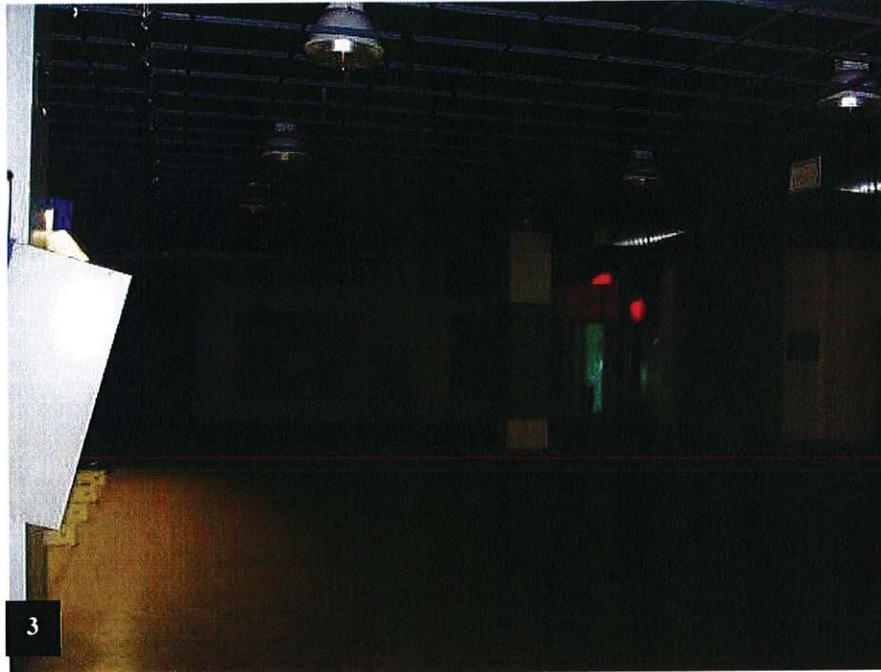
546 West 44th Street
New York, New York



Front Façade of Subject site – View from West 43rd Street



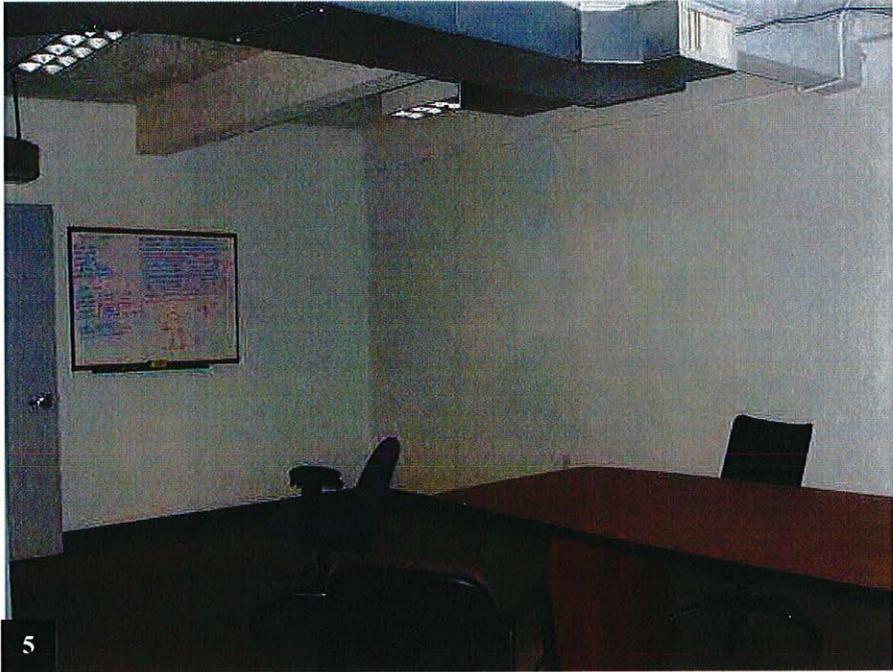
View of Subject from West 44th Street



Typical View of Interior Space



Typical Garage Space



Former Office Space



Typical Bathroom



View of Basement



View of HVAC Equipment in Basement



View of Roof and Rooftop Equipment



View of In-ground lift on northern Façade of Building



View of Aboveground Lift along eastern boundary

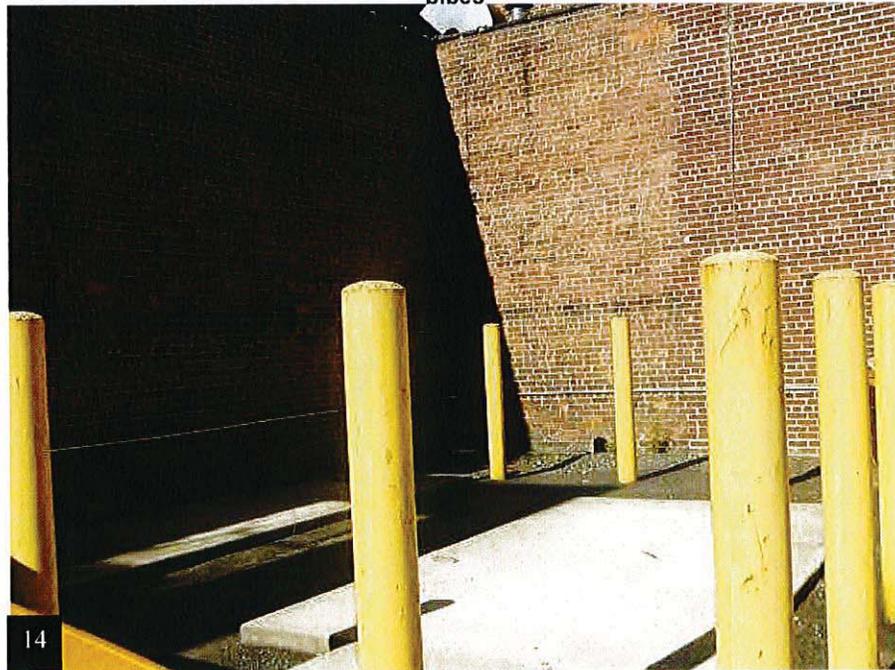


View of Area of former gasoline USTs



13

Alternate view of front façade along West 43rd Street and former gasoline vent pipes



14

View of Area of Former ASTs



View of Tank Sign in areas of former ASTs



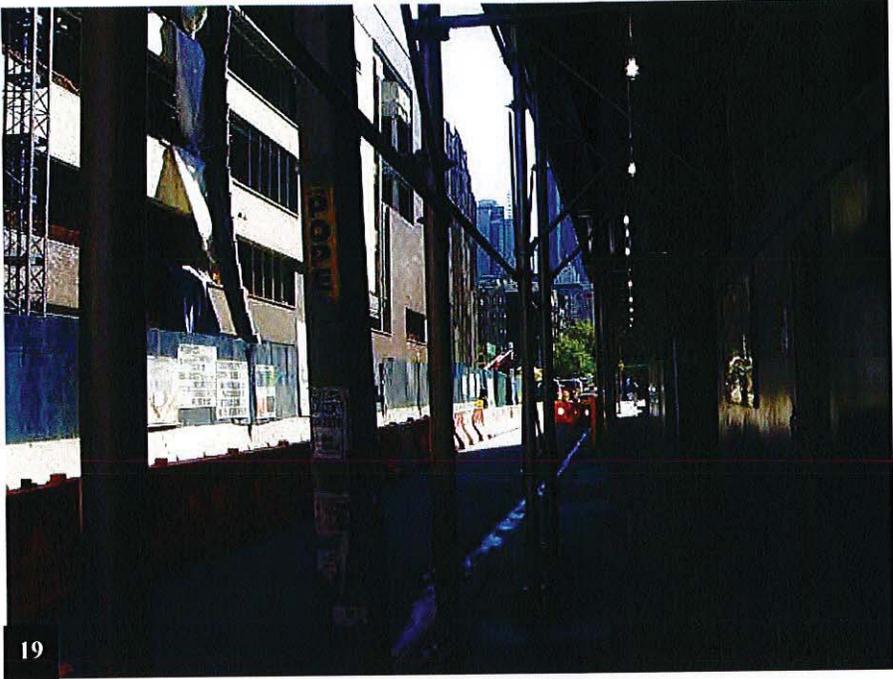
View of Monitoring well located adjacent along West 44th Street



Surrounding Properties to the North



Surrounding Properties to the South



Surrounding Properties to the East



Surrounding Properties to the West

FAX TO 212 479 8348



IVI Assessment Services, Inc.

**PROPERTY CONDITION & ENVIRONMENTAL
DUE-DILIGENCE**

55 West Red Oak Lane
White Plains, New York 10604
914.694.1900 (tel)
914.694.6549 (fax)



Someone familiar with the site should complete this questionnaire prior to our site visit. For those questions that are not applicable, please respond "N/A", and "U/K" for those questions in which the answer is not known. If you have any questions about how to answer any of the questions, please call IVI. If additional pages for responses are necessary, please attach hereto and reference it to the appropriate question number. Upon completing this form, please fax it to the above fax number. This document and your written response will be included as an exhibit in the final report.

Subject Name: 546 West 46th Street

Project Manager: Jessica Mosbey

Street: 546 West 46th Street

IVI Project No.: PC20901774

City/State: New York, New York

Date: September 20, 2012

Key Site Contact:

MARIO ANDRE

Telephone:

917-586-3944

Fax:

A. GENERAL

PREPARER

1. Name, title and telephone number of person completing this questionnaire:

MARVIN MITCHELL
 Name
MANAGING MEMBER, PASHA GROUP LLC
 Title
Marvin Mitchell
 Signature
917-693-4603
 Telephone Number

2. How long has the preparer been familiar with the site or facility?
If less than five years, who held the position prior?

3. Property Owner/Occupant Information

PASHA GROUP LLC
 Owner's Name
157 CONGRESS ST. #1
 Owner's Address
CENTRAL PARKING SYSTEMS
 Occupant's Name
360 WEST 31ST ST. NUL 10001
 Occupant's Address

VALUATION REDUCTION

Was/is the purchase price of the Subject property significantly less than the purchase price of comparable properties due to environmental conditions?

Yes No U/K N.A.

If yes, please explain below.

B. Property Description

1. Land

- a. Size of Parcel? 0.52 Acres
- b. Shape of Parcel? Rectangular Irregular Other
- c. Are there any surface waters or wetlands on the site? Yes No U/K
- d. Is there a well on the site? Yes No U/K

If so, what type of well is it?:

- Drinking Water
- Irrigation
- Monitoring
- Dry Well

Have contaminants in excess of governmental guidelines been identified in the water? Yes No

- e. Was or is there a septic system on the property? Yes No U/K
If so, is the septic system currently in use? Yes No
- f. Has fill been imported onto the Subject? Yes No U/K
- g. Are there currently or has there previously been waste treatment or disposal pits, ponds, or lagoons on the site? Yes No U/K
- h. Where is the site's stormwater discharged to? STREET OR NYC SEWER (BLDG CALL)

B. PROPERTY DESCRIPTION -- continued

2. Site Improvements This includes all buildings N/A

- a. Describe the size (square foot) of the existing building(s).
7,500 SQ. FT. FOOT PRINT,
- b. How old is the building(s)? PRE 1911
- c. Describe the heating and cooling system.
CENTRAL HEAT P/A/C FROM ROOFTOP SYSTEM
- d. Who provides the following utilities?
Water: NYC
Sanitary Sewer: NYC
Storm Drainage: NYC OR DRAINS TO STREET (PKG. LOT ONLY)
Natural Gas: CON ED (IF ANY)
Electric: CON ED

- e. Are there any floor drains on the site? Yes No U/K
If so, where do they discharge to?

3. Site History

- a. Were there any buildings or other improvements on the property prior to the existing improvements? Yes No U/K
If so, what were they?
- b. Is or has the property been used for industrial or agricultural purposes, or as a gasoline station, auto repair, dry cleaner, junkyard, or landfill? Yes No U/K

If so, please describe.
AUTO REPAIR SHOP ON PART OF TOP FLOOR 1980'S.
AUTO FRON'S MISSION REPAIR (CEE MYLES) BSMT, 2003-2006

B. PROPERTY DESCRIPTION -- continued

4. Site Operations

To the best of your knowledge, do any of the following operations take place on the Subject or have ever taken place on the Subject:

- Dry Cleaning: Yes No
- Battery Storage/Sales: Yes No
- Paint Storage/Sales: Yes No
- Petroleum Storage/Sales: Yes No
- Photo or X-Ray Finishing: Yes No
- Electronic Equipment Assembly or Manufacturing: Yes No
- Solvent Storage or Sales: Yes No
- Chemical Manufacturing/Sales: Yes No
- Automobile Storage, Repair, or Disposal: Yes No
- Agriculture: Yes No
- Medical or Dental Offices: Yes No

5. Previous Studies/Documentation

- a. Do you have any knowledge of previously prepared Environmental Site Assessment Reports, asbestos surveys, lead-based paint studies or testing (soil, groundwater, tank tightness testing, lead-based paint testing, asbestos testing, indoor air quality, mold (bacteria and fungi testing), etc.) conducted on the site? If so, please either provide copies of the reports or list the title, date, preparer and recipient of such report(s) below:
- YES. DON CARLO ENV. SERVICES REMOVED DST'S IN 1999?*
- I have no knowledge of any environmental related studies or reports prepared on the Subject.

- b. Are you in possession of a title report, site drawings, building drawings and specifications and/or a survey for the site? Yes No

If so, please provide copies of same. *SEE CUSHMAN-WKFLD FOR ALL SITE SURVEYS COPY OF DON CARLO REPORT*

Please provide all available environmental information from yours or your Client's records including, but not limited to, documentation in connection with any pending or threatened public or private proceedings or litigation with respect to environmental liability, environmental permits and permit applications, underground and above ground tank registration and information (including removal and testing of such tanks), environmental reports, asbestos, lead-based paint or indoor air quality studies, spill information and compliance information and programs.

C. SURROUNDING PROPERTIES

1. Has any adjoining properties been used for industrial purposes, or as a gasoline station, auto repair shop, junkyard, dry cleaner or landfill? Yes No U/K

If so, please explain.
2. Are you aware of any contamination conditions on adjoining or nearby properties? Yes No U/K
3. Are there any open surface waters or wetlands adjacent to the site? Yes No U/K
4. Are you aware of any active or former waste treatment or disposal pits, ponds, or lagoons on adjacent or nearby sites? Yes No U/K
5. Is any neighboring property engaged in the storing, transporting or disposal of hazardous waste, or chemicals? Yes No U/K

D. REGULATORY

1. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property? Yes No U/K

If so, please explain.
2. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property? Yes No U/K

If so, please state the circumstances.
3. Are you aware of 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/K

If so, please explain.

E. ASBESTOS

1. Do you have knowledge of any materials or substances on the site that are known or suspected to contain asbestos? Yes No U/K

If so, what materials and where are they located?

E. ASBESTOS - continued

- 2. Has an inspection for asbestos ever been conducted on the Subject? Yes No U/K
- 3. Has asbestos been removed from the Subject? Yes No U/K
- 4. Does the building have:
 - Spray-on or troweled-on fireproofing, insulation or finishes? Yes No U/K
 - Insulation on piping, boilers, tanks, chillers, or other mechanical equipment? Yes No U/K
 - Transite used in cooling towers, exterior walls, ceilings fascia panels, etc.? Yes No U/K
 - Resilient floor tile? Yes No U/K
 - Suspended acoustical ceiling tiles? Yes No U/K
 - A built-up or rolled roofing system? Yes No U/K

F. PCBs

- 1. Are there any on-site electrical transformers? Yes No U/K
- If so, do any of the transformers contain PCBs? Yes No U/K
- Who owns the transformers and where are they located?
- 2. Did any on-site transformers formerly contain PCBs, but later had the dielectric fluid replaced? Yes No U/K
- 3. Is there any hydraulic equipment such as elevators or automotive lifts on-site? Yes No U/K
- If so, who services the equipment? *DON'T KNOW. NOT IN USE AS FAR AS I KNOW*
- Are you aware of any hydraulic fluid leaks or evidence of leakage such as unexplained fluid loss in connection with the hydraulic equipment? Yes No U/K

F. Storage Tanks

1. Are there any (active or inactive) Underground Storage Tanks (UST) or Aboveground Storage Tanks (AST) on the site? Yes No U/K

If so, please fill out the following schedule:

Active or Inactive Tanks

Location of Tank	Size of Tank (Gallons)	AST or UST	Tank Contents	Age of Tank (Years)	Does the Tank Have Corrosion Protection? (Yes/No)	Does the Tank Have Leak Detection? (Yes/No)	Is the Tank In-Use? (Yes/No)

Have any of the tanks been tightness tested? Yes No U/K

1. Do you have any knowledge of tanks that were either removed or closed in-place at the site? Yes No U/K

If so, please fill out the following schedule:

Tanks Removed or Closed In-Place

Location of Former Tank	Size of Tank (Gallons)	AST or UST	Tank Contents	Tank Removal Company	Year Tank Was Removed
PAVED AREA - EAST SIDE OF BUILDING	2-4000	UST	GASOLINE	DON CARLO P.W. SERV.	1999?
NORTH SIDE OF BLDG.	250	AST	DIESEL FUEL	UNITED RENTALS INTL	2011

H. LEAD

- 1. Are you aware of any lead-based paint (LBP) applications on the site? Yes No U/K
- 2. Has LBP testing been conducted? Yes No U/K
- 3. Have there been any reported incidences of children with elevated blood lead levels residing at the site? Yes No U/K
- 4. Are there any children younger than 7 years old residing at the site or frequenting the site on a daily basis? Yes No U/K
- 5. Have any LBP abatements been conducted? Yes No U/K
- 6. Has the water been tested for lead? Yes No U/K

If so, please provide a copy of the results

I. HAZARDOUS MATERIALS

- 1. Are hazardous materials or chemicals stored or used on-site? Yes No U/K

If so, please fill out the following schedule (attach separate page if more room is required):

Schedule of Hazardous or Toxic Substances Stored On-Site

Material Type	Quantity (Gallons)	Location

- 2. Are there any hazardous or medical waste or fluids generated or used that employ an outside service for their periodic supply and removal? Yes No U/K

If so, please provide the name, address, & telephone number of the disposal company and the facility generating the waste.

J. INDOOR AIR QUALITY

- 1. Have strong mold odors and/or mold staining been observed onsite? Yes No U/K
- 2. Has there been any employee or tenant reports of symptoms consistent with mold contamination or other indoor air quality concerns? Yes No U/K
- 3. Are you aware of elevated radon gas concentrations on-site? Yes No U/K

K. AAJ USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLP) offered by the Small Business Liability Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments"), the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? Yes No U/K

2. Are you aware of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law? Yes No U/K

3. Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? Yes No U/K

4. Does/Did the purchase price paid for this property reasonably reflect the fair market value of the property? Yes No U/K N.A.

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? Yes No U/K N.A.

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

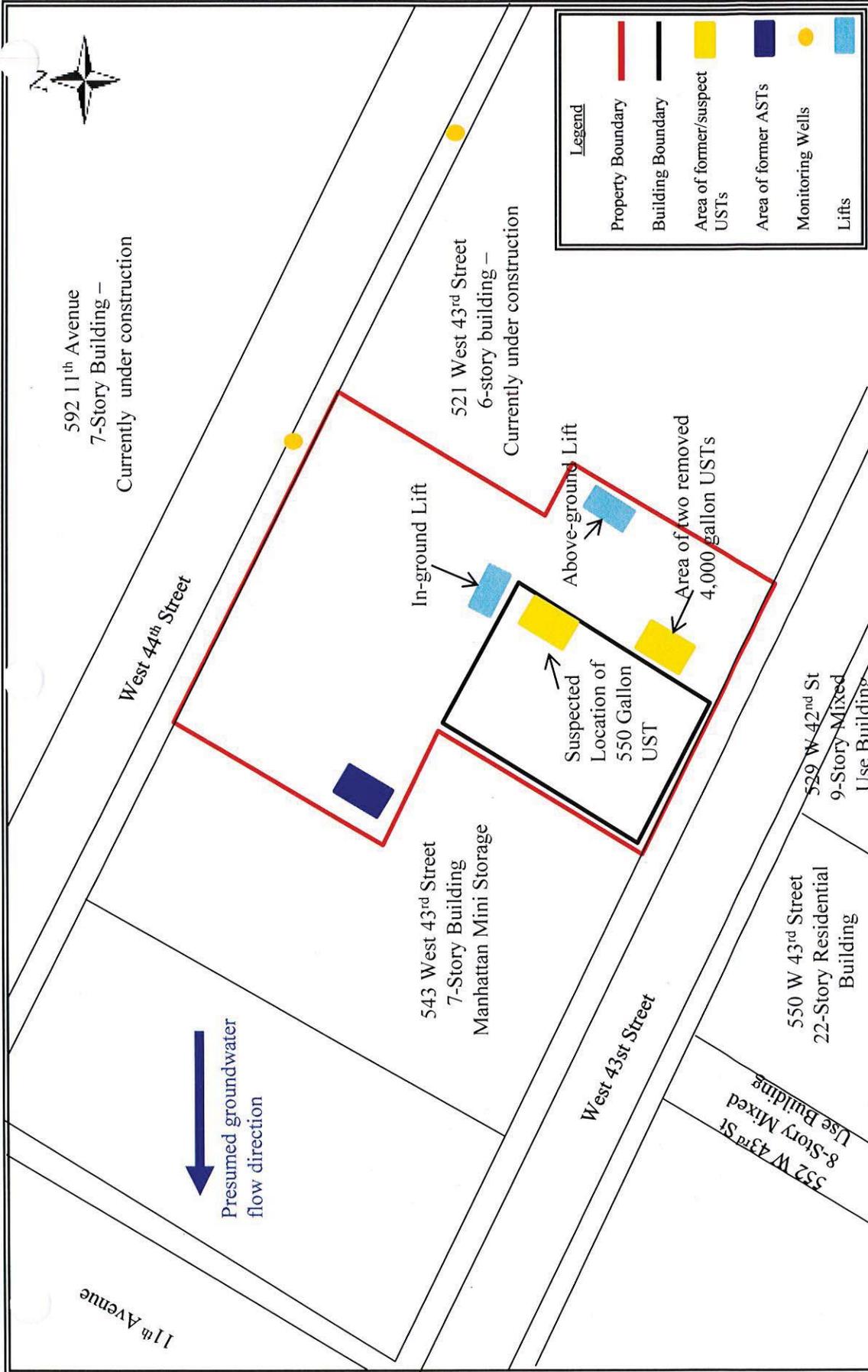
(a.) Do you know the past uses of the property? Yes No U/K

(b.) Do you know of specific chemicals that are present or once were present at the property? Yes No U/K

(c.) Do you know of spills or other chemical releases that have taken place at the property? Yes No U/K

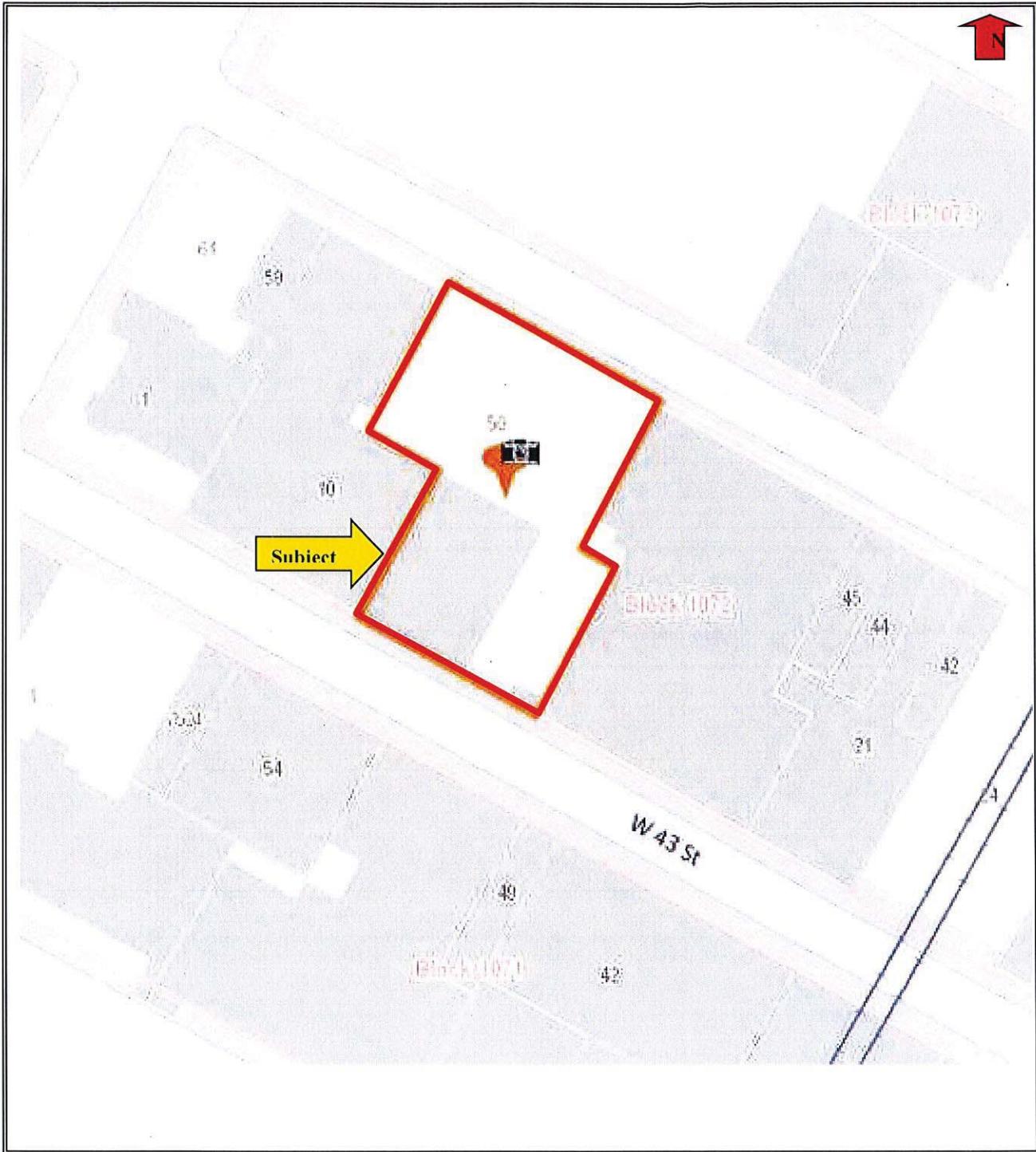
(d.) Do you know of any environmental cleanups that have taken place at the property? Yes No U/K

6. Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? Yes No U/K



SITE PLAN

<p>546 West 44th Street New York, New York</p>	<p>IVI ASSESSMENT SERVICES, INC. 55 WEST RED OAK LANE WHITE PLAINS, NY 10604 (914) 694-9600 (TEL) (914) 694-3727 (FAX)</p>	<p>Project No: PC20901774</p> <p>Boundaries are approximate. Not to scale.</p>
--	--	--

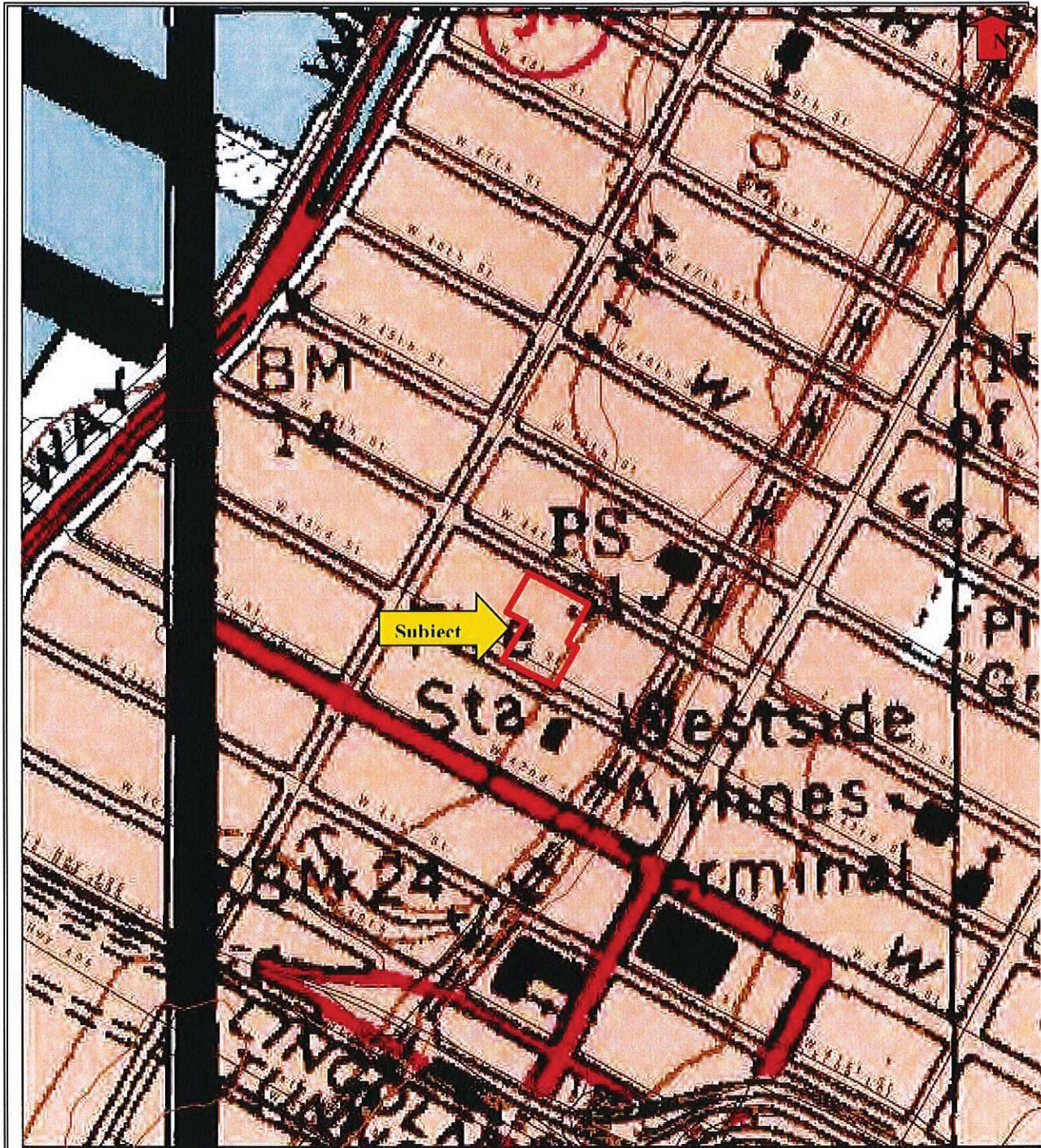


Tax Map

Source: Tax Assessor

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774

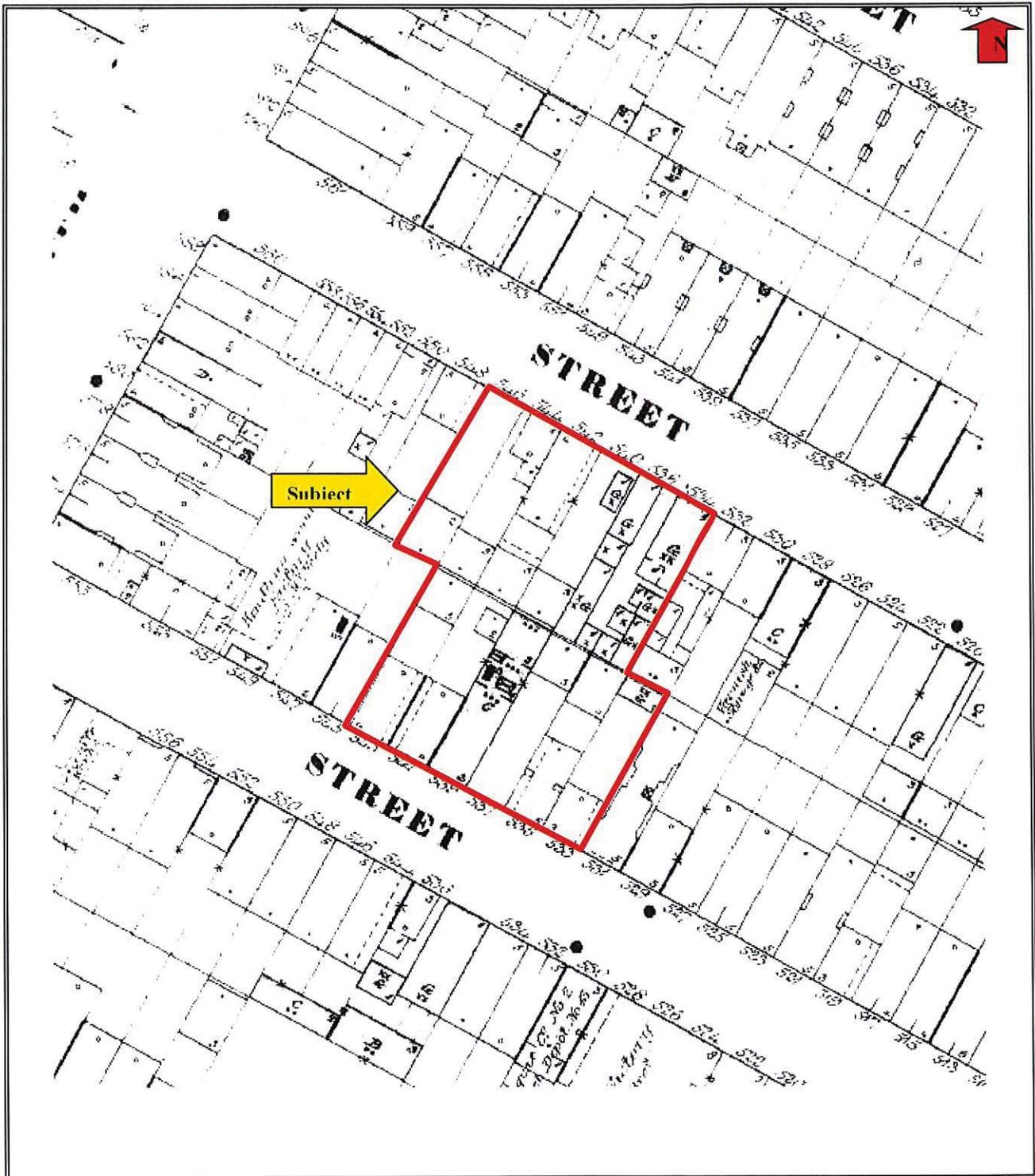




Historic USGS Topographic Map

Source: USGS Quadrangle
Central Park, N.Y.-N.J.
Year Revised: 1995

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774

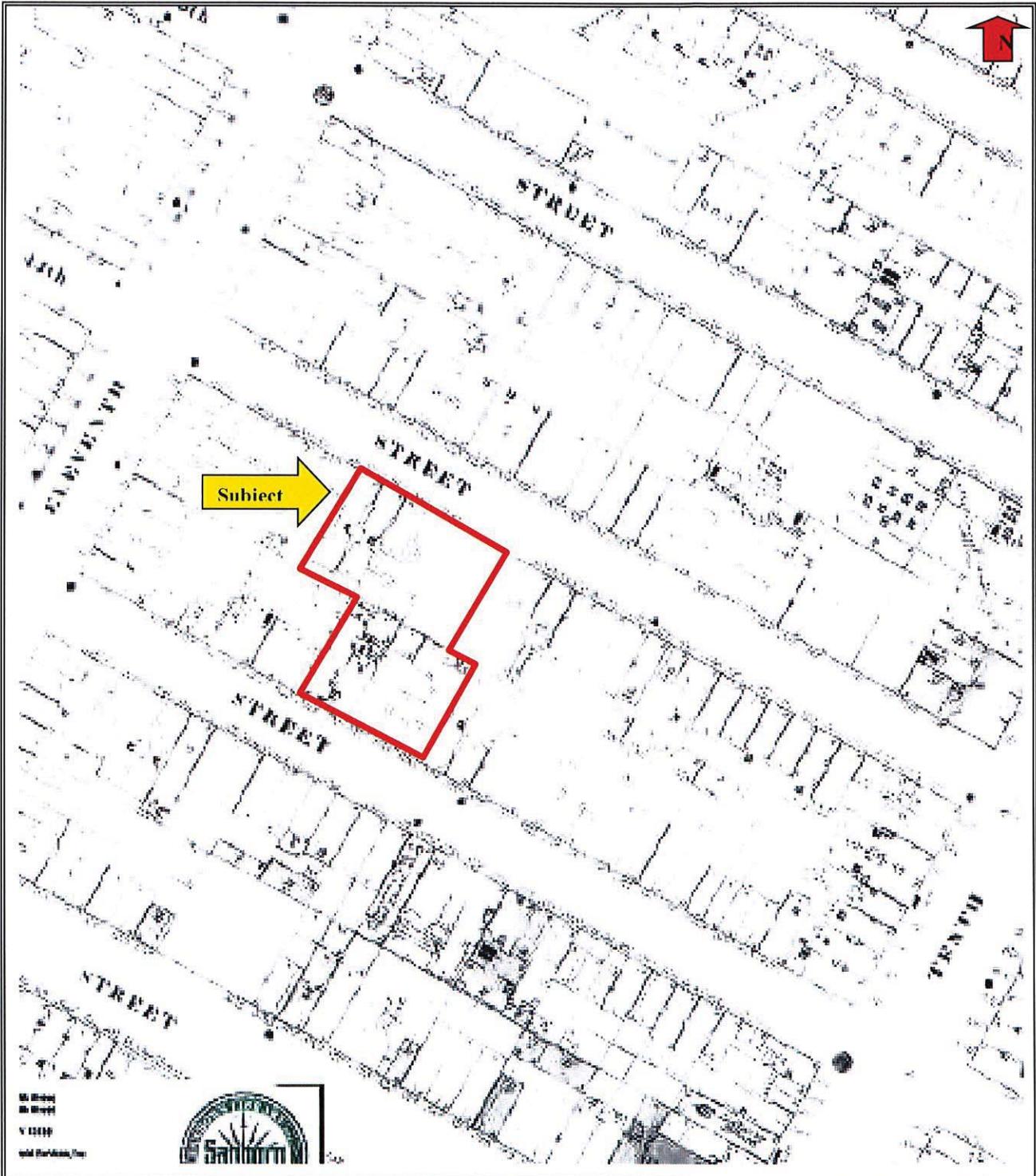


Sanborn Map
1890

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774



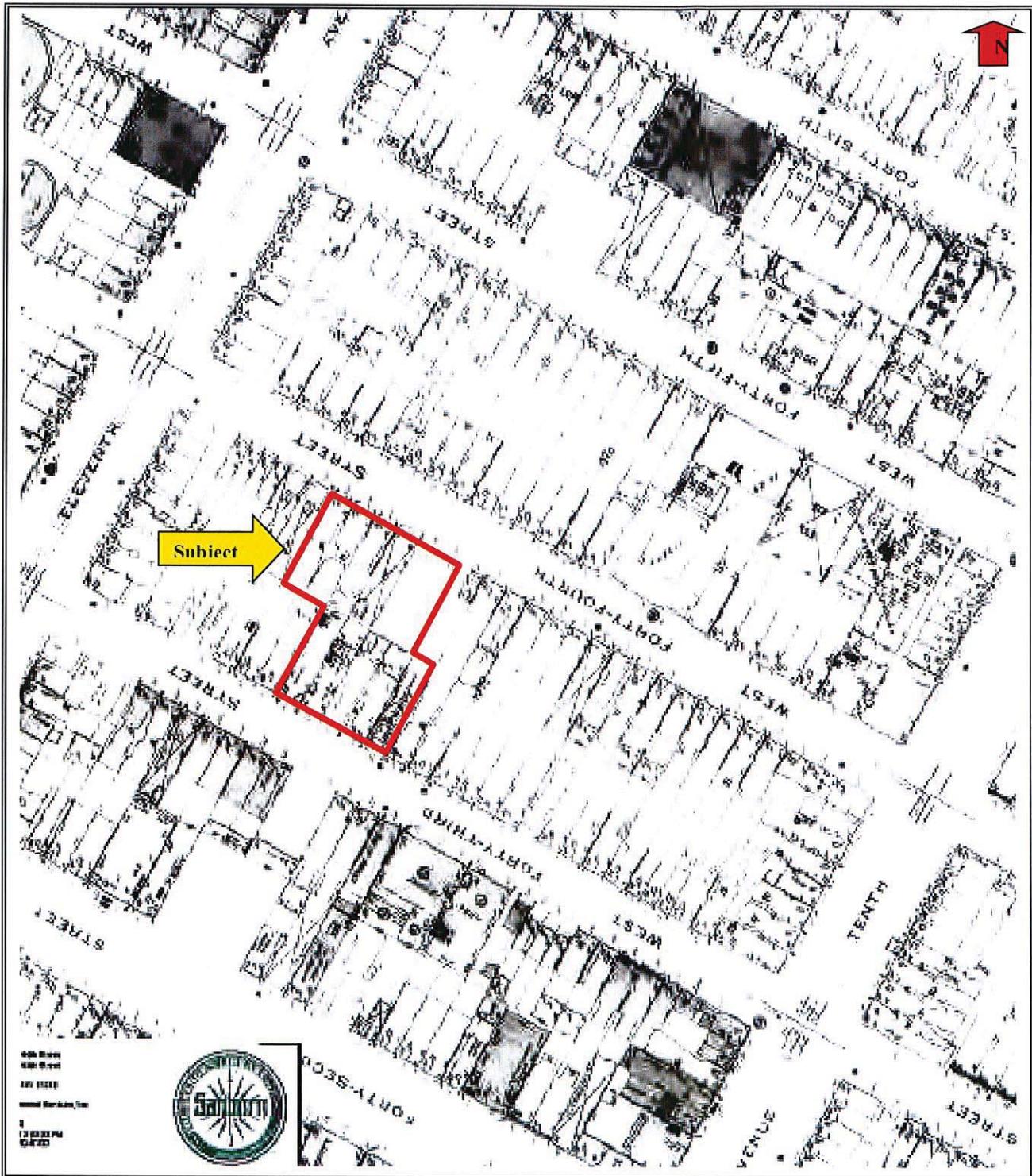


Sanborn Map
1899

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





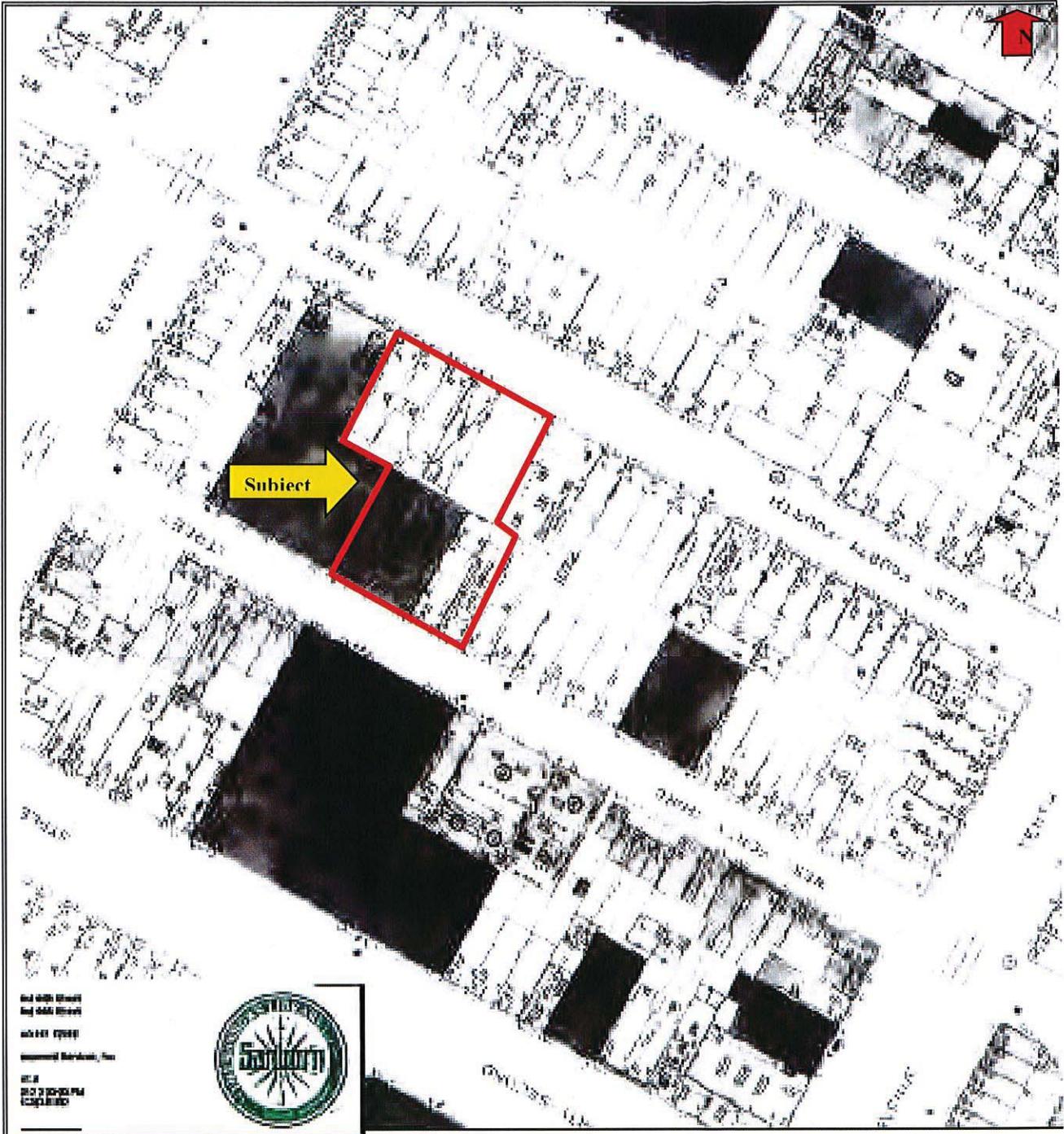
© 1911
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© 2018
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© 2020
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© 2022
© 2023
© 2024



Sanborn Map 1911

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774



Not with Street
and 44th Street
about 1920
Sanborn Fire Insurance Co.
INC.
212 JEROME
ST. N.Y.C.



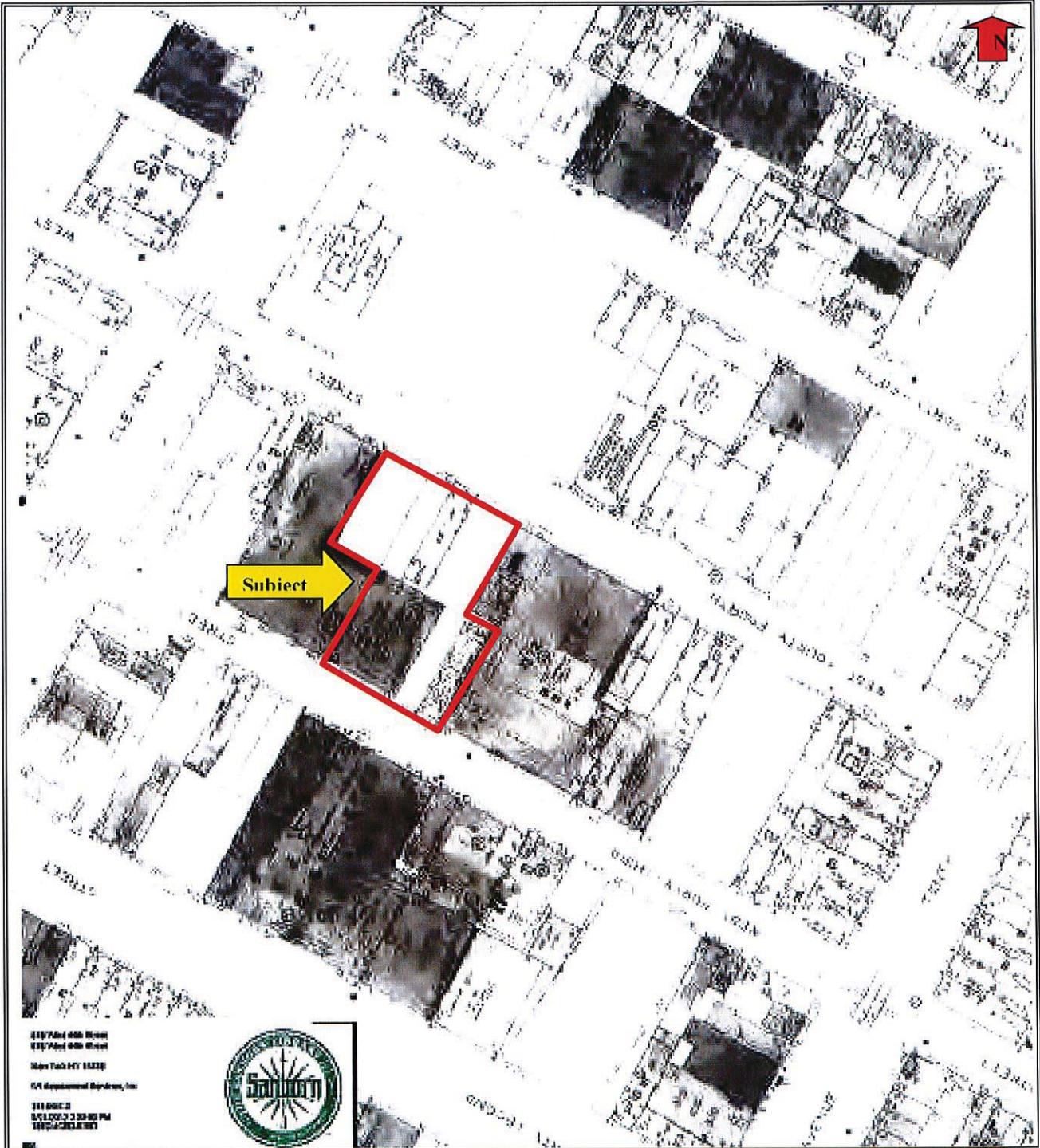
Sanborn Map

1930

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





111 100th St
111 100th St
Map York NY 10003
NY Department of Planning, Inc.
111 100th St
111 100th St
111 100th St



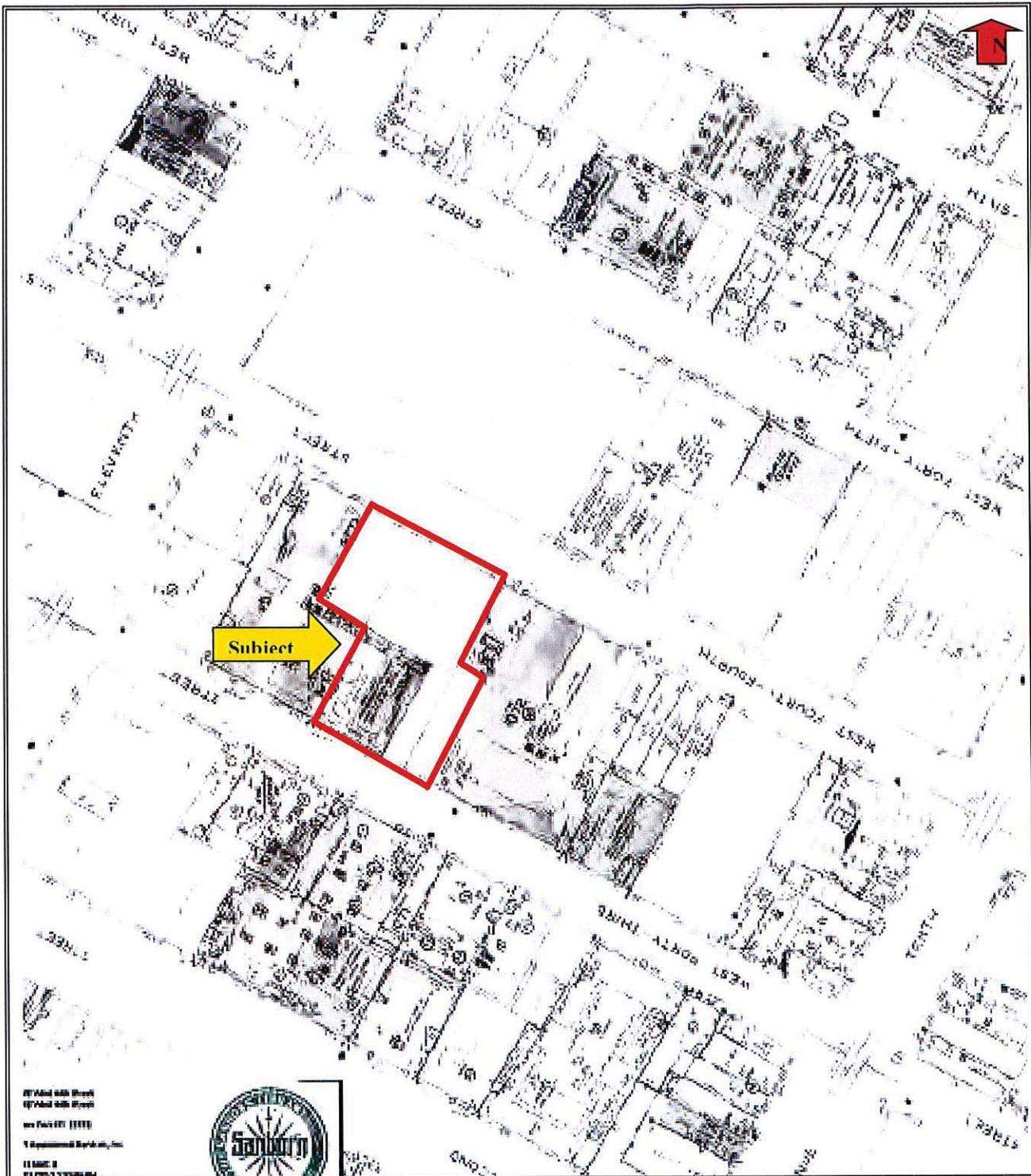
Sanborn Map

1950

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





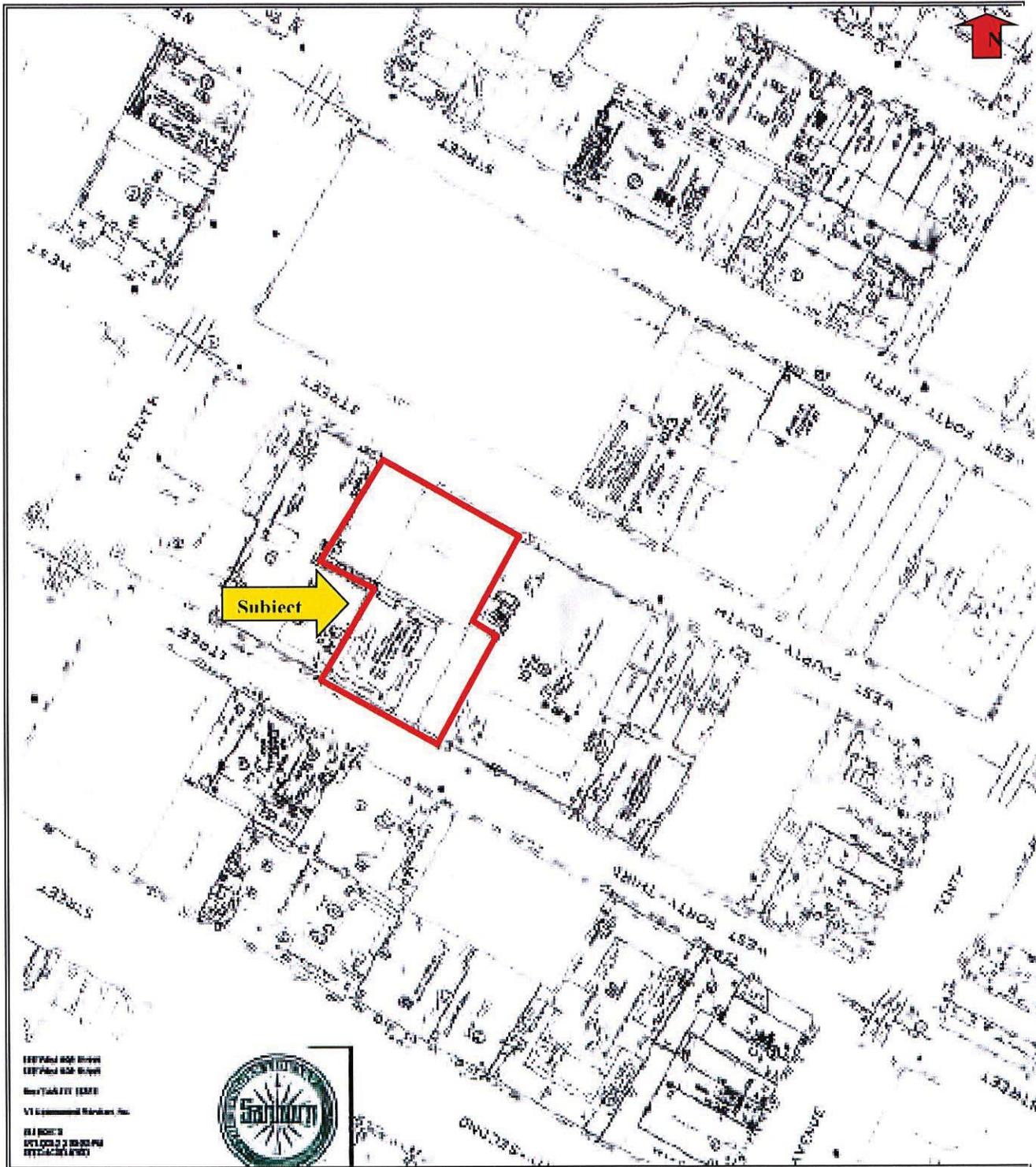
© 1980 Sanborn Fire Insurance Co.
© 1980 Sanborn Fire Insurance Co.
New York, N.Y. 10014
A Division of Rand McNally, Inc.
11 East Wacker Drive
Chicago, Illinois 60601

Sanborn Map 1980

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





1877-1985
1877-1985
New York City
VI Commercial Edition, Inc.
111 10th St
New York, NY 10003
212-692-1000

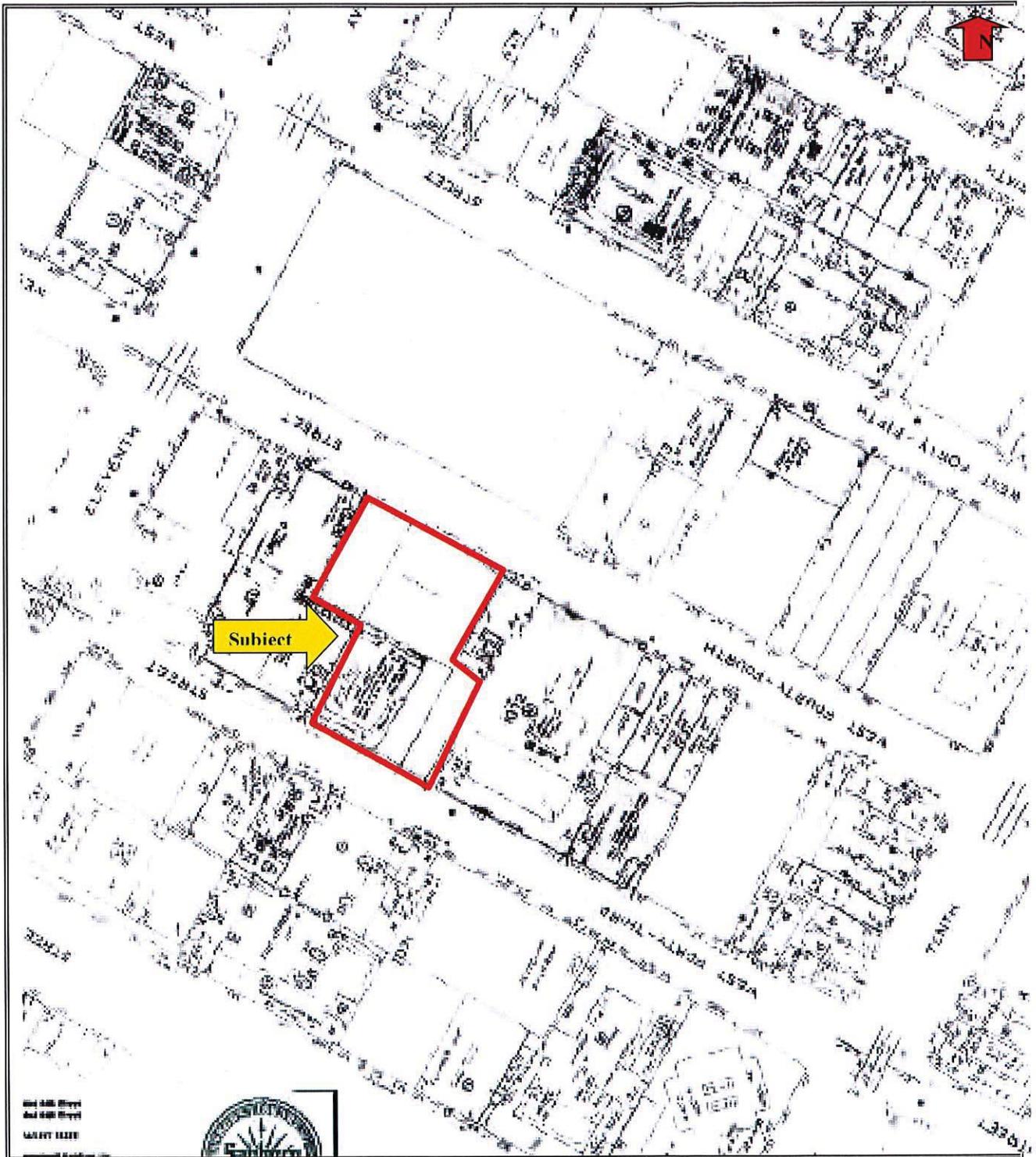


Sanborn Map 1985

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





West 44th Street
West 45th Street
West 46th Street



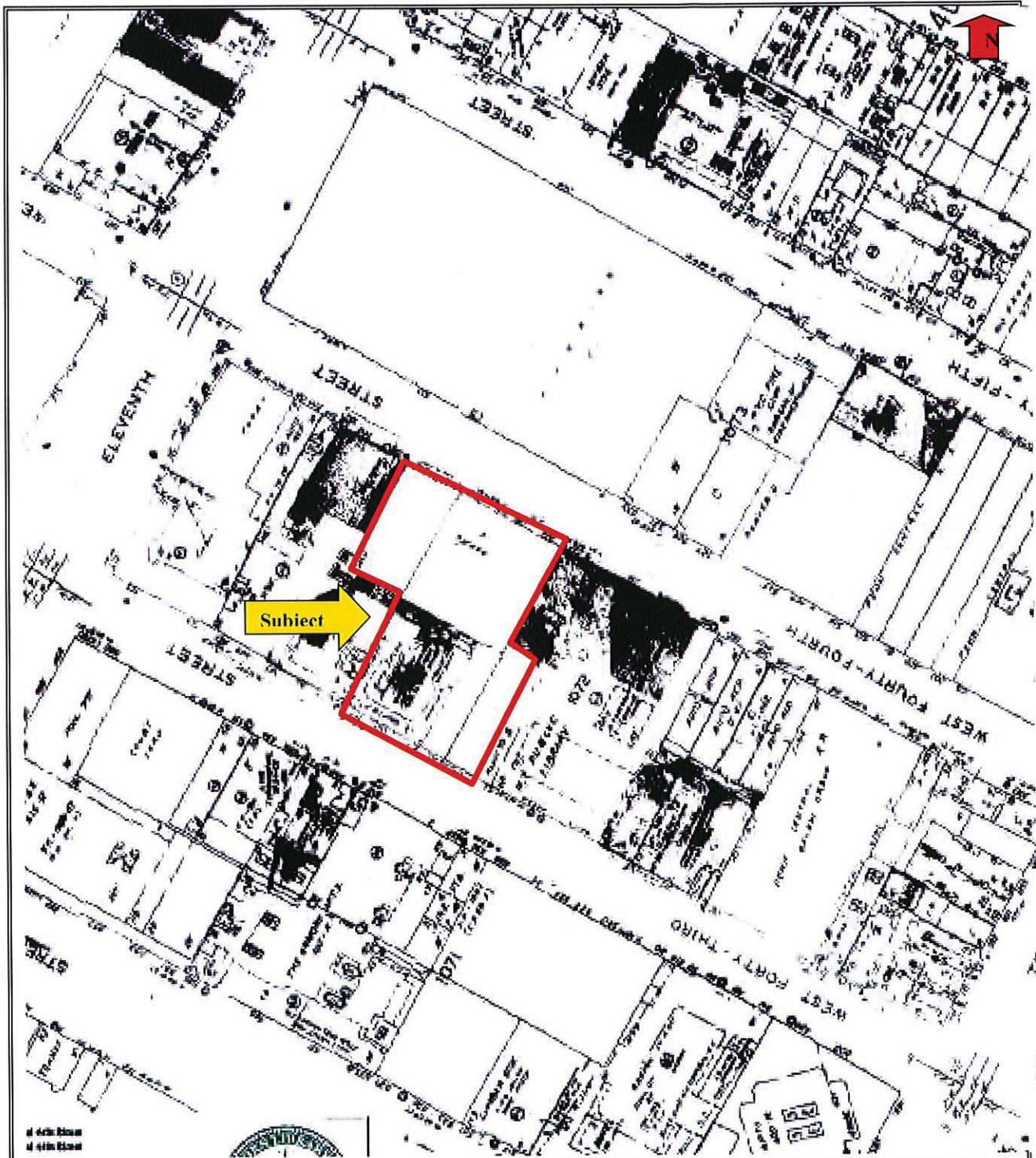
Sanborn Map

1990

Source: EDR

Project Name: 546 West 44th Street
New York, New York
Project Number: PC20901774





Sanborn Map

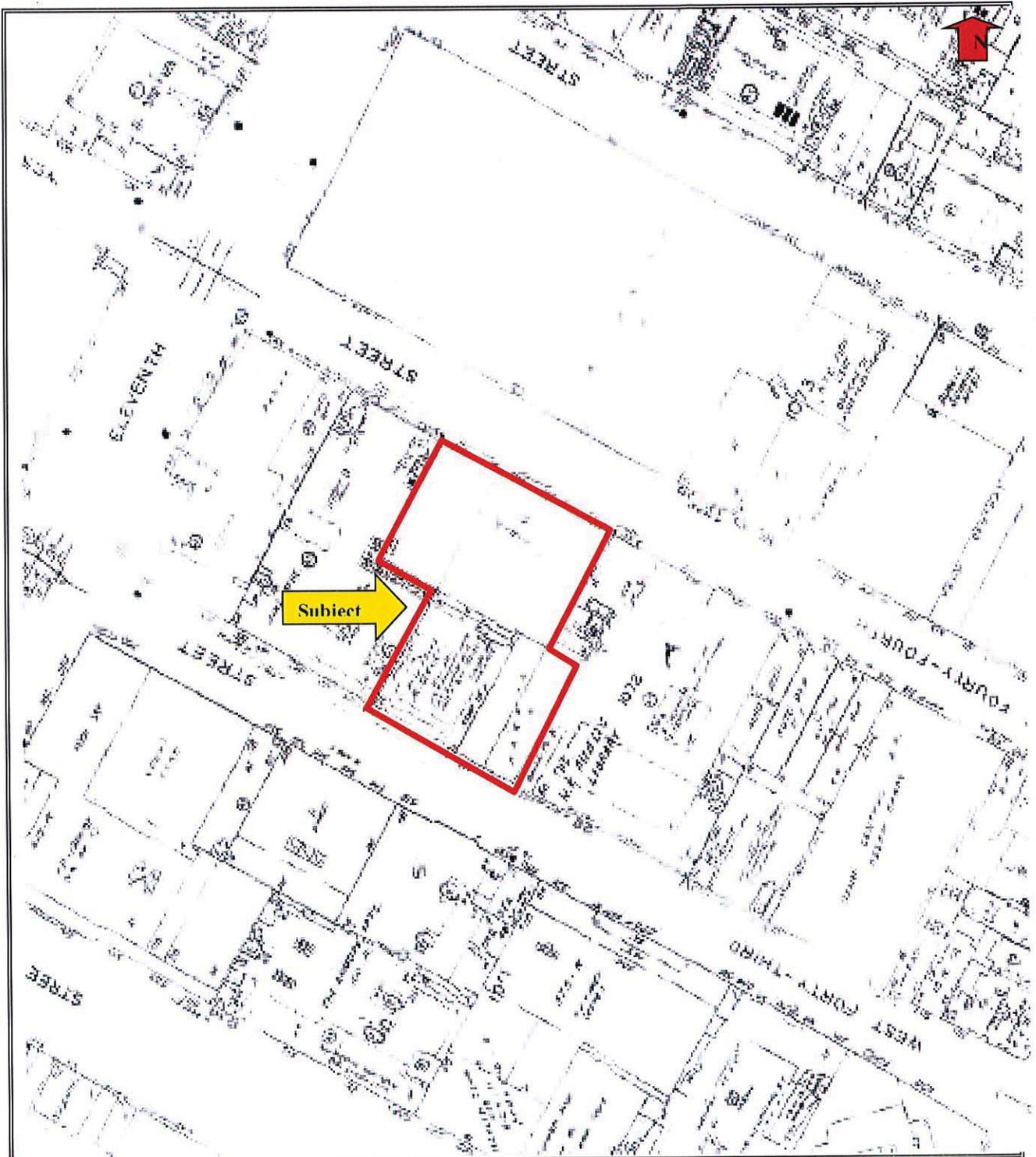
1996

Source: EDR

Project Name: 546 West 44th Street
New York, New York

Project Number: PC20901774





Sanborn Map

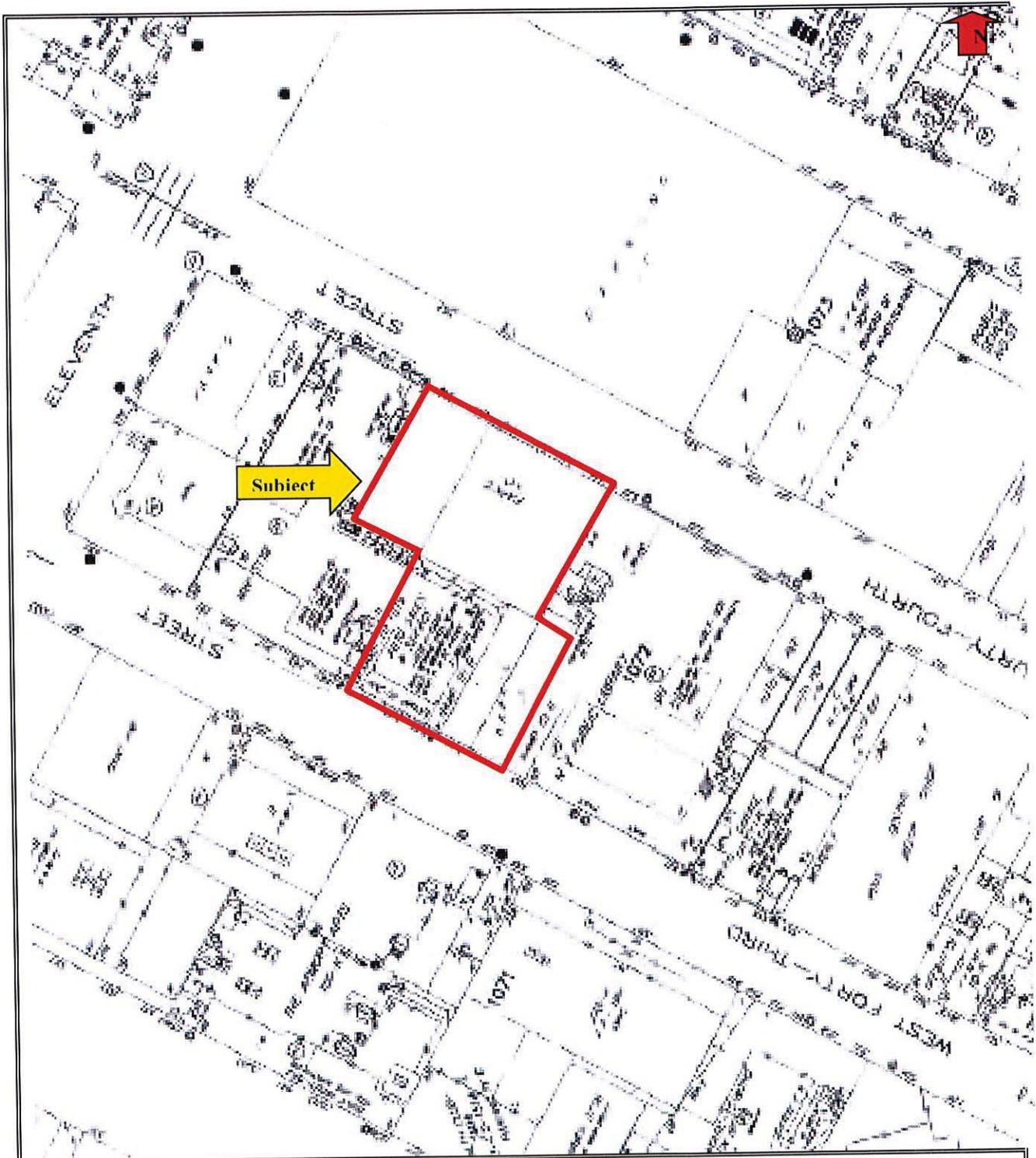
2001

Source: EDR

Project Name: 546 West 44th Street
New York, New York

Project Number: PC20901774





Sanborn Map

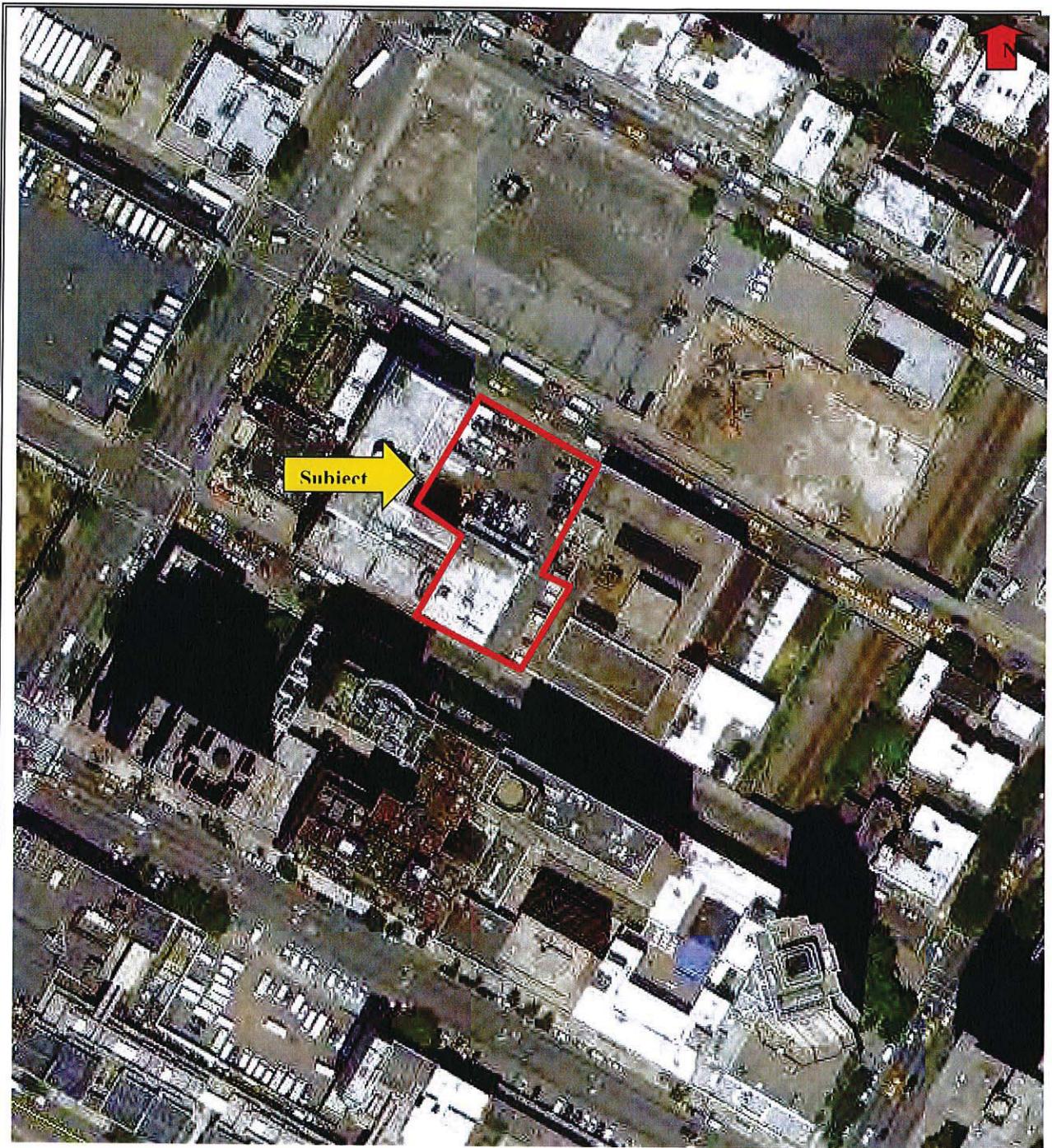
2005

Source: EDR

Project Name: 546 West 44th Street
New York, New York

Project Number: PC20901774





Historical Aerial Photograph

2012

Project Number: PC20901774

Project Name: 546 West 44th Street
New York, New York

546 West 44th Street
546 West 44th Street
New York, NY 10036

Inquiry Number: 03415441.2r
September 21, 2012

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

XXXXXXXXXX **S**XXXXXXXXXX

These reports have been prepared or reviewed by Environmental Consultants, Inc. The report was prepared to assist parties seeking to meet the search requirements of the State or Environmental Site Assessments 152-05 or custom requirements developed or the evaluation of environmental risk associated with proposed real estate.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXX **SS**

546 W. S. 44 S
New York, NY 10036

XXXXXXXXXX **S**

Latitude North: 40.616000 40.45.41.6
Longitude West: 73.61000 73.5.45.6
Meters: 5.4.35.
Year: 4512566.0
Elevation: 1 foot above sea level

S SXXXXXXXXXXXX SSXXXXXXXXXXXX WXXXXXXXXXXXX

Street Property: 400 3rd Street, NY, NY
Post Elevation: 1.5
South: 400 3rd Street, NY, NY
Post Elevation: 1.5
Southwest: 400 4th Street, NY, NY
Post Elevation: 1.1
West: 400 4th Street, NY, NY
Post Elevation: 1.5

XXXXXXXXXXXXXXXXXXXXXXXXXXXX **S**XXXXXXXXXXXX

Portions of photograph: 200, 2010
Source: S

XXXXXXXXXXXXXXXXXXXXXXXXXXXX **S**XXXXXXXXXXXX **S**XXXXXXXXXXXX

The street property was identified in the following reports. For more information on this property see page 10 of the attached plus report:

Site	Address	City
50, 10.2	NY	SI
546 W. S. 44 S	NY	SI
New York, NY 10036		

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S □□□□□□ □□□□□□ □□□□□□ □□□□ S

Federal NPL site list

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N □□ □□ NS □□□□□□ □ e er □ Super un □□ iens

Federal Delisted NPL site list

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Federal CERCLIS list

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Federal CERCLIS NFRAP site List

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Federal RCRA CORRACTS facilities list

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Federal RCRA non-CORRACTS TSD facilities list

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Federal ERNS list

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State- and tribal - equivalent CERCLIS

NY S □ WS □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□
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State and tribal landfill and/or solid waste disposal site lists

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State and tribal leaking storage tank lists

IN □ I □ N □□ S □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□ □□□□□□

Other Ascertainable Records

- XXXX S..... In ient n o i ient t
- Department o e ense Sites
- XX S..... Former y se e ense Sites
- r nium i i i n s Sites
- IN S..... ines ster In e e
- IS..... o i hemi e e se In entory System
- S..... o i Subst n es ontro t
- S..... I S r kin System I e er Inse ti e, un i e, o ent i e
- t S o i Subst n es ontro t
- IS S..... I S r kin System ministr ti e se istin
- SS S..... Se tion r kin Systems
- IS..... Inte r te omp i n e In orm tion System
- S..... t i t y t b se System
- S..... teri i ensin r kin System
- IN..... i tion In orm tion t b se
- S..... ministr ti e tion r kin System
- NY SW S..... rous Subst n e W ste ispos Site In entory
- NY I..... n er roun In e tion ontro We s
- N I..... n er roun In e tion We s t b se
- N Y N S..... ry e ner ist
- NY N S..... St te out nt is h re i min tion System
- N N S..... New ersey out nt is h re i min tion System is h rers
- NY I S..... ir missions t
- IN I N S..... In i n eser tions
- S Y N S..... St te o ition or e me i tion o ry e ners istin
- NY IN N I SS N..... in n i ssur n e In orm tion istin
- NY S..... o sh ispos Site istin
- NS..... r ns ormer e istr tion t b se
- S IN SS..... in n i ssur n e In orm tion
- W IS..... W IS
- 2020 I N..... 2020 orre ti e tion or r m ist
- N S..... o sh istin
- S..... o ombustion e si ues Sur e Impoun ments ist
- S..... Ste m e tri ent per tion t
- N IN N I SS N..... in n i ssur n e In orm tion istin

XXXXXXXXXX S

EDR Proprietary Records

- XXXX istori uto St tions.. XXXX ropriet ry istori s St tions
- XXXX istori e ners..... XXXX ropriet ry istori ry e ners

S S S S S S

Surround in sites were i ent i e in the o owin t b ses.

e tions h e been etermine rom the S S i it e e tion o e n shou be e u te on re ti e not n bsoute b sis. e e ti e e e tion in orm tion between sites o ose pro imity shou be ie e ri e i. Sites with n e e tion equ to or hi her th n the t r et property h e been i e r e n t e t e ow rom sites with n e e tion ower th n the t r et property. e e numbers n m p i e n t i i tion numbers re e r to the e e ius p report where e t i e t on in i i u sites n be re i ewe.

Sites iste in **bold italics** re in mu tip e t b ses.

nm pp b e orph n sites re not onsi ere in the ore oin n ysis.

S██████████ S

Federal NPL site list

NPL is also known as Superfund, the National Priority List. This base is a subset of the CERCLA sites. There are over 1,200 sites on the priority list under the Superfund program. The source of this base is the U.S. EPA.

A review of the NPL list, as provided by EPA, on 06/02/2012 has revealed that there is 1 NPL site within proximity 1 mile of the tract property.

Address	Distance	Street	Count
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11

Federal CERCLIS list

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains information on potentially hazardous waste sites that have been reported to the U.S. EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act. CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) sites which are in the screening or assessment phase or possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EPA, on 12/2/2011 has revealed that there is 1 CERCLIS site within proximity 0.5 miles of the tract property.

Address	Distance	Street	Count
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11

Federal RCRA generators list

RCRA: In order to support the Resource Conservation and Recovery Act of 1976, the various National Solid Waste Management Units (NSWMU) of 1974. This base includes sites which generate, transport, store, treat or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act. RCRA generators are sites which generate over 1,000 kilograms of hazardous waste, or over 1 kilogram of acutely hazardous waste per month.

A review of the RCRA list, as provided by EPA, on 03/15/2012 has revealed that there are 4 RCRA sites within proximity 0.25 miles of the tract property.

Address	Distance	Street	Count
W 5	530 W 45 S	N 0 1 0.04 mi.	11 101
NY S	515 533 W 44 S	S 0 1 0.050 mi.	21 144
NYCT - MICHAEL J. QUILL BUS DE	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC283 1091
Address	Distance	Street	Count
NYC PASSENGER SHIP TERMINAL	PIER 92	NW 1/8 - 1/4 (0.234 mi.)	BD322 1281

S

S: In o is s omprehensi e in orm tion system, pro i in ess to t supportin the esoure onser tion n e o ery t o 1 6 n the rous n So i W ste men ments SW o 1 4. he t b se in ues se e ti e in orm tion on sites whi h ener te, transp ort, store, tre t n or ispose o h rous w ste s e ine by the esoure onser tion n e o ery t . Sm quantity ener tors S s ener te between 100 k n 1,000 k o h rous w ste per month.

re iew o the S ist, s pro i e by , n te 03 15 2012 h s re e e th t there re 4 S sites within ppro im te y 0.25 mi es o the t r et property.

her e t	ress	re t st e		e
NEW YORK PUBLIC LIBRARY ANNEX	521 W 43RD ST	S 0 - 1/8 (0.058 mi.)	E44	205
OMNI CLEANERS CORP	595 10TH AVE	SE 0 - 1/8 (0.102 mi.)	J96	387
her e t	ress	re t st e		e
UNITED PARCEL SERVICE	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG183	679
627 WEST 42ND STREET	WEST 42ND STREET	W 1/8 - 1/4 (0.155 mi.)	AE197	782

S: In o is s omprehensi e in orm tion system, pro i in ess to t supportin the esoure onser tion n e o ery t o 1 6 n the rous n So i W ste men ments SW o 1 4. he t b se in ues se e ti e in orm tion on sites whi h ener te, transp ort, store, tre t n or ispose o h rous w ste s e ine by the esoure onser tion n e o ery t on ition y e empt sm quantity ener tors S s ener te ess th n 100 k o h rous w ste, or ess th n 1 k o ute y h rous w ste per month.

re iew o the S ist, s pro i e by , n te 03 15 2012 h s re e e th t there re 13 S sites within ppro im te y 0.25 mi es o the t r et property.

her e t	ress	re t st e		e
NYC BD OF ED - PUBLIC SCHOOL 5	520 W 45TH ST	NE 0 - 1/8 (0.050 mi.)	C23	148
N IS N	626 10	S 0 1 0.100 mi.	5	34
N IS N	533 W 4 S	N 1 1 4 0.150 mi.	1 1	66
CON EDISON - WEST 42ND ST SUB	571 W 41ST ST	SW 1/8 - 1/4 (0.157 mi.)	AH204	801
MERCEDES-BENZ MANHATTAN INC	528 W 41ST ST	SSW 1/8 - 1/4 (0.157 mi.)	AH206	816
N IS N	436 W 42N S	SS 1 1 4 0.1 mi.	242	60
DOWNTOWN IGNITION	548 W 48TH ST	NNE 1/8 - 1/4 (0.196 mi.)	AU253	988
N IS N	552 W 4 S N	NN 1 1 4 0.1 mi.	254	1000
N IS N	425 W 42N S	SS 1 1 4 0.220 mi.	301	1221
her e t	ress	re t st e		e
N IS N	63 11	N 1 1 4 0.15 mi.	212	6
N IS N	600 W 4 S	N 1 1 4 0.16 mi.	223	1
M V SEVEN SEAS NAVIGATOR	711 12THE AVE - PIER 88	NW 1/8 - 1/4 (0.217 mi.)	BD291	1191
MS NORWEGIAN SEA	711 12TH AVE TERMINAL A	NW 1/8 - 1/4 (0.234 mi.)	BD328	1322

Federal institutional controls / engineering controls registries

S N N S: istin o sites with en ineerin ontro s in p e.

re iew o the S N N S ist, s pro i e by , n te 12 30 2011 h s re e e th t

STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

there is 1 SINS site within approximately 0.5 miles of the target property.

Address	Distance	Site ID	Other
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11

SINS sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation requirements intended to prevent exposure to contaminants remaining on site. See restrictions are generally required as part of the institutional controls.

Review of the SINS list, as provided by EPA, on 12/30/2011 has revealed that there is 1 SINS site within approximately 0.5 miles of the target property.

Address	Distance	Site ID	Other
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11

State and tribal landfill and/or solid waste disposal site lists

NY SWIS: The Solid Waste Facilities in NY Sites report typically contain in inventory of solid waste disposal facilities or units in particular state. The following come from the list.

Review of the NY SWIS list, as provided by EPA, on 06/06/2012 has revealed that there are 2 NY SWIS sites within approximately 0.5 miles of the target property.

Address	Distance	Site ID	Other
CONED 12th Ave 12th St N 45 S	12th Ave 12th St N 45 S	NW 1/8 - 1/4 (0.204 mi.)	AY266 1045 Y26 1046

State and tribal leaking storage tank lists

NY NTS: Leaking Storage Tank Incidents Reports. These reports contain in inventory of reported leaking storage tank incidents reported from 4/1/06 through the most recent update. They can be either underground storage tanks or above ground storage tanks. The uses of the incidents are tank test failures, tank failures or tank overfills.

Review of the NY NTS list, as provided by EPA, on 05/22/2012 has revealed that there are 2 NY NTS sites within approximately 0.5 miles of the target property.

Address	Distance	Site ID	Other
CONED - V 3685 Not reported Date: 6/3/2003	522 W 44 ST 525 W 45 S	ESE 0 - 1/8 (0.040 mi.) N 0 1 0.051 mi.	B6 53 26 15
HESS #32215 Date: 10/1/2004	502 WEST 45TH STREET	ENE 0 - 1/8 (0.062 mi.)	F47 227
HESS GAS STATION Date: 3/1/2003	502 WEST 45TH STREET	ENE 0 - 1/8 (0.063 mi.)	F55 258
COACH USA Date: 1/1/2006	520 WEST 46TH STREET	NE 0 - 1/8 (0.104 mi.)	R102 400
WEST 45TH ST & 10TH AVE Date: 2/1/03	WEST 45TH ST & 10TH AVE	E 0 - 1/8 (0.107 mi.)	N125 510

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her e t	ress	re t st e		e
BMW te ose : 10 1 1	547 WEST 47TH ST	NNE 1/8 - 1/4 (0.148 mi.)	AF186	741
527 W 48TH ST te ose : 1 21 1	527 W 48TH ST	NE 1/8 - 1/4 (0.199 mi.)	AW256	1003
APARTMENT COMPLEX te ose : 3 6 2006	438 W.45TH ST	ESE 1/8 - 1/4 (0.200 mi.)	AX258	1009
N N te ose : 3 1 2006	605 W S 4 S	N 1 1 4 0.216 mi.	2	1065
525 11TH AVE/GREYHOUND te ose : 2 22 2005	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC280	1071
525 11TH AVE/GREYHOUND te ose : 3 2003	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC285	1158
BUS TERMINAL PORT AUTHORI te ose : 4 10 1	525 11TH AVE	SW 1/8 - 1/4 (0.219 mi.)	BC294	1200
MJ QUILL DEPOT -NYCT SI N te ose : 11 2 2002	523 11TH AVENUE 454 W S 4 S	SW 1/8 - 1/4 (0.219 mi.) N 1 1 4 0.22 mi.	BC295 312	1205 124
450 W. 41ST STREET te ose : 2 2005	450 W. 41ST STREET	S 1/8 - 1/4 (0.237 mi.)	BH333	1352
S N S te ose : 4 12 2006	423 W S 46 S	1 1 4 0.23 mi.	33	1361
PARKING LOT te ose : 2 4 2002	618-628 W 49TH ST	N 1/4 - 1/2 (0.267 mi.)	BO358	1435
611 9TH AVE te ose : 2 1 2004	611 9TH AVENUE	SE 1/4 - 1/2 (0.267 mi.)	359	1438
416 WEST 47TH STREET te ose : 6 13 2005	416 WEST 47TH ST	E 1/4 - 1/2 (0.276 mi.)	361	1445
725 10TH AVENUE te ose : 10 5 1 3	725 10TH AVENUE	NE 1/4 - 1/2 (0.287 mi.)	362	1448
te ose : 1 24 2006	520 W S 50 S	NN 1 4 1 2 0.2 6 mi.	363	1452
TERRIFIC TENEMENTS te ose : 4 13 2002	425 WEST 48TH STREET	ENE 1/4 - 1/2 (0.296 mi.)	364	1453
ASTOR SUBSTATION BCP SITE te ose : 12 21 2006	700 11TH AVE	NNE 1/4 - 1/2 (0.305 mi.)	BP365	1460
509 WEST 38TH ST te ose : 2 1 5	509 WEST 38TH ST	SSW 1/4 - 1/2 (0.312 mi.)	367	1468
695 9TH AVE/MANH te ose : 11 16 1 4	695 9TH AVENUE	E 1/4 - 1/2 (0.323 mi.)	368	1470
IS te ose : 14 200	410 W S 40	SS 1 4 1 2 0.324 mi.	36	14 3
442 WEST 50TH ST te ose : 1 14 1	442 WEST 50TH ST	ENE 1/4 - 1/2 (0.331 mi.)	370	1474
EXXON MOBIL te ose : 12 14 2006	714 11TH AVE	NNE 1/4 - 1/2 (0.338 mi.)	BR372	1478
BULL MCCABE BUSINESS te ose : 11 2003	714 11TH AVE	NNE 1/4 - 1/2 (0.339 mi.)	BR373	1482

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Address	Address	Area	Block	Lot
MOBIL OIL CORP SS #JWN Date of Sale: 10/2003 Date of Sale: 12/1/11 <i>*Additional key fields are available in the Map Findings section</i>	718 11TH AVE	NNE 1/4 - 1/2 (0.347 mi.)	BR378	1495
408 WEST 39TH ST Date of Sale: 2/13/11	408 WEST 39TH ST	SSE 1/4 - 1/2 (0.359 mi.)	BS382	1527
351 WEST 41ST ST Date of Sale: 3/15/2005	351 WEST 41 STREET	SE 1/4 - 1/2 (0.368 mi.)	384	1533
N 341 W 45 S Date of Sale: 1/13/2011	341 W 45 S	S 1/4 - 1/2 (0.36 mi.)	385	1536
330 WEST 43RD STREET Date of Sale: 1/16/11	330 WEST 43RD STREET	SE 1/4 - 1/2 (0.387 mi.)	386	1537
AMERICAN SAVINGS BANK Date of Sale: 10/31/11	735 9TH AVENUE	ENE 1/4 - 1/2 (0.390 mi.)	387	1540
475 10TH AVE/MANHATTAN Date of Sale: 1/26/11	475 10TH AVENUE	SSW 1/4 - 1/2 (0.390 mi.)	BT388	1542
553 561 W 52N S Date of Sale: 2/25/2004	553 561 W 52N S	NN 1/4 - 1/2 (0.35 mi.)	389	1543
AD SCHEUMANN LUMBER Date of Sale: 1/16/11	524 WEST 36TH STREET	SSW 1/4 - 1/2 (0.402 mi.)	392	1552
326 W 46TH ST Date of Sale: 4/22/11	326 W 46TH ST	ESE 1/4 - 1/2 (0.404 mi.)	393	1555
346 WEST 48TH ST Date of Sale: 12/30/11	346 WEST 48TH ST	E 1/4 - 1/2 (0.406 mi.)	394	1557
GASETERIA Date of Sale: 12/1/2003	466 10TH AVE	SSW 1/4 - 1/2 (0.409 mi.)	BT395	1560
460 10TH AVE Date of Sale: 12/20/11	460 10TH AVENUE	SSW 1/4 - 1/2 (0.423 mi.)	398	1571
37TH & 9TH ST/BKLYN Date of Sale: 3/14/2002	37TH/9TH STREET	S 1/4 - 1/2 (0.440 mi.)	399	1573
ANNA'S Date of Sale: 5/10/2005	763 9TH AVE	ENE 1/4 - 1/2 (0.440 mi.)	BV401	1577
855 TENTH AVENUE Date of Sale: 1/4/2000	857 TENTH AVE	NE 1/4 - 1/2 (0.447 mi.)	BW402	1583
CONSTRUCTION SITE Date of Sale: 12/13/2001	529 WEST 35TH ST	SSW 1/4 - 1/2 (0.448 mi.)	404	1600
788 10TH AVE. Date of Sale: 1/30/11	788 10TH AVE.	NE 1/4 - 1/2 (0.450 mi.)	BW405	1603
783 10TH AVENUE Date of Sale: 1/1/11	783 TENTH AVENUE	NE 1/4 - 1/2 (0.454 mi.)	BW406	1606
N 711 W 45 S Date of Sale: 12/12/2001	711 W 45 S	N 1/4 - 1/2 (0.45 mi.)	407	1607
766 11TH AVENUE Date of Sale: 4/2/11	766 11TH AVENUE	NNE 1/4 - 1/2 (0.468 mi.)	BX409	1612
VACANT LOT Date of Sale: 4/2/11	770 11TH AVE	NNE 1/4 - 1/2 (0.468 mi.)	BX410	1616
NYC FIRE DEPT ENG CO 54 Date of Sale: 6/6/2005	782 8TH AVE	E 1/4 - 1/2 (0.471 mi.)	BY411	1621

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Address	Address	Ret. St. E		
790 8TH AVE Date: 2 25 2003 Date: 3 2006	790 8TH AVE	E 1/4 - 1/2 (0.478 mi.)	BY412	1624
Not reported Date: 11 16 2005	360 WEST 51ST STREET	ENE 1/4 - 1/2 (0.479 mi.)	413	1631
307 W 39TH STREET Date: 12 31 2003	307 W 39TH STREET	SSE 1/4 - 1/2 (0.490 mi.)	414	1634
Address	Address	Ret. St. E		
APARTMENT COMPLEX Date: 1 13 2006	560 W 43RD ST	SW 0 - 1/8 (0.063 mi.)	G56	263
1 N W S 42 N S Date: 4 2 2003	560 W S 43 S	SW 0 - 1/8 (0.063 mi.)	5	2 0
612 W 45TH ST/UPS Date: 2 12 2003	612 W 45TH ST	NNW 0 - 1/8 (0.103 mi.)	L97	389
W 45TH ST / 11TH AV Date: 1 16 2005	609-611 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L107	424
MOBIL GAS STATION Date: 2 2003	561 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L108	429
MOBIL OIL CORP SS #QDL Date: 2 2003	561 11TH AVE	WSW 0 - 1/8 (0.106 mi.)	V114	458
MOBIL S/S Date: 2 2003	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V120	497
METROPOLITAN LUMBER COMPANY Date: 1 1 2003	617 11TH AVE	NNW 0 - 1/8 (0.117 mi.)	S140	556
3 Date: 12 20 2005	600 W S 42 N S	WSW 1/8 - 1/4 (0.133 mi.)	Y15	625
VERIZON Date: 6 25 2002	605 WEST 42ND ST	WSW 1/8 - 1/4 (0.135 mi.)	Y161	634
643 W 43RD ST/UPS Date: 3 31 2005 Date: 1 5	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG185	736
639 11TH AVE./MAHATTAN Date: 3 1 2003	639 11TH AVE.	N 1/8 - 1/4 (0.156 mi.)	AD203	798
Not reported Date: 3 2003	612 614 W S 4 S	N 1/8 - 1/4 (0.156 mi.)	22	06
CONSTRUCTION SITE Date: 20 2006	617-623 WEST 47TH STREE	N 1/8 - 1/4 (0.176 mi.)	AO232	913
605 W S 4 S Date: 11 2004	605 W S 4 S	N 1/8 - 1/4 (0.176 mi.)	23	32
CLOSED-LACKOF RECENT INFO Date: 3 5 2003	711 12TH AVENUE	NW 1/8 - 1/4 (0.218 mi.)	BD292	1196
608 W 40 ST - MAN Date: 10 16 2003	608 W 40 ST	SW 1/8 - 1/4 (0.223 mi.)	BC303	1229
624 WEST 48TH ST Date: 2 23 2003	624 WEST 48TH ST	N 1/8 - 1/4 (0.223 mi.)	BF306	1237

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Address	Distance	Parcel ID	Area
610-630 W. 48TH STREET Date: 06/1/06	624 WEST 48TH STREET	N 1/8 - 1/4 (0.227 mi.)	BF314 1253
PIER 90/MANHATTAN Date: 11/14/04	PIER 90	NW 1/4 - 1/2 (0.259 mi.)	356 1418
W49TH STREET SUBSTATION Date: 10/15/2003	637 WEST 49TH STREET	N 1/4 - 1/2 (0.274 mi.)	BO360 1440
IN Date: 5/5/2005	541 W. S. 3 S	SSW 1/4 - 1/2 (0.331 mi.)	31 14
Not reported Date: 3/1/2005	550 WEST 37TH ST	SSW 1/4 - 1/2 (0.352 mi.)	BQ379 1519
SILVERSTEIN 42ND ASSOC. Date: 03/1/06	500-516 12TH AVE	WSW 1/4 - 1/2 (0.352 mi.)	380 1523
CLOSED-LACKOF RECENT INFO Date: 3/5/2003	PIER 79 / 12TH AVE	W 1/4 - 1/2 (0.416 mi.)	397 1568
660 52ND ST/BKLYN Date: 11/26/00	660 52ND STREET	N 1/4 - 1/2 (0.447 mi.)	403 1598

NY IS N S: istin o e kin un er rou n bo e rou stor e t nks. he uses o the in i ents re nk test i ures, t nk i ures or t nk o er i s. In 2002, the ep rtment o n ironment onser tion stoppe pro i in up tes to its ori in Spi s In orm tion t b se. his t b se in ues ie s th t re no on er i i b e rom the NY s o nu ry 1, 2002. urrent in orm tion m y be oun in the NY N S t b se.

re i ew o the NY IS N S ist, s pro i e by , n te 01/01/2002 h s re e e th t there re 6 NY IS N S sites within ppro im te y 0.5 miles o the t r et property.

Address	Distance	Parcel ID	Area
HUDSON RIVER PCBS Date: 02/1/00	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11
HESS #32215 Date: 00/00/00	502 WEST 45TH STREET	ENE 0 - 1/8 (0.062 mi.)	F47 227
502 W. S. 45 S Date: 00/00/00	502 W. S. 45 S	N 0 - 1 (0.063 mi.)	54 256
WEST 45TH ST & 10TH AVE Date: 00/02/03	WEST 45TH ST & 10TH AVE	E 0 - 1/8 (0.107 mi.)	N125 510
BMW Date: 10/01/00	547 WEST 47TH ST	NNE 1/8 - 1/4 (0.148 mi.)	AF186 741
527 W 48TH ST Date: 01/21/00	527 W 48TH ST	NE 1/8 - 1/4 (0.199 mi.)	AW256 1003
APARTMENT COMPLEX Date: 00/00/00	438 W.45TH ST	ESE 1/8 - 1/4 (0.200 mi.)	AX258 1009
547 10TH AVENUE Date: 00/00/00	547 10TH AVENUE	S 1/8 - 1/4 (0.201 mi.)	AV260 1013
525 11TH AVE/GREYHOUND Date: 04/10/00	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC285 1158
MJ QUILL DEPOT -NYCT Date: 00/00/00	523 11TH AVENUE	SW 1/8 - 1/4 (0.219 mi.)	BC295 1205

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Address	Address	Distance	Block	Area
525 N 11th Street N 11th Street te use: 00	525 N 11th Street N 11th Street	SW 1/4 - 1/4 (0.21 mi.)	2-6	120
450 W. 41ST STREET te use: 00	450 W. 41ST STREET	S 1/8 - 1/4 (0.237 mi.)	BH333	1352
PARKING LOT te use: 00	618-628 W 49TH ST	N 1/4 - 1/2 (0.267 mi.)	BO358	1435
416 WEST 47TH STREET te use: 00	416 WEST 47TH ST	E 1/4 - 1/2 (0.276 mi.)	361	1445
725 10TH AVENUE te use: 10 05 03	725 10TH AVENUE	NE 1/4 - 1/2 (0.287 mi.)	362	1448
TERRIFIC TENEMENTS te use: 00	425 WEST 48TH STREET	ENE 1/4 - 1/2 (0.296 mi.)	364	1453
509 WEST 38TH ST te use: 0 2 05	509 WEST 38TH ST	SSW 1/4 - 1/2 (0.312 mi.)	367	1468
695 9TH AVE/MANH te use: 11 16 04	695 9TH AVENUE	E 1/4 - 1/2 (0.323 mi.)	368	1470
442 WEST 50TH ST te use: 01 14 00	442 WEST 50TH ST	ENE 1/4 - 1/2 (0.331 mi.)	370	1474
HERTZ/PENSKE - MAN te use: 00	493 / 7 10 AVE	SSW 1/4 - 1/2 (0.341 mi.)	374	1485
██████ S S te use: 01 2 01 te use: 11 22 06	11th Street N 11th Street	NN 1/4 - 1/2 (0.34 mi.)	3-5	14
██████ S S te use: 00	11th Street N 11th Street	NN 1/4 - 1/2 (0.34 mi.)	3-6	14-2
██████ S S te use: 03 2 05	11th Street N 11th Street	NN 1/4 - 1/2 (0.34 mi.)	3	14-3
408 WEST 39TH ST te use: 02 13 00	408 WEST 39TH ST	SSE 1/4 - 1/2 (0.359 mi.)	BS382	1527
PORT AUTH NY/NJ - MAN te use: 00	W.39TH ST / 9TH AVE	SSE 1/4 - 1/2 (0.367 mi.)	BS383	1530
330 WEST 43RD STREET te use: 01 16 06	330 WEST 43RD STREET	SE 1/4 - 1/2 (0.387 mi.)	386	1537
AMERICAN SAVINGS BANK te use: 10 31 00	735 9TH AVENUE	ENE 1/4 - 1/2 (0.390 mi.)	387	1540
475 10TH AVE/MANHATTAN te use: 01 26 06	475 10TH AVENUE	SSW 1/4 - 1/2 (0.390 mi.)	BT388	1542
549 WEST 52ND STREET te use: 00	549 WEST 52ND STREET	NNE 1/4 - 1/2 (0.395 mi.)	BU389	1545
AD SCHEUMANN LUMBER te use: 01 16 00	524 WEST 36TH STREET	SSW 1/4 - 1/2 (0.402 mi.)	392	1552
326 W 46TH ST te use: 04 22 03	326 W 46TH ST	ESE 1/4 - 1/2 (0.404 mi.)	393	1555
346 WEST 48TH ST te use: 12 30 04	346 WEST 48TH ST	E 1/4 - 1/2 (0.406 mi.)	394	1557
GASETERIA te use: 00	466 10TH AVE	SSW 1/4 - 1/2 (0.409 mi.)	BT396	1564

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Address	Address	Reference	Street	Block	Lot
460 10TH AVE 00te 00se: 12 20 4	460 10TH AVENUE	SSW 1/4 - 1/2 (0.423 mi.)	398	1571	
37TH & 9TH ST/BKLYN 00te 00se: 00	37TH/9TH STREET	S 1/4 - 1/2 (0.440 mi.)	399	1573	
Not reported 00te 00se: 00	63 000 000	N 1/4 - 1/2 0.440 mi.	400	15 6	
855 TENTH AVENUE 00te 00se: 01 04 00	857 TENTH AVE	NE 1/4 - 1/2 (0.447 mi.)	BW402	1583	
CONSTRUCTION SITE 00te 00se: 12 13 01	529 WEST 35TH ST	SSW 1/4 - 1/2 (0.448 mi.)	404	1600	
788 10TH AVE. 00te 00se: 00 30 2	788 10TH AVE.	NE 1/4 - 1/2 (0.450 mi.)	BW405	1603	
783 10TH AVENUE 00te 00se: 00	783 TENTH AVENUE	NE 1/4 - 1/2 (0.454 mi.)	BW406	1606	
766 11TH AVENUE / NEW YOR 00te 00se: 04 2 4	766 11TH AVENUE	NNE 1/4 - 1/2 (0.468 mi.)	BX408	1610	
VACANT LOT 00te 00se: 04 2 4	770 11TH AVE	NNE 1/4 - 1/2 (0.468 mi.)	BX410	1616	
NYC FIRE DEPT ENG CO 54 00te 00se: 00	782 8TH AVE	E 1/4 - 1/2 (0.471 mi.)	BY411	1621	
790 8TH AVE 00te 00se: 00	790 8TH AVE	E 1/4 - 1/2 (0.478 mi.)	BY412	1624	
Not reported 00te 00se: 00	360 WEST 51ST STREET	ENE 1/4 - 1/2 (0.479 mi.)	413	1631	
307 W 39TH STREET 00te 00se: 12 31 00	307 W 39TH STREET	SSE 1/4 - 1/2 (0.490 mi.)	414	1634	
00 I 00 S 000 00 N 00te 00se: 00 2 00	436 10 00 00 34 00 S	SSW 1/4 - 1/2 0.4 3 mi.	415	1640	

Address	Address	Reference	Street	Block	Lot
APARTMENT COMPLEX 00te 00se: 00	560 W 43RD ST	SW 0 - 1/8 (0.063 mi.)	G56	263	
612 W 45TH ST/UPS 00te 00se: 00	612 W 45TH ST	NNW 0 - 1/8 (0.103 mi.)	L97	389	
MOBIL GAS STATION 00te 00se: 00	561 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L108	429	
60 611 11 00 S 00te 00se: 00	611 11 00 00 N	NNW 0 01 0.105 mi.	110	44	
MOBIL OIL CORP SS #QDL 00te 00se: 00	561 11TH AVE	WSW 0 - 1/8 (0.106 mi.)	V114	458	
MOBIL S/S 00te 00se: 00	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V120	497	
METROPOLITAN LUMBER COMPANY 00te 00se: 01 0 00	617 11TH AVE	NNW 0 - 1/8 (0.117 mi.)	S140	556	
VERIZON 00te 00se: 00	605 WEST 42ND ST	WSW 1/8 - 1/4 (0.135 mi.)	Y161	634	

Address	Address	Reference	Street	Block	Lot
643 W 43RD ST/UPS 00te 00se: 00005 00te 00se: 03315	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG185	736	
639 11TH AVE./MAHATTAN 00te 00se: 0031	639 11TH AVE.	N 1/8 - 1/4 (0.156 mi.)	AD203	798	
CLOSED-LACKOF RECENT INFO 00te 00se: 00	711 12TH AVENUE	NW 1/8 - 1/4 (0.218 mi.)	BD292	1196	
608 W 40 ST - MAN 00te 00se: 1016	608 W 40 ST	SW 1/8 - 1/4 (0.223 mi.)	BC303	1229	
NYN 00te 00se: 00066	624 W. 4 S	N 1/4 0.223 mi.	00305	1235	
624 WEST 48TH ST 00te 00se: 02233	624 WEST 48TH ST	N 1/8 - 1/4 (0.223 mi.)	BF306	1237	
PIER 90/MANHATTAN 00te 00se: 11144	PIER 90	NW 1/4 - 1/2 (0.259 mi.)	356	1418	
CHINESE CONSULATE 00te 00se: 0112	520 12TH AVE	W 1/4 - 1/2 (0.265 mi.)	357	1420	
Not reported 00te 00se: 00	550 WEST 37TH ST	SSW 1/4 - 1/2 (0.352 mi.)	BQ379	1519	
SILVERSTEIN 42ND ASSOC. 00te 00se: 00036	500-516 12TH AVE	WSW 1/4 - 1/2 (0.352 mi.)	380	1523	
CLOSED-LACKOF RECENT INFO 00te 00se: 00	PIER 79 / 12TH AVE	W 1/4 - 1/2 (0.416 mi.)	397	1568	
660 52ND ST/BKLYN 00te 00se: 11260	660 52ND STREET	N 1/4 - 1/2 (0.447 mi.)	403	1598	

State and tribal registered storage tank lists

NY 00N S: This list contains information on sites that are or have been reported under the Storage Program. Information on these sites may not be released by the state agency.

The review of the NY 00N S list, is provided by the state, on 02/02/2012 has revealed that there are 5 NY 00N S sites within approximately 0.25 miles of the target property.

Address	Address	Reference	Street	Block	Lot
VERIZON NEW YORK, INC.	610-630 WEST 48TH STREE	N 1/8 - 1/4 (0.217 mi.)	BB289	1184	
VERIZON NEW YORK INC.	604-628 WEST 43RD STREE	W 0 - 1/8 (0.099 mi.)	K84	344	
VERIZON NEW YORK INC	563 11TH AVE	WSW 0 - 1/8 (0.102 mi.)	K93	381	
0001 N N WY 000 IN. NY 1155	615 W S 4 S	N 1/4 0.1 mi.	00234	022	
00000. 0001 S 00N 00N 00N	60 W S 40 S	SW 1/4 0.225 mi.	0030	1243	

NY State Office of Environmental Conservation
 Subtitle of the Resource Conservation and Recovery Act (RCRA) that come from the Department of
 Environment and Conservation (DEC) State Office

Review of the NY State list, is provided by the State Office of Environmental Conservation (SOEC) in late 2012 has revealed that there are 4
 NY State sites within proximity 0.25 miles of the target property.

Address	Address	Distance	Site ID	Area
43RD PARKING CORP MARVIN MITHELL N.Y. S 1 51 525 W S 45 S HESS #32215 NN IS N SYS SALVATION ARMY THERAPY BLDG S N NSI N PHIL'S WEST 44TH ST SERV/STA S N N INI INN 535-545 WEST 47TH STREET I I N N S TERIFIC TENEMENTS S N N IN 445 W 45 DEVELOPERS PARTNERSHP I N SS NY AVIS RENT A CAR SYSTEM, INC. AVIS RENT A CAR 653 N N 432 W S 45 S 520 W 4 S ADVANCED CONTRACTING CORP I S CUMBERLAND FARMS N N S DYER AVENUE ASSOCIATES, LLC PARKING GARAGE 414 W 44TH ST 42N S W LINCOLN TUNNEL/PROJECT FIND/DR YW I S NS I N SS IN N	541 W 43 ST 541 WEST 43RD STREET 530 W S 43 S 51 525 W S 45 S 502 WEST 45TH STREET 521 W S 43 S 515 W S 43 S 536 WEST 46TH STREET 520 W S 46 S 614/626 TENTH AVENUE 500 W S 43 S 515 W S 42N S 535-545 WEST 47TH STREE 2 W S 4 S 527 W 47 ST 536 W 41 S 445 W 45TH ST 515 W S 41S S 460 WEST 42ND STREET 460 W 42 ST 653 N N 432 W S 45 S 516 530 W 4 S 605 WEST 48TH STREET 525 N N 707 TENTH AVE 460 W 41S S 424 W 42ND STREET 415-419 WEST 45TH STREE 414 W 44TH ST 420 W S 42N S 402 WEST 41ST STREET 416 W S 42N S 514 W S 4 S	SSW 0 - 1/8 (0.049 mi.) SSW 0 - 1/8 (0.049 mi.) SSW 0 1 0.053 mi. N 0 1 0.054 mi. ENE 0 - 1/8 (0.062 mi.) S 0 1 0.062 mi. S 0 1 0.063 mi. NE 0 - 1/8 (0.098 mi.) N 0 1 0.102 mi. ESE 0 - 1/8 (0.105 mi.) SS 0 1 0.10 mi. S 0 1 0.113 mi. NE 1/8 - 1/4 (0.150 mi.) N 1 1 4 0.152 mi. NE 1/8 - 1/4 (0.152 mi.) SSW 1 1 4 0.15 mi. E 1/8 - 1/4 (0.159 mi.) SSW 1 1 4 0.160 mi. SSE 1/8 - 1/4 (0.181 mi.) SSE 1/8 - 1/4 (0.181 mi.) N 1 1 4 0.1 mi. S 1 1 4 0.1 mi. N 1 1 4 0.201 mi. N 1/8 - 1/4 (0.216 mi.) SW 1 1 4 0.21 mi. NE 1/8 - 1/4 (0.217 mi.) S 1 1 4 0.22 mi. SE 1/8 - 1/4 (0.229 mi.) ESE 1/8 - 1/4 (0.231 mi.) ESE 1/8 - 1/4 (0.237 mi.) S 1 1 4 0.23 mi. SSE 1/8 - 1/4 (0.240 mi.) S 1 1 4 0.245 mi. N 1 1 4 0.24 mi.	D13 D14 34 3 F47 50 60 P80 1 M105 115 W136 AF189 1 3 AF194 205 AJ213 216 AP238 AP239 244 24 W262 BB279 2 BA287 315 BE316 BI318 BK331 335 338 343 N351	109 113 1 1 5 227 24 2 6 330 3 4 414 4 546 757 1 773 12 869 934 938 63 0 1031 1067 10 1167 125 1260 1266 1334 135 1362 13 4 13

Address	Address	Distance	Site ID	Area
P R C RIVERBANK WEST APARTMENTS SWING TIME LLC CORP. MOBIL OIL CORP SS #QDL UNITED PARCEL SERVICE METROPOLITAN LUMBER COMPANY I N W I II NI S I MYRON GARFINKEL S IN W S NS, SMITH LIMOUSINE CO., INC.	550 WEST 43RD STREET 560 WEST 43RD STREET 609 11TH AVENUE 561 11TH AVE 612 WEST 45TH STREET 617 11TH AVE 604 W S 46 S 600 W S 42N S 643 W S 43 S 627 WEST 42ND STREET 63 11 N 605 W S 4 S 636 WEST 47TH STREET	SW 0 - 1/8 (0.052 mi.) SW 0 - 1/8 (0.063 mi.) NNW 0 - 1/8 (0.105 mi.) WSW 0 - 1/8 (0.106 mi.) NW 0 - 1/8 (0.108 mi.) NNW 0 - 1/8 (0.117 mi.) NNW 1 1 4 0.131 mi. WSW 1 1 4 0.133 mi. W 1 1 4 0.14 mi. W 1/8 - 1/4 (0.155 mi.) N 1 1 4 0.15 mi. N 1 1 4 0.1 mi. N 1/8 - 1/4 (0.192 mi.)	D32 G57 L109 V114 L127 S140 155 Y15 1 4 AE196 20 236 248	174 265 438 458 521 556 621 62 2 778 3 2 972

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Address	Address	Reference	Distance	Parcel ID	Area
660 TWELTH AVENUE NY 10011	660 TWELTH AVENUE 11 W	N 1/8 - 1/4 (0.221 mi.) NW 1/4	0.234 mi.	BF302 323	1222 12

NY 10011 S 1/2 hemi block Storage tank base. The installation of these tanks require by 6 NYCRR 250.6. It includes facilities storing hazardous substances listed in 6 NYCRR 250.6, in both round tanks with capacities of 15 gallons or greater, and in underground tanks of any size. Includes facilities registered under the Spill Prevention and Control Act of 1990. Sites are subject to a 15-day public hearing process.

A review of the NY 10011 S 1/2 list, as provided by [redacted], on 01/01/2002 has revealed that there are 2 NY 10011 S 1/2 sites within proximity 0.25 miles of the tract property.

Address	Address	Reference	Distance	Parcel ID	Area
MANHATTAN PLAZA HEALTH CLUB WEST SIDE DEPOT (FORMERLY GREY	482 W.43RD STREET 525 11 AVENUE	SE 1/8 - 1/4 (0.133 mi.) SW 1/8 - 1/4 (0.217 mi.)		156 BC284	623 1120

NY 10011 S 1/2 hemi block Storage tank base. The installation of these tanks require by 6 NYCRR 250.6. It includes facilities storing hazardous substances listed in 6 NYCRR 250.6, in both round tanks with capacities of 15 gallons or greater, and in underground tanks of any size. Includes facilities registered under the Spill Prevention and Control Act of 1990. Sites are subject to a 15-day public hearing process.

A review of the NY 10011 S 1/2 list, as provided by [redacted], on 01/02/2012 has revealed that there are NY 10011 S 1/2 sites within proximity 0.25 miles of the tract property.

Address	Address	Reference	Distance	Parcel ID	Area
531 WEST 45TH STREET N.Y. INDUSTRIAL CONDO F.D.N.Y.-RESCUE CO. 1 517-525 WEST 45TH STREET HUDSON TRANSIT CORPORATION 640 10TH ASSOC 641 10TH AVE 10TH AVE DEVELOPMENT CORP 657 TENTH AVENUE REALTY CORPOR 540 WEST 47TH STREET 534 W. S. 4 535-545 WEST 47TH STREET 524 WEST 47TH STREET 515 W. S. 4 MERCEDES-BENZ MANHATTAN INC. MERCEDES/BENZ MANHATTAN INC 448-450 WEST 46TH STREET 461 WEST 44TH ST. OWNERS CORP. 501 W. S. 41 S GAMO REALTY CO 455 WEST 44TH STREET 500 WEST 47 STREET 43 40 W. S. 45	540 W. S. 44 S 531 WEST 45TH STREET 520 W. S. 45 S 545 WEST 45TH STREET 530 WEST 43RD STREET 517-525 WEST 45TH STREE 520 W. S. 43 S 520 WEST 46TH STREET 52 543 W. S. 42 S 501 W. S. 43 S 642 10TH AVE 641 TENTH AVE 506 W 42ND ST 657 10TH AVENUE 540 WEST 47TH STREET 534 W. S. 4 S 535-545 WEST 47TH STREE 524 WEST 47TH STREET 515 W. S. 4 S 536 WEST 41TH ST. 536 W 41 ST 448-450 WEST 46TH ST 461 WEST 44TH ST 465 W. 46 S 561 10 N 503 WEST 47TH ST 455 WEST 44TH STREET 500 WEST 47 STREET 43 40 W. S. 45 S	S 0 1 0.013 mi. NE 0 - 1/8 (0.050 mi.) N 0 1 0.050 mi. NNE 0 - 1/8 (0.051 mi.) SSW 0 - 1/8 (0.053 mi.) NE 0 - 1/8 (0.054 mi.) S 0 1 0.05 mi. NE 0 - 1/8 (0.102 mi.) SSW 0 1 0.106 mi. SS - 0 1 0.10 mi. E 0 - 1/8 (0.113 mi.) E 0 - 1/8 (0.114 mi.) S 1/8 - 1/4 (0.129 mi.) ENE 1/8 - 1/4 (0.145 mi.) NE 1/8 - 1/4 (0.147 mi.) N 1 1/4 0.14 mi. NE 1/8 - 1/4 (0.150 mi.) NE 1/8 - 1/4 (0.151 mi.) N 1 1/4 0.155 mi. SSW 1/8 - 1/4 (0.156 mi.) SSW 1/8 - 1/4 (0.157 mi.) E 1/8 - 1/4 (0.160 mi.) ESE 1/8 - 1/4 (0.162 mi.) 1 1/4 0.162 mi. S 1 1/4 0.1 mi. ENE 1/8 - 1/4 (0.171 mi.) ESE 1/8 - 1/4 (0.172 mi.) ENE 1/8 - 1/4 (0.174 mi.) S 1 1/4 0.1 mi.	3 C17 22 C29 D35 C38 41 R90 113 11 N135 N139 Z152 AC179 AF180 1 AF189 AF192 1 AH200 AH207 AL215 AN218 21 225 AQ226 AN227 AQ231 233	43 124 146 166 181 190 1 366 455 4.1 543 553 602 666 669 43 757 767 790 828 876 883 6 5 897 901 910 20	

her e t	ress	re t st e		e
44-45 REALTY ASSOC, LP	449 WEST 44TH STREET	ESE 1/8 - 1/4 (0.186 mi.)	AN241	957
447 9 WEST 43RD ST	447-9 WEST 43RD ST	SE 1/8 - 1/4 (0.191 mi.)	AS245	965
BARUCH HAVIV	431 W 45TH ST	ESE 1/8 - 1/4 (0.192 mi.)	AT249	976
GAMO REALTY CO	693 TENTH AVE	ENE 1/8 - 1/4 (0.195 mi.)	AQ251	982
529 W 48 ST	529 W 48 ST	NE 1/8 - 1/4 (0.199 mi.)	AW257	1006
437-9 WEST 44TH STREET	437-9 WEST 44TH STREET	ESE 1/8 - 1/4 (0.201 mi.)	AX261	1028
427 WEST 45ST C/O B. HAVIV ASS	427 WEST 45 TH ST	ESE 1/8 - 1/4 (0.202 mi.)	AT263	1035
STRIKA JERKOV	519 WEST 48TH ST	NE 1/8 - 1/4 (0.202 mi.)	AW264	1038
517 WEST 48TH STREET	517 WEST 48TH STREET	NE 1/8 - 1/4 (0.203 mi.)	AW265	1041
W S 45 S SS I S	425 W. 45 S	S 1 14 0.20 mi.	26	104
439 WEST 46TH ST	439 WEST 46TH ST	E 1/8 - 1/4 (0.207 mi.)	AZ269	1049
N	450 W S 41S S	SS 1 14 0.20 mi.	20	1052
NIN N N Y	435 W S 43 S	S 1 14 0.210 mi.	S2 1	1055
504 W S 4 S	504 W S 4 S	N 1 14 0.211 mi.	2 2	105
L&F REALTY CO	435 WEST 46TH STREET	E 1/8 - 1/4 (0.214 mi.)	AZ277	1061
WEST SIDE DEPOT (FORMERLY GREY	525 11 AVENUE	SW 1/8 - 1/4 (0.217 mi.)	BC284	1120
433 W 46 SS	433 W S 46 S	1 14 0.21 mi.	2 3	11
426 42 W. 46 WN S	42 W S 46 S	1 14 0.21 mi.	2	1214
665 11	665 N N	N 1 14 0.21 mi.	2	1216
456 W 47 ST	456 W 47 ST	ENE 1/8 - 1/4 (0.223 mi.)	BG304	1232
W Y	6 10 N	N 1 14 0.224 mi.	30	123
GAMO REALTY CO	454 WEST 47TH ST	ENE 1/8 - 1/4 (0.226 mi.)	BG310	1244
424 W S WN S	424 W S 46 S	1 14 0.22 mi.	313	1250
414-420 WEST 45TH STREET	414-420 WEST 45TH STREE	ESE 1/8 - 1/4 (0.231 mi.)	BI317	1263
Y	425 W S 46 S	1 14 0.233 mi.	31	12 4
Y	425 W 46 S	1 14 0.233 mi.	320	12 6
ATTILIO VLASICA AND NINA MILIN	694 TENTH AVE	NE 1/8 - 1/4 (0.234 mi.)	BA321	1278
ST CLEMENTS CHURCH	423 W 46TH ST	E 1/8 - 1/4 (0.236 mi.)	BJ330	1331
42N S W	420 W S 42N S	S 1 14 0.23 mi.	334	1355
411 W S 45 S	411 W S 45 S	S 1 14 0.241 mi.	I33	1365
41 W 43 S	41 W 43 S	S 1 14 0.243 mi.	340	136
416 W S 46	416 W S 46 S	1 14 0.244 mi.	341	13 0
411 W 44 S	411 W S 44 S	S 1 14 0.244 mi.	342	13 2
NNY S WIN IN	542 W S 4 S	NN 1 14 0.246 mi.	344	13 6
408-410 W 44TH STREET	408-410 W 44TH STREET	ESE 1/8 - 1/4 (0.247 mi.)	BK345	1378
533 W 49ST	533 W 49ST	NNE 1/8 - 1/4 (0.247 mi.)	BL346	1381
545 IN IN	545 W S 4 S	NN 1 14 0.24 mi.	34	13 6
514 WEST 49TH STREET	514 WEST 49TH STREET	NE 1/8 - 1/4 (0.249 mi.)	BN353	1408
436 43 W S 4 N W	436 W S 4 S	1 14 0.24 mi.	354	1412
ASHLAND EQUITIES CO	525-527 WEST 49TH ST	NE 1/8 - 1/4 (0.249 mi.)	BN355	1414

er e t	ress	re t st e		e
I IN	55 W S 44 S	WNW 0 1 0.015 mi.	4	4
S I S S S	5 1 11 N	WNW 0 1 0.0 mi.	I63	2 1
599 11TH AVE	599 11TH AVE	NW 0 - 1/8 (0.097 mi.)	O77	318
N	613 15 11 N	NNW 0 1 0.111 mi.	S133	53
N WY N	624 W 43 S	W 0 1 0.124 mi.	14	5 4
62 W S 45 S	62 W S 45 S	NW 0 1 0.125 mi.	14	5 6
N N INIS	645 W S 44 S	WNW 1 14 0.133 mi.	15	632
636 N	636 N N	N 1 14 0.13 mi.	166	642
616 620 W S 46 S	616 620 W S 46 S	NNW 1 14 0.141 mi.	1 5	660
UNITED PARCEL SERVICE	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG183	679
S I	62 11 N	N 1 14 0.154 mi.	1 5	6
S IN	63 11 N	N 1 14 0.15 mi.	20	4
N W I IN	60 W S 4 S	N 1 14 0.1 3 mi.	22	04

S

Address	Address	Distance	Site ID	Count
1000 I, S	650 W. S. 42ND S	SW 1/4 - 1/4 (0.13 mi.)	I230	0
SS NY	63 W. S. 46 S	NNW 1/4 - 1/4 (0.13 mi.)	250	0
N.W.Y. N.N.N.N.N	621 W. S. 4 S	N 1/4 - 1/4 (0.224 mi.)	30	1241
NY PASSENGER SHIP TERMINAL	711 TWELFTH AVE	SW 1/4 - 1/4 (0.22 mi.)	311	124
		NW 1/8 - 1/4 (0.234 mi.)	BD327	1312

NY S: S: hemi uk Stor e t base. e istr tion t o e te s require by 6 NY t 5 6. It in u es i ities storin h rous subst nes iste in 6 NY t 5, in bo e roun t nks with p ities o 1 5 ons or re ter, n or in un er roun t nks o ny side. In u es i ities re iste n n ose sin e e e ti e te o S re u tions u y 15, 1 throu h the te request is pro esse.

re view o the NY S S ist, s pro ie by , n te 01 01 2002 h s re e e th t there re 3 NY S S sites within ppro im te y 0.25 mies o the t r et property.

Address	Address	Distance	Site ID	Count
HUDSON TRANSIT LINES INC	520 W 46TH ST	NE 0 - 1/8 (0.102 mi.)	R89	363
WEST SIDE DEPOT (FORMERLY GREY)	525 11 AVENUE	SW 1/8 - 1/4 (0.217 mi.)	BC284	1120

Address	Address	Distance	Site ID	Count
UNITED PARCEL SERVICE	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG183	679

NY S: hese i ities store re u te h rous subst nes in bo e roun t nks with p ities o 1 5 ons or re ter, n or in un er roun t nks o ny side

re view o the NY S ist, s pro ie by , n te 0 02 2012 h s re e e th t there re 4 NY S sites within ppro im te y 0.25 mies o the t r et property.

Address	Address	Distance	Site ID	Count
HUDSON TRANSIT LINES INC	520 W 46TH ST	NE 0 - 1/8 (0.102 mi.)	R89	363
MANHATTAN PLAZA HEALTH CLUB	482 W.43RD STREET	SE 1/8 - 1/4 (0.133 mi.)	156	623
WEST SIDE DEPOT (FORMERLY GREY)	525 11 AVENUE	SW 1/8 - 1/4 (0.217 mi.)	BC284	1120

Address	Address	Distance	Site ID	Count
UNITED PARCEL SERVICE	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG183	679

State and tribal institutional control / engineering control registries

NY N N S: n ironment e me i tion sites th t h e en ineerin t ontr os in p e.

re view o the NY N N S ist, s pro ie by , n te 05 21 2012 h s re e e th t there is 1 NY N N S site within ppro im te y 0.5 mies o the t r et property.

Address	Address	Distance	Site ID	Count
CE - W 42ND ST. - RIVER PLACE	640 W 42ND STREET	W 1/8 - 1/4 (0.178 mi.)	235	922

S

Environment remediation sites that the institution controls in place.

Review of the NY INS N list, as provided by , on 05/21/2012 has revealed that there is 1 NY INS N site within proximity 0.5 miles of the target property.

Address	Address	Distance	Lot	Block
CE - W 42ND ST. - RIVER PLACE	640 W 42ND STREET	W 1/8 - 1/4 (0.178 mi.)	235	922

State and tribal voluntary cleanup sites

NY County cleanup agreements. The county remediation program uses private monies to get contaminated sites remediated to meet existing or the sites productive use. The program orders virtually any kind of site contamination.

Review of the NY list, as provided by , on 05/21/2012 has revealed that there is 1 NY site within proximity 0.5 miles of the target property.

Address	Address	Distance	Lot	Block
CE - W 42ND ST. - RIVER PLACE	640 W 42ND STREET	W 1/8 - 1/4 (0.178 mi.)	235	922

State and tribal Brownfields sites

NY WNI S: Brownfields Site list

Review of the NY WNI S list, as provided by , on 05/21/2012 has revealed that there are 6 NY WNI S sites within proximity 0.5 miles of the target property.

Address	Address	Distance	Lot	Block
MERCEDES-BENZ MANHATTAN INC	528 W 41ST ST	SSW 1/8 - 1/4 (0.157 mi.)	AH206	816
S S S I N S I	00 11 54 551	NN 1/4 1/2 0.305 mi.	366	1466
S I N N	51 S 53 S 10	N 1/4 1/2 0.35 mi.	31	1526
S N WS Y Y	403 W S 3 S N	S 1/4 1/2 0.36 mi.	31	1551
W S 42N S N	605 615 W S 42N S	WSW 1/4 1/4 0.135 mi.	Y162	63
CE - W 42ND ST. - RIVER PLACE	640 W 42ND STREET	W 1/8 - 1/4 (0.178 mi.)	235	922

S

Local Lists of Registered Storage Tanks

NY IS S: The New York State Storage Tank Database contains registered Storage Sites registered under Subtitle 60 of the Resource Conservation and Recovery Act. The data comes from the Department of Environmental Conservation's Petroleum Bulk Storage Sites Database.

Review of the NY IS S list, as provided by , on 01/01/2002 has revealed that there

SEARCH RESULTS

are 43 NY sites within proximity 0.25 miles of the target property.

Address	Distance	Site ID	Area
43RD PARKING CORP	541 W 43 ST	SSW 0 - 1/8 (0.049 mi.)	D13 109
MARVIN MITHELL	541 WEST 43RD STREET	SSW 0 - 1/8 (0.049 mi.)	D14 113
F.D.N.Y.-RESCUE CO. 1	530 WEST 43RD STREET	SSW 0 - 1/8 (0.053 mi.)	D35 181
51 525 W S 45 S	51 W S 45 S	N 0 - 1 0.054 mi.	40 1
HESS #32215	502 WEST 45TH STREET	ENE 0 - 1/8 (0.062 mi.)	F47 227
NN	521 W S 43 S	S 0 - 1 0.062 mi.	51 251
SALVATION ARMY THERAPY BLDG	536 WEST 46TH STREET	NE 0 - 1/8 (0.098 mi.)	P80 330
HUDSON TRANSIT CORPORATION	520 WEST 46TH STREET	NE 0 - 1/8 (0.102 mi.)	R90 366
PHIL'S WEST 44TH ST SERV/STA	614/626 TENTH AVENUE	ESE 0 - 1/8 (0.105 mi.)	M105 414
S N N INI	500 W S 43 S	SS 0 - 1 0.10 mi.	116 4
NN	515 W S 42N S	S 0 - 1 0.113 mi.	W13 54
TERIFIC TENEMENTS	527 W 47 ST	NE 1/8 - 1/4 (0.152 mi.)	AF194 773
MERCEDES/BENZ MANHATTAN INC	536 W 41 ST	SSW 1/8 - 1/4 (0.157 mi.)	AH207 828
445 W 45 DEVELOPERS PARTNERSHP	445 W 45TH ST	E 1/8 - 1/4 (0.159 mi.)	AJ213 869
I N SS N Y	515 W S 41S S	SSW 1 1 4 0.160 mi.	21 1
AVIS RENT A CAR SYSTEM, INC.	460 WEST 42ND STREET	SSE 1/8 - 1/4 (0.181 mi.)	AP238 934
AVIS RENT A CAR	460 W 42 ST	SSE 1/8 - 1/4 (0.181 mi.)	AP239 938
653 N N	653 N N	N 1 1 4 0.10 mi.	243 61
432 W S 45 S	432 W S 45 S	S 1 1 4 0.11 mi.	246 6
ADVANCED CONTRACTING CORP	605 WEST 48TH STREET	N 1/8 - 1/4 (0.216 mi.)	BB279 1067
WEST SIDE DEPOT (FORMERLY GREY	525 11 AVENUE	SW 1/8 - 1/4 (0.217 mi.)	BC284 1120
CUMBERLAND FARMS	707 TENTH AVE	NE 1/8 - 1/4 (0.217 mi.)	BA287 1167
VERIZON NEW YORK, INC.	610-630 WEST 48TH STREE	N 1/8 - 1/4 (0.217 mi.)	BB289 1184
DYER AVENUE ASSOCIATES, LLC	424 W. 42ND STREET	SE 1/8 - 1/4 (0.229 mi.)	BE316 1260
PARKING GARAGE	415-419 WEST 45TH STREE	ESE 1/8 - 1/4 (0.231 mi.)	BI318 1266
414 W 44TH ST	414 W 44TH ST	ESE 1/8 - 1/4 (0.237 mi.)	BK331 1334
42N S W	420 424 W S 42N S	S 1 1 4 0.23 mi.	336 135
LINCOLN TUNNEL/PROJECT FIND/DR	402 WEST 41ST STREET	SSE 1/8 - 1/4 (0.240 mi.)	338 1362

Address	Distance	Site ID	Area
P R C	550 WEST 43RD STREET	SW 0 - 1/8 (0.052 mi.)	D32 174
RIVERBANK WEST APARTMENTS	560 WEST 43RD STREET	SW 0 - 1/8 (0.063 mi.)	G57 265
VERIZON NEW YORK INC.	604-628 WEST 43RD STREE	W 0 - 1/8 (0.099 mi.)	K84 344
VERIZON NEW YORK INC	563 11TH AVE	WSW 0 - 1/8 (0.102 mi.)	K93 381
SWING TIME LLC CORP.	609 11TH AVENUE	NNW 0 - 1/8 (0.105 mi.)	L109 438
MOBIL OIL CORP SS #QDL	561 11TH AVE	WSW 0 - 1/8 (0.106 mi.)	V114 458
UNITED PARCEL SERVICE	612 WEST 45TH STREET	NW 0 - 1/8 (0.108 mi.)	L127 521
METROPOLITAN LUMBER COMPANY	617 11TH AVE	NNW 0 - 1/8 (0.117 mi.)	S140 556
NYN	615 W 42N S	WSW 1 1 4 0.140 mi.	1 4 65
UNITED PARCEL SERVICE	643 W 43RD ST	W 1/8 - 1/4 (0.148 mi.)	AG183 679
MYRON GARFINKEL	627 WEST 42ND STREET	W 1/8 - 1/4 (0.155 mi.)	AE196 778
GUTMAN SUNOCO	639 11TH AVE	N 1/8 - 1/4 (0.158 mi.)	AD211 857
SMITH LIMOUSINE CO., INC.	636 WEST 47TH STREET	N 1/8 - 1/4 (0.192 mi.)	248 972
660 TWELTH AVENUE	660 TWELTH AVENUE	N 1/8 - 1/4 (0.221 mi.)	BF302 1222
NY PASSENGER SHIP TERMINAL	711 TWELFTH AVE	NW 1/8 - 1/4 (0.234 mi.)	BD327 1312

Records of Emergency Release Reports

NY Spi's: [redacted] o e te [redacted] on spi's reporte [redacted] to NYS [redacted]. is require [redacted] by one or more o the o owin [redacted]
 [redacted] rti e 12 o the N [redacted] i tion [redacted] w, 6 NY [redacted] Se tion 613. [redacted] rom [redacted] S re s [redacted] or 6 NY [redacted] Se tion 5.2 [redacted] rom [redacted] S
 re s [redacted]. It in u es spi's [redacted] ti e s o [redacted] pri 1, 1 [redacted] 6, [redacted] s we s spi's o [redacted] urrin [redacted] sin e this [redacted] te.

[redacted] re i ew o the NY Spi's list, [redacted] s pro i e by [redacted], [redacted] n [redacted] te [redacted] 05 22 2012 h s re e e th t there [redacted] re
 35 NY Spi's sites within [redacted] ppro i m te y 0.125 mi es o the t [redacted] r et property.

[redacted] her e t [redacted]	[redacted] ress	[redacted] re t [redacted] st [redacted] e	[redacted]	[redacted] e
5 2 60 [redacted] 11 [redacted] [redacted] [redacted] te [redacted] ose : 11 1 [redacted] 2011	525 W 44 [redacted] S [redacted] [redacted]	[redacted] S 0 [redacted] 1 [redacted] 0.03 [redacted] mi. [redacted]	[redacted] 5	[redacted] 51
CON ED - V 3685 [redacted] te [redacted] ose : 10 2 [redacted] 2003	522 W 44 ST	ESE 0 - 1/8 (0.040 mi.)	B6	53
545 W 45TH STREET [redacted] te [redacted] ose : [redacted] 5 1 [redacted] 4	545 W. 45TH STREET	NNE 0 - 1/8 (0.050 mi.)	C18	127
[redacted] Y [redacted] Y [redacted] te [redacted] ose : 2 [redacted] 2005	51 [redacted] 525 W S [redacted] 45 [redacted] S [redacted]	N [redacted] 0 [redacted] 1 [redacted] 0.053 mi. [redacted]	[redacted] 36	[redacted] 1 [redacted]
517-525 WEST 45TH STREET [redacted] te [redacted] ose : 6 25 2004	517-525 WEST 45TH STREE	NE 0 - 1/8 (0.054 mi.)	C38	190
N Y Y [redacted] [redacted] I [redacted] I [redacted] Y GOTHAM CONSTRUCTION SITE [redacted] te [redacted] ose : [redacted] 23 1 [redacted]	521 W S [redacted] 43 S [redacted] 520 WEST 43RD ST	S 0 [redacted] 1 [redacted] 0.05 [redacted] mi. [redacted] S 0 - 1/8 (0.059 mi.)	[redacted] 42	[redacted] 201 E45 218
HESS GAS STATION [redacted] te [redacted] ose : [redacted] 2 [redacted] 2010 [redacted] te [redacted] ose : 1 21 1 [redacted] 4	502 WEST 45TH STREET	ENE 0 - 1/8 (0.063 mi.)	F55	258
<i>*Additional key fields are available in the Map Findings section</i>				
[redacted] [redacted] S. [redacted] te [redacted] ose : [redacted] 2 [redacted] 2010	506 512 W S [redacted] 44 [redacted] S [redacted]	[redacted] S 0 [redacted] 1 [redacted] 0.0 [redacted] 1 mi. [redacted]	[redacted] 61	[redacted] 2 [redacted]
[redacted] [redacted] I Y INN [redacted] [redacted] [redacted] [redacted] [redacted] te [redacted] ose : 10 4 2010	505 513 W S [redacted] 43 [redacted] S [redacted]	SS [redacted] 0 [redacted] 1 [redacted] 0.0 [redacted] mi. [redacted]	[redacted] 6 [redacted]	[redacted] 301
MH 60171 [redacted] te [redacted] ose : 3 1 [redacted] 2004	10TH AVE/44TH ST	ESE 0 - 1/8 (0.096 mi.)	H74	314
[redacted] [redacted] I IN [redacted] [redacted] te [redacted] ose : [redacted] 13 2004	602 10 [redacted] [redacted]	S [redacted] 0 [redacted] 1 [redacted] 0.100 mi. [redacted]	[redacted] 6 [redacted]	[redacted] 34 [redacted]
630 10TH AVE [redacted] te [redacted] ose : 4 [redacted] 1 [redacted] 3	630 10TH AVE	E 0 - 1/8 (0.102 mi.)	Q88	361
524 W. 46TH STREET [redacted] te [redacted] ose : [redacted] 1 [redacted] 5	524 W. 46TH STREET	NE 0 - 1/8 (0.102 mi.)	R94	384
52 [redacted] W S [redacted] 46 [redacted] S [redacted] [redacted] [redacted] te [redacted] ose : 12 5 2003	52 [redacted] W S [redacted] 46 [redacted] S [redacted] [redacted]	N [redacted] 0 [redacted] 1 [redacted] 0.103 mi. [redacted]	[redacted] [redacted]	[redacted] 3 3
BTWN 45TH & 46TH ST [redacted] te [redacted] ose : 3 1 [redacted] 2003	520 W 46TH ST	NE 0 - 1/8 (0.104 mi.)	R101	398
COACH USA [redacted] te [redacted] ose : 6 2 [redacted] 200 [redacted] [redacted] te [redacted] ose : 6 10 200 [redacted]	520 WEST 46TH STREET	NE 0 - 1/8 (0.104 mi.)	R102	400
IN THE ROADWAY [redacted] te [redacted] ose : 3 4 2003	W 45TH BET 9TH & 10TH	E 0 - 1/8 (0.107 mi.)	N124	508
42ND STREET SUB STATION [redacted] te [redacted] ose : 5 21 2002 [redacted] te [redacted] ose : [redacted] 4 200 [redacted]	521 WEST 42ND STREET	S 0 - 1/8 (0.111 mi.)	U130	528

**Additional key fields are available in the Map Findings section*

S

Address	Distance	Parcel ID	Area
W 42ND ST SUBSTATION Date: 5/21/2002	521 W 42ND ST	S 0 - 1/8 (0.111 mi.)	U131 532
W S 42 S S I N. 4 Date: 10/20/00	521 W S 42 S	S 0 1 0.111 mi.	132 536
HESS GAS STATION Date: 11/15/05	10TH AVENUE NEAR W 44TH ESE 0 - 1/8 (0.118 mi.)		Q145 586
IN ROADWAY Date: 10/31/2001	507 W 42ND ST	S 0 - 1/8 (0.123 mi.)	W146 589
er e t N 624 Date: 2/2003	551 W S 43 S	SW 0 - 1/8 (0.051 mi.)	25 156
MERCHANDISING WORKSHOP Date: 5/4/2010	550 WEST 43RD ST	SW 0 - 1/8 (0.052 mi.)	D31 171
N W Y Date: 12/2/2006	44 S 11	WNW 0 1 0.05 mi.	162 2
200 S Date: 4/15/2003	45 S 11	NNW 0 1 0.05 mi.	1 30
NYNEX Date: 5/30/1	604 WEST 43RD ST	W 0 - 1/8 (0.095 mi.)	K73 312
FEDERAL EXPRESS Date: 3/1/1	560 WEST 42ND ST	SW 0 - 1/8 (0.105 mi.)	T103 407
W 45TH ST / 11TH AV Date: 3/20/2002	609-611 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L107 424
MOBIL GAS STATION Date: 3/20/2002 Date: 2/2003	561 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L108 429
MOBIL OIL CORP SS #QDL	561 11TH AVE	WSW 0 - 1/8 (0.106 mi.)	V114 458
MOBIL S/S Date: 10/16/1	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V121 500
MOBIL S/S Date: 11/15/1	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V122 503
MOBIL S/S Date: 10/1/14	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V123 505

NY list Spi s: his t b se ont ins re or s o hemi n petro eum spi in i ents. n er St te w, petro eum n h rous hemi spi s th t n imp t the w ters o the st te must be reporte by the spi er n, in some es, by nyone who h s know ee o the spi s. In 2002, the ep rtment o n ironment onser tion stoppe p i in up tes to its ori in Spi s In orm tion t b se. his t b se in u es ie s th t re no n er i b e rom the NY s o nury 1, 2002. urrent in orm tion m y be oun in the NY S I S t b se.

re iew o the NY list Spi s list, s p i e e by , n te 01/01/2002 h s re e e th t there re 2 NY list Spi s sites within p p i m t e y 0.125 mi es o the t r et property.

Address	Address	Distance	Site ID	Volume
545 W 45TH STREET	545 W. 45TH STREET	NNE 0 - 1/8 (0.050 mi.)	C18	127
545 W. S 45 S	545 W. S 45 S	NN 0 1 0.050 mi.	1	130
530 W. S 43 S	530 W. S 43 S	S 0 1 0.054 mi.	3	1
GOTHAM CONSTRUCTION SITE	520 WEST 43RD ST	S 0 - 1/8 (0.059 mi.)	E45	218
W. S 42N. S. S. S. N	521 W 43 S	S 0 1 0.062 mi.	4	24
502 W. S 45 S	502 W. S 45 S	N 0 1 0.063 mi.	52	253
SS S S N	502 W. S 45 S	N 0 1 0.063 mi.	53	255
HESS GAS STATION	502 WEST 45TH STREET	ENE 0 - 1/8 (0.063 mi.)	F55	258
MH 60171	10TH AVE/44TH ST	ESE 0 - 1/8 (0.096 mi.)	H74	314
502 W. 45 S	502 W. 45 S 10	0 1 0.0 mi.	N6	31
630 10TH AVE	630 10TH AVE	E 0 - 1/8 (0.102 mi.)	Q88	361
524 W. 46TH STREET	524 W. 46TH STREET	NE 0 - 1/8 (0.102 mi.)	R94	384
BTWN 45TH & 46TH ST	520 W 46TH ST	NE 0 - 1/8 (0.104 mi.)	R101	398
IN THE ROADWAY	W 45TH BET 9TH & 10TH	E 0 - 1/8 (0.107 mi.)	N124	508
Not reported	521 W. S 42N S	S 0 1 0.111 mi.	12	525
W 42N S S S N	521 W 42N S	S 0 1 0.111 mi.	12	526
42ND STREET SUB STATION	521 WEST 42ND STREET	S 0 - 1/8 (0.111 mi.)	U130	528
W 42ND ST SUBSTATION	521 W 42ND ST	S 0 - 1/8 (0.111 mi.)	U131	532
HESS GAS STATION	10TH AVENUE NEAR W 44TH	ESE 0 - 1/8 (0.118 mi.)	Q145	586
IN ROADWAY	507 W 42ND ST	S 0 - 1/8 (0.123 mi.)	W146	589

Address	Address	Distance	Site ID	Volume
550 W. S 43 S	550 W. S 43 S	SW 0 1 0.052 mi.	33	1
NYNEX	604 WEST 43RD ST	W 0 - 1/8 (0.095 mi.)	K73	312
FEDERAL EXPRESS	560 WEST 42ND ST	SW 0 - 1/8 (0.105 mi.)	T103	407
W 45TH ST / 11TH AV	609-611 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L107	424
MOBIL GAS STATION	561 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L108	429
S S S	561 11 S N	WSW 0 1 0.10 mi.	11	4 6
MOBIL S/S	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V121	500
MOBIL S/S	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V122	503
MOBIL S/S	561 11TH AVENUE	WSW 0 - 1/8 (0.107 mi.)	V123	505

Other Ascertainable Records

Non-en: In o is s omprehensi e in orm tion system, pro i in ess to t supportin the esour e onser tion n e o ery t o 1 6 n the rous n Soil W ste men ments SW o 1 4. he t b se in u es se e tie in orm tion on sites wh h ener te, transport, store, treat n or dispose o h rous w ste s e ine by the esour e onser tion n e o ery t . Non ener tors o not present y ener te h rous w ste.

re iew o the Non-en ist, s pro ie by , n te 03/15/2012 h s re e th t there re 46 Non-en sites within ppro im te y 0.25 mi es o the t ret property.

Address	Address	Distance	Site ID	Volume
CON ED - V 3685	522 W 44 ST	ESE 0 - 1/8 (0.040 mi.)	B6	53
STYLE MANG & CO	518 W 44TH ST	ESE 0 - 1/8 (0.044 mi.)	B9	87
TRIPOD PRINTING INC	545 W 45TH ST	NNE 0 - 1/8 (0.051 mi.)	C27	160
C MAX GRAPHICS INC	545 W 45TH ST - 2ND FLO	NNE 0 - 1/8 (0.051 mi.)	C28	164
NY	525 W 45 S	N 0 1 0.051 mi.	30	16
AMERADA HESS SERVICE STATION	502 W. 45TH STREET	ENE 0 - 1/8 (0.062 mi.)	F46	220
MARTIN MANHATTAN ACURA	11TH AVE & W 46TH ST	NE 0 - 1/8 (0.101 mi.)	P87	350
HUDSON TRANSIT LINES INC	520 W 46TH ST	NE 0 - 1/8 (0.102 mi.)	R89	363

000000000 S 0000000

Address	Distance	Parcel ID	Area
MANHATTAN B M W	547 W 47TH ST	NNE 1/8 - 1/4 (0.149 mi.)	AF188 745
TRAILWAYS INC	55 W 41ST ST	SW 1/4 - 1/4 0.155 mi.	1 000
FAST TOWING & AUTO REPAIR	544 W 41ST ST	SSW 1/8 - 1/4 (0.156 mi.)	AH201 796
CON ED - V 8433	565 W 10TH ST	S 1/4 - 1/4 0.160 mi.	214 5
NEW YORK TELEPHONE CO	520 W 48TH ST	S 1/8 - 1/4 (0.199 mi.)	AV255 1001
CON EDISON - MH 3319	525 11TH ST	NE 1/8 - 1/4 (0.200 mi.)	AW259 1012
HUNTER COLLEGE - MFA	610 W 48TH ST	SW 1/4 - 1/4 0.21 mi.	2 6 1166
MARTIN HONDA	S/E/C W48 ST & 10 AVE S	N 1/8 - 1/4 (0.217 mi.)	BB290 1189
US POSTAL SERVICE - VEH MAINT	450 W 41ST ST	NE 1/8 - 1/4 (0.219 mi.)	BA300 1219
	677 11TH AVE	S 1/8 - 1/4 (0.237 mi.)	BH332 1338
	514 W 49TH ST	N 1/8 - 1/4 (0.248 mi.)	350 1389
		NE 1/8 - 1/4 (0.249 mi.)	BN352 1402

Address	Distance	Parcel ID	Area
DEMARCO JOSEPH E	595 11TH AVE	NW 0 - 1/8 (0.078 mi.)	I64 283
CON EDISON - MH MH33170	W. 45TH STREET & 11TH AV	NW 0 - 1/8 0.0 mi.	I66 2
NEW YORK TELEPHONE CO	45 S 00000 11TH ST	NNW 0 - 1/8 (0.090 mi.)	L70 307
FEDERAL EXPRESS CORP	604 W 43RD ST	NNW 0 - 1/8 0.0 0 mi.	2 311
MILLER-GERALDI INC	560 W 42ND ST	W 0 - 1/8 (0.099 mi.)	K83 341
MOBIL OIL CORP SS #QDL	609 11TH AVE	SW 0 - 1/8 (0.105 mi.)	T104 409
UNITED PARCEL SERVICE	561 11TH AVE	NNW 0 - 1/8 (0.105 mi.)	L106 422
METROPOLITAN LUMBER CO	612 W 45TH ST	WSW 0 - 1/8 (0.106 mi.)	V114 458
KELLERMANN PAINT CO INC	617 11TH AVE	NW 0 - 1/8 (0.108 mi.)	L126 513
CON EDISON MANHOLE 33151	605 W 45TH ST	NNW 0 - 1/8 (0.117 mi.)	S142 573
MOBIL OIL CORP	W 42 ST & 11 AVE	NW 0 - 1/8 (0.118 mi.)	X143 574
NEW YORK TELEPHONE CO	42 ST & 11TH AVE	WSW 1/8 - 1/4 (0.127 mi.)	Y150 598
PLAZA WEST ASSOCIATES LLC	605 W 42ND ST	WSW 1/8 - 1/4 (0.127 mi.)	Y151 600
INFOMART NEW YORK LLC	636 11TH AVE	WSW 1/8 - 1/4 (0.129 mi.)	V153 605
ACCURATE REFINING CORPORATION	636 11TH AVE 5TH FL 500	N 1/8 - 1/4 (0.138 mi.)	AD165 639
SPLENDID CLEANERS	636 11TH AVENUE - 5TH F	N 1/8 - 1/4 (0.138 mi.)	AD167 646
SHERWIN-WILLIAMS CO THE	636 11TH AVE - BASEMENT	N 1/8 - 1/4 (0.138 mi.)	AD168 649
GUTMAN SUNOCO	619 W 46TH ST	N 1/8 - 1/4 (0.138 mi.)	AD169 651
NY Y N S IN	639 11TH AVE	NNW 1/8 - 1/4 (0.144 mi.)	AA178 664
CON EDISON N 602	525 11TH ST	N 1/8 - 1/4 (0.158 mi.)	AD210 855
GUGGENHEIM MUSEUM	600 W 4TH ST	SW 1/4 - 1/4 0.16 mi.	I220 000
MY PRINT CO LIMIT	620 W 47TH ST	N 1/4 - 1/4 0.16 mi.	222 001
	711 12TH AVE PIER 88	N 1/8 - 1/4 (0.181 mi.)	AO240 942
	11 12TH ST	NW 1/8 - 1/4 (0.234 mi.)	BD325 1296
	636 W 40TH ST	NW 1/4 - 1/4 0.234 mi.	32 132
		WSW 1/4 - 1/4 0.24 mi.	34 13 6

NSN: or settlements that establish responsibility in streets or enup t N super un sites. e e se perio i by .S. istri t courts ter settlement by parties to ition matters.

review of the NSN list, s pro i e by , n te 06 01 2012 h s re e e th t there is 1 NSN site within ppro im te y 1 mi e o the t r et property.

Address	Distance	Parcel ID	Area
HUDSON RIVER PCBs	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0 11

S

re or o e ision. o uments m n te permanent reme y t n N Super un site
ont inin te hni n n he th in orm tion to i the e nup.

re iew o the ist, s pro i e by , n te 02 2 2012 h s re e e th t there is 1
site within ppro im te y 1 mi e o the t r et property.

her e t	ress	re t st e		e
HUDSON RIVER PCBS	NO STREET APPLICABLE	WNW 1/4 - 1/2 (0.321 mi.)	0	11

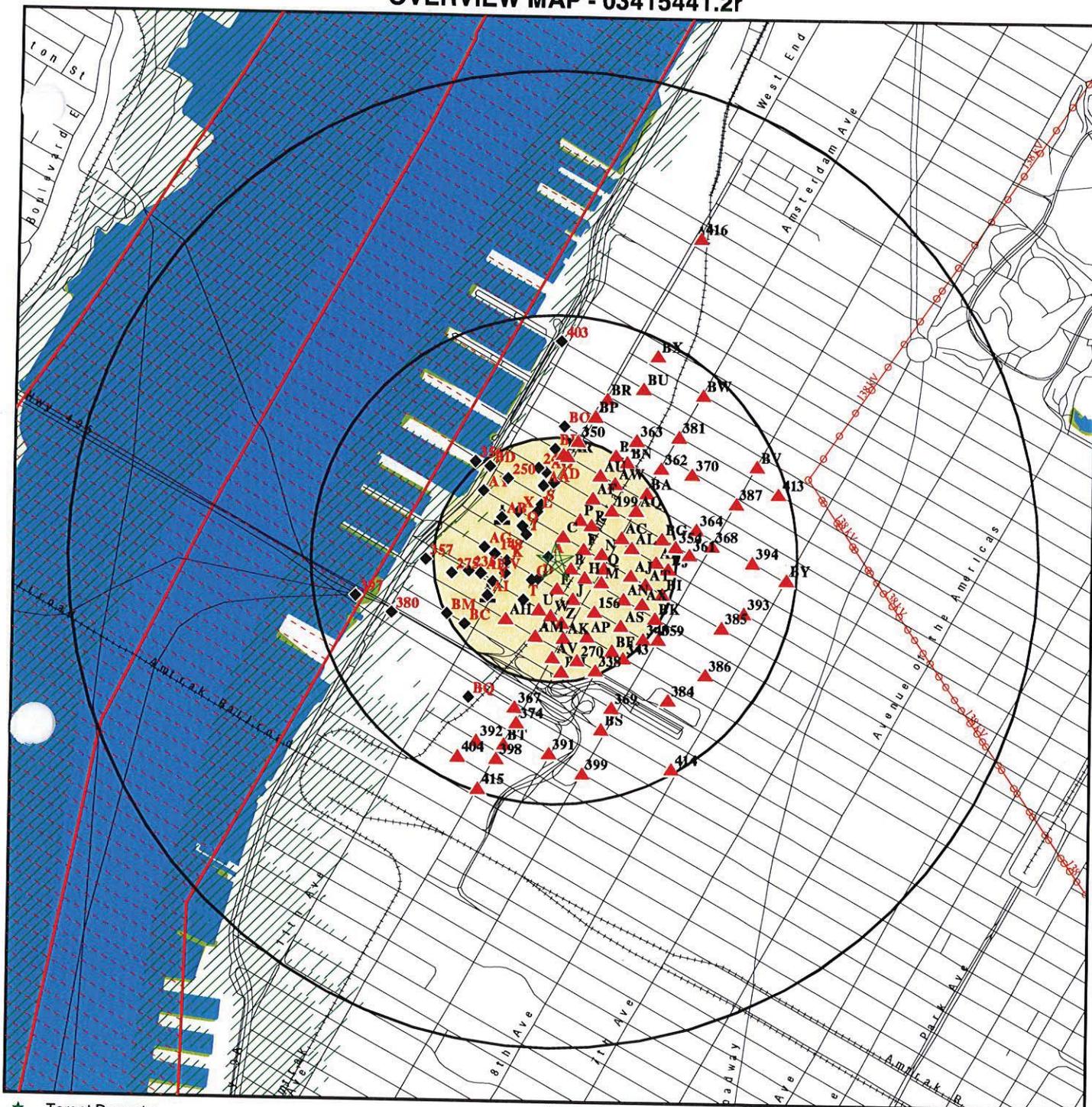
NY NI S: ni est is o ument th t lists n tr ks h rous w ste rom the ener tor throu h
tr nsporters to S i ty.

re iew o the NY NI S ist, s pro i e by , n te 05 01 2012 h s re e e th t there
re 63 NY NI S sites within ppro im te y 0.25 mi es o the t r et property.

her e t	ress	re t st e		e
CON ED - V 3685	522 W 44 ST	ESE 0 - 1/8 (0.040 mi.)	B6	53
W S	530 W 45 S	N 0 1 0.04 mi.	10	
NY	535 W S 45 S	NN 0 1 0.050 mi.	15	11
NY	535 W 45 S	NN 0 1 0.050 mi.	16	124
NY S	515 533 W 44 S	S 0 1 0.050 mi.	20	131
NYC BD OF ED - PUBLIC SCHOOL 5	520 W 45TH ST	NE 0 - 1/8 (0.050 mi.)	C23	148
TRIPOD PRINTING INC	545 W 45TH ST	NNE 0 - 1/8 (0.051 mi.)	C27	160
NEW YORK PUBLIC LIBRARY ANNEX	521 W 43RD ST	S 0 - 1/8 (0.058 mi.)	E44	205
AMERADA HESS SERVICE STATION	502 W. 45TH STREET	ENE 0 - 1/8 (0.062 mi.)	F46	220
MARTIN MANHATTAN ACURA	11TH AVE & W 46TH ST	NE 0 - 1/8 (0.101 mi.)	P87	350
OMNI CLEANERS	595 10TH AVENUE	SE 0 - 1/8 (0.102 mi.)	J95	386
NS I IS N	W 43 S 10	SS 0 1 0.106 mi.	112	454
NS I IS N	46 S 10	N 1 1 4 0.13 mi.	163	63
NS I IS N	42N S 10	SS 1 1 4 0.140 mi.	1 3	656
NS I IS N	42N 10 60134	SS 1 1 4 0.141 mi.	1 6	662
NS I IS N	W 42 S 10 4326	SS 1 1 4 0.141 mi.	1	663
MANHATTAN B M W	547 W 47TH ST	NNE 1/8 - 1/4 (0.149 mi.)	AF188	745
NS I IS N	533 W 4 S	N 1 1 4 0.150 mi.	1 0	63
TRAILWAYS INC	544 W 41ST ST	SSW 1/8 - 1/4 (0.156 mi.)	AH201	796
CON EDISON - WEST 42ND ST SUB	571 W 41ST ST	SW 1/8 - 1/4 (0.157 mi.)	AH204	801
MERCEDES-BENZ MANHATTAN INC	528 W 41ST ST	SSW 1/8 - 1/4 (0.157 mi.)	AH206	816
NS I IS N	46 W 42N S	SS 1 1 4 0.16 mi.	224	2
NS I IS N	552 W S 4 S	NN 1 1 4 0.1 6 mi.	252	5
DOWNTOWN IGNITION	548 W 48TH ST	NNE 1/8 - 1/4 (0.196 mi.)	AU253	988
FAST TOWING & AUTO REPAIR	547 10TH ST	S 1/8 - 1/4 (0.199 mi.)	AV255	1001
CON ED - V 8433	520 W 48TH ST	NE 1/8 - 1/4 (0.200 mi.)	AW259	1012
NY	W 4 S W 10 11	N 1 1 4 0.211 mi.	2 3	105
NYN	11 4 S	N 1 1 4 0.211 mi.	2 4	1060
IN N W Y IN	605 W 4	N 1 1 4 0.214 mi.	2 6	1061
525 11TH AVE/GREYHOUND	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC280	1071
NYCT - MICHAEL J. QUILL BUS DE	525 11TH AVE	SW 1/8 - 1/4 (0.217 mi.)	BC283	1091
IN N W Y N	610 W 4 S	N 1 1 4 0.21 mi.	2	11 2
CON EDISION - MH 3319	S/E/C W48 ST & 10 AVE S	NE 1/8 - 1/4 (0.219 mi.)	BA300	1219
HUNTER COLLEGE - MFA	450 W 41ST ST	S 1/8 - 1/4 (0.237 mi.)	BH332	1338
MARTIN HONDA	677 11TH AVE	N 1/8 - 1/4 (0.248 mi.)	350	1389
US POSTAL SERVICE - VEH MAINT	514 W 49TH ST	NE 1/8 - 1/4 (0.249 mi.)	BN352	1402

her e t	ress	re t st e		e
MERCHANDISING WORKSHOP	550 WEST 43RD ST	SW 0 - 1/8 (0.052 mi.)	D31	171

OVERVIEW MAP - 03415441.2r



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites

- ▨ Indian Reservations BIA
- County Boundary
- Power transmission lines
- Oil & Gas pipelines from USGS
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 546 West 44th Street
 ADDRESS: 546 West 44th Street
 New York NY 10036
 LAT/LONG: 40.7616 / 73.9961

CLIENT: IVI Assessment Services, Inc.
 CONTACT: Sandy Smith
 INQUIRY #: 03415441.2r
 DATE: September 21, 2012 11:06 am



**LIMITED PHASE II
ENVIRONMENTAL SITE ASSESSMENT**

**546 West 44th Street
New York, New York 10036**

IVI Project Number: E21004109

Prepared for:

**Pasha Group LLC
Brooklyn, New York**

Prepared By:



**IVI Environmental, Inc.
White Plains, New York 10604**

November 14, 2012



55 West Red Oak Lane
White Plains, New York 10604
914.694.9600 (tel)
914.694.2903 (fax)
www.ivi-intl.com

November 14, 2012

Mr. Marvin Mitchell
Pasha Group, LLC
157 Congress Street, Apt 1
Brooklyn, New York 11201-6184
Karen.wiedenmann@cushwake.com

Re: Limited Phase II Environmental Site Assessment
546 West 44th Street
New York, New York 10036
IVI Project No.: E21004109

Dear Mr. Mitchell:

IVI Environmental, Inc. (IVI) is pleased to submit this Limited Phase II Environmental Site Assessment (Assessment) on the property located at 546 West 44th Street, New York, New York (the "Subject"). A Site Location Map is provided as Figure 1 in Appendix A. The purpose of this Assessment was to investigate Recognized Environmental Conditions (RECs) identified in a Phase I Environmental Site Assessment (ESA) prepared by IVI Assessment Services, Inc., dated October 12, 2012. Specifically, the following RECs were identified in the Phase I ESA, which warranted investigation at this time:

Historical Usage and Former Underground Storage Tanks

Automotive repair and fueling was historically conducted on the Subject. Prior to 1977 the Subject was utilized for automotive repair. From 1977 to 1987, the Subject was the location of a trucking business with automotive repair only conducted on the trucks associated with the on-site trucking business. In 1978, two 4,000 gallon gasoline underground storage tanks were installed to fuel the trucks associated with the on-site trucking business. In addition, an illegal body shop operated on part of the upper level of the Subject building for approximately three and a half years after 1987 and from 2003 to 2006 the basement was leased to a transmission repair business. Automotive repair activities commonly use solvents for parts cleaning and generate automotive wastes such as waste oils and antifreeze. Improper disposal of solvents and automotive wastes commonly result in subsurface impacts.

Based on our review of a report titled *Closure Report for Underground Storage Gasoline Tank Property Located at 541 West 43rd Street, NYC, NY 10036* (the "Report") prepared by DCES, the two 4,000 gallon gasoline USTs were removed from the Subject during 1999. The report indicated that post closure soil testing was conducted. The post-tank removal samples did not exhibit concentrations of contamination warranting remediation. The removed tanks have a closed status with regulatory authorities and are considered a historic REC. However, due to the "E" Designation placed on the Subject, the area of these two former gasoline USTs will need to be further investigated prior to any new construction or change in use of the Subject taking place. Further, based on our review of historical Sanborn Maps, a 550 gallon gasoline UST is identified within the northeastern portion of the Subject building, though the exact location was not depicted. No further information pertaining to this UST was discovered through this assessment and there is the potential for it to remain on-site. It is unknown if the soils and/or groundwater beneath the Subject have been impacted by the UST.

Based on the above, IVI considers the historical usage of the site a REC. In addition, due to the past site use a vapor encroachment condition cannot be ruled out. IVI recommended a subsurface investigation be conducted to determine the disposition of the 550 gallon gasoline UST and determine if historic automotive repair activities, fueling operations, and underground storage tanks have impacted the subsurface.

Adjacent Property with RECs

IVI observed a monitoring well adjacent to the north of the Subject site within the sidewalk along West 44th Street. IVI additionally observed an additional monitoring well in the sidewalk further east along West 44th Street. The wells were fitted with secured caps and are associated with the eastern adjacent property, the New York City Public Library Annex Property Spills site located at 521 West 43rd Street (Spill No. 1103225).

Spill No. 1103225 was reported for this eastern adjacent site on May 11, 2011. The site is proposed to be a new primary/intermediate public school and high school. Currently the building is a six-story storage building with basement owned by the New York Public Library. During a Phase I in September 2010 RECs identified for this site included: historical structures which could potentially result in historical fill material from demolition under the building; historical usages including varnish and machinery storage, a garage with a 550 gallon gasoline UST, motor repair shop, and other manufacturing operations; the existence of two No. 2 fuel oil ASTs with identified staining; staining within the building likely from equipment leaks; and the site inclusion as a RCRA Large Quantity Generator.

A Phase II investigation was performed at the site in July 2010. Sub-slab vapor samples identified petroleum and chlorinated solvent compounds exceeding standards. Eighteen soil borings were advanced in the site building and sidewalk. During soil sampling observations of petroleum impacts were observed. Five metals (arsenic, cadmium, total cadmium, lead, and mercury) were detected in soil samples at concentration greater than Unrestricted Use Soil Cleanup Objectives (SCOs). Additionally, Light Non-Aqueous

Phase Liquid (LNAPL) was identified on groundwater (perched water above bedrock). Fingerprint analysis indicated that a LNAPL sample exhibited characteristics of an unknown motor oil and a non-calibrated fuel type. Two bedrock groundwater monitoring wells were installed in the sidewalks outside the building. Sampling of these wells did not identify volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), metals, cyanide, PCBs or pesticides above the Class GA Values in groundwater collected from the bedrock aquifer.

Given the proximity and upgradient hydrogeological relationship to the Subject there is the potential for this open Spills site to have impacted the Subject including the potential for the LNAPL on groundwater to have migrated to the Subject. In addition, due to the detection of sub-slab vapor concentrations of petroleum and chlorinated solvent compounds exceeding standards from this adjacent site and the presence of LNAPL there is a potential for a vapor encroachment condition (VEC) at the Subject and a VEC cannot be ruled out. IVI recommends that the above recommended subsurface investigation be expanded to include investigating potential impacts from the eastern adjacent Spills site located at 521 West 43rd Street.

LNAPL sample exhibited characteristics of an unknown motor oil and a non-calibrated fuel type. Two bedrock groundwater monitoring wells were installed in the sidewalks outside the building. Sampling of these wells did not identify volatile organic compounds (VOC's), semi-volatile organic compounds (SVOC's), metals, cyanide, PCBs or pesticides above the Class GA Values in groundwater collected from the bedrock aquifer.

Given the proximity and upgradient hydrogeological relationship to the Subject there is the potential for this open Spills site to have impacted the Subject. In addition, there is a potential for a vapor encroachment condition (VEC) at the Subject and a VEC cannot be ruled out. IVI recommended that the above recommended subsurface investigation be expanded to include investigating potential impacts from the eastern adjacent Spills site located at 521 West 43rd Street.

Scope of Work

The scope of this Assessment included the following activities:

1. Geophysical survey for underground storage tanks (USTs) and underground utilities mark out;
2. Advancement of six soil borings, two sub-slab vapor points, two (2) corresponding indoor air samples, and one (1) ambient air sample.
3. Collection and field screening of soil samples for volatile organic compound (VOC) contamination with a photoionization detector (PID) using the head space analysis; and,
4. Laboratory analysis of four soil samples, two groundwater samples, and five vapor samples.

Field Activities

Naeva Geophysics, Inc. (Naeva) conducted a geophysical survey at the Subject, as directed by IVI. The purpose of the geophysical survey was to search for any out of service USTs and to clear IVI's proposed borings for subsurface utilities. The mark out for the boring locations and UST search was conducted using ground penetrating radar (GPR) and pipe locating equipment. Naeva scanned accessible areas throughout the Subject with the GPR and identified one metallic anomaly in the basement of the Subject building, which may be indicative of a UST. In addition, Naeva confirmed that the two 4,000-gallon USTs are no longer present on the southeastern portion of the Subject property.

Subsurface Investigation

IVI directed the advancement of six soil borings, denoted as B-1 through B-6. The borings were advanced using a track-mounted Geoprobe[®] model 6600, operated by Zebra Environmental, Inc. (Zebra). Prior to the advancement of each boring, all down-hole drilling equipment was decontaminated by Zebra in accordance with U.S. EPA protocols and good commercial and customary practice. Specifically, borings B-1 and B-2 were advanced on the northern portion of the Subject for investigation of off-site concerns, borings B-3 and B-4 were advanced in the vicinity of the two removed USTs, boring B-5 was advanced in the vicinity of the former ASTs, and boring B-6 was advanced in the vicinity of the anomaly identified by Naeva. Boring locations are shown on the Boring Location Plan provided as Figure 2 in Appendix A.

Borings B-1 and B-2 were advanced for collection of groundwater samples only. As such, IVI advanced a hydropunch for sample collection; however probe refusal was encountered after several attempts on presumed bedrock at these boring locations. During advancement of the remaining borings, IVI collected continuous soil samples at 5' intervals using macro-core samplers. IVI inspected each soil sample for evidence of contamination and field screened the samples for VOC contamination using a PID. The soil borings were advanced to depths ranging from 3' below ground surface (bgs) to 20' bgs, where probe refusal was encountered in each boring. Observed soil conditions encountered in the borings consisted of brown silty sands. Groundwater was encountered in boring B-5 at a depth of 16' bgs. No elevated PID reading or visual or olfactory evidence of contamination was identified. Detailed soil descriptions and PID readings are provided on the boring logs presented in Appendix B.

IVI collected a soil sample for laboratory analysis from the bottom of borings B-3, B-4, and B-6, and from the 6-inch interval above the groundwater interface from boring B-5. In addition, IVI collected a groundwater sample for laboratory analysis from boring B-5 using a reusable stainless steel hydropunch sampler, dedicated tubing, and peristaltic pump. Finally, IVI collected a groundwater sample for laboratory analysis from a monitoring well identified in the sidewalk north of the Subject, which IVI arbitrarily denoted as MW-1.

IVI transferred the collected soil and groundwater samples to appropriate sample containers, packed them on ice in a cooler, and shipped them via FedEx to Accutest Laboratories of New England (Accutest) for laboratory analysis. Each sample was analyzed for VOCs and polynuclear aromatic hydrocarbons (PAHs) via EPA Methods 8260B/5035 and 8270C; respectively. In addition, the soil samples collected from borings B-3 and B-6 were also analyzed for polychlorinated biphenyls (PCBs), priority pollutant metals, and pesticides.

Vapor Intrusion Assessment

On October 23, 2012, IVI collected two sub-slab vapor samples from beneath the Subject building denoted as SS-1 and SS-2. In addition, IVI collected two corresponding indoor air samples denoted as IA-1 and IA-2; respectively. Finally, IVI collected one background ambient air sample from the northern portion of the on-site parking lot denoted as AA. Specific sample locations are shown on Figure 2 in Appendix A.

The sub-slab sample points were advanced using a hand-held hammer drill operated by Zebra. Dedicated polyethylene tubing was inserted below the concrete slab. The gap around the tubing was sealed with hydrated bentonite at the surface. The vapor samples were collected into 6 liter summa canisters at a rate which did not exceed one hour, using flow controllers pre-set by the laboratory. Upon completion of vapor sampling, the boreholes were backfilled with bentonite and the ground surface was patched. Samples were sent to Accutest for analysis of VOCs in accordance with EPA Method TO-15.

Analytical Results

Soil

Analytical results of soil samples identified numerous PAHs, in the soil samples collected from boring B-3. PAH concentrations identified in boring B-3 greatly exceed their respective New York State of New York Rules and Regulations (6 NYCRR) Part 375-6 Unrestricted Soil Cleanup Objectives (SCOs). Specifically, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were all identified to exceed their respective SCOs in the soil sample collected from boring B-3. In addition, numerous heavy metals including arsenic, copper, lead, mercury, nickel, and zinc were identified in B-3 at concentrations exceeding their SCO. The same metals, except mercury, were also detected in the sample collected from boring B-6, but at lower concentrations. No PCBs or pesticides were identified to exceed their respective laboratory Method Detection Limits (MDLs) in the samples collected from borings B-3 and B-6. The soil analytical data is summarized on Table 1 in Appendix C. The laboratory analytical report is provided in Appendix D.

Groundwater

Analytical results of the groundwater samples collected from B-5 and MW-1 identified three VOCs. Specifically, chloroform and naphthalene were identified to exceed their respective NYSDEC Water Quality Standards (WQS) in the groundwater sample collected from MW-1. In addition, methyl tertiary butyl ether (MTBE) was identified at a concentration below its NYSDEC WQS in the groundwater sample collected from boring B-5. No other VOCs were identified to exceed their laboratory MDLs. No PAHs were identified to exceed their laboratory MDLs in any groundwater sample collected. The groundwater analytical data is summarized on Tables 2 and 3 in Appendix C. The laboratory is provided in Appendix D.

Air

Analytical results of sub-slab vapor and indoor air samples identified the presence of numerous aromatic hydrocarbons including benzene, ethylbenzene, 1,2,4 trimethylbenzene, and xylenes at concentrations exceeding their respective U.S. Environmental Protection Agency (EPA) Residential Regional Screening Levels (RSLs). In addition, of significance the chlorinated VOC tetrachloroethylene (PCE) was identified in sub-slab vapor sample SS-1 and SS-2 exceeding its RSL. The analytical data is summarized on Table 4 in Attachment B. The laboratory report is provided in Attachment D.

Conclusions and Recommendations

A geophysical survey conducted in accessible areas on the Subject property using GPR identified one buried metallic anomaly indicative of a UST in the basement of the Subject building. Based on the results of the geophysical survey, it is possible that there may be an out of service UST the Subject. IVI recommends that the anomaly be excavated to confirm whether it is a UST. If the anomaly is determined to be a UST, IVI recommends the UST be removed in accordance with applicable federal, state, and local laws and regulations.

Based on the analytical results of this Assessment, it appears that the subsurface soil is impacted in the vicinity of the removed USTs with PAHs and heavy metals. PAH concentrations identified in the soil sample collected from boring B-3 greatly exceed their respective SCOs. In addition, numerous heavy metals including arsenic, copper, lead, mercury, nickel, and zinc were identified in B-3 at concentrations exceeding their SCO. These impacts could be as a result of an incomplete cleanup when the USTs were removed or could be the result fill material that was imported to the Subject to fill the UST excavation. The same metals, except mercury, were also identified in the soil sample collected from boring B-6, but at lower concentrations. Copper and nickel were found to exceed their respective SCO in boring B-6. No PCBs or pesticides were identified to exceed their respective laboratory method detection limits (MDLs) in borings B-3 or B-6. IVI recommends the impacted soil in the vicinity of boring B-3 be removed. IVI further recommends that site soils removed during future redevelopment activities be managed in accordance with State and Federal requirements.

Due to shallow refusal, groundwater sampling was only conducted at B-5 in the vicinity of the former AST and in a monitoring well along 44th Street denoted as MW-1. The analytical results of the groundwater samples collected identified chloroform and naphthalene in MW-1 at concentrations exceeding their respective WQS. Naphthalene is a VOC most commonly associated with petroleum spills and is suspected to be related to the eastern adjacent property, the New York City Public Library Annex Property Spills site located at 521 West 43rd Street (Spill No. 1103225). There is no known source of chloroform on the Subject.

New York has not established standards for petroleum related VOCs in sub-slab or indoor air. Therefore, IVI compared the sub-slab vapor results to the EPA RSLs 10^{-6} cancer risk values for Indoor Air. Concentrations of benzene, ethylbenzene, 1,2,4-trimethylbenzene, and xylenes were identified in sub-slab and indoor air samples at concentrations exceeding their respective RSLs. Overall, the greatest petroleum related VOC concentrations were identified in sub-slab samples SS-1 and SS-2 nearest the area of the area of the suspected 550 gallon UST and the area of the removed 4,000 gallon UST. In addition, the chlorinated VOC, PCE was identified in the sub-slab samples SS-1 and SS-2 at concentrations exceeding its EPA RSL and New York State Department of Health (NYSDOH) screening levels. PCE is an industrial degreasing solvent, which is most commonly associated with dry cleaning establishments.

In addition, elevated VOCs were detected in sub-slab vapor samples collected from beneath the Subject's building. The petroleum VOCs can be attributed to the former UST. The PCE is a common industrial degreasing solvent, most commonly associated with dry cleaning operations. In the event that future occupancy of the building is planned, IVI recommends the installation of a system to mitigate the PCE concentrations to prevent them from entering the Subject's building. In addition, any redevelopment plans should incorporate a vapor barrier to mitigate the potential for vapor intrusion

Of note, at this time, the PCBs, PPM, and pesticides soil analytical results for B-6 have not yet been completed by Accutest. IVI will finalize this Assessment report upon receipt and review of the data from Accutest.

Please do not hesitate to call if you have any comments or questions regarding this Assessment. Thank you for letting us be of assistance.

Sincerely,

IVI ENVIRONMENTAL, INC.



Steven Gustems
Assistant Department Manager

cc: David Lent, IVI

Limited Phase II Environmental Site Assessment
546 West 44th Street
New York, New York
November 14, 2012
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enc.: Appendix A: Figures
Appendix B: Boring Logs
Appendix C: Tables
Appendix D: Laboratory Report



Figure 1 - Site Location Map

Project Site: 546 West 44th Street
 New York, New York

IVI Project No: E2100419

IVI Environmental Inc.
 55 West Red Oak Lane
 White Plains, New York 10604
 (914) 694-9600 (tel)
 (914) 694-2903 (fax)

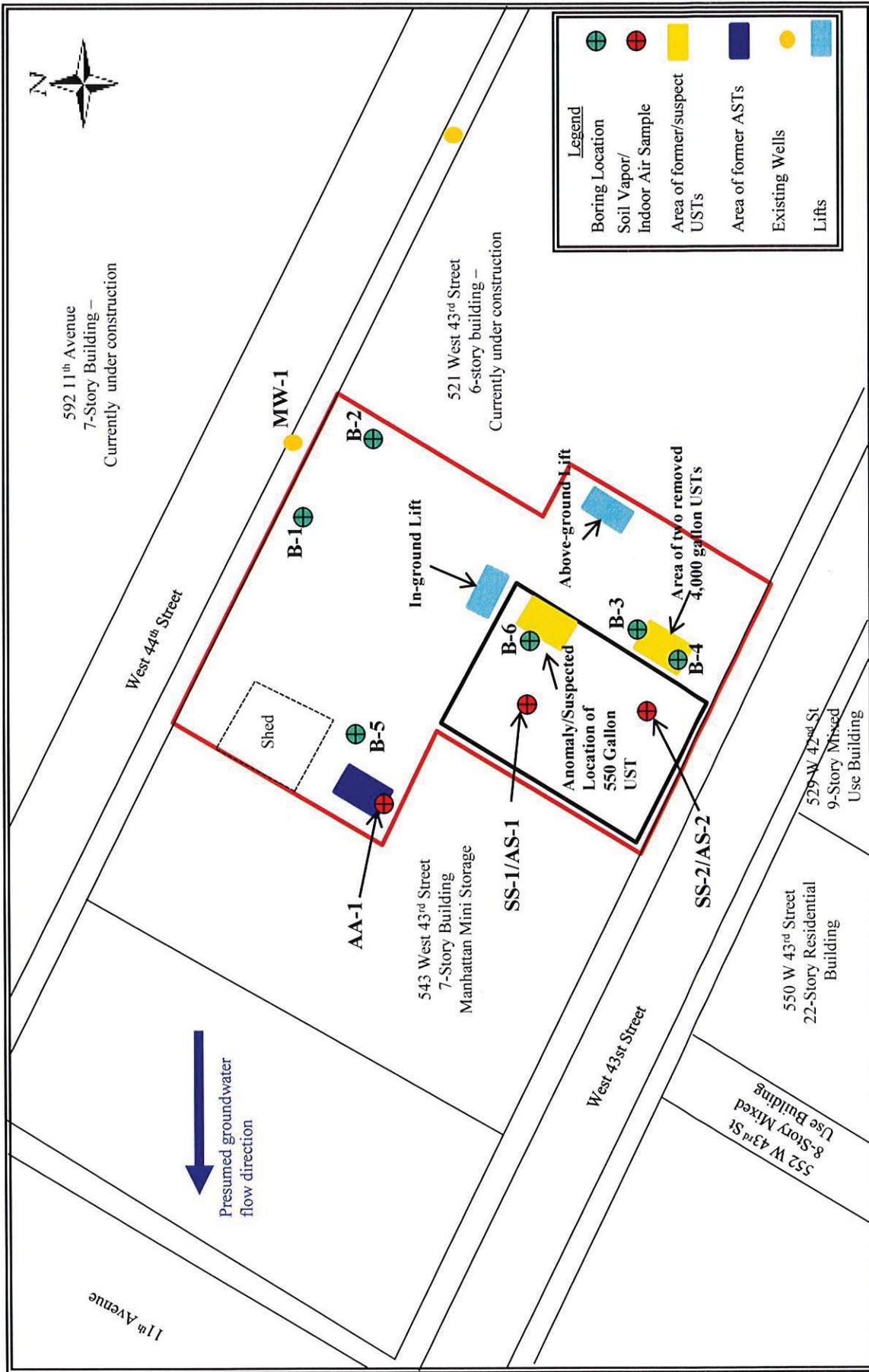


Figure 2 – Boring Location Map

Project No: E21004109

Boundaries are approximate. Not to scale.

IVI ENVIRONMENTAL, INC.
55 WEST RED OAK LANE
WHITE PLAINS, NY 10604
(914) 694-9600 (TEL)
(914) 694-2903 (FAX)

546 West 44th Street
New York, New York

Table 1

Summary of Soil Analytical Results
546 W 44th Street, NY, NY

Client Sample ID:		NY SCO -	B-3	B-4	B-6	B-5
Lab Sample ID:		Unrestricted	MC15219-2	MC15219-1	MC15219-4	MC15219-3
Date Sampled:		Use (6 NYCRR	10/23/2012	10/23/2012	10/23/2012	10/23/2012
Matrix:		375-6 12/06)	Soil	Soil	Soil	Soil
GC/MS Semi-volatiles (SW846 8270C BY SIM)						
Acenaphthene	ug/kg	20000	ND (140)	ND (25)	ND (27)	ND (27)
Acenaphthylene	ug/kg	100000	877	ND (25)	ND (27)	ND (27)
Anthracene	ug/kg	100000	742	ND (25)	ND (27)	ND (27)
Benzo(a)anthracene	ug/kg	1000	3050	ND (25)	ND (27)	ND (27)
Benzo(a)pyrene	ug/kg	1000	3020	ND (25)	ND (27)	ND (27)
Benzo(b)fluoranthene	ug/kg	1000	3780	ND (25)	ND (27)	ND (27)
Benzo(g,h,i)perylene	ug/kg	100000	2640	ND (25)	ND (27)	ND (27)
Benzo(k)fluoranthene	ug/kg	800	1430	ND (25)	ND (27)	ND (27)
Chrysene	ug/kg	1000	3700	ND (25)	ND (27)	ND (27)
Dibenzo(a,h)anthracene	ug/kg	330	736	ND (25)	ND (27)	ND (27)
Fluoranthene	ug/kg	100000	5230	ND (25)	ND (27)	ND (27)
Fluorene	ug/kg	30000	312	ND (25)	ND (27)	ND (27)
Indeno(1,2,3-cd)pyrene	ug/kg	500	2190	ND (25)	ND (27)	ND (27)
2-Methylnaphthalene	ug/kg	-	164	ND (25)	ND (27)	ND (27)
Naphthalene	ug/kg	12000	572	ND (25)	ND (27)	ND (27)
Phenanthrene	ug/kg	100000	3960	ND (25)	ND (27)	ND (27)
Pyrene	ug/kg	100000	3990	ND (25)	ND (27)	ND (27)
GC Semi-volatiles (SW846 8081)						
Aldrin	ug/kg	5	ND (7.2)	-	ND (7.1)	-
alpha-BHC	ug/kg	20	ND (7.2)	-	ND (7.1)	-
beta-BHC	ug/kg	36	ND (7.2)	-	ND (7.1)	-
delta-BHC	ug/kg	40	ND (7.2)	-	ND (7.1)	-
gamma-BHC (Lindane)	ug/kg	100	ND (7.2)	-	ND (7.1)	-
alpha-Chlordane	ug/kg	94	ND (7.2)	-	ND (7.1)	-
gamma-Chlordane	ug/kg	-	ND (7.2)	-	ND (7.1)	-
Dieldrin	ug/kg	5	ND (7.2)	-	ND (7.1)	-
4,4'-DDD	ug/kg	3.3	ND (7.2)	-	ND (7.1)	-
4,4'-DDE	ug/kg	3.3	ND (7.2)	-	ND (7.1)	-
4,4'-DDT	ug/kg	3.3	ND (7.2)	-	ND (7.1)	-
Endrin	ug/kg	14	ND (7.2)	-	ND (7.1)	-
Endosulfan sulfate	ug/kg	2400	ND (7.2)	-	ND (7.1)	-
Endrin aldehyde	ug/kg	-	ND (7.2)	-	ND (7.1)	-
Endosulfan-I	ug/kg	2400	ND (7.2)	-	ND (7.1)	-
Endosulfan-II	ug/kg	2400	ND (7.2)	-	ND (7.1)	-
Heptachlor	ug/kg	42	ND (7.2)	-	ND (7.1)	-
Heptachlor epoxide	ug/kg	-	ND (7.2)	-	ND (7.1)	-
Methoxychlor	ug/kg	-	ND (7.2)	-	ND (7.1)	-
Endrin ketone	ug/kg	-	ND (7.2)	-	ND (7.1)	-
Toxaphene	ug/kg	-	ND (7.2)	-	ND (7.1)	-
GC Semi-volatiles (SW846 8082)						
Aroclor 1016	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1221	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1232	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1242	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1248	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1254	ug/kg	100	ND (110)	-	ND (100)	-
Aroclor 1260	ug/kg	100	ND (110)	-	ND (100)	-
Metals Analysis						
Antimony	mg/kg	-	1.3	-	<1.0	-
Arsenic	mg/kg	13	19.6	-	2.6	-
Beryllium	mg/kg	7.2	<0.42	-	<0.41	-
Cadmium	mg/kg	2.5	<0.42	-	<0.41	-
Chromium	mg/kg	-	58.8	-	58.3	-
Copper	mg/kg	50	131	-	68.9	-
Lead	mg/kg	63	866	-	6.7	-
Mercury	mg/kg	0.18	0.26	-	<00033	-
Nickel	mg/kg	30	95.1	-	33.9	-
Selenium	mg/kg	3.9	<2.1 ^a	-	<1.0	-
Silver	mg/kg	2	<0.52	-	<0.51	-
Thallium	mg/kg	-	<1.0	-	<1.0	-
Zinc	mg/kg	109	261	-	74.8	-
Footnotes:						
^a Elevated RL due to dilution required for matrix interference.						
				Legend:	Hit	Exceed
13 results exceeded regulatory criteria.						

Table 2

**Summary of Groundwater Analytical Data
546 W 44th Street, NY, NY**

Client Sample ID:		NY TOGS Class GA GW Standards (NYSDEC 6/2004) ¹	B-5	MW-1
Lab Sample ID:			MC15219-5	MC15219-6
Date Sampled:			10/23/2012	10/23/2012
Matrix:			Ground Water	Ground Water
GC/MS Volatiles (SW846 8260B)				
Acetone	ug/l	50	ND (5.0)	ND (5.0)
Benzene	ug/l	1	ND (0.50)	ND (0.50)
Bromobenzene	ug/l	5	ND (5.0)	ND (5.0)
Bromochloromethane	ug/l	5	ND (5.0)	ND (5.0)
Bromodichloromethane	ug/l	-	ND (1.0)	ND (1.0)
Bromoform	ug/l	-	ND (1.0)	ND (1.0)
Bromomethane	ug/l	5	ND (2.0)	ND (2.0)
2-Butanone (MEK)	ug/l	50	ND (5.0)	ND (5.0)
n-Butylbenzene	ug/l	5	ND (5.0)	ND (5.0)
sec-Butylbenzene	ug/l	5	ND (5.0)	ND (5.0)
tert-Butylbenzene	ug/l	5	ND (5.0)	ND (5.0)
Carbon disulfide	ug/l	60	ND (5.0)	ND (5.0)
Carbon tetrachloride	ug/l	5	ND (1.0)	ND (1.0)
Chlorobenzene	ug/l	5	ND (1.0)	ND (1.0)
Chloroethane	ug/l	5	ND (2.0)	ND (2.0)
Chloroform	ug/l	7	ND (1.0)	18.6
Chloromethane	ug/l	5	ND (2.0)	ND (2.0)
o-Chlorotoluene	ug/l	5	ND (5.0)	ND (5.0)
p-Chlorotoluene	ug/l	5	ND (5.0)	ND (5.0)
1,2-Dibromo-3-chloropropane	ug/l	0.04	ND (5.0)	ND (5.0)
Dibromochloromethane	ug/l	50	ND (1.0)	ND (1.0)
1,2-Dibromoethane	ug/l	0.0006	ND (2.0)	ND (2.0)
1,2-Dichlorobenzene	ug/l	3	ND (1.0)	ND (1.0)
1,3-Dichlorobenzene	ug/l	3	ND (1.0)	ND (1.0)
1,4-Dichlorobenzene	ug/l	3	ND (1.0)	ND (1.0)
Dichlorodifluoromethane	ug/l	5	ND (2.0)	ND (2.0)
1,1-Dichloroethane	ug/l	5	ND (1.0)	ND (1.0)
1,2-Dichloroethane	ug/l	0.6	ND (1.0)	ND (1.0)
1,1-Dichloroethene	ug/l	5	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	ug/l	5	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	ug/l	5	ND (1.0)	ND (1.0)
1,2-Dichloropropane	ug/l	1	ND (2.0)	ND (2.0)
1,3-Dichloropropane	ug/l	5	ND (5.0)	ND (5.0)
2,2-Dichloropropane	ug/l	5	ND (5.0)	ND (5.0)
1,1-Dichloropropene	ug/l	-	ND (5.0)	ND (5.0)
cis-1,3-Dichloropropene	ug/l	-	ND (0.50)	ND (0.50)
trans-1,3-Dichloropropene	ug/l	-	ND (0.50)	ND (0.50)
Ethylbenzene	ug/l	5	ND (1.0)	ND (1.0)
Hexachlorobutadiene	ug/l	0.5	ND (5.0)	ND (5.0)
2-Hexanone	ug/l	-	ND (5.0)	ND (5.0)
Iodomethane	ug/l	5	ND (5.0)	ND (5.0)
Isopropylbenzene	ug/l	5	ND (5.0)	ND (5.0)
p-Isopropyltoluene	ug/l	5	ND (5.0)	ND (5.0)
Methyl Tert Butyl Ether	ug/l	10	3.8	ND (1.0)
4-Methyl-2-pentanone (MIBK)	ug/l	50	ND (5.0)	ND (5.0)
Methylene bromide	ug/l	5	ND (5.0)	ND (5.0)
Methylene chloride	ug/l	5	ND (2.0)	ND (2.0)
Naphthalene	ug/l	10	ND (5.0)	18.2
n-Propylbenzene	ug/l	5	ND (5.0)	ND (5.0)
Styrene	ug/l	5	ND (5.0)	ND (5.0)
1,1,1,2-Tetrachloroethane	ug/l	5	ND (5.0)	ND (5.0)
1,1,1,2,2-Tetrachloroethane	ug/l	5	ND (1.0)	ND (1.0)
Tetrachloroethene	ug/l	5	ND (1.0)	ND (1.0)
Toluene	ug/l	5	ND (1.0)	ND (1.0)
1,2,3-Trichlorobenzene	ug/l	5	ND (5.0)	ND (5.0)
1,2,4-Trichlorobenzene	ug/l	5	ND (5.0)	ND (5.0)
1,1,1-Trichloroethane	ug/l	5	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	ug/l	1	ND (1.0)	ND (1.0)
Trichloroethene	ug/l	5	ND (1.0)	ND (1.0)
Trichlorofluoromethane	ug/l	5	ND (1.0)	ND (1.0)
1,2,3-Trichloropropane	ug/l	0.04	ND (5.0)	ND (5.0)
1,2,4-Trimethylbenzene	ug/l	5	ND (5.0)	ND (5.0)
1,3,5-Trimethylbenzene	ug/l	5	ND (5.0)	ND (5.0)
Vinyl Acetate	ug/l	-	ND (5.0)	ND (5.0)
Vinyl chloride	ug/l	2	ND (1.0)	ND (1.0)
m,p-Xylene	ug/l	-	ND (1.0)	ND (1.0)
o-Xylene	ug/l	5	ND (1.0)	ND (1.0)
Xylene (total)	ug/l	5	ND (1.0)	ND (1.0)
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).			Hit	Exceed
2 results exceeded regulatory criteria.				

Table 3

Summary of Groundwater Analytical Data
546 W 44th Street, NY, NY

Client Sample ID:		NY TOGS Class GA GW Standards (NYSDEC 6/2004) ¹	B-5	MW-1
Lab Sample ID:			MC15219-5	MC15219-6
Date Sampled:			10/23/2012	10/23/2012
Matrix:			Ground Water	Ground Water
GC/MS Semi-volatiles (SW846 8270C BY SIM)				
Acenaphthene	ug/l	20	ND (0.10)	ND (0.10)
Acenaphthylene	ug/l	20	ND (0.10)	ND (0.10)
Anthracene	ug/l	50	ND (0.10)	ND (0.10)
Benzo(a)anthracene	ug/l	0.002	ND (0.051)	ND (0.050)
Benzo(a)pyrene	ug/l	0.002	ND (0.10)	ND (0.10)
Benzo(b)fluoranthene	ug/l	0.002	ND (0.051)	ND (0.050)
Benzo(g,h,i)perylene	ug/l	5	ND (0.10)	ND (0.10)
Benzo(k)fluoranthene	ug/l	0.002	ND (0.10)	ND (0.10)
Chrysene	ug/l	0.002	ND (0.10)	ND (0.10)
Dibenzo(a,h)anthracene	ug/l	50	ND (0.10)	ND (0.10)
Fluoranthene	ug/l	50	ND (0.10)	ND (0.10)
Fluorene	ug/l	50	ND (0.10)	ND (0.10)
Indeno(1,2,3-cd)pyrene	ug/l	0.002	ND (0.10)	ND (0.10)
2-Methylnaphthalene	ug/l	50	ND (0.20)	ND (0.20)
Naphthalene	ug/l	10	ND (0.10)	ND (0.10)
Phenanthrene	ug/l	50	ND (0.051)	ND (0.050)
Pyrene	ug/l	50	ND (0.10)	ND (0.10)
Results flagged as "Exceed" if any of the selected criteria exceeded (most stringent).			Hit	Exceed
No results exceeded regulatory criteria.				

Table 4

Summary of Air Sampling Data
546 W44th Street, NY, NY

Client Sample ID:		EPA Region 3,6,	AA-1	IA-1	IA-2	SS-1	SS-2
Lab Sample ID:		9 RSL -	MC15187-5	MC15187-2	MC15187-4	MC15187-1	MC15187-3
Date Sampled:		Residential Air	10/23/2012	10/23/2012	10/23/2012	10/23/2012	10/23/2012
Matrix:		(USEPA 4/12)	Ambient Air	Indoor Air	Indoor Air	Air	Air
GC/MS Volatiles (TO-15) - ug/m3							
Acetone	ug/m3	32000	42	63.4	60.6	39.2	242
1,3-Butadiene	ug/m3	0.081	ND (1.1)	ND (1.1)	ND (1.1)	ND (2.2)	ND (1.1)
Benzene	ug/m3	0.31	3	12	12	6.7	8
Bromodichloromethane	ug/m3	0.066	ND (3.3)	ND (3.3)	ND (3.3)	ND (6.7)	ND (3.3)
Bromoform	ug/m3	2.2	ND (5.2)	ND (5.2)	ND (5.2)	ND (10)	ND (5.2)
Bromomethane	ug/m3	5.2	ND (1.9)	ND (1.9)	ND (1.9)	ND (3.9)	ND (1.9)
Bromoethane	ug/m3	0.076	ND (2.2)	ND (2.2)	ND (2.2)	ND (4.4)	ND (2.2)
Benzyl Chloride	ug/m3	0.05	ND (2.6)	ND (2.6)	ND (2.6)	ND (5.2)	ND (2.6)
Carbon disulfide	ug/m3	730	ND (1.6)	ND (1.6)	ND (1.6)	ND (3.1)	ND (1.6)
Chlorobenzene	ug/m3	52	ND (2.3)	ND (2.3)	ND (2.3)	ND (4.6)	ND (2.3)
Chloroethane	ug/m3	10000	ND (0.53)	ND (0.53)	ND (0.53)	ND (1.1)	2.9
Chloroform	ug/m3	0.11	ND (2.4)	ND (2.4)	ND (2.4)	ND (4.9)	4.3
Chloromethane	ug/m3	94	1.3	1.3	1.2	ND (2.1)	1.5
3-Chloropropene	ug/m3	0.41	ND (1.6)	ND (1.6)	ND (1.6)	ND (3.1)	ND (1.6)
2-Chlorotoluene	ug/m3		ND (2.6)	ND (2.6)	ND (2.6)	ND (5.2)	ND (2.6)
Carbon tetrachloride	ug/m3	0.41	ND (1.3)	ND (1.3)	ND (1.3)	ND (2.5)	ND (1.3)
Cyclohexane	ug/m3	6300	ND (1.7)	3.2	3.1	ND (3.4)	12
1,1-Dichloroethane	ug/m3	1.5	ND (0.81)	ND (0.81)	ND (0.81)	ND (1.6)	ND (0.81)
1,1-Dichloroethylene	ug/m3	210	ND (0.79)	ND (0.79)	ND (0.79)	ND (1.6)	ND (0.79)
1,2-Dibromoethane	ug/m3	0.0041	ND (3.8)	ND (3.8)	ND (3.8)	ND (7.7)	ND (3.8)
1,2-Dichloroethane	ug/m3	0.094	ND (0.81)	ND (0.81)	ND (0.81)	ND (1.6)	ND (0.81)
1,2-Dichloropropane	ug/m3	0.24	ND (2.3)	ND (2.3)	ND (2.3)	ND (4.6)	ND (2.3)
1,4-Dioxane	ug/m3	0.32	ND (1.8)	ND (1.8)	ND (1.8)	ND (3.6)	ND (1.8)
Dichlorodifluoromethane	ug/m3	100	3.1	3.1	3.1	61.4	86
Dibromochloromethane	ug/m3	0.09	ND (4.3)	ND (4.3)	ND (4.3)	ND (8.5)	ND (4.3)
trans-1,2-Dichloroethylene	ug/m3	63	ND (0.79)	ND (0.79)	ND (0.79)	ND (1.6)	ND (0.79)
cis-1,2-Dichloroethylene	ug/m3		ND (0.79)	ND (0.79)	ND (0.79)	ND (1.6)	ND (0.79)
cis-1,3-Dichloropropene	ug/m3	-	ND (2.3)	ND (2.3)	ND (2.3)	ND (4.5)	ND (2.3)
m-Dichlorobenzene	ug/m3	-	ND (3.0)	ND (3.0)	ND (3.0)	ND (6.0)	ND (3.0)
o-Dichlorobenzene	ug/m3	210	ND (3.0)	ND (3.0)	ND (3.0)	ND (6.0)	ND (3.0)
p-Dichlorobenzene	ug/m3	0.22	ND (3.0)	ND (3.0)	ND (3.0)	ND (6.0)	ND (3.0)
trans-1,3-Dichloropropene	ug/m3	-	ND (2.3)	ND (2.3)	ND (2.3)	ND (4.5)	ND (2.3)
Ethanol	ug/m3	-	65.1	98	99	9.4	116
Ethylbenzene	ug/m3	0.97	ND (2.2)	7.8	6.9	47.3	40
Ethyl Acetate	ug/m3		10	9.4	9.7	ND (3.6)	109
4-Ethyltoluene	ug/m3	-	ND (2.5)	ND (2.5)	ND (2.5)	31	25
Freon 113	ug/m3	31000	ND (3.8)	ND (3.8)	ND (3.8)	ND (7.7)	ND (3.8)
Freon 114	ug/m3	-	ND (3.5)	ND (3.5)	ND (3.5)	ND (7.0)	ND (3.5)
Heptane	ug/m3	-	ND (2.0)	7.8	7.4	14	20
Hexachlorobutadiene	ug/m3	0.11	ND (5.3)	ND (5.3)	ND (5.3)	ND (11)	ND (5.3)
Hexane	ug/m3	730	4.2	14	13	18	182
2-Hexanone	ug/m3	31	ND (2.0)	ND (2.0)	ND (2.0)	ND (4.1)	ND (2.0)
Isopropyl Alcohol	ug/m3	7300	8.8	8.6	9.3	ND (2.5)	18
Methylene chloride	ug/m3	5.2	4.2	3.8	3.8	ND (3.5)	2.1
Methyl ethyl ketone	ug/m3	5200	11	16	16	ND (2.9)	13
Methyl Isobutyl Ketone	ug/m3	3100	ND (2.0)	ND (2.0)	2.5	ND (4.1)	ND (2.0)
Methyl Tert Butyl Ether	ug/m3	9.4	ND (1.8)	ND (1.8)	ND (1.8)	ND (3.6)	ND (1.8)
Propylene	ug/m3	3100	ND (0.86)	20.4	21	ND (1.7)	ND (0.86)
Styrene	ug/m3	1000	ND (2.1)	ND (2.1)	ND (2.1)	ND (4.3)	ND (2.1)
1,1,1-Trichloroethane	ug/m3	5200	ND (1.1)	ND (1.1)	ND (1.1)	ND (2.2)	ND (1.1)
1,1,2,2-Tetrachloroethane	ug/m3	0.042	ND (1.4)	ND (1.4)	ND (1.4)	ND (2.7)	ND (1.4)
1,1,2-Trichloroethane	ug/m3	0.15	ND (1.1)	ND (1.1)	ND (1.1)	ND (2.2)	ND (1.1)
1,2,4-Trichlorobenzene	ug/m3	2.1	ND (3.7)	ND (3.7)	ND (3.7)	ND (7.4)	ND (3.7)
1,2,4-Trimethylbenzene	ug/m3	7.3	ND (2.5)	ND (2.5)	ND (2.5)	101	77.2
1,3,5-Trimethylbenzene	ug/m3		ND (2.5)	ND (2.5)	ND (2.5)	24	20
2,2,4-Trimethylpentane	ug/m3	-	2.8	9.8	9.3	5.6	ND (2.3)
Tertiary Butyl Alcohol	ug/m3	-	ND (1.5)	ND (1.5)	ND (1.5)	ND (3.0)	30.6
Tetrachloroethylene	ug/m3	9.4	ND (1.4)	ND (1.4)	ND (1.4)	91.5	841
Tetrahydrofuran	ug/m3	-	ND (1.5)	ND (1.5)	ND (1.5)	ND (2.9)	ND (1.5)
Toluene	ug/m3	5200	12	38.8	34	125	104
Trichloroethylene	ug/m3	0.43	ND (1.1)	ND (1.1)	ND (1.1)	ND (2.1)	29
Trichlorofluoromethane	ug/m3	730	ND (2.8)	ND (2.8)	ND (2.8)	ND (5.6)	ND (2.8)
Vinyl chloride	ug/m3	0.16	ND (0.51)	ND (0.51)	ND (0.51)	ND (1.0)	ND (0.51)
Vinyl Acetate	ug/m3	210	5.6	19	17	ND (3.5)	34
m,p-Xylene	ug/m3	-	4.2	24	20	215	174
o-Xylene	ug/m3	100	ND (2.2)	7.4	6.1	69.9	57.3
Xylenes (total)	ug/m3	100	4.2	32	26	285	232
Legend:							Hit

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-1	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	97.8
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M51682.D	1	10/30/12	AMY	n/a	n/a	MSM1751
Run #2	V12920.D	1	10/31/12	AMY	n/a	n/a	MSV530

Run #	Initial Weight	Final Volume
Run #1	4.97 g	5.0 ml
Run #2	5.20 g	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	21.1	5.1	ug/kg	
71-43-2	Benzene	ND	0.51	ug/kg	
108-86-1	Bromobenzene	ND	5.1	ug/kg	
74-97-5	Bromochloromethane	ND	5.1	ug/kg	
75-27-4	Bromodichloromethane	ND	2.1	ug/kg	
75-25-2	Bromoform	ND	2.1	ug/kg	
74-83-9	Bromomethane	ND	2.1	ug/kg	
78-93-3	2-Butanone (MEK)	ND	5.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.1	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.1	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.1	ug/kg	
75-15-0	Carbon disulfide	ND	5.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.1	ug/kg	
108-90-7	Chlorobenzene	ND	2.1	ug/kg	
75-00-3	Chloroethane	ND	5.1	ug/kg	
67-66-3	Chloroform	ND	2.1	ug/kg	
74-87-3	Chloromethane	ND	5.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.1	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.1	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.1	ug/kg	
124-48-1	Dibromochloromethane	ND	2.1	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.1	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.1	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.1	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.1	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.1	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.1	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.1	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.1	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.1	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-4	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-1	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	97.8
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.1	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.1	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	ug/kg	
100-41-4	Ethylbenzene	ND	2.1	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.1	ug/kg	
591-78-6	2-Hexanone	ND	5.1	ug/kg	
74-88-4	Iodomethane	ND	5.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.1	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND ^a	2.0	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.1	ug/kg	
74-95-3	Methylene bromide	ND	5.1	ug/kg	
75-09-2	Methylene chloride	2.3	2.1	ug/kg	
91-20-3	Naphthalene	ND	5.1	ug/kg	
103-65-1	n-Propylbenzene	ND	5.1	ug/kg	
100-42-5	Styrene	ND	5.1	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	ug/kg	
127-18-4	Tetrachloroethene	ND	2.1	ug/kg	
108-88-3	Toluene	ND	5.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.1	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.1	ug/kg	
79-01-6	Trichloroethene	ND	2.1	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.1	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.1	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.1	ug/kg	
108-05-4	Vinyl Acetate	ND	5.1	ug/kg	
75-01-4	Vinyl chloride	ND	2.1	ug/kg	
	m,p-Xylene	ND	2.1	ug/kg	
95-47-6	o-Xylene	ND	2.1	ug/kg	
1330-20-7	Xylene (total)	ND	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	121%	70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4	
Lab Sample ID: MC15219-1	Date Sampled: 10/23/12
Matrix: SO - Soil	Date Received: 10/25/12
Method: SW846 8260B	Percent Solids: 97.8
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%	120%	70-130%
460-00-4	4-Bromofluorobenzene	103%	105%	70-130%

(a) Result is from Run# 2

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-4		Date Sampled: 10/23/12
Lab Sample ID: MC15219-1		Date Received: 10/25/12
Matrix: SO - Soil		Percent Solids: 97.8
Method: SW846 8270C BY SIM SW846 3546		
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I79825.D	1	10/29/12	KR	10/26/12	OP30819	MSI2971
Run #2							

Run #1	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	25	ug/kg	
208-96-8	Acenaphthylene	ND	25	ug/kg	
120-12-7	Anthracene	ND	25	ug/kg	
56-55-3	Benzo(a)anthracene	ND	25	ug/kg	
50-32-8	Benzo(a)pyrene	ND	25	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	25	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	25	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	25	ug/kg	
218-01-9	Chrysene	ND	25	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	25	ug/kg	
206-44-0	Fluoranthene	ND	25	ug/kg	
86-73-7	Fluorene	ND	25	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	25	ug/kg	
91-57-6	2-Methylnaphthalene	ND	25	ug/kg	
91-20-3	Naphthalene	ND	25	ug/kg	
85-01-8	Phenanthrene	ND	25	ug/kg	
129-00-0	Pyrene	ND	25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		30-130%
321-60-8	2-Fluorobiphenyl	72%		30-130%
1718-51-0	Terphenyl-d14	99%		30-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3	
Lab Sample ID: MC15219-2	Date Sampled: 10/23/12
Matrix: SO - Soil	Date Received: 10/25/12
Method: SW846 8260B	Percent Solids: 88.0
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M51683.D	1	10/30/12	AMY	n/a	n/a	MSM1751
Run #2	V12921.D	1	10/31/12	AMY	n/a	n/a	MSV530

Run #	Initial Weight	Final Volume
Run #1	4.98 g	5.0 ml
Run #2	4.61 g	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	48.0	5.7	ug/kg	
71-43-2	Benzene	0.63	0.57	ug/kg	
108-86-1	Bromobenzene	ND	5.7	ug/kg	
74-97-5	Bromochloromethane	ND	5.7	ug/kg	
75-27-4	Bromodichloromethane	ND	2.3	ug/kg	
75-25-2	Bromoform	ND	2.3	ug/kg	
74-83-9	Bromomethane	ND	2.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	5.7	ug/kg	
104-51-8	n-Butylbenzene	ND	5.7	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.7	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.7	ug/kg	
75-15-0	Carbon disulfide	ND	5.7	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.3	ug/kg	
108-90-7	Chlorobenzene	ND	2.3	ug/kg	
75-00-3	Chloroethane	ND	5.7	ug/kg	
67-66-3	Chloroform	ND	2.3	ug/kg	
74-87-3	Chloromethane	ND	5.7	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.7	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.7	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.7	ug/kg	
124-48-1	Dibromochloromethane	ND	2.3	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.3	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.3	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.3	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.3	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.3	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-2	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	88.0
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.7	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.7	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.7	ug/kg	
591-78-6	2-Hexanone	ND	5.7	ug/kg	
74-88-4	Iodomethane	ND	5.7	ug/kg	
98-82-8	Isopropylbenzene	ND	5.7	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND ^a	2.5	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.7	ug/kg	
74-95-3	Methylene bromide	ND	5.7	ug/kg	
75-09-2	Methylene chloride	ND	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.7	ug/kg	
103-65-1	n-Propylbenzene	ND	5.7	ug/kg	
100-42-5	Styrene	ND	5.7	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.7	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	ug/kg	
127-18-4	Tetrachloroethene	ND	2.3	ug/kg	
108-88-3	Toluene	ND	5.7	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.7	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.3	ug/kg	
79-01-6	Trichloroethene	ND	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.3	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.7	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.7	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.7	ug/kg	
108-05-4	Vinyl Acetate	ND	5.7	ug/kg	
75-01-4	Vinyl chloride	ND	2.3	ug/kg	
	m,p-Xylene	ND	2.3	ug/kg	
95-47-6	o-Xylene	ND	2.3	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	127%	70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3	Date Sampled: 10/23/12
Lab Sample ID: MC15219-2	Date Received: 10/25/12
Matrix: SO - Soil	Percent Solids: 88.0
Method: SW846 8260B	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%	122%	70-130%
460-00-4	4-Bromofluorobenzene	108%	108%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3		
Lab Sample ID: MC15219-2		Date Sampled: 10/23/12
Matrix: SO - Soil		Date Received: 10/25/12
Method: SW846 8270C BY SIM SW846 3546		Percent Solids: 88.0
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	179826.D	5	10/29/12	KR	10/26/12	OP30819	MSI2971
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	140	ug/kg	
208-96-8	Acenaphthylene	877	140	ug/kg	
120-12-7	Anthracene	742	140	ug/kg	
56-55-3	Benzo(a)anthracene	3050	140	ug/kg	
50-32-8	Benzo(a)pyrene	3020	140	ug/kg	
205-99-2	Benzo(b)fluoranthene	3780	140	ug/kg	
191-24-2	Benzo(g,h,i)perylene	2640	140	ug/kg	
207-08-9	Benzo(k)fluoranthene	1430	140	ug/kg	
218-01-9	Chrysene	3700	140	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	736	140	ug/kg	
206-44-0	Fluoranthene	5230	140	ug/kg	
86-73-7	Fluorene	312	140	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2190	140	ug/kg	
91-57-6	2-Methylnaphthalene	164	140	ug/kg	
91-20-3	Naphthalene	572	140	ug/kg	
85-01-8	Phenanthrene	3960	140	ug/kg	
129-00-0	Pyrene	3990	140	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		30-130%
321-60-8	2-Fluorobiphenyl	78%		30-130%
1718-51-0	Terphenyl-d14	93%		30-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3	
Lab Sample ID: MC15219-2	Date Sampled: 10/23/12
Matrix: SO - Soil	Date Received: 10/25/12
Method: SW846 8081 SW846 3546	Percent Solids: 88.0
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BE32690.D	1	10/31/12	AP	10/26/12	OP30817	GBE1783
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.8 g	10.0 ml
Run #2		

Pesticide TCL List

CAS No.	Compound	Result	RL	Units	Q
309-00-2	Aldrin	ND	7.2	ug/kg	
319-84-6	alpha-BHC	ND	7.2	ug/kg	
319-85-7	beta-BHC	ND	7.2	ug/kg	
319-86-8	delta-BHC	ND	7.2	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	7.2	ug/kg	
5103-71-9	alpha-Chlordane	ND	7.2	ug/kg	
5103-74-2	gamma-Chlordane	ND	7.2	ug/kg	
60-57-1	Dieldrin	ND	7.2	ug/kg	
72-54-8	4,4'-DDD	ND	7.2	ug/kg	
72-55-9	4,4'-DDE	ND	7.2	ug/kg	
50-29-3	4,4'-DDT	ND	7.2	ug/kg	
72-20-8	Endrin	ND	7.2	ug/kg	
1031-07-8	Endosulfan sulfate	ND	7.2	ug/kg	
7421-93-4	Endrin aldehyde	ND	7.2	ug/kg	
959-98-8	Endosulfan-I	ND	7.2	ug/kg	
33213-65-9	Endosulfan-II	ND	7.2	ug/kg	
76-44-8	Heptachlor	ND	7.2	ug/kg	
1024-57-3	Heptachlor epoxide	ND	7.2	ug/kg	
72-43-5	Methoxychlor	ND	7.2	ug/kg	
53494-70-5	Endrin ketone	ND	7.2	ug/kg	
8001-35-2	Toxaphene	ND	72	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	45%		30-150%
877-09-8	Tetrachloro-m-xylene	37%		30-150%
2051-24-3	Decachlorobiphenyl	52%		30-150%
2051-24-3	Decachlorobiphenyl	103%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-3	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-2	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	88.0
Method:	SW846 8082 SW846 3546		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK18352.D	1	10/31/12	AP	10/26/12	OP30818	GBK673
Run #2							

	Initial Weight	Final Volume
Run #1	15.4 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	110	ug/kg	
11104-28-2	Aroclor 1221	ND	110	ug/kg	
11141-16-5	Aroclor 1232	ND	110	ug/kg	
53469-21-9	Aroclor 1242	ND	110	ug/kg	
12672-29-6	Aroclor 1248	ND	110	ug/kg	
11097-69-1	Aroclor 1254	ND	110	ug/kg	
11096-82-5	Aroclor 1260	ND	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		30-150%
877-09-8	Tetrachloro-m-xylene	97%		30-150%
2051-24-3	Decachlorobiphenyl	117%		30-150%
2051-24-3	Decachlorobiphenyl	132%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-3	Date Sampled: 10/23/12
Lab Sample ID: MC15219-2	Date Received: 10/25/12
Matrix: SO - Soil	Percent Solids: 88.0
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	1.3	1.0	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Arsenic	19.6	1.0	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Beryllium	< 0.42	0.42	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Cadmium	< 0.42	0.42	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Chromium	58.8	1.0	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Copper	131	2.6	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Lead	866	1.0	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Mercury	0.26	0.036	mg/kg	1	10/26/12	10/26/12	EM SW846 7471B ¹	SW846 7471B ⁴
Nickel	95.1	4.2	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Selenium ^a	< 2.1	2.1	mg/kg	2	10/26/12	10/29/12	EAL SW846 6010C ³	SW846 3050B ⁵
Silver	< 0.52	0.52	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Thallium	< 1.0	1.0	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵
Zinc	261	2.1	mg/kg	1	10/26/12	10/27/12	EAL SW846 6010C ²	SW846 3050B ⁵

- (1) Instrument QC Batch: MA14880
(2) Instrument QC Batch: MA14883
(3) Instrument QC Batch: MA14886
(4) Prep QC Batch: MP19917
(5) Prep QC Batch: MP19918

(a) Elevated RL due to dilution required for matrix interference.

Report of Analysis

Client Sample ID: D-5		Date Sampled: 10/23/12
Lab Sample ID: MC15219-3		Date Received: 10/25/12
Matrix: SO - Soil		Percent Solids: 89.6
Method: SW846 8260B		
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M51684.D	1	10/30/12	AMY	n/a	n/a	MSM1751
Run #2	V12922.D	1	10/31/12	AMY	n/a	n/a	MSV530

Run #	Initial Weight	Final Volume
Run #1	4.86 g	5.0 ml
Run #2	4.55 g	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	50.0	5.7	ug/kg	
71-43-2	Benzene	ND	0.57	ug/kg	
108-86-1	Bromobenzene	ND	5.7	ug/kg	
74-97-5	Bromochloromethane	ND	5.7	ug/kg	
75-27-4	Bromodichloromethane	ND	2.3	ug/kg	
75-25-2	Bromoform	ND	2.3	ug/kg	
74-83-9	Bromomethane	ND	2.3	ug/kg	
78-93-3	2-Butanone (MEK)	ND	5.7	ug/kg	
104-51-8	n-Butylbenzene	ND	5.7	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.7	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.7	ug/kg	
75-15-0	Carbon disulfide	ND	5.7	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.3	ug/kg	
108-90-7	Chlorobenzene	ND	2.3	ug/kg	
75-00-3	Chloroethane	ND	5.7	ug/kg	
67-66-3	Chloroform	ND	2.3	ug/kg	
74-87-3	Chloromethane	ND	5.7	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.7	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.7	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.7	ug/kg	
124-48-1	Dibromochloromethane	ND	2.3	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.3	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.3	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.3	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.3	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.3	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.3	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.3	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.3	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	D-5	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-3	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	89.6
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.7	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.7	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.7	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.3	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.7	ug/kg	
591-78-6	2-Hexanone	ND	5.7	ug/kg	
74-88-4	Iodomethane	ND	5.7	ug/kg	
98-82-8	Isopropylbenzene	ND	5.7	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND ^a	2.5	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.7	ug/kg	
74-95-3	Methylene bromide	ND	5.7	ug/kg	
75-09-2	Methylene chloride	ND	2.3	ug/kg	
91-20-3	Naphthalene	ND	5.7	ug/kg	
103-65-1	n-Propylbenzene	ND	5.7	ug/kg	
100-42-5	Styrene	ND	5.7	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.7	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.3	ug/kg	
127-18-4	Tetrachloroethene	ND	2.3	ug/kg	
108-88-3	Toluene	ND	5.7	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.7	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.3	ug/kg	
79-01-6	Trichloroethene	ND	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.3	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.7	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.7	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.7	ug/kg	
108-05-4	Vinyl Acetate	ND	5.7	ug/kg	
75-01-4	Vinyl chloride	ND	2.3	ug/kg	
	m,p-Xylene	ND	2.3	ug/kg	
95-47-6	o-Xylene	ND	2.3	ug/kg	
1330-20-7	Xylene (total)	ND	2.3	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%	118%	70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: D-5		Date Sampled: 10/23/12
Lab Sample ID: MC15219-3		Date Received: 10/25/12
Matrix: SO - Soil		Percent Solids: 89.6
Method: SW846 8260B		
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%	117%	70-130%
460-00-4	4-Bromofluorobenzene	107%	103%	70-130%

(a) Result is from Run# 2

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: D-5		
Lab Sample ID: MC15219-3		Date Sampled: 10/23/12
Matrix: SO - Soil		Date Received: 10/25/12
Method: SW846 8270C BY SIM SW846 3546		Percent Solids: 89.6
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	179827.D	1	10/29/12	KR	10/26/12	OP30819	MSI2971
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	27	ug/kg	
208-96-8	Acenaphthylene	ND	27	ug/kg	
120-12-7	Anthracene	ND	27	ug/kg	
56-55-3	Benzo(a)anthracene	ND	27	ug/kg	
50-32-8	Benzo(a)pyrene	ND	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	27	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	27	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	27	ug/kg	
218-01-9	Chrysene	ND	27	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	27	ug/kg	
206-44-0	Fluoranthene	ND	27	ug/kg	
86-73-7	Fluorene	ND	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	27	ug/kg	
91-57-6	2-Methylnaphthalene	ND	27	ug/kg	
91-20-3	Naphthalene	ND	27	ug/kg	
85-01-8	Phenanthrene	ND	27	ug/kg	
129-00-0	Pyrene	ND	27	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	51%		30-130%
321-60-8	2-Fluorobiphenyl	50%		30-130%
1718-51-0	Terphenyl-d14	86%		30-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-6	Date Sampled: 10/23/12
Lab Sample ID: MC15219-4	Date Received: 10/25/12
Matrix: SO - Soil	Percent Solids: 93.3
Method: SW846 8260B	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M51685.D	1	10/30/12	AMY	n/a	n/a	MSM1751
Run #2	V12923.D	1	10/31/12	AMY	n/a	n/a	MSV530

	Initial Weight	Final Volume
Run #1	4.36 g	5.0 ml
Run #2	4.09 g	5.0 ml

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	6.1	ug/kg	
71-43-2	Benzene	ND	0.61	ug/kg	
108-86-1	Bromobenzene	ND	6.1	ug/kg	
74-97-5	Bromochloromethane	ND	6.1	ug/kg	
75-27-4	Bromodichloromethane	ND	2.5	ug/kg	
75-25-2	Bromoform	ND	2.5	ug/kg	
74-83-9	Bromomethane	ND	2.5	ug/kg	
78-93-3	2-Butanone (MEK)	ND	6.1	ug/kg	
104-51-8	n-Butylbenzene	ND	6.1	ug/kg	
135-98-8	sec-Butylbenzene	ND	6.1	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.1	ug/kg	
75-15-0	Carbon disulfide	ND	6.1	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.5	ug/kg	
108-90-7	Chlorobenzene	ND	2.5	ug/kg	
75-00-3	Chloroethane	ND	6.1	ug/kg	
67-66-3	Chloroform	ND	2.5	ug/kg	
74-87-3	Chloromethane	ND	6.1	ug/kg	
95-49-8	o-Chlorotoluene	ND	6.1	ug/kg	
106-43-4	p-Chlorotoluene	ND	6.1	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	6.1	ug/kg	
124-48-1	Dibromochloromethane	ND	2.5	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.5	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.5	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.5	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.5	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.5	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.5	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.5	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.5	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.5	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.5	ug/kg	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-6	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-4	Date Received:	10/25/12
Matrix:	SO - Soil	Percent Solids:	93.3
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	6.1	ug/kg	
594-20-7	2,2-Dichloropropane	ND	6.1	ug/kg	
563-58-6	1,1-Dichloropropene	ND	6.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	ug/kg	
100-41-4	Ethylbenzene	ND	2.5	ug/kg	
87-68-3	Hexachlorobutadiene	ND	6.1	ug/kg	
591-78-6	2-Hexanone	ND	6.1	ug/kg	
74-88-4	Iodomethane	ND	6.1	ug/kg	
98-82-8	Isopropylbenzene	ND	6.1	ug/kg	
99-87-6	p-Isopropyltoluene	ND	6.1	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND ^a	2.6	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	6.1	ug/kg	
74-95-3	Methylene bromide	ND	6.1	ug/kg	
75-09-2	Methylene chloride	2.5	2.5	ug/kg	
91-20-3	Naphthalene	ND	6.1	ug/kg	
103-65-1	n-Propylbenzene	ND	6.1	ug/kg	
100-42-5	Styrene	ND	6.1	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	6.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	ug/kg	
127-18-4	Tetrachloroethene	ND	2.5	ug/kg	
108-88-3	Toluene	ND	6.1	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	6.1	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	6.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.5	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.5	ug/kg	
79-01-6	Trichloroethene	ND	2.5	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	6.1	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	6.1	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	6.1	ug/kg	
108-05-4	Vinyl Acetate	ND	6.1	ug/kg	
75-01-4	Vinyl chloride	ND	2.5	ug/kg	
	m,p-Xylene	ND	2.5	ug/kg	
95-47-6	o-Xylene	ND	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	125%	70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-6	Date Sampled: 10/23/12
Lab Sample ID: MC15219-4	Date Received: 10/25/12
Matrix: SO - Soil	Percent Solids: 93.3
Method: SW846 8260B	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%	123%	70-130%
460-00-4	4-Bromofluorobenzene	100%	106%	70-130%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-6	Date Sampled: 10/23/12
Lab Sample ID: MC15219-4	Date Received: 10/25/12
Matrix: SO - Soil	Percent Solids: 93.3
Method: SW846 8270C BY SIM SW846 3546	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I79828.D	1	10/29/12	KR	10/26/12	OP30819	MSI2971
Run #2							

Run #	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	27	ug/kg	
208-96-8	Acenaphthylene	ND	27	ug/kg	
120-12-7	Anthracene	ND	27	ug/kg	
56-55-3	Benzo(a)anthracene	ND	27	ug/kg	
50-32-8	Benzo(a)pyrene	ND	27	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	27	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	27	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	27	ug/kg	
218-01-9	Chrysene	ND	27	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	27	ug/kg	
206-44-0	Fluoranthene	ND	27	ug/kg	
86-73-7	Fluorene	ND	27	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	27	ug/kg	
91-57-6	2-Methylnaphthalene	ND	27	ug/kg	
91-20-3	Naphthalene	ND	27	ug/kg	
85-01-8	Phenanthrene	ND	27	ug/kg	
129-00-0	Pyrene	ND	27	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		30-130%
321-60-8	2-Fluorobiphenyl	53%		30-130%
1718-51-0	Terphenyl-d14	92%		30-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5	
Lab Sample ID: MC15219-5	Date Sampled: 10/23/12
Matrix: AQ - Ground Water	Date Received: 10/25/12
Method: SW846 8260B	Percent Solids: n/a
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G121518.D	1	11/01/12	JM	n/a	n/a	MSG4843
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-5	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-5	Date Received:	10/25/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
74-88-4	Iodomethane	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.8	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-5	
Lab Sample ID: MC15219-5	Date Sampled: 10/23/12
Matrix: AQ - Ground Water	Date Received: 10/25/12
Method: SW846 8260B	Percent Solids: n/a
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-5	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-5	Date Received:	10/25/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U10424.D	1	10/29/12	KR	10/26/12	OP30812	MSU558
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	ND	0.051	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		30-130%
321-60-8	2-Fluorobiphenyl	61%		30-130%
1718-51-0	Terphenyl-d14	31%		30-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1	Date Sampled: 10/23/12
Lab Sample ID: MC15219-6	Date Received: 10/25/12
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G121517.D	1	11/01/12	JM	n/a	n/a	MSG4843
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	18.6	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-6	Date Received:	10/25/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
74-88-4	Iodomethane	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	18.2	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%		70-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1	Date Sampled: 10/23/12
Lab Sample ID: MC15219-6	Date Received: 10/25/12
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	88%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-1	Date Sampled:	10/23/12
Lab Sample ID:	MC15219-6	Date Received:	10/25/12
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U10425.D	1	10/29/12	KR	10/26/12	OP30812	MSU558
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	ND	0.050	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		30-130%
321-60-8	2-Fluorobiphenyl	65%		30-130%
1718-51-0	Terphenyl-d14	44%		30-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-1	Date Sampled: 10/23/12
Lab Sample ID: MC15187-1	Date Received: 10/24/12
Matrix: AIR - Air Summa ID: M233	Percent Solids: n/a
Method: TO-15	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q21881.D	2	10/31/12	AA	n/a	n/a	MSQ930
Run #2							

Run #1	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	16.5	1.0	ppbv		39.2	2.4	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	1.0	ppbv		ND	2.2	ug/m3
71-43-2	78.11	Benzene	2.1	1.0	ppbv		6.7	3.2	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	1.0	ppbv		ND	6.7	ug/m3
75-25-2	252.8	Bromoform	ND	1.0	ppbv		ND	10	ug/m3
74-83-9	94.94	Bromomethane	ND	1.0	ppbv		ND	3.9	ug/m3
593-60-2	106.9	Bromoethene	ND	1.0	ppbv		ND	4.4	ug/m3
100-44-7	126	Benzyl Chloride	ND	1.0	ppbv		ND	5.2	ug/m3
75-15-0	76.14	Carbon disulfide	ND	1.0	ppbv		ND	3.1	ug/m3
108-90-7	112.6	Chlorobenzene	ND	1.0	ppbv		ND	4.6	ug/m3
75-00-3	64.52	Chloroethane	ND	0.40	ppbv		ND	1.1	ug/m3
67-66-3	119.4	Chloroform	ND	1.0	ppbv		ND	4.9	ug/m3
74-87-3	50.49	Chloromethane	ND	1.0	ppbv		ND	2.1	ug/m3
107-05-1	76.53	3-Chloropropene	ND	1.0	ppbv		ND	3.1	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	1.0	ppbv		ND	5.2	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.40	ppbv		ND	2.5	ug/m3
110-82-7	84.16	Cyclohexane	ND	1.0	ppbv		ND	3.4	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.40	ppbv		ND	1.6	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.40	ppbv		ND	1.6	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	1.0	ppbv		ND	7.7	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.40	ppbv		ND	1.6	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	1.0	ppbv		ND	4.6	ug/m3
123-91-1	88	1,4-Dioxane	ND	1.0	ppbv		ND	3.6	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	10.4	1.0	ppbv		51.4	4.9	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	1.0	ppbv		ND	8.5	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.40	ppbv		ND	1.6	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.40	ppbv		ND	1.6	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	1.0	ppbv		ND	4.5	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	1.0	ppbv		ND	6.0	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	1.0	ppbv		ND	6.0	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	1.0	ppbv		ND	6.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	1.0	ppbv		ND	4.5	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-1		Date Sampled: 10/23/12
Lab Sample ID: MC15187-1		Date Received: 10/24/12
Matrix: AIR - Air	Summa ID: M233	Percent Solids: n/a
Method: TO-15		
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	5.0	1.0	ppbv		9.4	1.9	ug/m3
100-41-4	106.2	Ethylbenzene	10.9	1.0	ppbv		47.3	4.3	ug/m3
141-78-6	88	Ethyl Acetate	ND	1.0	ppbv		ND	3.6	ug/m3
622-96-8	120.2	4-Ethyltoluene	6.4	1.0	ppbv		31	4.9	ug/m3
76-13-1	187.4	Freon 113	ND	1.0	ppbv		ND	7.7	ug/m3
76-14-2	170.9	Freon 114	ND	1.0	ppbv		ND	7.0	ug/m3
142-82-5	100.2	Heptane	3.3	1.0	ppbv		14	4.1	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	1.0	ppbv		ND	11	ug/m3
110-54-3	86.17	Hexane	5.0	1.0	ppbv		18	3.5	ug/m3
591-78-6	100	2-Hexanone	ND	1.0	ppbv		ND	4.1	ug/m3
67-63-0	60	Isopropyl Alcohol	ND	1.0	ppbv		ND	2.5	ug/m3
75-09-2	84.94	Methylene chloride	ND	1.0	ppbv		ND	3.5	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	1.0	ppbv		ND	2.9	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	1.0	ppbv		ND	4.1	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	1.0	ppbv		ND	3.6	ug/m3
115-07-1	42	Propylene	ND	1.0	ppbv		ND	1.7	ug/m3
100-42-5	104.1	Styrene	ND	1.0	ppbv		ND	4.3	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.40	ppbv		ND	2.2	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.40	ppbv		ND	2.7	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.40	ppbv		ND	2.2	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	1.0	ppbv		ND	7.4	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	20.6	1.0	ppbv		101	4.9	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	4.8	1.0	ppbv		24	4.9	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	1.2	1.0	ppbv		5.6	4.7	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	1.0	ppbv		ND	3.0	ug/m3
127-18-4	165.8	Tetrachloroethylene	13.5	0.40	ppbv		91.5	2.7	ug/m3
109-99-9	72	Tetrahydrofuran	ND	1.0	ppbv		ND	2.9	ug/m3
108-88-3	92.14	Toluene	33.2	1.0	ppbv		125	3.8	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.40	ppbv		ND	2.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	1.0	ppbv		ND	5.6	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.40	ppbv		ND	1.0	ug/m3
108-05-4	86	Vinyl Acetate	ND	1.0	ppbv		ND	3.5	ug/m3
	106.2	m,p-Xylene	49.4	1.0	ppbv		215	4.3	ug/m3
95-47-6	106.2	o-Xylene	16.1	1.0	ppbv		69.9	4.3	ug/m3
1330-20-7	106.2	Xylenes (total)	65.5	1.0	ppbv		285	4.3	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		50-129%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-1		Date Sampled: 10/23/12
Lab Sample ID: MC15187-2		Date Received: 10/24/12
Matrix: AIR - Indoor Air Comp. Summa ID: M276		Percent Solids: n/a
Method: TO-15		
Project: Central Parking Systems, 546 West 44th Street, New York, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q21852.D	1	10/25/12	AA	n/a	n/a	MSQ928
Run #2	Q21860.D	5	10/26/12	AA	n/a	n/a	MSQ928

Run #	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	26.7	0.50	ppbv		63.4	1.2	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.50	ppbv		ND	1.1	ug/m3
71-43-2	78.11	Benzene	3.8	0.50	ppbv		12	1.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
593-60-2	106.9	Bromoethene	ND	0.50	ppbv		ND	2.2	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.62	0.50	ppbv		1.3	1.0	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.50	ppbv		ND	1.6	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.50	ppbv		ND	2.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	0.94	0.50	ppbv		3.2	1.7	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.63	0.50	ppbv		3.1	2.5	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-1	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-2	Date Received:	10/24/12
Matrix:	AIR - Indoor Air Comp. Summa ID: M276	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	52.1 ^a	2.5	ppbv		98.0 ^a	4.7	ug/m3
100-41-4	106.2	Ethylbenzene	1.8	0.50	ppbv		7.8	2.2	ug/m3
141-78-6	88	Ethyl Acetate	2.6	0.50	ppbv		9.4	1.8	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.50	ppbv		ND	2.5	ug/m3
76-13-1	187.4	Freon 113	ND	0.50	ppbv		ND	3.8	ug/m3
76-14-2	170.9	Freon 114	ND	0.50	ppbv		ND	3.5	ug/m3
142-82-5	100.2	Heptane	1.9	0.50	ppbv		7.8	2.0	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	4.1	0.50	ppbv		14	1.8	ug/m3
591-78-6	100	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
67-63-0	60	Isopropyl Alcohol	3.5	0.50	ppbv		8.6	1.2	ug/m3
75-09-2	84.94	Methylene chloride	1.1	0.50	ppbv		3.8	1.7	ug/m3
78-93-3	72.11	Methyl ethyl ketone	5.4	0.50	ppbv		16	1.5	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
115-07-1	42	Propylene	11.9	0.50	ppbv		20.4	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	2.1	0.50	ppbv		9.8	2.3	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.50	ppbv		ND	1.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	10.3	0.50	ppbv		38.8	1.9	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	5.3	0.50	ppbv		19	1.8	ug/m3
	106.2	m,p-Xylene	5.6	0.50	ppbv		24	2.2	ug/m3
95-47-6	106.2	o-Xylene	1.7	0.50	ppbv		7.4	2.2	ug/m3
1330-20-7	106.2	Xylenes (total)	7.3	0.50	ppbv		32	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%	90%	50-129%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-1	Date Sampled: 10/23/12
Lab Sample ID: MC15187-2	Date Received: 10/24/12
Matrix: AIR - Indoor Air Comp. Summa ID: M276	Percent Solids: n/a
Method: TO-15	
Project: Central Parking Systems, 546 West 44th Street, New York, NY	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
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(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SS-2
Lab Sample ID: MC15187-3
Matrix: AIR - Air Summa ID: M221
Method: TO-15
Project: Central Parking Systems, 546 West 44th Street, New York, NY
Date Sampled: 10/23/12
Date Received: 10/24/12
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q21854.D	1	10/26/12	AA	n/a	n/a	MSQ928
Run #2	Q21861.D	5	10/26/12	AA	n/a	n/a	MSQ928

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	102 ^a	2.5	ppbv		242 ^a	5.9	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.50	ppbv		ND	1.1	ug/m3
71-43-2	78.11	Benzene	2.5	0.50	ppbv		8.0	1.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
593-60-2	106.9	Bromoethene	ND	0.50	ppbv		ND	2.2	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	1.1	0.20	ppbv		2.9	0.53	ug/m3
67-66-3	119.4	Chloroform	0.88	0.50	ppbv		4.3	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.75	0.50	ppbv		1.5	1.0	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.50	ppbv		ND	1.6	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.50	ppbv		ND	2.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	3.5	0.50	ppbv		12	1.7	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	17.4	0.50	ppbv		86.0	2.5	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-2	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-3	Date Received:	10/24/12
Matrix:	AIR - Air Summa ID: M221	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	61.4 ^a	2.5	ppbv		116 ^a	4.7	ug/m3
100-41-4	106.2	Ethylbenzene	9.2	0.50	ppbv		40	2.2	ug/m3
141-78-6	88	Ethyl Acetate	30.2	0.50	ppbv		109	1.8	ug/m3
622-96-8	120.2	4-Ethyltoluene	5.0	0.50	ppbv		25	2.5	ug/m3
76-13-1	187.4	Freon 113	ND	0.50	ppbv		ND	3.8	ug/m3
76-14-2	170.9	Freon 114	ND	0.50	ppbv		ND	3.5	ug/m3
142-82-5	100.2	Heptane	5.0	0.50	ppbv		20	2.0	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	51.6 ^a	2.5	ppbv		182 ^a	8.8	ug/m3
591-78-6	100	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
67-63-0	60	Isopropyl Alcohol	7.4	0.50	ppbv		18	1.2	ug/m3
75-09-2	84.94	Methylene chloride	0.60	0.50	ppbv		2.1	1.7	ug/m3
78-93-3	72.11	Methyl ethyl ketone	4.5	0.50	ppbv		13	1.5	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	15.7	0.50	ppbv		77.2	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	4.0	0.50	ppbv		20	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.50	ppbv		ND	2.3	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	10.1	0.50	ppbv		30.6	1.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	124 ^a	1.0	ppbv		841 ^a	6.8	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	27.5	0.50	ppbv		104	1.9	ug/m3
79-01-6	131.4	Trichloroethylene	5.4	0.20	ppbv		29	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	9.7	0.50	ppbv		34	1.8	ug/m3
	106.2	m,p-Xylene	40.1	0.50	ppbv		174	2.2	ug/m3
95-47-6	106.2	o-Xylene	13.2	0.50	ppbv		57.3	2.2	ug/m3
1330-20-7	106.2	Xylenes (total)	53.3	0.50	ppbv		232	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%	97%	50-129%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SS-2	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-3	Date Received:	10/24/12
Matrix:	AIR - Air Summa ID: M221	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
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(a) Result is from Run# 2

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-2	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-4	Date Received:	10/24/12
Matrix:	AIR - Indoor Air Comp. Summa ID: M156	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q21856.D	1	10/26/12	AA	n/a	n/a	MSQ928
Run #2	Q21862.D	5	10/26/12	AA	n/a	n/a	MSQ928

	Initial Volume
Run #1	400 ml
Run #2	400 ml

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	25.5	0.50	ppbv		60.6	1.2	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.50	ppbv		ND	1.1	ug/m3
71-43-2	78.11	Benzene	3.8	0.50	ppbv		12	1.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
593-60-2	106.9	Bromoethene	ND	0.50	ppbv		ND	2.2	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.59	0.50	ppbv		1.2	1.0	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.50	ppbv		ND	1.6	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.50	ppbv		ND	2.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	0.91	0.50	ppbv		3.1	1.7	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.63	0.50	ppbv		3.1	2.5	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-2	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-4	Date Received:	10/24/12
Matrix:	AIR - Indoor Air Comp. Summa ID: M156	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	52.6 ^a	2.5	ppbv		99.0 ^a	4.7	ug/m3
100-41-4	106.2	Ethylbenzene	1.6	0.50	ppbv		6.9	2.2	ug/m3
141-78-6	88	Ethyl Acetate	2.7	0.50	ppbv		9.7	1.8	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.50	ppbv		ND	2.5	ug/m3
76-13-1	187.4	Freon 113	ND	0.50	ppbv		ND	3.8	ug/m3
76-14-2	170.9	Freon 114	ND	0.50	ppbv		ND	3.5	ug/m3
142-82-5	100.2	Heptane	1.8	0.50	ppbv		7.4	2.0	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	3.7	0.50	ppbv		13	1.8	ug/m3
591-78-6	100	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
67-63-0	60	Isopropyl Alcohol	3.8	0.50	ppbv		9.3	1.2	ug/m3
75-09-2	84.94	Methylene chloride	1.1	0.50	ppbv		3.8	1.7	ug/m3
78-93-3	72.11	Methyl ethyl ketone	5.3	0.50	ppbv		16	1.5	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	0.62	0.50	ppbv		2.5	2.0	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
115-07-1	42	Propylene	12.2	0.50	ppbv		21.0	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	2.0	0.50	ppbv		9.3	2.3	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.50	ppbv		ND	1.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	9.0	0.50	ppbv		34	1.9	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	4.8	0.50	ppbv		17	1.8	ug/m3
	106.2	m,p-Xylene	4.6	0.50	ppbv		20	2.2	ug/m3
95-47-6	106.2	o-Xylene	1.4	0.50	ppbv		6.1	2.2	ug/m3
1330-20-7	106.2	Xylenes (total)	6.1	0.50	ppbv		26	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%	90%	50-129%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-2	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-4	Date Received:	10/24/12
Matrix:	AIR - Indoor Air Comp. Summa ID: M156	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
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(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AA-1			
Lab Sample ID: MC15187-5		Date Sampled: 10/23/12	
Matrix: AIR - Ambient Air Comp. Summa ID: M118		Date Received: 10/24/12	
Method: TO-15		Percent Solids: n/a	
Project: Central Parking Systems, 546 West 44th Street, New York, NY			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q21858.D	1	10/26/12	AA	n/a	n/a	MSQ928
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	17.7	0.50	ppbv		42.0	1.2	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.50	ppbv		ND	1.1	ug/m3
71-43-2	78.11	Benzene	0.93	0.50	ppbv		3.0	1.6	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.50	ppbv		ND	3.3	ug/m3
75-25-2	252.8	Bromoform	ND	0.50	ppbv		ND	5.2	ug/m3
74-83-9	94.94	Bromomethane	ND	0.50	ppbv		ND	1.9	ug/m3
593-60-2	106.9	Bromoethene	ND	0.50	ppbv		ND	2.2	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.50	ppbv		ND	2.6	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.50	ppbv		ND	1.6	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.50	ppbv		ND	2.3	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.50	ppbv		ND	2.4	ug/m3
74-87-3	50.49	Chloromethane	0.62	0.50	ppbv		1.3	1.0	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.50	ppbv		ND	1.6	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.50	ppbv		ND	2.6	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.50	ppbv		ND	1.7	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.50	ppbv		ND	3.8	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.50	ppbv		ND	2.3	ug/m3
123-91-1	88	1,4-Dioxane	ND	0.50	ppbv		ND	1.8	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.63	0.50	ppbv		3.1	2.5	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.50	ppbv		ND	4.3	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.50	ppbv		ND	3.0	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.50	ppbv		ND	2.3	ug/m3

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

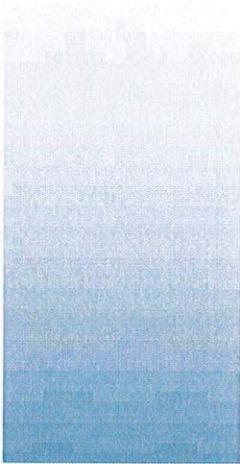
Client Sample ID:	AA-1	Date Sampled:	10/23/12
Lab Sample ID:	MC15187-5	Date Received:	10/24/12
Matrix:	AIR - Ambient Air Comp. Summa ID: M118	Percent Solids:	n/a
Method:	TO-15		
Project:	Central Parking Systems, 546 West 44th Street, New York, NY		

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46	Ethanol	34.6	0.50	ppbv		65.1	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.50	ppbv		ND	2.2	ug/m3
141-78-6	88	Ethyl Acetate	2.8	0.50	ppbv		10	1.8	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.50	ppbv		ND	2.5	ug/m3
76-13-1	187.4	Freon 113	ND	0.50	ppbv		ND	3.8	ug/m3
76-14-2	170.9	Freon 114	ND	0.50	ppbv		ND	3.5	ug/m3
142-82-5	100.2	Heptane	ND	0.50	ppbv		ND	2.0	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.50	ppbv		ND	5.3	ug/m3
110-54-3	86.17	Hexane	1.2	0.50	ppbv		4.2	1.8	ug/m3
591-78-6	100	2-Hexanone	ND	0.50	ppbv		ND	2.0	ug/m3
67-63-0	60	Isopropyl Alcohol	3.6	0.50	ppbv		8.8	1.2	ug/m3
75-09-2	84.94	Methylene chloride	1.2	0.50	ppbv		4.2	1.7	ug/m3
78-93-3	72.11	Methyl ethyl ketone	3.6	0.50	ppbv		11	1.5	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.50	ppbv		ND	2.0	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.50	ppbv		ND	1.8	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.50	ppbv		ND	2.1	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.50	ppbv		ND	3.7	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.50	ppbv		ND	2.5	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	0.60	0.50	ppbv		2.8	2.3	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.50	ppbv		ND	1.5	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
109-99-9	72	Tetrahydrofuran	ND	0.50	ppbv		ND	1.5	ug/m3
108-88-3	92.14	Toluene	3.2	0.50	ppbv		12	1.9	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-69-4	137.4	Trichlorofluoromethane	ND	0.50	ppbv		ND	2.8	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	86	Vinyl Acetate	1.6	0.50	ppbv		5.6	1.8	ug/m3
	106.2	m,p-Xylene	0.96	0.50	ppbv		4.2	2.2	ug/m3
95-47-6	106.2	o-Xylene	ND	0.50	ppbv		ND	2.2	ug/m3
1330-20-7	106.2	Xylenes (total)	0.96	0.50	ppbv		4.2	2.2	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		50-129%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Technical Report for

IVI Environmental

Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

Sampling Date: 10/23/12

Report to:

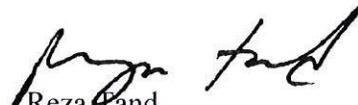
IVI ENVIRONMENTAL, INC.
55 West Red Oak Lane
White Plains, NY 10604
steven.gustems@ivi-intl.com

ATTN: Steven Gustems

Total number of pages in report: **11**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Reza Fand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) ISO 17025:2005 (L2235)

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Test results relate only to samples analyzed.

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11/13/12

Technical Report for

IVI Environmental

Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

Sampling Date: 10/23/12

Report to:

IVI ENVIRONMENTAL, INC.
55 West Red Oak Lane
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11/13/12

1

2

Technical Report for

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Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

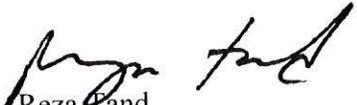
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Technical Report for

IVI Environmental

Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

Sampling Date: 10/23/12

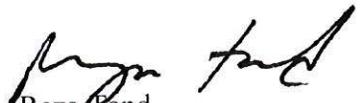
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Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

Sampling Date: 10/23/12

Report to:

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Technical Report for

IVI Environmental

Central Parking Systems, 546 West 44th Street, New York, NY

Accutest Job Number: MC15219R

Sampling Date: 10/23/12

Report to:

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Test results relate only to samples analyzed.



**Environmental Consulting &
Management Services, Inc.**

10 Filmont Drive – New City, NY 10956

Complete Environmental Services

Tel/Fax: 845.638.0640 – Cell: 914.523.1523
marc.rutstein@ecmsny.com
www.ECMSNY.com

December 4, 2012

Tom Aschmoneit
DHA Capital LLC
The Grace Building
1114 Avenue of the Americas 40th floor
New York, NY 10036
www.dhollanderassociates.com

RE: Soil Composition @ 546 West 44th St., New York, NY

Environmental Consulting and Management Services (ECMS) has performed soil sampling in association with the demolition and subsequent excavation at the above referenced property.

Sampling took place November 16, 2012.

The sampling area consists of an active car parking establishment.

Soil was collected utilizing an auger drill rig and continuous sampling to groundwater depths. Volatile organic samples were collected via grab sampling methods at the ground water level. Semi volatile samples were comprised of composite soils from the length of the boring. Samples collected were placed laboratory cleaned glassware, packed on ice and transported to a certified, accredited laboratory. Samples TB-1 through TB-8 were analysed for full New York State Department of Environmental Conservation CP-51 Analysis.

Soils collected consisted of moist, grey, tight, fine to medium sand and silt with small amounts of fine gravel. Soils did not exhibit any odors or photoionization detector (PID) readings.

None of the samples collected exceeded State guidelines/standards for volatiles or semi volatiles.

Attached please find analytical data for the samples collected.

Ed Townsend
ECMSNY

YORK

ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for:

Environmental Consulting and Management Services
10 Filmont Drive
New City NY, 10956
Attention: Ed Townsend

Report Date: 12/03/2012
Client Project ID: 546W.44th St.
York Project (SDG) No.: 12K0572

CT License No. PH-0723

New Jersey License No. CT-005



New York License No. 10854

PA License No. 68-04440

120 RESEARCH DRIVE

STRATFORD, CT 06615

(203) 325-1371

FAX (203) 357-0166

Report Date: 12/03/2012
Client Project ID: 546W.44th St.
York Project (SDG) No.: 12K0572

Environmental Consulting and Management Services

10 Filmont Drive
New City NY, 10956
Attention: Ed Townsend

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on November 19, 2012 and listed below. The project was identified as your project: **546W.44th St.**

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the attachment to this report, and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
12K0572-01	TP-1	Soil	11/16/2012	11/19/2012
12K0572-02	TP-2	Soil	11/16/2012	11/19/2012
12K0572-03	TP-3	Soil	11/16/2012	11/19/2012
12K0572-04	TP-4	Soil	11/16/2012	11/19/2012
12K0572-05	TP-5	Soil	11/16/2012	11/19/2012
12K0572-06	TP-6	Soil	11/16/2012	11/19/2012
12K0572-07	TP-7	Soil	11/16/2012	11/19/2012
12K0572-08	TP-8	Soil	11/16/2012	11/19/2012

General Notes for York Project (SDG) No.: 12K0572

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation, unless otherwise noted.
6. All analyses conducted met method or Laboratory SOP requirements. See the Qualifiers and/or Narrative sections for further information.
7. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
8. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.

Approved By:



Robert Q. Bradley
Laboratory Director

Date: 12/03/2012

YORK

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-1

York Sample ID: 12K0572-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

12K0572

546W.44th St.

Soil

November 16, 2012 3:00 pm

11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO

Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	5.8	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	3.5	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
108-88-3	Toluene	ND		ug/kg dry	4.6	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
95-47-6	o-Xylene	ND		ug/kg dry	4.4	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	11	120	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	6.3	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	4.9	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	3.6	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	6.5	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	5.3	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	5.2	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	5.5	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	5.6	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
91-20-3	Naphthalene	ND		ug/kg dry	13	120	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	4.4	59	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	7.0	180	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 04:32	SS
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	102 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	97.8 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	104 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO

Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	74	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
120-12-7	Anthracene	ND		ug/kg dry	170	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
86-73-7	Fluorene	ND		ug/kg dry	150	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
85-01-8	Phenanthrene	ND		ug/kg dry	160	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
129-00-0	Pyrene	170	J	ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
83-32-9	Acenaphthene	ND		ug/kg dry	110	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	150	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	110	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
206-44-0	Fluoranthene	200	J	ug/kg dry	180	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	250	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	300	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-1

York Sample ID: 12K0572-01

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
218-01-9	Chrysene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	100	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 19:00	SR
Surrogate Recoveries		Result			Acceptance Range						
321-60-8	Surrogate: 2-Fluorobiphenyl	11.9 %	S-04		30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	33.3 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	42.4 %			30-130						

Total Solids

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	82.6		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-2

York Sample ID: 12K0572-02

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.67	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
108-88-3	Toluene	ND		ug/kg dry	0.89	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.84	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.1	23	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.2	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.96	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	0.70	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.0	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:10	SS

Sample Information

Client Sample ID: TP-2

York Sample ID: 12K0572-02

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Total Solids

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	87.0		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-3

York Sample ID: 12K0572-03

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.2	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.69	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
108-88-3	Toluene	ND		ug/kg dry	0.92	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.88	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.2	24	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.3	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.99	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	0.73	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.6	24	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	0.88	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	36	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 05:49	SS
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	110 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	105 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	109 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO] Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	74	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
120-12-7	Anthracene	ND		ug/kg dry	160	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-3

York Sample ID: 12K0572-03

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-73-7	Fluorene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
85-01-8	Phenanthrene	ND		ug/kg dry	160	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
129-00-0	Pyrene	ND		ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
83-32-9	Acenaphthene	ND		ug/kg dry	110	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	110	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
206-44-0	Fluoranthene	ND		ug/kg dry	180	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	250	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	300	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
218-01-9	Chrysene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	140	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	99	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	120	300	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:09	SR
	Surrogate Recoveries	Result			Acceptance Range						
321-60-8	Surrogate: 2-Fluorobiphenyl	13.2 %	S-04		30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	31.3 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	48.6 %			30-130						

Total Solids

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	83.5		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-4

York Sample ID: 12K0572-04

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.68	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
108-88-3	Toluene	ND		ug/kg dry	0.90	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.86	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS

Sample Information

Client Sample ID: TP-4

York Sample ID: 12K0572-04

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| **Sample Notes:**

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.2	23	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.2	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.97	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	0.71	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.5	23	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	0.86	12	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	35	1	EPA SW846-8260B	11/26/2012 10:48	11/27/2012 06:27	SS
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	106 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	103 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	104 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| **Sample Notes:**

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	72	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
120-12-7	Anthracene	ND		ug/kg dry	160	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
86-73-7	Fluorene	ND		ug/kg dry	140	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
85-01-8	Phenanthrene	ND		ug/kg dry	150	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
129-00-0	Pyrene	ND		ug/kg dry	120	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
83-32-9	Acenaphthene	ND		ug/kg dry	110	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	140	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	110	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
206-44-0	Fluoranthene	ND		ug/kg dry	170	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	250	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	290	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
218-01-9	Chrysene	ND		ug/kg dry	140	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	120	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	130	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	98	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR

Sample Information

Client Sample ID: TP-4

York Sample ID: 12K0572-04

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| **Sample Notes:**

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	120	290	1	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:43	SR
	Surrogate Recoveries	Result			Acceptance Range						
321-60-8	Surrogate: 2-Fluorobiphenyl	14.2 %	S-04		30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	30.9 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	46.0 %			30-130						

Total Solids

Log-in Notes: VOA-CO| **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	84.9		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-5

York Sample ID: 12K0572-05

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| **Sample Notes:**

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.67	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
108-88-3	Toluene	3.5	J	ug/kg dry	0.89	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.85	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.2	23	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.2	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.96	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	0.71	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.5	23	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	0.85	12	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	35	1	EPA SW846-8260B	11/27/2012 17:04	11/28/2012 14:45	SS
	Surrogate Recoveries	Result			Acceptance Range						

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-5

York Sample ID: 12K0572-05

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO | **Sample Notes:**

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	110 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	111 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	143 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO | **Sample Notes:**

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	710	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
120-12-7	Anthracene	ND		ug/kg dry	1600	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
86-73-7	Fluorene	ND		ug/kg dry	1400	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
85-01-8	Phenanthrene	ND		ug/kg dry	1500	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
129-00-0	Pyrene	ND		ug/kg dry	1200	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
83-32-9	Acenaphthene	ND		ug/kg dry	1100	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	1400	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	1100	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
206-44-0	Fluoranthene	ND		ug/kg dry	1700	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	2400	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	2900	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
218-01-9	Chrysene	ND		ug/kg dry	1300	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	1200	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	1300	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	960	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	1200	2900	10	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:17	SR
	Surrogate Recoveries	Result			Acceptance Range						
321-60-8	Surrogate: 2-Fluorobiphenyl	33.9 %			30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	62.7 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	95.4 %			30-130						

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-5

York Sample ID: 12K0572-05

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Total Solids

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	86.1		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-6

York Sample ID: 12K0572-06

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.67	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
108-88-3	Toluene	ND		ug/kg dry	0.88	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.84	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.1	23	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.2	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.96	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
99-87-6	p-Isopropyltoluene	2.3	J	ug/kg dry	0.70	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.2	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.0	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.5	23	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	0.84	11	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	34	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:20	SS
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	109 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	101 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	102 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	350	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
120-12-7	Anthracene	ND		ug/kg dry	780	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-6

York Sample ID: 12K0572-06

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
86-73-7	Fluorene	ND		ug/kg dry	690	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
85-01-8	Phenanthrene	ND		ug/kg dry	750	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
129-00-0	Pyrene	ND		ug/kg dry	580	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
83-32-9	Acenaphthene	ND		ug/kg dry	520	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	690	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	540	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
206-44-0	Fluoranthene	ND		ug/kg dry	840	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1200	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1400	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
218-01-9	Chrysene	ND		ug/kg dry	660	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	570	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	650	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	480	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	580	1400	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:08	SR
Surrogate Recoveries		Result		Acceptance Range							
321-60-8	Surrogate: 2-Fluorobiphenyl	25.1 %	S-04		30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	33.8 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	51.9 %			30-130						

Total Solids

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	87.2		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

Sample Information

Client Sample ID: TP-7

York Sample ID: 12K0572-07

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO| Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
71-43-2	Benzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
100-41-4	Ethyl Benzene	ND		ug/kg dry	0.67	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
108-88-3	Toluene	ND		ug/kg dry	0.89	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
95-47-6	o-Xylene	ND		ug/kg dry	0.85	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS

120 RESEARCH DRIVE

STRATFORD, CT 06615

(203) 325-1371

FAX (203) 357-0166

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-7

York Sample ID: 12K0572-07

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO Sample Notes:

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
1330-20-7P/M	p- & m- Xylenes	ND		ug/kg dry	2.1	23	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
98-82-8	Isopropylbenzene	ND		ug/kg dry	1.2	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
103-65-1	n-Propylbenzene	ND		ug/kg dry	0.96	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	0.70	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	1.3	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
104-51-8	n-Butylbenzene	ND		ug/kg dry	1.0	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
135-98-8	sec-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
98-06-6	tert-Butylbenzene	ND		ug/kg dry	1.1	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
91-20-3	Naphthalene	ND		ug/kg dry	2.5	23	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	0.85	12	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
1330-20-7	Xylenes, Total	ND		ug/kg dry	1.4	35	1	EPA SW846-8260B	11/28/2012 12:47	11/28/2012 15:55	SS
	Surrogate Recoveries	Result			Acceptance Range						
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	142 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	98.9 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	93.7 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO Sample Notes:

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	360	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
120-12-7	Anthracene	ND		ug/kg dry	790	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
86-73-7	Fluorene	ND		ug/kg dry	700	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
85-01-8	Phenanthrene	ND		ug/kg dry	760	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
129-00-0	Pyrene	ND		ug/kg dry	590	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
83-32-9	Acenaphthene	ND		ug/kg dry	530	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	700	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	540	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
206-44-0	Fluoranthene	ND		ug/kg dry	850	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1200	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1500	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
218-01-9	Chrysene	ND		ug/kg dry	670	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	580	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	660	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	480	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 20:41	SR

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-8

York Sample ID: 12K0572-08

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Volatile Organics, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO | **Sample Notes:**

Sample Prepared by Method: EPA 5035B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
17060-07-0	Surrogate: 1,2-Dichloroethane-d4	111 %			72.6-129						
460-00-4	Surrogate: p-Bromofluorobenzene	106 %			63.5-145						
2037-26-5	Surrogate: Toluene-d8	101 %			81.2-127						

Semi-Volatiles, CP-51 (formerly STARS) List

Log-in Notes: VOA-CO | **Sample Notes:**

Sample Prepared by Method: EPA 3550B

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/kg dry	360	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
120-12-7	Anthracene	ND		ug/kg dry	800	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
86-73-7	Fluorene	ND		ug/kg dry	700	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
85-01-8	Phenanthrene	ND		ug/kg dry	760	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
129-00-0	Pyrene	ND		ug/kg dry	600	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
83-32-9	Acenaphthene	ND		ug/kg dry	530	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	700	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	550	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
206-44-0	Fluoranthene	ND		ug/kg dry	860	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	1200	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	1500	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
218-01-9	Chrysene	ND		ug/kg dry	670	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	580	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	670	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	490	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	590	1500	5	EPA SW-846 8270C	11/29/2012 15:13	11/30/2012 21:14	SR
Surrogate Recoveries		Result			Acceptance Range						
321-60-8	Surrogate: 2-Fluorobiphenyl	41.4 %			30-130						
4165-60-0	Surrogate: Nitrobenzene-d5	38.7 %			30-130						
1718-51-0	Surrogate: Terphenyl-d14	54.9 %			30-130						

YORK

ANALYTICAL LABORATORIES, INC.

Sample Information

Client Sample ID: TP-8

York Sample ID: 12K0572-08

York Project (SDG) No.
12K0572

Client Project ID
546W.44th St.

Matrix
Soil

Collection Date/Time
November 16, 2012 3:00 pm

Date Received
11/19/2012

Total Solids

Log-in Notes: VOA-CO | Sample Notes:

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	MDL	RL	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	% Solids	85.5		%	0.100	0.100	1	SM 2540G	11/26/2012 13:35	11/26/2012 13:35	AMC

YORK

ANALYTICAL LABORATORIES, INC.

Analytical Batch Summary

Batch ID: BK20876

Preparation Method: % Solids Prep

Prepared By: AMC

YORK Sample ID	Client Sample ID	Preparation Date
12K0572-01	TP-1	11/26/12
12K0572-02	TP-2	11/26/12
12K0572-03	TP-3	11/26/12
12K0572-04	TP-4	11/26/12
12K0572-05	TP-5	11/26/12
12K0572-06	TP-6	11/26/12
12K0572-07	TP-7	11/26/12
12K0572-08	TP-8	11/26/12

Batch ID: BK20892

Preparation Method: EPA 5035B

Prepared By: EKM

YORK Sample ID	Client Sample ID	Preparation Date
12K0572-01	TP-1	11/26/12
12K0572-02	TP-2	11/26/12
12K0572-03	TP-3	11/26/12
12K0572-04	TP-4	11/26/12
BK20892-BLK1	Blank	11/26/12
BK20892-BS1	LCS	11/26/12
BK20892-BSD1	LCS Dup	11/26/12
BK20892-MS1	Matrix Spike	11/26/12
BK20892-MSD1	Matrix Spike Dup	11/26/12

Batch ID: BK21018

Preparation Method: EPA 5035B

Prepared By: AY

YORK Sample ID	Client Sample ID	Preparation Date
12K0572-05	TP-5	11/27/12
12K0572-06	TP-6	11/28/12
12K0572-07	TP-7	11/28/12
12K0572-08	TP-8	11/28/12
BK21018-BLK1	Blank	11/28/12
BK21018-BS1	LCS	11/28/12
BK21018-BSD1	LCS Dup	11/28/12
BK21018-MS1	Matrix Spike	11/28/12
BK21018-MSD1	Matrix Spike Dup	11/28/12

Batch ID: BK21100

Preparation Method: EPA 3550B

Prepared By: TFD

YORK Sample ID	Client Sample ID	Preparation Date
12K0572-01	TP-1	11/29/12
12K0572-02	TP-2	11/29/12
12K0572-03	TP-3	11/29/12
12K0572-04	TP-4	11/29/12
12K0572-05	TP-5	11/29/12
12K0572-06	TP-6	11/29/12
12K0572-07	TP-7	11/29/12
12K0572-08	TP-8	11/29/12
BK21100-BLK1	Blank	11/29/12

YORK

ANALYTICAL LABORATORIES, INC.

BK21100-BS1	LCS	11/29/12
BK21100-MS1	Matrix Spike	11/29/12
BK21100-MSD1	Matrix Spike Dup	11/29/12

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD	
		Limit	Units							Limit	Flag

Batch BK20892 - EPA 5035B

Prepared & Analyzed: 11/26/2012

Blank (BK20892-BLK1)

Benzene	ND	5.0	ug/kg wet								
Ethyl Benzene	ND	5.0	"								
Toluene	ND	5.0	"								
o-Xylene	ND	5.0	"								
p- & m- Xylenes	ND	10	"								
Isopropylbenzene	ND	5.0	"								
n-Propylbenzene	ND	5.0	"								
p-Isopropyltoluene	ND	5.0	"								
1,2,4-Trimethylbenzene	ND	5.0	"								
1,3,5-Trimethylbenzene	ND	5.0	"								
n-Butylbenzene	ND	5.0	"								
sec-Butylbenzene	ND	5.0	"								
tert-Butylbenzene	ND	5.0	"								
Naphthalene	ND	10	"								
Methyl tert-butyl ether (MTBE)	ND	5.0	"								
Xylenes, Total	ND	15	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	53.7		ug/L	50.0		107	72.6-129				
<i>Surrogate: p-Bromofluorobenzene</i>	48.6		"	50.0		97.1	63.5-145				
<i>Surrogate: Toluene-d8</i>	51.5		"	50.0		103	81.2-127				

Prepared & Analyzed: 11/26/2012

LCS (BK20892-BS1)

Benzene	54		ug/L	50.0		108	70.4-128				
Ethyl Benzene	52		"	50.0		104	75.2-131				
Toluene	53		"	50.0		106	72.5-127				
o-Xylene	51		"	50.0		102	70.4-126				
p- & m- Xylenes	100		"	100		102	73.8-130				
Isopropylbenzene	47		"	50.0		93.9	73.7-136				
n-Propylbenzene	46		"	50.0		92.9	67.8-128				
p-Isopropyltoluene	48		"	50.0		95.7	71.1-131				
1,2,4-Trimethylbenzene	47		"	50.0		94.8	73.1-136				
1,3,5-Trimethylbenzene	47		"	50.0		94.0	69.7-127				
n-Butylbenzene	46		"	50.0		91.3	63.7-125				
sec-Butylbenzene	48		"	50.0		96.4	68.6-126				
tert-Butylbenzene	48		"	50.0		95.8	76.4-151				
Naphthalene	55		"	50.0		110	55.2-150				
Methyl tert-butyl ether (MTBE)	46		"	50.0		92.5	56.5-140				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.9		"	50.0		106	72.6-129				
<i>Surrogate: p-Bromofluorobenzene</i>	48.1		"	50.0		96.1	63.5-145				
<i>Surrogate: Toluene-d8</i>	49.4		"	50.0		98.9	81.2-127				

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike Level	Source*		%REC Limits	Flag	RPD	
		Limit	Units		Result	%REC			RPD	Limit

Batch BK20892 - EPA 5035B

LCS Dup (BK20892-BSD1)

Prepared & Analyzed: 11/26/2012

Benzene	50		ug/L	50.0		101	70.4-128		6.39	21.8
Ethyl Benzene	51		"	50.0		103	75.2-131		0.698	22.5
Toluene	53		"	50.0		106	72.5-127		0.133	22.9
o-Xylene	51		"	50.0		102	70.4-126		0.785	22.7
p- & m- Xylenes	100		"	100		103	73.8-130		0.469	23
Isopropylbenzene	49		"	50.0		97.4	73.7-136		3.64	23.2
n-Propylbenzene	48		"	50.0		95.2	67.8-128		2.45	28.9
p-Isopropyltoluene	49		"	50.0		97.7	71.1-131		2.03	23.4
1,2,4-Trimethylbenzene	48		"	50.0		96.4	73.1-136		1.61	24.3
1,3,5-Trimethylbenzene	48		"	50.0		95.3	69.7-127		1.40	23.3
n-Butylbenzene	45		"	50.0		89.7	63.7-125		1.77	25.3
sec-Butylbenzene	48		"	50.0		96.3	68.6-126		0.166	23.3
tert-Butylbenzene	50		"	50.0		99.4	76.4-151		3.63	45.4
Naphthalene	55		"	50.0		109	55.2-150		0.931	29.4
Methyl tert-butyl ether (MTBE)	48		"	50.0		96.4	56.5-140		4.09	30.6
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>49.2</i>		<i>"</i>	<i>50.0</i>		<i>98.5</i>	<i>72.6-129</i>			
<i>Surrogate: p-Bromofluorobenzene</i>	<i>49.8</i>		<i>"</i>	<i>50.0</i>		<i>99.7</i>	<i>63.5-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.5</i>		<i>"</i>	<i>50.0</i>		<i>103</i>	<i>81.2-127</i>			

Matrix Spike (BK20892-MS1)

*Source sample: 12K0572-03 (TP-3)

Prepared: 11/26/2012 Analyzed: 11/27/2012

Benzene	37		ug/L	50.0	ND	74.9	59.1-115			
Ethyl Benzene	35		"	50.0	ND	69.7	45.3-123			
Toluene	36		"	50.0	ND	72.8	48.1-124			
o-Xylene	35		"	50.0	ND	69.7	41.5-115			
p- & m- Xylenes	63		"	100	ND	63.0	42.6-121			
Isopropylbenzene	34		"	50.0	ND	68.9	70.3-110	Low Bias		
n-Propylbenzene	28		"	50.0	ND	56.2	58.9-102	Low Bias		
p-Isopropyltoluene	35		"	50.0	ND	70.4	37.5-136			
1,2,4-Trimethylbenzene	27		"	50.0	ND	54.9	61.9-109	Low Bias		
1,3,5-Trimethylbenzene	31		"	50.0	ND	62.1	61.2-103			
n-Butylbenzene	19		"	50.0	ND	38.3	43.5-93.9	Low Bias		
sec-Butylbenzene	31		"	50.0	ND	62.6	38-130			
tert-Butylbenzene	29		"	50.0	ND	58.7	68.9-142	Low Bias		
Naphthalene	16		"	50.0	ND	32.5	-6.06-206			
Methyl tert-butyl ether (MTBE)	28		"	50.0	ND	55.6	40.2-137			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>51.1</i>		<i>"</i>	<i>50.0</i>		<i>102</i>	<i>72.6-129</i>			
<i>Surrogate: p-Bromofluorobenzene</i>	<i>49.8</i>		<i>"</i>	<i>50.0</i>		<i>99.7</i>	<i>63.5-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>"</i>	<i>50.0</i>		<i>101</i>	<i>81.2-127</i>			

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike	Source*	%REC		Flag	RPD	
		Limit	Units			Level	Result		Limits	RPD

Batch BK20892 - EPA 5035B

Matrix Spike Dup (BK20892-MSD1)	*Source sample: 12K0572-03 (TP-3)				Prepared: 11/26/2012 Analyzed: 11/27/2012							
Benzene	44		ug/L	50.0	ND	87.0	59.1-115		15.0	23.5		
Ethyl Benzene	39		"	50.0	ND	77.1	45.3-123		10.1	38.1		
Toluene	42		"	50.0	ND	83.2	48.1-124		13.4	28.1		
o-Xylene	40		"	50.0	ND	79.1	41.5-115		12.6	35.3		
p- & m- Xylenes	74		"	100	ND	73.6	42.6-121		15.4	37		
Isopropylbenzene	37		"	50.0	ND	74.8	70.3-110		8.18	25		
n-Propylbenzene	31		"	50.0	ND	61.8	58.9-102		9.43	25		
p-Isopropyltoluene	34		"	50.0	ND	69.0	37.5-136		2.07	25		
1,2,4-Trimethylbenzene	32		"	50.0	ND	64.0	61.9-109		15.3	26		
1,3,5-Trimethylbenzene	34		"	50.0	ND	69.0	61.2-103		10.6	25		
n-Butylbenzene	23		"	50.0	ND	46.2	43.5-93.9		18.8	25		
sec-Butylbenzene	33		"	50.0	ND	66.5	38-130		6.07	25		
tert-Butylbenzene	32		"	50.0	ND	63.3	68.9-142	Low Bias	7.54	25		
Naphthalene	23		"	50.0	ND	45.5	-6.06-206		33.3	29.3	Non-dir.	
Methyl tert-butyl ether (MTBE)	48		"	50.0	ND	96.0	40.2-137		53.3	25	Non-dir.	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.8		"	50.0		106	72.6-129					
<i>Surrogate: p-Bromofluorobenzene</i>	49.5		"	50.0		98.9	63.5-145					
<i>Surrogate: Toluene-d8</i>	52.2		"	50.0		104	81.2-127					

Batch BK21018 - EPA 5035B

Blank (BK21018-BLK1)	Prepared & Analyzed: 11/28/2012											
Benzene	ND	5.0	ug/kg wet									
Ethyl Benzene	ND	5.0	"									
Toluene	ND	5.0	"									
o-Xylene	ND	5.0	"									
p- & m- Xylenes	ND	10	"									
Isopropylbenzene	ND	5.0	"									
n-Propylbenzene	ND	5.0	"									
p-Isopropyltoluene	ND	5.0	"									
1,2,4-Trimethylbenzene	ND	5.0	"									
1,3,5-Trimethylbenzene	ND	5.0	"									
n-Butylbenzene	ND	5.0	"									
sec-Butylbenzene	ND	5.0	"									
tert-Butylbenzene	ND	5.0	"									
Naphthalene	ND	10	"									
Methyl tert-butyl ether (MTBE)	ND	5.0	"									
Xylenes, Total	ND	15	"									
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.4		ug/l	50.0		105	72.6-129					
<i>Surrogate: p-Bromofluorobenzene</i>	47.6		"	50.0		95.2	63.5-145					
<i>Surrogate: Toluene-d8</i>	49.2		"	50.0		98.3	81.2-127					

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BK21018 - EPA 5035B

Prepared & Analyzed: 11/28/2012

LCS (BK21018-BS1)

Benzene	46		ug/L	50.0		92.4	70.4-128				
Ethyl Benzene	53		"	50.0		106	75.2-131				
Toluene	51		"	50.0		101	72.5-127				
o-Xylene	52		"	50.0		103	70.4-126				
p- & m- Xylenes	99		"	100		99.2	73.8-130				
Isopropylbenzene	49		"	50.0		99.0	73.7-136				
n-Propylbenzene	49		"	50.0		97.2	67.8-128				
p-Isopropyltoluene	48		"	50.0		95.9	71.1-131				
1,2,4-Trimethylbenzene	49		"	50.0		98.8	73.1-136				
1,3,5-Trimethylbenzene	48		"	50.0		95.5	69.7-127				
n-Butylbenzene	49		"	50.0		98.3	63.7-125				
sec-Butylbenzene	49		"	50.0		98.8	68.6-126				
tert-Butylbenzene	49		"	50.0		97.5	76.4-151				
Naphthalene	50		"	50.0		99.9	55.2-150				
Methyl tert-butyl ether (MTBE)	52		"	50.0		105	56.5-140				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>51.7</i>		<i>"</i>	<i>50.0</i>		<i>103</i>	<i>72.6-129</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>49.8</i>		<i>"</i>	<i>50.0</i>		<i>99.6</i>	<i>63.5-145</i>				
<i>Surrogate: Toluene-d8</i>	<i>51.4</i>		<i>"</i>	<i>50.0</i>		<i>103</i>	<i>81.2-127</i>				

Prepared & Analyzed: 11/28/2012

LCS Dup (BK21018-BSD1)

Benzene	48		ug/L	50.0		95.7	70.4-128		3.51	21.8	
Ethyl Benzene	52		"	50.0		104	75.2-131		2.14	22.5	
Toluene	50		"	50.0		99.8	72.5-127		1.63	22.9	
o-Xylene	52		"	50.0		104	70.4-126		1.18	22.7	
p- & m- Xylenes	100		"	100		104	73.8-130		4.94	23	
Isopropylbenzene	50		"	50.0		101	73.7-136		1.82	23.2	
n-Propylbenzene	49		"	50.0		97.2	67.8-128		0.0206	28.9	
p-Isopropyltoluene	51		"	50.0		101	71.1-131		5.24	23.4	
1,2,4-Trimethylbenzene	50		"	50.0		101	73.1-136		1.85	24.3	
1,3,5-Trimethylbenzene	50		"	50.0		99.3	69.7-127		3.88	23.3	
n-Butylbenzene	51		"	50.0		102	63.7-125		3.58	25.3	
sec-Butylbenzene	50		"	50.0		99.7	68.6-126		0.927	23.3	
tert-Butylbenzene	49		"	50.0		98.8	76.4-151		1.39	45.4	
Naphthalene	54		"	50.0		107	55.2-150		7.01	29.4	
Methyl tert-butyl ether (MTBE)	54		"	50.0		108	56.5-140		3.15	30.6	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>51.1</i>		<i>"</i>	<i>50.0</i>		<i>102</i>	<i>72.6-129</i>				
<i>Surrogate: p-Bromofluorobenzene</i>	<i>47.6</i>		<i>"</i>	<i>50.0</i>		<i>95.1</i>	<i>63.5-145</i>				
<i>Surrogate: Toluene-d8</i>	<i>51.4</i>		<i>"</i>	<i>50.0</i>		<i>103</i>	<i>81.2-127</i>				

YORK

ANALYTICAL LABORATORIES, INC.

Volatile Organic Compounds by EPA SW846-8260B - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BK21018 - EPA 5035B

Matrix Spike (BK21018-MS1)	*Source sample: 12K0572-06 (TP-6)					Prepared & Analyzed: 11/28/2012					
Benzene	41		ug/L	50.0	ND	82.2	59.1-115				
Ethyl Benzene	37		"	50.0	ND	74.9	45.3-123				
Toluene	42		"	50.0	ND	83.2	48.1-124				
o-Xylene	38		"	50.0	ND	77.0	41.5-115				
p- & m- Xylenes	71		"	100	ND	71.0	42.6-121				
Isopropylbenzene	48		"	50.0	ND	96.4	70.3-110				
n-Propylbenzene	42		"	50.0	ND	83.5	58.9-102				
p-Isopropyltoluene	37		"	50.0	2.0	69.9	37.5-136				
1,2,4-Trimethylbenzene	39		"	50.0	ND	77.9	61.9-109				
1,3,5-Trimethylbenzene	40		"	50.0	ND	80.6	61.2-103				
n-Butylbenzene	29		"	50.0	ND	57.0	43.5-93.9				
sec-Butylbenzene	37		"	50.0	ND	74.4	38-130				
tert-Butylbenzene	38		"	50.0	ND	76.7	68.9-142				
Naphthalene	22		"	50.0	ND	44.8	-6.06-206				
Methyl tert-butyl ether (MTBE)	56		"	50.0	ND	111	40.2-137				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	54.9		"	50.0		110	72.6-129				
<i>Surrogate: p-Bromofluorobenzene</i>	57.7		"	50.0		115	63.5-145				
<i>Surrogate: Toluene-d8</i>	50.9		"	50.0		102	81.2-127				

Matrix Spike Dup (BK21018-MSD1)	*Source sample: 12K0572-06 (TP-6)					Prepared & Analyzed: 11/28/2012					
Benzene	45		ug/L	50.0	ND	90.6	59.1-115		9.63	23.5	
Ethyl Benzene	42		"	50.0	ND	83.8	45.3-123		11.2	38.1	
Toluene	44		"	50.0	ND	87.4	48.1-124		4.95	28.1	
o-Xylene	43		"	50.0	ND	85.6	41.5-115		10.6	35.3	
p- & m- Xylenes	78		"	100	ND	77.8	42.6-121		9.07	37	
Isopropylbenzene	44		"	50.0	ND	87.5	70.3-110		9.74	25	
n-Propylbenzene	41		"	50.0	ND	82.2	58.9-102		1.57	25	
p-Isopropyltoluene	32		"	50.0	2.0	59.7	37.5-136		15.7	25	
1,2,4-Trimethylbenzene	37		"	50.0	ND	74.9	61.9-109		3.93	26	
1,3,5-Trimethylbenzene	38		"	50.0	ND	75.8	61.2-103		6.06	25	
n-Butylbenzene	32		"	50.0	ND	63.3	43.5-93.9		10.4	25	
sec-Butylbenzene	37		"	50.0	ND	73.2	38-130		1.60	25	
tert-Butylbenzene	36		"	50.0	ND	71.7	68.9-142		6.82	25	
Naphthalene	23		"	50.0	ND	46.1	-6.06-206		2.95	29.3	
Methyl tert-butyl ether (MTBE)	57		"	50.0	ND	114	40.2-137		2.78	25	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	56.1		"	50.0		112	72.6-129				
<i>Surrogate: p-Bromofluorobenzene</i>	52.0		"	50.0		104	63.5-145				
<i>Surrogate: Toluene-d8</i>	49.7		"	50.0		99.5	81.2-127				

YORK

ANALYTICAL LABORATORIES, INC.

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike	Source*	%REC	%REC	Flag	RPD	
		Limit	Units						Level	Result

Batch BK21100 - EPA 3550B

Prepared: 11/29/2012 Analyzed: 11/30/2012

Blank (BK21100-BLK1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Naphthalene	ND	250	ug/kg wet								
Anthracene	ND	250	"								
Fluorene	ND	250	"								
Phenanthrene	ND	250	"								
Pyrene	ND	250	"								
Acenaphthene	ND	250	"								
Acenaphthylene	ND	250	"								
Benzo(a)anthracene	ND	250	"								
Fluoranthene	ND	250	"								
Benzo(b)fluoranthene	ND	250	"								
Benzo(k)fluoranthene	ND	250	"								
Chrysene	ND	250	"								
Benzo(a)pyrene	ND	250	"								
Indeno(1,2,3-cd)pyrene	ND	250	"								
Benzo(g,h,i)perylene	ND	250	"								
Dibenzo(a,h)anthracene	ND	250	"								
Surrogate: 2-Fluorobiphenyl	1500		"	2510		61.7	30-130				
Surrogate: Nitrobenzene-d5	1600		"	2510		63.6	30-130				
Surrogate: Terphenyl-d14	1700		"	2510		66.0	30-130				

Prepared: 11/29/2012 Analyzed: 11/30/2012

LCS (BK21100-BS1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Naphthalene	1900	250	ug/kg wet	2500		77.9	25.2-111				
Anthracene	2100	250	"	2500		83.8	31.5-107				
Fluorene	2100	250	"	2500		84.5	29.9-108				
Phenanthrene	2100	250	"	2500		82.5	31.2-105				
Pyrene	2200	250	"	2500		89.3	26.3-124				
Acenaphthene	2000	250	"	2500		79.9	31.1-109				
Acenaphthylene	1900	250	"	2500		75.9	31.1-106				
Benzo(a)anthracene	2300	250	"	2500		91.6	31.5-115				
Fluoranthene	2400	250	"	2500		97.8	31.3-110				
Benzo(b)fluoranthene	2300	250	"	2500		90.5	14.9-131				
Benzo(k)fluoranthene	2200	250	"	2500		89.2	29.1-121				
Chrysene	2100	250	"	2500		85.5	27.4-117				
Benzo(a)pyrene	2300	250	"	2500		91.4	29.1-138				
Indeno(1,2,3-cd)pyrene	2000	250	"	2500		80.7	12.6-120				
Benzo(g,h,i)perylene	1900	250	"	2500		77.2	6.56-121				
Dibenzo(a,h)anthracene	2000	250	"	2500		79.8	14.6-119				
Surrogate: 2-Fluorobiphenyl	1800		"	2510		73.3	30-130				
Surrogate: Nitrobenzene-d5	1900		"	2510		76.6	30-130				
Surrogate: Terphenyl-d14	2200		"	2510		87.3	30-130				

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ANALYTICAL LABORATORIES, INC.

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting		Spike	Source*	%REC	%REC	Flag	RPD	
		Limit	Units						Level	Result

Batch BK21100 - EPA 3550B

Matrix Spike (BK21100-MS1)	*Source sample: 12K0572-02 (TP-2)						Prepared: 11/29/2012 Analyzed: 11/30/2012					
Naphthalene	1300	290	ug/kg dry	2870	ND	46.0	25.2-111					
Anthracene	1400	290	"	2870	ND	49.1	31.5-107					
Fluorene	1400	290	"	2870	ND	47.8	29.9-108					
Phenanthrene	1400	290	"	2870	ND	48.6	31.2-105					
Pyrene	1300	290	"	2870	ND	46.6	26.3-124					
Acenaphthene	1300	290	"	2870	ND	45.7	31.1-109					
Acenaphthylene	1300	290	"	2870	ND	43.7	31.1-106					
Benzo(a)anthracene	1500	290	"	2870	ND	51.6	31.5-115					
Fluoranthene	1600	290	"	2870	ND	56.7	31.3-110					
Benzo(b)fluoranthene	1500	290	"	2870	ND	50.8	14.9-131					
Benzo(k)fluoranthene	1400	290	"	2870	ND	50.1	29.1-121					
Chrysene	1400	290	"	2870	ND	47.4	27.4-117					
Benzo(a)pyrene	1500	290	"	2870	ND	52.7	29.1-138					
Indeno(1,2,3-cd)pyrene	1400	290	"	2870	ND	47.9	12.6-120					
Benzo(g,h,i)perylene	1300	290	"	2870	ND	46.1	6.56-121					
Dibenzo(a,h)anthracene	1400	290	"	2870	ND	47.4	14.6-119					
Surrogate: 2-Fluorobiphenyl	1200		"	2890		41.6	30-130					
Surrogate: Nitrobenzene-d5	1300		"	2890		44.2	30-130					
Surrogate: Terphenyl-d14	1300		"	2890		44.8	30-130					

Matrix Spike Dup (BK21100-MSD1)	*Source sample: 12K0572-02 (TP-2)						Prepared: 11/29/2012 Analyzed: 11/30/2012					
Naphthalene	1200	290	ug/kg dry	2870	ND	42.9	25.2-111		6.98	30		
Anthracene	1300	290	"	2870	ND	44.0	31.5-107		10.9	30		
Fluorene	1200	290	"	2870	ND	43.3	29.9-108		9.83	30		
Phenanthrene	1200	290	"	2870	ND	43.1	31.2-105		12.0	30		
Pyrene	1200	290	"	2870	ND	41.4	26.3-124		11.7	30		
Acenaphthene	1200	290	"	2870	ND	42.3	31.1-109		7.73	30		
Acenaphthylene	1200	290	"	2870	ND	40.0	31.1-106		8.75	30		
Benzo(a)anthracene	1400	290	"	2870	ND	47.0	31.5-115		9.29	30		
Fluoranthene	1400	290	"	2870	ND	48.1	31.3-110		16.4	30		
Benzo(b)fluoranthene	1200	290	"	2870	ND	42.8	14.9-131		17.2	30		
Benzo(k)fluoranthene	1200	290	"	2870	ND	42.2	29.1-121		17.2	30		
Chrysene	1200	290	"	2870	ND	43.4	27.4-117		8.63	30		
Benzo(a)pyrene	1400	290	"	2870	ND	47.0	29.1-138		11.4	30		
Indeno(1,2,3-cd)pyrene	1300	290	"	2870	ND	45.2	12.6-120		5.72	30		
Benzo(g,h,i)perylene	1300	290	"	2870	ND	43.5	6.56-121		5.76	30		
Dibenzo(a,h)anthracene	1300	290	"	2870	ND	44.3	14.6-119		6.76	30		
Surrogate: 2-Fluorobiphenyl	1100		"	2890		36.9	30-130					
Surrogate: Nitrobenzene-d5	1200		"	2890		41.6	30-130					
Surrogate: Terphenyl-d14	1100		"	2890		39.1	30-130					

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Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
12K0572-01	TP-1	4 oz. WM Clear Glass Cool to 4° C
12K0572-02	TP-2	4 oz. WM Clear Glass Cool to 4° C
12K0572-03	TP-3	4 oz. WM Clear Glass Cool to 4° C
12K0572-04	TP-4	4 oz. WM Clear Glass Cool to 4° C
12K0572-05	TP-5	4 oz. WM Clear Glass Cool to 4° C
12K0572-06	TP-6	4 oz. WM Clear Glass Cool to 4° C
12K0572-07	TP-7	4 oz. WM Clear Glass Cool to 4° C
12K0572-08	TP-8	4 oz. WM Clear Glass Cool to 4° C

Notes and Definitions

VOA-CONTNON-COMPLIANT- the container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A or NYSDOH ELAP. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL); therefore, the result is an estimated concentration.

ND Analyte NOT DETECTED at the stated Reporting Limit (RL) or above.

RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.

MDL METHOD DETECTION LIMIT - the minimum concentration that can be measured and reported with a 99% confidence that the concentration is greater than zero. If requested or required, a value reported below the RL and above the MDL is considered estimated and is noted with a "J" flag.

NR Not reported

RPD Relative Percent Difference

Wet The data has been reported on an as-received (wet weight) basis

Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.

Non-Dir. Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

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Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the MDL, with values between the MDL and the RL being "J" flagged as estimated results.

YORK

ANALYTICAL LABORATORIES, INC.

120 RESEARCH DR. STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 12K0572

YOUR Information		Report To:		Invoice To:		YOUR Project ID		Turn-Around Time		Report Type/Deliverables							
Company: <u>Ecms</u>	Company: <u>GAWE</u>	Company: <u>GAWE</u>	Company: <u>GAWE</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>	Address: <u>546 W. 44th St.</u>						
Address: <u>10 Filman + Dr New City NY 10956</u>	Address: <u>GAWE</u>	Address: <u>GAWE</u>	Address: <u>GAWE</u>	Phone No: <u>845-249-0458</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>						
Phone No: <u>845-249-0458</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Phone No: <u>GAWE</u>	Attention: <u>Ed Townsend</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>	Attention: <u>GAWE</u>						
Contact Person: <u>Ed Townsend</u>	Contact Person: <u>GAWE</u>	Contact Person: <u>GAWE</u>	Contact Person: <u>GAWE</u>	E-Mail Address: <u>Ed.Townsend@cmx.com</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>	E-Mail Address: <u>GAWE</u>						
<p>Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.</p> <p><u>Ed Townsend</u> Samples Collected/Authorized By (Signature) <u>Ed Townsend</u> Name (printed)</p>																	
Matrix Codes		Volatiles		Semi-Volatiles		Metals		Misc. Org.		Full Lists		Common Miscellaneous Parameters		Special			
S - soil Other - specify (oil, etc.)		82/60 full TICS Site Spec. STARS list BTEX MTBE TCL list TAGM list CT RCP list Arom. only Halog. only App. IX list 802/B list		8082/PCB RCRAS PPL3 list IAL CTI5 list TAGM list NIJEP list Total Dissolved SPLP or TCLP Infus. Metals LIST Below		8270 or 625 STARS list BN Only Acids Only PAH list TAGM list CT RCP list TCLP list NIJEP list App. IX ICLP BNA SPLP or TCLP		TPH GRO TPH DRO CT ETPH NY 310-13 TPH 1664 Air TO14A Air TO15 Air STARS Air VPH Air TKS Methane Helium		Nitrate Nitrite TKN Tot. Nitrogen Ammonia-N Chloride Phosphate Tot. Phos. Ortho Phos. F.O.G. pH MEAS		Color Phenols Cyanide-T Cyanide-A BOD5 CBOD5 BOD28 COD FOS Total Solids TDS TPH-1664		INSTRUCTIONS Field Filtered Lab to Filter			
<p>Choose Analyses Needed from the Menu Above and Enter Below</p> <p><u>CP-51</u></p>																	
Sample Identification	Date Sampled	Sample Matrix	Preservation	4°C	Frozen	HCl	MeOH	HNO ₃	H ₂ SO ₄	NaOH	Container Description(s)	Temperature on Receipt					
TB-1	11/16/12	S	Check those Applicable								14oz, 18oz	4.4 °C					
TB-2																	
TB-3																	
TB-4																	
TB-5																	
TB-6																	
TB-7																	
TB-8																	
<p>Comments</p> <p>Samples Relinquished By <u>Ed Townsend</u> Date/Time <u>11-19-12</u></p> <p>Samples Relinquished By <u>GAWE</u> Date/Time <u>11-19-12</u></p> <p>Samples Received By <u>Cherie</u> Date/Time <u>11-19-12</u></p> <p>Samples Received in LAB by <u>GAWE</u> Date/Time <u>11/19/12-1525</u></p>																	

PRELIMINARY REPORT

534-546 W 44th ST
546 W 44th ST
170229701

**GEOTECHNICAL INVESTIGATION
AND FOUNDATION
RECOMMENDATIONS**

**PROPOSED 13-STORY BUILDING
534-546 44TH STREET
MANHATTAN, NEW YORK CITY, NY**

Prepared for:
DHA Capital
4 Times Square 24th floor
New York, NY 10018

December 5, 2012

Prepared By:

Geotechnical Engineering Services, P.C.
85 Windom Street
White Plains, New York 10607

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1.1 GENERAL

This draft report presents the results of a preliminary geotechnical investigation and recommendations for a proposed residential building to be located at 534-546 West 44th Street in the Borough of the Manhattan, New York. The field work and contents of this report are in accordance with our proposal to you, dated November 8, 2012. In order to meet the requirements of the New York City Building Code (NYCBC), an additional four (4) test borings should be drilled after the 2-story building in the southwest quadrant of the site is demolished. Once these borings are drilled, a final geotechnical and foundation recommendation report will be issued.

1.2 PROJECT LOCATION AND DESCRIPTION

We understand that it is proposed to construct a new 13-story residential building with a one-level basement at 534-546 West 44th Street in Manhattan, New York. The floor to floor clearance will be about 10 ft. Based on the information provided to us by Mr. Thomas Aschmoneit (Client), the building will occupy an area of about 20,000 square feet and the remainder of the lot will be used as a court yard.

The site, covering an area of about 27,000 square feet, consists of multiple joining lots and a parking lot. In the southwest quadrant of the site, there is an existing building that is being used by Central Parking, to operate the parking lot. This building has a one-level basement that extends about 7 ft below 43rd Street level and about 4 ft above the street level, for a total floor to floor clearance of about 11 ft.

The vacant portion of the site, about 21,000 square feet, is relatively flat. No ground elevations were provided and no survey was performed by Geotechnical Engineering Services, P.C. (GES) for the purpose of this report.

The site is bordered by 44th Street to the North, by 43rd Street to the South, by two six-story buildings and a one-story building to the East, and by a seven-story and a six-story building to the West. During the investigation, it could not be determined whether or not these buildings have basements.

1.3 OBJECTIVES AND SCOPE OF SERVICES

The objectives of this preliminary investigation were to evaluate the subsurface conditions beneath the proposed building site and to provide geotechnical recommendations for the design and construction of the foundations of the proposed building. In order to achieve these objectives, the following scope of services was performed:

1. Performed a total of eight (8) test borings at the site.
2. Provided full-time controlled inspection of the drilling operations.
3. Prepared this preliminary report that includes the following:
 - a) Description of the test borings, methodology of drilling and sampling;

- b) A Test Boring Location Plan showing the locations of the as-drilled test borings;
- c) Results of engineering evaluations and recommendations regarding the foundation design including:
 - Foundation type, estimated capacity, and bearing elevation;
 - Geotechnical earthquake engineering considerations including soil profile type and liquefaction evaluation;
 - Lateral Earth Pressures;
 - Permanent and temporary groundwater control measures;
- d) Results of engineering evaluations and recommendations regarding the construction of the foundations including:
 - Support of excavation considerations;
 - Temporary groundwater control considerations;
 - Protection of adjacent structures and utilities;
 - Construction monitoring considerations including vibration monitoring and compaction control.
- e) List of Figures.
- f) An Appendix that includes test boring logs.

2.1 GENERAL

The preliminary subsurface investigation consisted of field locating and drilling eight (8) test borings. Details of the subsurface investigation program and the generalized subsurface conditions are described in the following sections.

2.2 TEST BORINGS

A total of eight (8) test borings, denoted TB-1 through TB-8, were performed at the locations shown in Figure 1 between November 13 and November 16, 2012. The locations of the borings were determined in the field, by GES, based on the drawings provided by the Client. The test borings were advanced to depths ranging from 12.5 to 39 feet. All test borings were terminated in bedrock. The test borings were inspected on a full time basis by Mr. Ziad H. Maad and Mr. Richard Young of GES, P.C.

The test borings were drilled by Aquifer Drilling and Testing, Inc. using a truck mounted CME 75 drill rig utilizing the rotary drilling technique with a 3-7/8 inch diameter tri-cone roller bit and 4 inch diameter steel casing. Soil samples were obtained using techniques and equipment in general accordance with the American Society for Testing and Materials (ASTM) Standard Specification D1586-Standard Penetration Test (SPT). The SPT consists of driving a 2-inch O.D. split spoon sampler with repeated blows of a 140-lb hammer free falling a distance of 30-inches. The standard penetration resistance, or N-value, is determined as the number of blows required to advance the sampler the middle 12-inches of a 24-inch penetration. Please note that the hammer used, unless otherwise noted, was an automatic trip hammer. This hammer operates with an efficiency of about 90%, whereas the manual (cathead and rope) hammer operates at an efficiency of about 60%. This means that the blow counts that are reported on the boring logs, where the automatic hammer was used, are about 2/3 of the values that would be reported if a conventional hammer had been used. A correction factor of 1.3 is generally used to convert the N-values from the automatic hammer to the normalized N-value (N_{60}).

Sampling was generally performed at 5-foot intervals to top of bedrock. Once top of bedrock was encountered, it was cored using NX diamond bit double wall core barrel to assess its relative quality as indicated by Core Recovery¹ and the Rock Quality Designation (RQD)². The length of rock cores varied from a minimum of 4 feet to about 15 feet, depending on the existing ground surface elevation and the rock quality.

The recovered soil and rock samples were labeled with the project name, boring number, sample number, depth of sample, SPT blow counts and the amount of recovery in feet. All samples were transported to GES's Office for classification and storage.

¹ The Core Recovery is defined as the ratio (expressed as a percent) of the total length of recovered core to the length cored.

² The Rock Quality Designation (RQD) is defined as the ratio (expressed as a percentage) of the total length of recovered core samples having a length of at least twice the core diameter (e.g., about 4 in for NX-core) to the total length of core.

The final test boring logs are included in Appendix A.

2.3 GENERALIZED SUBSURFACE CONDITIONS

The following general descriptions of the soil strata are based on our interpretations of the data collected from the eight (8) test borings performed. Under about 3-4 inches of asphalt, the generalized subsurface conditions are presented below.

Stratum 1: Fill (7)³ - This stratum generally consists of sand, silt, gravel, and some concrete and rock fragments. This stratum was encountered in all test borings, with a thickness ranging from 1.0 feet at the northeast corner of the site to about 20 feet at the northwest corner of the site. The SPT N-values within this stratum, using an automatic hammer, ranged from 2 to over 20-blows/ft. The large variation in N-values is indicative of uncontrolled fill. Characteristics of this fill may not be well defined based on the results obtained from 4-inch diameter borings that were widely spaced.

Stratum 2: Loose Sand (6) - This stratum was mainly encountered in one of the test borings, namely TB-4. This stratum was encountered below Stratum 1 and extended to a depth of about 16 ft. This stratum generally consists of fine to medium micaceous sand with small amounts of silt, and medium to fine gravel. Where encountered, this stratum extended from the bottom of stratum 1 to the top of medium dense to dense sand, i.e. Stratum 3. The N-values in this stratum were about 3 to 6 blows/ft, indicative of loose sand.

Stratum 3: Sand (3b, 3a) - This stratum was mainly encountered in the west portion of the site. This stratum was encountered below Stratum 1 in boring TB-1 and Stratum 2 in boring TB-4 and extended to a depth of about 33 ft and 25 ft, respectively. This stratum generally consists of fine to coarse sand with variable amounts of silt, and medium to fine gravel. Where encountered, this stratum extended from the bottom of Stratum 1 and Stratum 2 to the top of weathered bedrock, i.e. Stratum 4. The N-values in this stratum ranged from 20 to about 31 blows/ft, indicative of medium dense to dense sand.

Stratum 3: Weathered Bedrock (1d) Weathered bedrock was encountered below Stratum 1 or Stratum 3 in all test borings except in TB-4 and TB-6. This stratum generally consists of severely to completely weathered, soft Mica Schist. Due to the soft nature of this Stratum, it could not cored.

Stratum 4: Bedrock (1c, 1b, 1a) Bedrock was encountered and cored in all test borings. Bedrock encountered at the site is gray with black/white micaceous Schist. Also, Some white Quartzo-Feldspathic Alaskite type of rock was encountered in TB-4 and TB-8. Bedrock is variable from moderately weathered to fresh and from fractured to massive. Recovery and Rock Quality Designation (RQD), in general, increased with depth in all test borings. Recovery ranged from about 32 to 98% and the RQD from 17% to 84%.

³ Number in parentheses which follows the material designation indicates the classification of soil and rock material in accordance with the 2008 New York City Building Code.

2.4 GROUNDWATER CONDITIONS

Groundwater conditions at the site are based on measurements made inside the observation wells installed in test borings TB-2 and TB-7. Two (2) groundwater readings were taken manually, on November 28 and November 30, 2012. As shown below, the groundwater readings were taken during a period of about 2 weeks after the drilling was completed. The groundwater level should be expected to vary with the season and weather conditions or other unknown factors.

Date	Location	Groundwater Level Below Ground Surface (ft.)
11/28/2012	TB-2	9.7
11/28/2012	TB-7	12.6
11/30/2012	TB-2	9.7
11/30/2012	TB-7	12.7

In order to provide a design groundwater elevation/depth, both wells shall be “bailed” out and a re-charge rate be measured. However, for the purpose of this draft report, a design depth of about 9 ft. below top of pavement shall be considered.

2.5 LABORATORY TESTING PROGRAM

Due to the limited amount of overburden soils, which will be mostly excavated during construction, no Laboratory testing was performed for the purpose of this preliminary report. If the scope of construction or unusual soil conditions are discovered during the drilling of additional borings, a laboratory testing program maybe warranted.

3.1 GENERAL

This section presents seismic considerations, our preliminary recommendations for feasible foundation and floor slab system, and lateral earth pressures. Our preliminary evaluation and recommendations are based on the subsurface conditions encountered at the boring locations, our understanding of the site geology, foundation loading information, requirements of the NYCBC, and construction considerations.

3.2 SEISMIC CONSIDERATIONS

The subsurface conditions at the western third of the site, as obtained from borings TB-1 and TB-4, generally consist of about 25 to 35 feet of fill and sand overlying bedrock. A Site Class of "D" is recommended for this portion of site. The subsurface conditions at the eastern two-third of the site generally consist of about 2 to 10 ft of overburden over bedrock. The foundation for the buildings in this portion of the site will be founded on bedrock. Therefore, a site class of "B" is recommended for this portion of the site. The proposed structure is classified as "Structural Occupancy Category II." If the number of people occupying the property is over 300, then a Structural Occupancy Category of III should be used.

During construction of the basement, most of the loose sandy soils in the site will be removed. The remaining loose soils will be compacted. Therefore, soil liquefaction is not a concern at this site.

3.3 FOUNDATION RECOMMENDATIONS

Based on the results of the eight (8) test borings and the information provided to us on the possible scheme of construction, two (2) types of foundation system may be considered to support the proposed 13-story building with one-level basement.

3.3.1 Shallow Foundation (Footing on Rock)

The proposed one-level basement with about 10 feet floor to floor clearance would require an excavation of about 13 to 14 feet below the current top of pavement. This means that approximately half of the footprint of the proposed building, namely the eastern half, would bear in the bedrock stratum, i.e. Stratum 4.

We recommend that the eastern half of the proposed building, generally, in the area of TB-2, 3, 5, 6, 7, 7 and TB-8, be supported on spread footings founded on bedrock. Based on the rock core results, the quality of the rock ranges from "intermediate rock" (Class 1C) to "medium hard and hard rock" (Class 1b, 1a). It is recommended that the foundations be designed to bear on Class 1c rock or better with an allowable bearing pressure of 20 tsf.

As required by the NYC Building Code, it will be necessary to confirm the bearing conditions during construction. If Class 1c rock or better is not encountered at the bearing elevation of the footing, it will be necessary to over-excavate until such rock is encountered.

3.3.2 Deep Foundation (Drilled Piles)

It is recommended that small diameter drilled piles (min-piles) be used to support the foundations in the western half and along the existing 7 and 6-story buildings to the west of the site.

The drilled piles should consist of a minimum 7-5/8 inch diameter steel casing filled with concrete. The pile should be drilled through the overburden and socketed into bedrock (Stratum 4). The allowable bearing capacity of the pile will depend on the length of the socket. An allowable load of 60 tons can be achieved by socketing the pile a minimum of 5 ft into competent rock, i.e. Class 1c or better. Higher capacity piles are possible with a larger diameter and longer embedment into stratum 4. Supplemental recommendations will be provided once the remaining borings are drilled and the actual loads are identified.

3.3.3 Slab-on Grade

The floor slab for this building (the basement floor slab) may be constructed at grade. Based on the test boring results, the floor slab of the eastern half of the building will be bearing on either weathered bedrock or sound bedrock (Stratum 3 or Stratum 4). For the slab-on-grade design, a minimum of 6 inches of crushed stone covered.

For the western half of the proposed building, approximately west of TB-2 and TB-5, the basement floor slab can be constructed on existing material as a slab-on-grade bearing on a minimum of 6 inches of crushed stone.

Considering that the basement slab may be designed to be above the groundwater table, waterproofing of the slab may not be needed. However, a vapor barrier should be placed under the slab. Following completion of the planned additional borings and groundwater level measurements, further evaluation of the need for waterproofing will be performed. If waterproofing is required, recommendations will be provided in the final report.

Prior to construction of the slab, the subgrade should be compacted with a minimum 8 passes of a 10 ton or heavier roller. However, to avoid damage to the building walls to the west of the site, lighter compaction equipment, such as walk-behind roller, may be used near these buildings. A coefficient of sub-grade reaction of 200-lbs/in³ may be used for designing the slab.

The above recommendations for footings and slab-on-grade are dependent on GES, P.C being retained to provide controlled inspection of the subgrade.

3.4 LATERAL EARTH PRESSURES

The design lateral pressures for permanent basement walls consist of static and seismic pressures that are influenced by the thickness and type of overburden material. For design purposes, we recommend that the basement walls be designed for a static lateral soil and rock pressures given in the table below.

Material	Unit Weight (pcf)	Internal Friction Angle (deg)	Equivalent Unit Fluid Weight (pcf)
Fill/Sand			
Above Water Table	120	32	45
Below water Table	58	32	85
Rock:			
Above Water Table	170	35 (along joints)	30
Below water Table	108	35 (along joints)	75

The NYCBC also requires that the below grade walls be designed to resist seismic loads. We recommend using a seismic lateral soil force of $6H^2$ (lb/ft of wall), where H is the total vertical height of the wall, in feet. This force is in addition to the static force and should be applied at a distance of H/3 from the top of the wall (wall pressure is an inverted triangle).

The recommended lateral pressure does not include any surcharge loads adjacent to the walls or at the ground surface. We recommend adding a uniform (i.e., rectangular) lateral pressure distribution of 0.40 times the surcharge to the lateral soil pressure distribution. The structural engineer should determine the magnitude of the surcharge loads (i.e., live loads).

3.5 PERMANENT GROUNDWATER CONTROL

Based on the groundwater levels measured, a preliminary design water depth of 9 ft is recommended. Therefore, based on information provided to us regarding the basement height, waterproofing of the basement slab may not be required. Instead, perimeter footing drains maybe installed to prevent infiltration during storms and flooding. These drains should consist of perforated 6-in diameter PVC pipes surrounded by drainage media, i.e. granular material that have a maximum particle size of one inch and zero passing the No. 200 sieve. The drainage media should be placed in trenches lined with non-woven UV resistant geotextile.

A vapor barrier should be installed directly beneath the concrete slab, on top of the stone, to prevent moisture migration into the concrete. It may be prudent to waterproof the below grade walls to prevent water infiltration into the building due to any run off or water main break.

Following completion of the planned additional borings and groundwater level measurements, further evaluation of the need for waterproofing will be performed. If waterproofing is required, recommendations will be provided in the final report.

4.1 GENERAL

The following sections provide preliminary recommendations regarding preparation of the subgrade for shallow foundations, pile drilling and testing, excavation considerations, underpinning, backfill and compaction control, pre-construction surveys of adjacent buildings, and the need for construction monitoring.

4.2 SUBGRADE PREPARATION

Upon excavating the approximate eastern half of the building to the bearing subgrade of the footings, the material should be inspected and approved by a geotechnical engineer to ensure that the rock material encountered at the bearing level is the anticipated bearing material (i.e. Class 1c rock or better). The rock bearing surface should be level, and clean of soil, mud and other material that could undermine the bond between the concrete and the bearing surface.

4.3 PILE DRILLING AND TESTING

Prior to drilling the test piles for the western half of the proposed building, the contractor should submit the proposed design and the calculation for our review. Static load tests should be performed in accordance with the NYCBC. Two (2) pile load tests should be performed for a site having a footprint area between 5,000 sf and 30,000 sf. Load test procedures should be in accordance with the 2008 NYCBC. Production piles should not be drilled until test pile results are reviewed and are established by GES, P.C..

4.4 TEMPORARY SUPPORT OF EXCAVATION

Since the finished basement floor will be constructed at about 10 feet below existing ground surface, the site would have to be excavated to about 14 ft depth. Based on the results from the test borings, soil and rock are expected to be encountered during the excavation. Any soil faces, sidewalks, and utility lines along the excavation perimeter (particularly along 44th and 43rd Streets) will have to be temporarily retained until the new building walls are constructed and the area is properly backfilled.

A feasible support system may consist of soldier piles and wood lagging. In order to reduce excessive noise, vibrations, and settlement of adjacent structures and utility lines, the piles could be placed in pre-drilled holes. In areas where there is insufficient soil to achieve the necessary lateral reaction at the toe, the piles can be pinned at the bottom with rock anchors and/or embedded into the rock and backfilled with lean concrete. The use of continuous sheet piling is not appropriate at this site because of the potential detrimental effects of vibrations and possible difficulties associated with driving sheeting through the fill material and shallow bedrock.

If the temporary excavation support consists of soldier piles and lagging and the soldier piles are driven, measurements of vibration levels should be made in selected adjacent structures. The maximum vibration level that a structure can tolerate is dependent on many factors, including the age and condition of the building. Therefore, the maximum vibration level should be established as part of the pre-construction survey. However, as specified by the

New York City Fire Department (NYCFD), maximum peak particle velocity readings at the lowest level of any adjacent building should be kept below 2 in/sec. In order to reduce excessive noise and vibrations that might develop from hard driving of the piles through obstructions in the soil, the piles could be placed in pre-drilled holes.

When rock is encountered during excavation, the shoring systems required for the rock faces will depend on the nature, locations, extent, and orientation of discontinuities such as joints, shears, and foliation surfaces. These discontinuities, together with the excavation faces could form unstable rock wedges and slabs on the rock walls. The use of rock bolts and/or prestressed rock anchors may be required to stabilize any potentially unstable rock blocks. The type, number, and location of rock support is determined in the field after the rock face is exposed. We recommend that in general the rock face below the overburden be pattern bolted as the excavation proceeds to retain any wedges of rock that may appear or may potentially become unstable. For purposes of bidding, we recommend assuming 10 to 15 ft long, cement or epoxy grouted bolts will be required in a 10 ft grid pattern. This recommendation is for cost estimating purposes only. A qualified engineer/geologist should be present during excavation work to inspect the exposed rock surfaces and to evaluate the need for changes in the assumed bolting patterns and locations. The location and installation of the rock bolts/anchors should be approved and inspected by the Owner's Engineer.

The design of any temporary excavation support system should be the responsibility of a licensed New York Professional Engineer retained by the foundation contractor. All excavations of temporary support systems should conform to pertinent OSHA and local safety regulations. The soil parameters used in the design of the temporary support system should be reviewed by the owner's geotechnical engineer prior to construction of the temporary support structures.

4.5 TEMPORARY GROUNDWATER CONTROL

The bedrock of Stratum 4 is considered to be relatively impervious, therefore once the eastern half of the site is excavated, the surface runoff may not drain easily through this material. The contractor should be prepared to perform some localized dewatering/pumping due to seepage through the rock joints, if necessary, to maintain a relatively dry working conditions for the building footing and floor slab subgrade. On the western half of the site, dewatering may be required to keep groundwater about two feet below the bottom of the excavation during construction. The contractor should submit his dewatering plan to the Owner for review and approval.

4.6 EXCAVATION CONSIDERATIONS

4.6.1 Rock Excavation

Based on the bedrock being relatively shallow on the eastern half of the site, excavation of bedrock will need to be performed to achieve the cellar floor elevation. The degree of difficulty to excavate rock is dependent on many factors including the degree of fracturing of the rock, the rock hardness and strength, and the abrasiveness of the rock. It may be possible to use a ho-ram to peel away rock along joints and foliations. The contractor is responsible for the use of suitable methods for excavation at the site.

Special attention should be given to the excavation of rock along the limits of the excavation. It is recommended that line drilling be performed to reduce the amount of over break and to limit vibrations. The line drilling should be performed so that it creates a minimum of 50% rock removal (e.g., drill 3 inch diameter holes at 6 inch spacing). The proper use of line drilling will also assist in limiting the extent of the rock support that will be needed. In order to minimize vibrations in the adjacent buildings and reduce rock over break directly underneath the foundations of the adjacent buildings, channel drilling should be used when excavating rock adjacent to existing foundations that bear on rock.

During rock excavation operations, measurements of vibration levels should be made in selected adjacent structures. As specified by the New York City Fire Department (NYCFD), maximum peak particle velocity readings at the lowest level of any adjacent building should be kept below 2 in/sec.

4.6.2 Soil Excavation

Local temporary soil excavations above the natural groundwater level can have cut slopes as steep as 1.5H:1V. Temporary soil excavations below the groundwater level should be no steeper than 2H:1V.

The design of any soil slopes will be the responsibility of the foundation contractor's engineer. Design of temporary cuts and braced excavations should conform to pertinent OSHA and local safety regulations. Excavations and bracing will be subject to controlled inspection in accordance with the New York City Building Code.

4.7 BACKFILL AND COMPACTION REQUIREMENTS

If needed, select backfill or structural backfill should be granular soils free of cinder, brick, asphalt, ash, and other unsuitable materials. We recommend that structural backfill or select backfill beneath the proposed building foundations and slabs-on-grade be compacted to a minimum of 95% of the maximum dry density, as determined by ASTM D1557-88, Method C. All backfill should be placed in lifts not exceeding 8 in. in loose thickness. The subgrade underneath the backfill should be inspected and approved prior to placement of backfill.

4.8 UNDERPINNING

Underpinning may be required at locations where the foundations of existing adjacent structures are above the proposed excavation levels. It appears that the all the adjacent buildings to the east and west of the site have to be underpinned. Underpinning of these building may be required prior to the excavation for the proposed building basement. It is recommended that test pits be performed at several locations along the walls/building that have to be underpinned, to evaluate the depth and size of the foundation of these walls.

Underpinning should transfer the foundation loads from their present bearing level to a level below the lowest excavation elevation of the proposed basement. The underpinning designer should take these subsurface conditions described in this report into account and develop appropriate underpinning methods. The proposed underpinning system or other methods to

limit the ground movements should be reviewed and approved by the structural engineer prior to the construction.

4.9 PRE-CONSTRUCTION SURVEY

A pre-construction survey should be performed for any adjacent structure or utility that is within 50 ft of the construction site, especially the 3-story brick buildings located to the north and south of the site. On the basis of the survey, an observational program should be designed for checking performance and monitoring construction procedures. This observational program could include the establishment of survey points to monitor vertical and horizontal movements and/or the monitoring of vibrations during rock excavation. Construction procedures should be modified to reduce the vibration levels and movement of the adjacent structures, if warranted.

4.10 CONSTRUCTION INSPECTION

Our recommendations are contingent upon the proper review and observation during excavation and foundation construction operations by a geotechnical engineer familiar with the subsurface conditions and foundation design criteria. The geotechnical engineer's role should include the following:

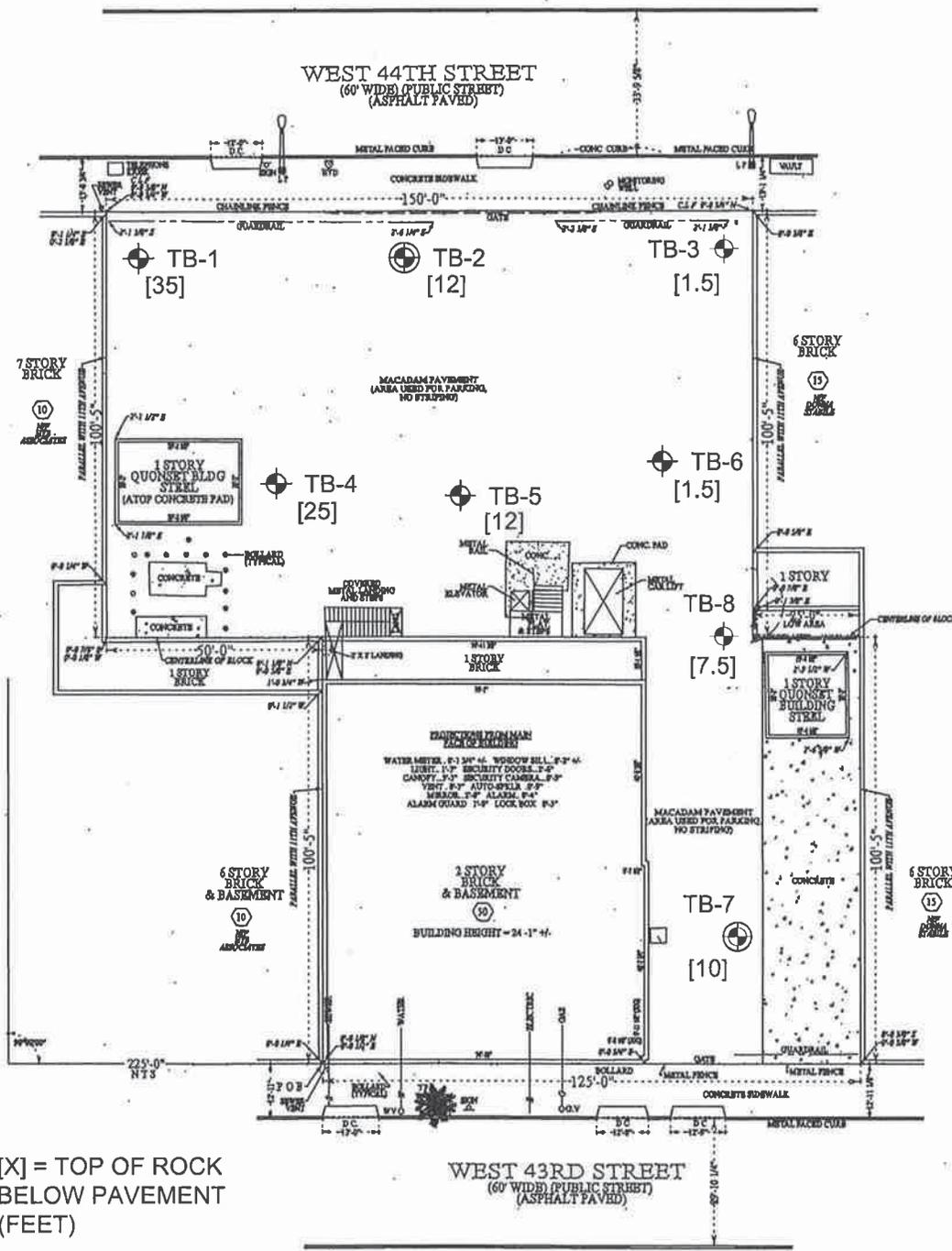
- Review and approval of contractor submittals related to foundation construction;
- Observation and documentation of all phases of excavation and foundation construction;
- Controlled inspection of subgrade preparation (required by the NYCBC);
- Controlled inspection of drilled pile installation (required by the NYCBC);
- Monitoring of subgrade preparation and structural fill placement and compaction.

Our conclusions and summary of recommendations are as follows:

1. Based on the test boring logs and the proposed structure, liquefaction at the site is not a concern. A Site Class of "B" is recommended for the eastern half of the site based on the NYCBC. A site class of D is recommended for the western half as rock is deeper in this area.
2. The Eastern half of the 13-story structure may be founded on a system of spread footings bearing on Stratum 4 (Bedrock). An allowable bearing pressure of 20 tsf is recommended for the spread footings.
3. The Western half of the 13-story structure may be founded on a deep foundation system, namely a drilled pile system. The drilled piles can be 7 5/8 inch in diameter with a rock socket of about 5 feet into Stratum 4, which can provide about 60 ton allowable bearing capacity.
4. For the slab-on-grade, a minimum of 6 inches of crushed stone should be placed under the slab. Prior to construction of the slab, the subgrade should be inspected and approved.
5. A pre-construction survey should be performed for any adjacent structure or utility that is within 50 ft of the construction site. On the basis of the survey, an observational program should be designed for checking performance and monitoring construction procedures. Construction procedures should be modified to reduce the vibration levels and movement of the adjacent structures, if warranted.
6. Our recommendations are contingent upon the proper review and observation during excavation and foundation construction operations by a geotechnical engineer/geologist familiar with the subsurface conditions and the foundation design criteria.

Professional judgments were necessary in relation to determining stratigraphy and soil properties from the subsurface investigations. Such judgments were based partly on the evaluation of the technical information gathered, and partly on our experience with similar projects. If further investigation reveals differences in the subsurface conditions and/or groundwater level, or if the proposed building design is different from indicated herein, or is changed, it is recommended that we be given the opportunity to review the new information and modify our recommendations, if deemed appropriate.

The results presented in this report are applicable only to the present study, and should not be used for any other purpose without our review and consent. This study has been conducted in accordance with the standard of care commonly used as state-of-the-practice in the profession. No other warranties are either expressed or implied.



[X] = TOP OF ROCK
BELOW PAVEMENT
(FEET)

1 BORING LOCATION PLAN
SCALE: 1" = 15'-0"

- LEGEND:**
- TB-1 TEST BORING LOCATION
 - TB-2 WELL LOCATION

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW ARTICLE 145, SECTION 7209.

546 WEST 44TH STREET NEW YORK CITY, NEW YORK			
GES GEOTECHNICAL ENGINEERING SERVICES, P.C.			
WHITE PLAINS, NEW YORK			
PHONE 914-592-4616		FAX 914-592-0416	
DR. BY	JWM	SCALE	AS NOTED
CK'D. BY	ZHM	DATE	11/27/2012
			FIG. NO. 1

**APPENDIX A
TEST BORING LOGS**

Log of Boring TB-1

Project: 534-546 WEST 44TH STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY					
Date(s) Drilled	11/15/12 - 11/15/12	Inspector	Richard Young	Coordinates	North: East:
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet)	NA
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	39.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Sampler Type(s)	Split Spoon
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				No. of Samples	Dist.: 7 Undist.: 0 Core (ft): 4

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0							about 3-4 inches of Pavement						
	SS S-1	0.7	11 10 7 3				FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Bricks, some Asphalt Pieces [7].						
5	SS S-2	0.7	WOH WOH 3 4				FILL: White, gray, and reddish brown fine to coarse Sand, Mica, some Bricks, medium to fine Gravel and Silt [7].						
10	SS S-3	0.9	1 2 2 2				FILL: Tan, medium to fine micaceous Sand, trace Bricks, trace medium to fine Gravel, some Silt [7].						
15	SS S-4	0.9	12 6 8 6				FILL: Gray to tan, fine to medium micaceous Sand, trace Bricks, trace fine Gravel, trace Silt [7].						Rig Chattering
20													

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Log of Boring TB-1

Project: 534-546 WEST 44TH. STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
20	SS S-5	1.1	5 7 13 12				[Stippled pattern]	Brown, fine to coarse micaceous Sand, some Silt, trace Clay (SP-SM) [3b].					20 ft. of 4" casing used.
25	SS S-6	1.1	5 10 11 12				[Stippled pattern]	SAME. (SP-SM) [3b].					
30	SS S-7	1.0	12 14 17 18				[Stippled pattern]	SAME. (SP-SM) [3a].					
35							[Horizontal lines pattern]	Presumed top of weathered rock. Very hard drilling from 33 to 35 ft.					
35	C-1			1	53	17	[Diagonal lines pattern]	Gray and black, Mica SCHIST, trace Garnet. Coarsely-Crystalline (to 1/4"). Moderate to severe weathering. Medium to soft. Total 6 Joints. [1d].					Loss of circulation at 36 ft.
40								Boring terminated at 39 ft. below existing ground.					Casing slipped and fell in the boring. Could NOT be retrieved. Additional coring, although necessary, it could not have done.

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Log of Boring TB-2

Project: 534-546 WEST 44TH STREET			Project Number: 2012032		
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY					
Date(s) Drilled	11/15/12 - 11/16/12	Inspector	Richard Young	Coordinates	North: East:
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet)	NA
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	25.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Sampler Type(s)	Split Spoon
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				No. of Samples	Dist.: 3 Undist.: 0 Core (ft): 10

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS S-1	0.9	10 8 4 2					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
5	SS S-2	0.7	2 8 7 6					FILL: White and tan with reddish brown fine to coarse Sand, some Bricks, medium to fine Gravel and Silt [7].					
10	SS S-3	0.1	50/2"					Presumed top of weathered rock. White-black gray with tan Mica SCHIST. Severely weathered. Soft [1d].					too soft to core from 10 to 15 ft. Roller bitted and sat casing to 15 ft.
15	C-1			1	80	64		15-15.3: White and black with gray, coarsely crystalline Mica SCHIST with garnet. Many joints and fractures. Slightly weathered, medium hard. 15.3-20: Gray and black Mica SCHIST, breaks on foliation, 6 joints. Slightly weathered, medium to hard [1-b].					15 ft. of 4" casing used. about 2.5 min/ft. from 15 to 20 ft.
20													

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Log of Boring TB-2

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
20	C-2			2	98	56		20 to 20.7 ft: Gray and black Mica SCHIST. Fresh. Medium to hard. 2 Joints. [2-65]. 20.7 to 25 ft: White and gray ALASKITE/Quartzo-feldspathic zone. 10 Joints. Hard, Fresh [1a to 1b].					about 3 min/ft. from 15 to 20 ft.
25								Boring terminated at 25 ft. below existing ground. GROUND WATER MONITORING WELL INSTALLED: 2" PVC Tip at 20 ft. 10 ft. Screen 10 ft. Riser Flush-Mount man hole cover					
30													
35													
40													

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Log of Boring TB-3

Sheet 1 of 1

Project: 534-546 WEST 44TH STREET				Project Number: 2012032			
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY							
Date(s) Drilled 11/14/12 - 11/15/12		Inspector Ziad Maad/RV			Coordinates North: East:		
Drilling Agency ADT, INC.		Foreman Mr. Rashid Malyukov			Approximate Surface Elevation (feet) NA		
Drilling Equipment CME 75		Drilling Method Mud Rotary			Completion Depth (feet) 18.0		Rock Depth (feet) 1.5
Casing Size/Type 4"-Steel		Size/Type of Bit 3 7/8"			Sampler Type(s) Split Spoon		
Groundwater Level and Date Measured NA		Hammer Wt/Drop Auto-140 lbs/30"		Casing Hammer Wt/Drop Auto-140 lbs/30"		Size/Type of Core Barrel NX	
Boring Location As shown on Figure 1						No. of Samples Dist.: 1 Undist.: 0 Core (ft): 15	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0							about 3-4 inches of Pavement						
	SS	1.2	9				FILL:						
	S-1		8				Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].						
			22				Presumed top of weathered rock.						
			56				Gray Mica SCHIST. Severely weathered. Soft [1d].						
5	C-1			1	98	66	White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, 7 joints, medium to hard [1-b].						about 6 mins/ft. from 3 to 8 ft. 5 ft. of 4" casing used.
10	C-2			2	82	72	White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, medium to hard [1-b].						about 4 mins/ft. from 8 to 13 ft.
15	C-3			3	98	78	13 to 15 ft.: White Quartzo-Feldspathic zone, Fresh Mica SCHIST, trace garnet. Slightly weathered, 3 joints, medium to hard [1-b]. 15 to 18 ft.: White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, 5 joints, hard [1-b].						Loss of circulation at 13-15 ft. about 3 mins/ft. from 8 to 13 ft.
20							Boring terminated at 18 ft. below existing ground.						

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Log of Boring TB-4

Project: 534-546 WEST 44TH STREET				Project Number: 2012032				
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY								
Date(s) Drilled: 11/16/12 - 11/16/12		Inspector: Richard Young			Coordinates North:			East:
Drilling Agency: ADT, INC.		Foreman: Mr. Rashid Malyukov			Approximate Surface Elevation (feet): NA			
Drilling Equipment: CME 75		Drilling Method: Mud Rotary			Completion Depth (feet): 30.0		Rock Depth (feet): 25.0	
Casing Size/Type: 4"-Steel		Size/Type of Bit: 3 7/8"			Sampler Type(s): Split Spoon			
Groundwater Level and Date Measured: NA		Hammer Wt/Drop: Auto-140 lbs/30"		Casing Hammer Wt/Drop: Auto-140 lbs/30"		Size/Type of Core Barrel: NX		
Boring Location As shown on Figure 1						No. of Samples Dist.: 5 Undist.: 0 Core (ft): 5		

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0							about 3-4 inches of Pavement						
	SS S-1	0.9	22 12 11 10				FILL: White and gray, fine to coarse Sand and medium to fine Gravel, some Bricks, some Debris [7].						
5	SS S-2	0.4	2 1 2 3				FILL: White, gray, and reddish brown fine to coarse Sand, some Bricks, medium to fine Gravel [7].						
10	SS S-3	0.8	3 2 1 1				Tan and brown, fine to medium micaceous Sand, trace medium to fine Gravel (SM) [6].						
15	SS S-4	1.3	2 1 6 8				SAME [6]. Brown, fine to coarse micaceous Sand, some Silt, trace Clay (SP-SM) [3b].						Boulder at 15 ft. 15 ft. of 4" casing used.
20													

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Log of Boring TB-4

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
20	SS S-5	1.4	9 10 10 11					Reddish brown, micaceous fine to medium Sand, trace Clay, some Silt (SP-SM) [3b].					
25	C-1			1	96	84		0-7 ft.: Black Mica SCHIST, soft, Slightly to moderately weathered, 2 Joints [1d]. 0.7 to 5 ft: White Quartzo-Feldspathic ALASKITE, Medium Hard, Fresh to slightly weathered, 5 Joints [1b].					top of soft rock at about 24 ft. Roller bitted to 25 ft. and cored. about 4.5 mins/ft.
30								Boring terminated at 30 ft. below existing ground.					
35													
40													

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Log of Boring TB-5

Project: 534-546 WEST 44TH STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY					
Date(s) Drilled	11/16/12 - 11/16/12	Inspector	Richard Young	Coordinates North:	
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA	
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	17.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Sampler Type(s)	Split Spoon
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				No. of Samples	Dist.: 3 Undist.: 0 Core (ft): 5

Depth, feet	Soil Samples		Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)							
0							about 3-4 inches of Pavement					
	SS S-1	0.8	13 15 13 9				FILL: Black and reddish brown, fine to coarse Sand and medium to fine Gravel, some Bricks, some Debris [7].					
5	SS S-2	0.5	3 4 5 5				FILL: SAME [7].					
10	SS S-3	0.9	2 2 15 50/3"				Tan, fine to medium micaceous Sand, trace Silt, trace medium to fine Gravel (SM) [6]. Weathered Rock: White and black, Mica SCHIST, severe to complete weathering, very soft [1d].					
15	C-1			1	32	24	12 to 13.6 ft.: White and gray ALASKITE/Quartzo-Feldspathic Zone. 5 joints, hard, fresh [1b]. Could be a Boulder, must be investigated in Phase II. 13.6 to 17 ft: Tan fine to medium Sand with Silt, not sure if it is Soil or Wash. See above.					12 ft. of 4 inch casing used.
							Boring terminated at 17 ft. below existing ground.					Due to mechanical break down, further coring could not be done. This area must be investigated further,
20												

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Log of Boring TB-6

Sheet 1 of 1

Project: 534-546 WEST 44TH STREET				Project Number: 2012032			
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY							
Date(s) Drilled	11/14/12 - 11/14/12	Inspector	Ziad H. Maad	Coordinates North: East:			
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA			
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	16.5	Rock Depth (feet)	1.5
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Sampler Type(s) Split Spoon			
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"	Size/Type of Core Barrel	NX
Boring Location As shown on Figure 1				No. of Samples Dist.: 1 Undist.: 0 Core (ft): 15			

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS	1.0	20					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
	S-1		21 50/0"					White and black with gray, Mica SCHIST, some garnet. slightly weathered, moderately fractured, 21 Joints, medium to intermediate Rock [1C]					No casing used for this boring
5	C-1			1	91	38							about 6 mins/ft.
10	C-2			2	91	33		White and black with gray, Mica SCHIST, some garnet. slightly weathered, moderately fractured, 21 Joints (mineralized), medium to intermediate Rock [1C]					about 4 mins/ft.
15	C-3			3	68	43		Gray, Mica SCHIST, some garnet. moderately weathered, moderately fractured, 14 Joints, medium to intermediate Rock [1C]					about 5 mins/ft.
20								Boring terminated at 16.5 ft. below existing ground.					

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY).GPJ

Log of Boring TB-7

Sheet 1 of 2

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY					
Date(s) Drilled: 11/13/12 - 11/13/12		Inspector: Ziad H. Maad		Coordinates: North: East:	
Drilling Agency: ADT, INC.		Foreman: Mr. Rashid Malyukov		Approximate Surface Elevation (feet): NA	
Drilling Equipment: CME 75		Drilling Method: Mud Rotary		Completion Depth (feet): 20.0	Rock Depth (feet): 10.0
Casing Size/Type: 4"-Steel		Size/Type of Bit: 3 7/8"		Sampler Type(s): Split Spoon	
Groundwater Level and Date Measured: NA		Hammer Wt/Drop: Auto-140 lbs/30"	Casing Hammer Wt/Drop: Auto-140 lbs/30"	Size/Type of Core Barrel: NX	
Boring Location As shown on Figure 1				No. of Samples: Dist.: 3 Undist.: 0 Core (ft): 10	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0							about 3-4 inches of Pavement						
	SS S-1	0.5	16 39 50/2"				FILL: Brown, gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].						
5	SS S-2	1.0	9 24 11 9				SAME. [7].						
10	S-3	0.1	100/4"				Weathered rock [1d]. Gray, Mica SCHIST, moderately fractured, moderately weathered, 14 joints. Intermediate Rock [1C].						Loss of circulation at 7 ft. 10 ft. of 4 Inch casing used.
	C-1			1	88	38							about 3 mins/ft.
15	C-2			2	90	55		Gray, Mica SCHIST, moderately fractured, slightly weathered, 13 joints. medium hard Rock [1b].					about 4 mins/ft.
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY).GPJ

Log of Boring TB-7

Project: 534-546 WEST 44 TH STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS	
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)								
20								Boring terminated at 20 ft. below existing ground.						
25								GROUND WATER MONITORING WELL INSTALLED: 2" PVC Tip at 20 ft. 10 ft. Screen 10 ft. Riser Flush-Mount man hole cover						
30														
35														
40														

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY).GPJ

Log of Boring TB-8

Sheet 1 of 1

Project: 534-546 WEST 44TH STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH AVENUE, NYC, NY					
Date(s) Drilled	11/14/12 - 11/14/12	Inspector	Ziad H. Maad	Coordinates North:	
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA	
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	12.5
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Rock Depth (feet)	7.5
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				Sampler Type(s)	Split Spoon
				Size/Type of Core Barrel	NX
				No. of Samples	Dist.: 2 Undist.: 0 Core (ft): 5

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS S-1	1.0	6 28 8 8					FILL: Brown, gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
5	S-2A	1.0	1 2 4					SAME. [7].					
	S-2B	0.5	30					Weathered rock [1d].					
								White ALASKITE/Quartzo-Feldspathic. Moderately fractured, slightly weathered, intermediate Rock [1c]					7 feet of 4 inch casing used.
10	C-1			1	83	33							about 5 mins/ft.
								Boring terminated at 12.5 ft. below existing ground.					
15													
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY).GPJ

GEOTECHNICAL ENGINEERING STUDY

for

**546 WEST 44TH STREET
NEW YORK, NY**

Prepared For:

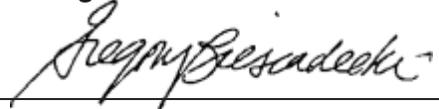
**CREF 546 West 44th Street, LLC
1980 Post Oak Boulevard, Suite 1600
Houston, TX 77056**

Prepared By:

**Langan Engineering, Environmental, Surveying
and Landscape Architecture, D.P.C.
21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001**



**Robert A. Garino, PE
New York State Professional Engineer License No.079030**



**Gregory L. Biesiadecki , PE, LEED AP
New York State Professional Engineer License No. 063718**

**26 April 2013
170229701**

LANGAN

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Appendix B..... 2012 Langan Boring Logs
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INTRODUCTION

This report presents the results of our geotechnical engineering study for the proposed development at 546 West 44th Street in Manhattan, New York. The purpose of this study is to evaluate the subsurface conditions and to develop recommendations related to foundation design.

This report was prepared by Langan Engineering, Environmental, Survey and Landscape Architecture, D.P.C. (Langan) in accordance with our proposal with Crimson Real Estate Advisors, L.P., dated 22 February 2013. Our understanding of the project, the results of our geotechnical field investigation and a summary of our recommendations are presented herein. Environmental testing results and analysis related to the waste characterization of the on-site soil were not part of this study and will be presented under a separate cover.

Architectural Information was provided to us by Cetra/CRI Architecture PLLC; the structural engineer is Desimone Consulting Engineers. Ground surface elevations were taken from a topographic survey prepared by Roguski Land Surveying, P.C., dated 26 February 2013. All elevations reported herein correspond to the Borough President of Manhattan Datum (BPMD) which is 2.75 ft above the Mean Sea Level at Sandy Hook, New Jersey, 1929 (NGVD 1929).

SITE DESCRIPTION

The proposed development, at 546 West 44th Street in the Midtown section of Manhattan, New York (Block 1072, Lot 50), is on city block bordered by West 44th Street to the north, West 43rd Street to the south, 10th Avenue to the East, and 11th Avenue to the west. An open-air railroad easement, which services the Amtrak Empire Line, exists about 230 feet (ft) to the east of the site. A site location map is reproduced as Drawing No.1.

The approximately 28,000 square ft project site is mostly an open air, asphalt paved parking lot. A two-story garage building with a cellar level exists on the southwest corner of the site. Construction drawings of the existing garage building obtained from the New York City Department of Buildings (DOB) indicate that the basement extends typically about 7 ft below grade. The building is supported on shallow foundations. Existing sidewalk grades bordering the site vary from about el 15 to about el 19 along West 44th Street and about el 15 to el 16 along West 43rd Street.

Adjacent Structures

The site is bordered by existing buildings to the east and to the west. Both buildings span the full width of the block. A seven-story Manhattan Mini Storage building with a single cellar level, built in 1920, is to the west of the site at 543 West 43rd Street. The certificate of occupancy for the building indicates that the west building has a cellar level. A six-story building, built in 1940, is to the east of the site at 530 west 44th Street. The building to

the east has at least a cellar level beneath a portion, if not the entire building footprint. Research of available drawings returned no foundation information for the adjacent structures.

Flood Zone

We have reviewed the National Flood Insurance Rate Maps for the City of New York (Community-Panel No. 360497 0088 F) published by the Federal Emergency Management Agency (FEMA). Based on our review, the site is within Zone X, areas determined to be outside the 0.2% annual chance floodplain. We have also reviewed the current FEMA Advisory Base Flood Elevation (ABFE) Maps and note that the site falls outside the advisory limit of the 0.2% Annual Chance Flood Hazard Area. The ABFE Maps include new advisory flood zone boundaries and advisory base flood elevations that better estimate the areas included in the Flood Insurance Rate Maps that FEMA is expected to release this summer. A copy of the FEMA ABFE Map is attached as Drawing No. 2.

PROPOSED CONSTRUCTION

The proposed development consists of two 14-story buildings, known herein as Buildings A and B. Building A will be on the north side of the site fronting West 44th Street. Building B will occupy the south side of the site fronting West 43rd Street. The buildings will have partial cellar levels that are connected by an amenity room and a corridor. The combined footprint area of the cellar levels is about 20,100 square ft including a center landscaped portion. The cellar level will extend about 10 ft below ground surface, corresponding to about el 5.

The above grade portions of the buildings will be separated by an approximately 60-ft wide yard area. The yard area will consist of a ground level landscaped area on the east side, a ground level paved space with a covered breezeway near the center of the yard, and a depressed landscaped area on the west side matching the proposed cellar level of the buildings.

SUBSURFACE INVESTIGATION

A subsurface investigation was completed in 2012 by others. A supplementary subsurface investigation was inspected in 2013 by Langan. Both field investigations are described below.

2013 Geotechnical Investigation

Our geotechnical subsurface investigation program consisted of drilling a total of four borings: two exterior borings and two interior borings. The exterior borings are identified as LB-1(OW) and LB-2. The interior borings are identified as LB-3 and LB-4(OW). All borings were drilled by Warren George Inc. between 1 April and 8 April 2013, under the full-time special inspection of Langan. The borings were drilled using a track-mounted DK-525 drill rig. The borings were drilled to depths ranging from 9 to 40 ft below ground surface (bgs). A boring location plan is provided as Drawing 4.

Standard Penetration Test (SPT) Standard Penetration Resistances (N-values) were recorded and soil samples were typically obtained continuously to a depth of about 14 ft below grade and at 5 ft intervals thereafter. Soil samples were obtained using a standard two-inch outside diameter split spoon sampler driven by a 140-pound donut hammer in accordance with ASTM D1586.

Rock cores were obtained with a NX-sized double-tube core barrel with a diamond cutting bit in accordance with ASTM D2113. Rock type, percent core recoveries (REC), and Rock Quality Designation (RQD) values were determined for each core run.

Groundwater observation wells were installed in completed Borings LB-1(OW) and LB-4(OW). Each well consisted of 10 ft of PVC screen and solid PVC riser pipe. Steel well covers were grouted in place to protect the well-points for future readings. Well construction logs are provided in Appendix C.

Recovered soil samples and rock cores were visually examined and classified in the field by our engineer in accordance with the Building Code and the Unified Soil Classification System (USCS). Soil classifications, Standard Penetration Resistances, and other field observations were recorded on the field logs. Copies of final boring logs are provided in Appendix B.

All soil samples were returned to our office in Manhattan, New York for storage up to six months. In accordance with Building Code requirements, subsurface investigation samples need to be kept by the property owner for up to one year after obtaining certificate of occupancy.

2012 Investigation

The 2012 geotechnical investigation consisted of drilling eight borings, identified as Borings TB-1 through TB-8. The borings were drilled by Aquifer Drilling and Testing, Inc. under the full-time observation of Geotechnical Engineering Services, P.C. (GES). The borings were reportedly completed to depths ranging from 12.5 to 39 ft. SPTs were performed at 5-ft intervals to the top of bedrock; once top of bedrock was encountered, rock cores ranging from 4 to 15 ft were cored. The eight GES borings are superimposed on Drawing No. 4.

A preliminary report, dated 5 December 2012, was prepared by GES. The report gives a written account of an investigation completed at the site between 13 and 16 November 2012. A copy of the GES boring logs, is provided in Appendix A.

SUBSURFACE CONDITIONS

The generalized subsurface profile consists of uncontrolled fill material overlying rock or natural sand. Where encountered, the natural sand is underlain by rock. In general, the top of sound rock slopes down from a depth of about 3 ft at the east side of the site to a depth of over 35 ft at the west side of the site. Considering the two investigations used dissimilar sampling hammers, $(N_1)_{60}$ ¹ blowcounts will be used in this section of the report. A detailed description of each soil stratum is given below in order of increasing depth. General subsurface profiles are presented in Drawing Nos. 5 through 7.

Fill [Class 7]

Fill material, consisting of sand and gravel of assorted colors, with varying amounts of silt, brick and concrete fragments was encountered all but one boring. The fill thickness ranges from about 3 to 20 ft. $(N_1)_{60}$ values in the fill ranged from 4 blows per foot (bpf) to refusal², but typically range from 8 to 57 bpf, averaging 31 bpf. The fill is considered to be generally loose to medium-dense. The higher $(N_1)_{60}$ values are likely the result of obstructions in the fill that impeded the advance of the split-spoon sampler.

The uncontrolled fill is classified as Building Code Class 7; Controlled and Uncontrolled Fills.

¹ The $(N_1)_{60}$ blowcount is the measured SPT N-value normalized to a common reference effective overburden stress, and corrected for hammer efficiency, borehole diameter, rod length, and sampler lining.

² Refusal indicates blowcounts greater than 100 blows for 6 inches of split spoon penetration were measured.

Sand [Class 3a & 3b]

A layer of coarse to fine sand of assorted colors, with varying amounts of gravel, silt, and mica was encountered below the fill material in four borings within the deep rock zone (LB-1(OW), LB-4(OW), TB-1, and TB-4). The thickness of the sand layer ranges from about 4 to 20 ft. $(N_1)_{60}$ values in the sand typically ranged from about 9 to refusal bpf, but typically range from 17 to 39 bpf averaging about 34 bpf.

The sand layer is classified as Building Code Class 3a and 3b; Dense, and Medium Dense Granular Soils.

Silt [Class 5b]

Within the sand layer, one sample of silt was observed in Boring LB-1(OW). The sample was obtained at a depth of about 15 ft below grade. The silt consisted of gray silt with some clay, and trace amounts of fine sand and fibers. Thickness of the silt pocket is about 2 ft. One $(N_1)_{60}$ value of 19 bpf was obtained within the silt material.

The silt is classified as Building Code Class 5b, Medium Dense Silts and Silty Soils.

Weathered Rock [Class 1d]

Weathered rock was encountered above sound rock in ten of the twelve borings. Top of this layer was encountered at depths ranging from about 1 to 34 ft below existing grade, corresponding to el 7 to -17. The thickness of the layer ranged from about 1 to 7 ft. The weathered rock contains intact rock as well as residual soil which display the parent rock's structure. It is noted that, although hard, the highly fractured rock did not meet the Building Code requirements to be classified as Class 1C rock. $(N_1)_{60}$ -Values recorded within the weathered rock layer all reached refusal. Rock core recoveries (RCD)¹ ranged from 32 to 91 percent, averaging about 60 percent. Rock Quality Designation (RQD)² values ranged from 17 to 33 percent, averaging about 28 percent.

The weathered rock is classified as Building Code Class 1d material.

¹ Core recovery is defined as the ratio of the total length of rock recovered to the total length of core run.

² Rock Quality Designation is defined as the sum of the lengths of all core pieces over 4-inches in length divided by the total core run length (for NX size cores). The RQD is an indicator of overall rock mass quality.

Bedrock [Class 1a, 1b & 1c]

Sound bedrock was encountered in nine of the twelve borings. Where encountered, depth of bedrock ranged from about 3 ft to 30 ft below existing ground surface, corresponding to el 16 to about el -13. The bedrock is grey to white quartz-mica schist of the Hartland Formation. Top of sound rock slopes down from a depth of about 3 ft at the east side of the site, to a depth of over 35 ft at the west side of the site.

Fractures in the rock were observed to be generally fresh to moderately weathered. Rock core recoveries ranged from 68 to 100 percent, averaging about 90 percent. RQD values ranged from 38 to 100 percent, averaging about 66 percent.

The bedrock at the site is classified as Building Code Class 1a, Class 1b and Class 1c material (Hard Sound Rock, Medium Hard Rock, and Intermediate Rock, respectively).

Groundwater

Water in Borings TB-2 AND TB-7 was measured perched near top of rock at depths of about 10 ft and 13 ft below ground surface, respectively. Water in Borings LB-1(OW) AND LB-4(OW) was measured within the overburden material, above the top of rock at a depth of about 16 ft and 6 ft below ground surface respectively, corresponding to about el 2.

RECOMMENDATIONS

The following sections evaluate the subsurface conditions established by the geotechnical investigation as it relates to, or may impact the various aspects of the proposed foundation design. Our recommendations for seismicity, foundation system, groundwater control and other geotechnical engineering related issues are presented herein.

Seismicity

This section provides the results of our seismic evaluation for the site. The following subsections provide recommendations for seismic site coefficients and liquefaction potential. Conclusions and recommendations provided herein are in accordance with the Building Code seismic requirements that became effective in July 2008.

Design Spectral Response Accelerations and Seismic Design Category

The mapped maximum considered earthquake response spectra at short periods (S_s) and at 1-second period (S_1) are 0.365g and 0.071g respectively. The subsurface conditions at the anticipated foundation level can be generally characterized as uncontrolled fill material overlying rock or natural sand. Where encountered, the natural sand is underlain by rock. Top of rock ranges from a depth of about 3 ft at the east side of the site to a depth of more than 35 ft at the west side of the site.

The estimated average SPT $(N_1)_{60}$ value for the top 100 ft is about 90 bpf (assuming SPT values within the rock mass equal 100 bpf), corresponding to Site Class C. The Site Coefficient for short periods (F_a) is 1.2 and for 1-second period (F_v) is 1.7. The design spectral response accelerations at short periods (SD_s) and at 1-second period (SD_1) are 0.292g and 0.08g, respectively.

The proposed structure is in Structural Occupancy Category II, which corresponds to Seismic Use Group I. For the above design spectral accelerations, it is our judgment that the Seismic Design Category (SD_C) is Category B.

Liquefaction Potential

The Building Code requires an evaluation of the liquefaction potential of non-cohesive soils below the groundwater table and to a depth of 50 ft below the ground surface. The Building Code screening process typically uses uncorrected field N-values to investigate the potential for liquefaction. In this case $(N_1)_{60}$ values were used to account for the different hammers used during the GES and the Langan investigations. The $(N_1)_{60}$ values were plotted against depth to investigate the potential for liquefaction. Several data points fall within the "Liquefaction Probable" zone, in accordance with the Building Code screening tool for Occupancy Category II. The Building Code Screening Chart is attached as Drawing No. 8.

The potential for soil liquefaction was further evaluated using the procedure outlined by Youd et al. (2001). The Youd et al. evaluation is based on the Seed and Idriss (1982) procedure for liquefaction evaluation and is currently considered to be State of Practice procedure, as recommended by the National Earthquake Hazard Reduction Program (NEHRP). This evaluation presents an empirical relationship between the earthquake demand, represented by the Cyclic Stress Ratio (CSR). The CSR is correlated to the Peak Ground Acceleration (PGA) of the design earthquake event, as well as the in-situ stresses, whereas the CRR is correlated to SPT N-values obtained in the field. The field N-values is converted to $(N_1)_{60}$, by applying correction factors for soil overburden pressure (C_N), hammer energy efficiency (C_E), borehole diameter (C_B), rod length (C_R), sampler lining (C_S).

Our analysis parameters included a Magnitude 5.71 earthquake event, a Peak Ground Acceleration of 0.147g, and a Magnitude Scaling Factor of 2. All data points have a factor of safety of 1.25 or greater and typically have a factor of safety greater than 1.75. It is our judgment that liquefaction is unlikely and need not be considered in the design. The results of the Youd et al. liquefaction analysis are attached as Drawing No. 9.

Foundation System

Suitable bearing materials at the site are the natural overburden sand and the rock; the fill material is considered unsuitable for foundation support. Although the natural sand is a suitable bearing material, we recommend that all building loads gain support on or in the rock to avoid potential differential settlement.

As discussed, the top of rock is relatively shallow on the east side of the site and slopes down towards the west. Foundations in portions of the site where rock is near the general subgrade for the cellar may be constructed directly on rock. Construction of a shallow foundation in areas where rock is significantly below the general excavation for the cellar (i.e., on the west side of the site) will be problematic due to the required over excavation, anticipated dewatering and the need to avoid undermining of the adjacent building. In areas of deeper rock relative to the cellar, we recommend a drilled caisson foundation system to transfer the loads to the underlying bedrock in areas.

Caisson Foundations

The load carrying capacity of the caisson is derived from the shear stress between the concrete and the roughened rock face inside the rock socket. Side shear resistance in the top 2 ft of the rock socket should be neglected to account for the fractured and uneven nature of the rock surface. We recommend a design rock socket peripheral shear resistance of 200 pounds per square inch (psi) for the concrete-to-rock interface in compression and 100 psi in tension. The minimum rock socket length is recommended to be 5 ft.

The capacity of a caisson may be customized to the loading requirements. The Building Code requires that the limiting structural capacity of a caisson be based upon 33% of the minimum required grout strength and 50% of the steel reinforcing yield strength. Spacers/centralizers should be used to keep the reinforcing steel in the central portion of the steel casing and bond zone. The steel casing sections should have a minimum yield strength of 36 kips-per-square-inch (ksi) and be filled with minimum 5,000 psi (in 28 days) cement-grout. The required support capacity may be tail

The recommended tension capacity for a caisson may be assumed to be 50% of that for compression. Where uplift loads are applied, local and global stabilities need to be considered for the rock socket design. Therefore, the rock socket lengths at column locations subjected to uplift need to be designed on a case-by-case based on the uplift load, and number, locations, and spacing of the caissons in the pile cap.

Caissons with rock socket in bedrock do not need to be load tested in accordance with Building Code. However, inspection of the rock socket using a down-the-hole video camera is necessary to confirm the rock quality.

Shallow Foundations

In areas where the rock is shallow and the overburden material can be practically excavated, individual spread footings bearing on Class 1b bedrock or better may be used. The recommended allowable bearing pressure is 40 tons per square foot (tsf). The minimum recommended footing area for individual column support is 9 square ft. The minimum width for a continuous footing is 1.5 ft.

It is noted that shallow foundations, bearing on the top of rock offer little uplift resistance. Uplift may be resisted using permanent tie-down anchors in sound rock. Tie-down anchors should consist of double-corrosion-protected high strength threaded bars. Bond lengths should be designed using an allowable peripheral shear of up to 100 psi along the grout-rock interface. The bond length should be a minimum of 10 ft into sound bedrock (Building Code Class 1.c or better).

In general, the top of rock is below the proposed top of slab elevations, however, rock excavation should be anticipated to create the east portion of the cellar space underneath Building A (about one third of Building A cellar footprint) and the north half of the proposed amenity space in the rear yard area. Sloping top of rock, joints, foliations, and local zones of weathered or fractured rock may require locally deepening of the footing excavations. It is especially important that the rock bearing surface be made level and clean prior to receiving the foundations.

New footings adjacent to existing footings should be constructed outside the influence zone of the adjacent footing to minimize risk of loading the footing. The Footing Influence Line is shown on Drawing No. 11.

Slab Support

The lowest level slabs can be supported on-grade bearing on rock or natural soil material. we recommend that a minimum of 1 ft of clean crushed stone be used below the slab to provide drainage and to allow for uniform bearing (this will tend to eliminate differential settlement of the slab due to portions bearing on rock and portions bearing on natural overburden material).

Following general excavation of the site, we recommend that the exposed subgrade within the limits of the deep foundation area be proof rolled with a minimum of 8 overlapping coverages of a smooth drum vibratory roller having a static weight on the drum of 5 tons. Any loose or soft zones remaining after the proof-rolling should be removed and replaced with controlled compacted fill. Placement of structural fill is discussed in the Fill Material and Compaction Criteria section of this report. We recommend that a bi-axial geogrid be placed over the prepared soil subgrade; the geogrid should overlap a minimum of 10 ft

onto the rock subgrade. The recommended modulus of subgrade reaction for support of gravity loads on the compacted fill is 100 psi per inch.

Below Grade Walls

Lateral pressure against subgrade walls will vary depending on the stratum bearing against the wall and surcharge loads adjacent to the wall (if present). The upper fill materials will typically exert a higher lateral pressure than the bedrock. Lateral loads due to surcharges from sidewalks and streets, and building loads from the surrounding structures must be included.

Permanent below grade walls will be subjected to lateral pressures due to soil, rock, hydrostatic, and surcharge loads. The recommended design lateral pressure diagram has a triangular distribution using an equivalent fluid weight of 60 psf per ft of depth of soil (in accordance with the Building Code minimum requirement) and 18 psf per ft for rock plus potential water pressure as shown in Drawing No. 11. Lateral pressures due to surcharge should be designed as a uniform distribution based on a pressure equal to 50 percent of the vertical pressure.

Permanent Groundwater Control

The measured groundwater level at the site is about 15 to 16 ft below existing ground surface, corresponding to about el 2; where rock was shallower, water was also measured on the top of rock. We typically recommend a design groundwater level of 5 ft above the measured stabilized groundwater level to take into account the variation in the measured water level, potential seasonal fluctuations and broken utility lines. At this site, the 5-ft design groundwater level corresponds to a hydrostatic pressure equivalent to 2 ft of water above the top of cellar slab. The hydrostatic pressure resulting from the design water level can be resisted using the dead weight of the building and a structural slab.

Waterproofing

The lowest floor slab and below grade walls should be fully waterproofed. A membrane type waterproofing, such as the Preprufe and Bituthene products by W.R. Grace, should be used. The use of bentonite waterproofing or negative side crystalline waterproofing is not recommended. For horizontal applications, the waterproofing membrane should be installed on a 2-inch thick working membrane (mud slab). The vertical waterproofing should be protected with a rigid barrier to prevent damage during backfilling operations.

In addition to waterproofing, the foundation walls should have a drainage panel such as Hydroduct 220 by Grace, or approved equivalent. The drainage panel will serve to provide protection for the waterproofing membrane and to minimize water from accumulating against the foundation walls above the water table.

Successful waterproofing is dependent on careful installation, specifically on penetrations, corners, laps and seams. We recommend that a warrantee be obtained from the manufacturer and installer to cover materials and workmanship; only certified installers should be used to perform the work. Diligent protection and quality control is critical in producing a final product that limits the potential for seepage. Detailed daily inspections should be performed to document any damage resulting from the contractor's activities. Repairs should be made as soon as possible. A representative of the manufacturer should perform a final inspection and approve all work prior concrete pours.

CONSTRUCTION RECOMMENDATIONS

Excavation

General excavation to the proposed foundation level will be required to a depth of about 12 ft below sidewalk grade and deeper for footings, elevator pits, and utility pits. The excavated material will include both overburden soil and rock. Soil excavation using conventional earthmoving equipment (i.e., excavators) is feasible. Rock excavation will likely require rock chipping and splitting techniques to reach proposed design grades and to construct footings. The perimeter excavation adjacent to 43rd and 44th Streets and the excavation for the east side of the proposed cellar level should be, at a minimum, line-drilled (drill holes at about 4 to 6 inch spacing) to limit rock over-break. We do not anticipate the need for rock excavation adjacent to the existing 543 West 43rd Street building. Should rock excavation be required, very sensitive and careful removal techniques, such as channel drilling (drill holes located adjacent to each other forming a continuous open slot), should be used. Channel drilling should extend a minimum of 2-ft below the design subgrade level.

All excavations should be conducted in accordance with all OSHA requirements including, but not limited to, temporary shoring, utilizing trench boxes, and proper benching. All work plans should be submitted for Owner and design team review prior to commencement of excavation operations.

Temporary Excavation Support

Construction of the proposed basements will require an excavation that will need to be temporarily supported if the excavation sides cannot be sloped back. We anticipate the need for an excavation support system along the north and south sides of the excavation.

Where rock is shallow, the most viable option for excavation support is the use of concrete piers that bear on rock and extend up to the sidewalk elevation. Timber lagging can span between individual piers. Vertical tie-downs and lateral support will likely be needed to resist forces that would tend to cause overturning and sliding of the piers. Where top of rock extends below the bottom of the excavation, we recommend a soldier pile and

lagging system. Soldier piles should be installed in pre-drilled holes to reduce vibration levels and disturbance to adjacent structures and utilities.

Final design of the excavation support system should be performed by the excavation contractor. The Contractor will be responsible for the preparation of excavation drawings showing all locations of shoring, sections and elevations, dimension and spacing of piers, soldier piles, lagging and all steel dimensions if needed. The design should be sealed by a professional engineer licensed in the State of New York.

Underpinning

Foundation information from the adjacent structures was not available from the DOB archives due to the age of the buildings. However, a search of the Certificate of Occupancy for the buildings indicates both buildings have single cellar levels. The Manhattan Mini-Storage building, to the west, has rentable storage space in the cellar, suggesting a full-height cellar. Therefore, excavation of the overburden material beyond about a 12 ft depth will require underpinning of the adjacent building.

A detailed design for underpinning, including construction sequence, should be signed and sealed by a Professional Engineer registered in the State of New York.

Temporary Groundwater Control

The groundwater level will need to be controlled in the local excavations for foundation construction. We anticipate that groundwater seepage during foundation construction will predominately come from the fractured bedrock. We anticipate this seepage to occur at a small to moderate rate. Surface runoff within the general excavation can be controlled using sump pumping from gravel filled trenches and sump pits. If water seepage is higher than estimated, or the excavation is deepened, then steps to mitigate water inflow (e.g., grouting of exposed seams) could be performed during foundation excavation operations.

Also, a permit from the New York City Department of Environmental Protection (NYCDEP) will be required for water discharge; an evaluation will be made by the NYCDEP to check if the local sewers can handle the volume of water.

Fill Material and Compaction Criteria

Fill material to be used to raise grade around footings or below the slab-on-grade should be free of organic, frozen, and other deleterious materials, and should have a maximum particle size no greater than 4 inches. Imported fill should contain no more than 30% of the material retained on the $\frac{3}{4}$ inch sieve. The material passing the $\frac{3}{4}$ inch sieve should contain, by weight, no more than 40% passing the No. 100 sieve, or 12% passing the No. 200 sieve. On-site material meeting the above referenced criteria can be used as controlled backfill. Fill should be placed in uniform 12-inch-thick loose lifts and compacted

to a minimum of 95% of the maximum dry density as determined by Modified Proctor tests (ASTM 1557). Water content at the time of compaction should be within a few percentage points of optimum.

Grain size distributions, maximum dry density and optimum water content determinations should be made on representative samples of the proposed fill material. All fill placement and compaction should be subject to inspection and testing. No fill material should be placed on areas where free water is standing, on frozen subsoil, or on surfaces which have not been approved by the on-site geotechnical engineer. The suitability of on-site material for reuse as backfill should be determined during construction by the Owner's geotechnical engineer.

ADDITIONAL RECOMMENDATION

Preconstruction Conditions Documentation and Monitoring Program in Adjacent Structures

General

Pre-construction conditions documentation of the adjacent structures at 543 West 43rd Street and 530 West 44th Street, sidewalks and utilities in nearby areas should be performed. The survey would provide the owner and foundation contractor with documentation of existing conditions in the event of a future damage claim. On the basis of this survey, an observational and instrumentation program should be designed for monitoring the performance of adjacent structures and evaluating construction procedures. This program should consist of monitoring horizontal and vertical movements by optical surveying and vibration monitoring using threshold-type seismographs to measure construction-induced vibrations. In addition, prior to the start of construction a plumb survey of the adjacent buildings should be performed. The plumb survey will document the relative verticality of the adjacent buildings.

Optical Survey and Vibrations

During site excavation, a precise optical survey program should be implemented to monitor vertical and horizontal movements of surrounding structures and the excavation perimeter including the excavation support system and the sidewalk grades. The survey should be performed biweekly, with measurements taken to the nearest 0.005 ft. A fixed off-site reference benchmark should be used. At least two baseline surveys should be made prior to the start of work.

The threshold peak particle velocities (PPV) of 2 in/sec for buildings with concrete foundation walls and 0.5 in/sec for building with brick or rubble foundation walls should be

considered. These thresholds should be verified or revised based on the results of the pre-construction conditions survey.

CONSTRUCTION DOCUMENTS AND CONSTRUCTION QUALITY ASSURANCE

Technical specifications and design drawings should incorporate Langan's recommendations. When authorized, Langan will assist the design team in preparing specification sections related to geotechnical issues such as earthwork, shallow foundations, pile foundations, backfill and excavation support. Langan should also, when authorized, review foundation drawings prepared by the Structural Engineer, as well as Contractor submittals relating to materials and construction procedures for geotechnical work.

Langan has investigated and interpreted the site subsurface conditions and developed the foundation design recommendations contained herein, and is therefore best suited to perform quality assurance observation and testing of geotechnical-related work during construction. This work requiring quality assurance confirmation includes, but is not limited to, earthwork, backfill, ground improvement, shallow and deep foundations, and excavation support. Recognizing that construction is essentially the completion of design, Langan's quality assurance observation and testing during construction is necessary to maintain our continuity of responsibility on this project.

OWNER AND CONTRACTOR OBLIGATIONS

The Contractor is responsible for construction quality control, which includes satisfactorily constructing the foundation system and any associated temporary works to achieve the design intent while not adversely impacting or causing loss of support to neighboring structures. Construction activities that can alter the existing ground conditions such as excavation, fill placement, foundation construction, ground improvement, pile driving/drilling, dewatering, etc. can also potentially induce stresses, vibrations, and movements in nearby structures and utilities, and disturb occupants of nearby structures. Contractors working at the site must ensure that their activities will not adversely affect the performance of the structures and utilities, and will not disturb occupants of nearby structures. Contractors must also take all necessary measures to protect the existing structures during construction. By using this report, the Owner agrees that Langan will not be held responsible for any damage to adjacent structures.

The preparation and use of this report is based on the condition that the project construction contract between the Owner and their Contractor(s) will include: 1) Langan being added to the Project Wrap and/or Contractor's General Liability insurance as an additional insured, and 2) language specifically stating the Foundation Contractor will

defend, indemnify, and hold harmless the Owner and Langan against all claims related to disturbance or damage to adjacent structures or properties.

LIMITATIONS

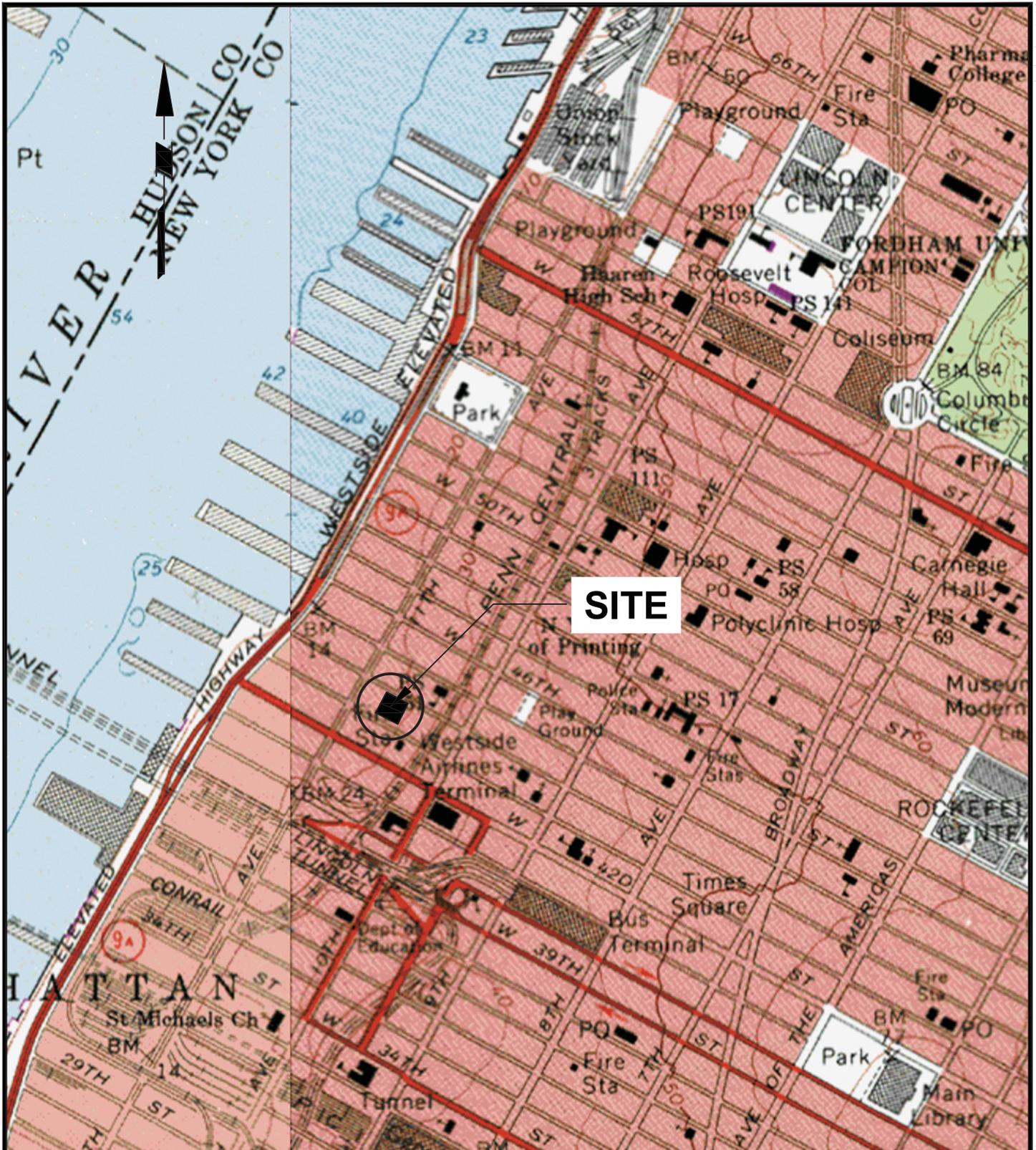
The conclusions and recommendations provided in this report are based on subsurface conditions inferred from a limited number of boring, as well as architectural information provided by Cetra/CRI Architecture PLLC. Recommendations provided are dependent upon one another and no recommendation should be followed independent of the others.

Any proposed changes in structures or their locations should be brought to Langan's attention as soon as possible so that we can determine whether such changes affect our recommendations. Information on subsurface strata and groundwater levels shown on the logs represent conditions encountered only at the locations indicated and at the time of investigation. If different conditions are encountered during construction, they should immediately be brought to Langan's attention for evaluation, as they may affect our recommendations.

This report has been prepared to assist the Owner, architect and structural engineer in the design process and is only applicable to the design of the specific project identified. The information in this report cannot be utilized or depended on by engineers or contractors who are involved in evaluations or designs of facilities (including underpinning, grouting, stabilization, etc.) on adjacent properties which are beyond the limits of that which is the specific subject of this report.

Construction activities that require controlled inspection as required by the NYC Building Code include environmental issues (such as potentially contaminated soil and groundwater) and are outside the scope of this study and should be addressed in a separate study.

FIGURES



REFERENCE: USGS MAP, "YONKERS QUADRANGLE, NY-NJ, 7.5-MINUTE SERIES (TOPOGRAPHIC)" (1998).

LANGAN

21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001

T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering, Environmental, Surveying and
Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
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546 WEST 44TH STREET

NEW YORK

NEW YORK

SITE LOCATION MAP

Project No.
170229701

Date
4/26/2013

Scale
N.T.S.

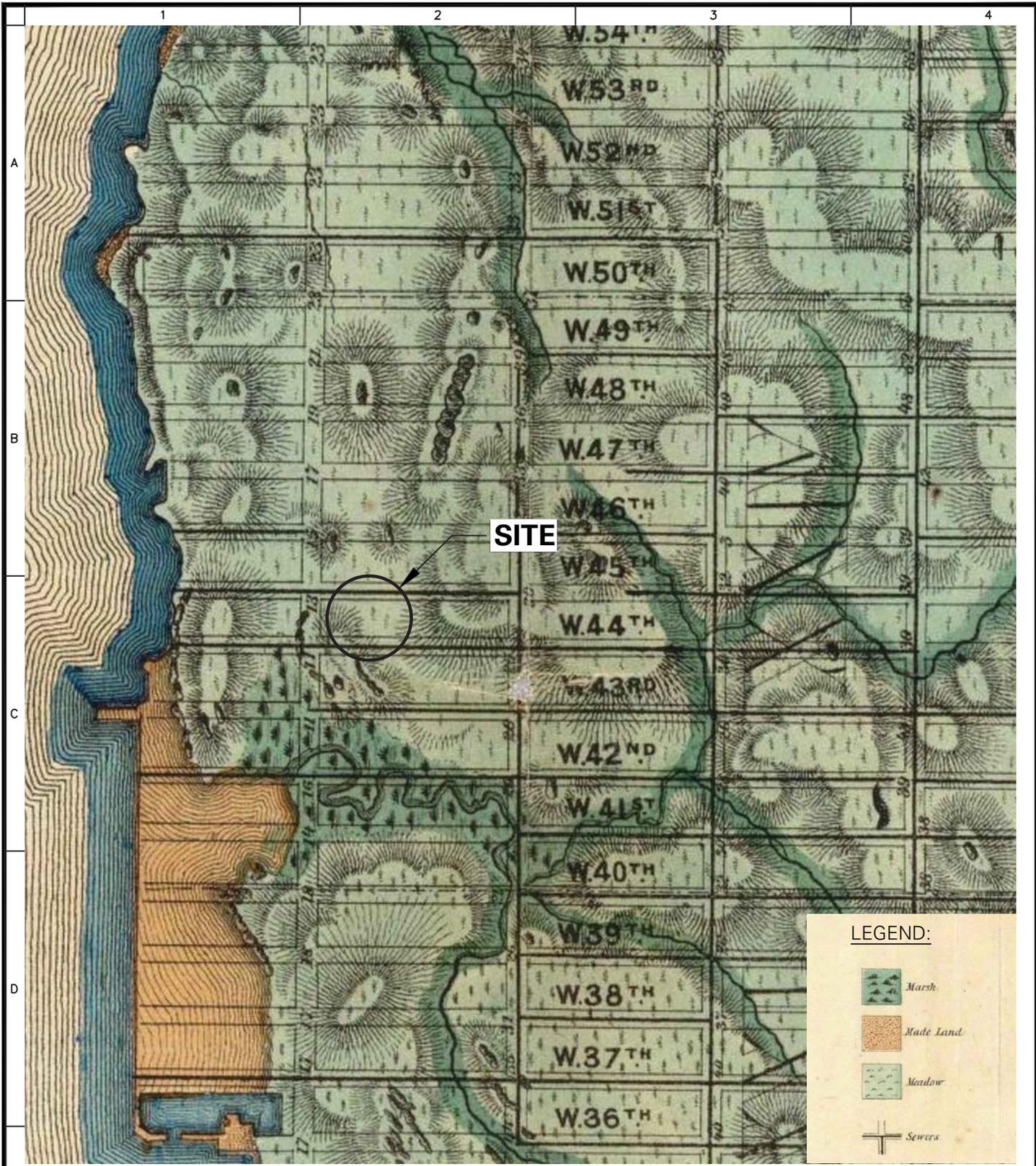
Drawn By
RS

Submission Date
4/26/2013

Drawing No.

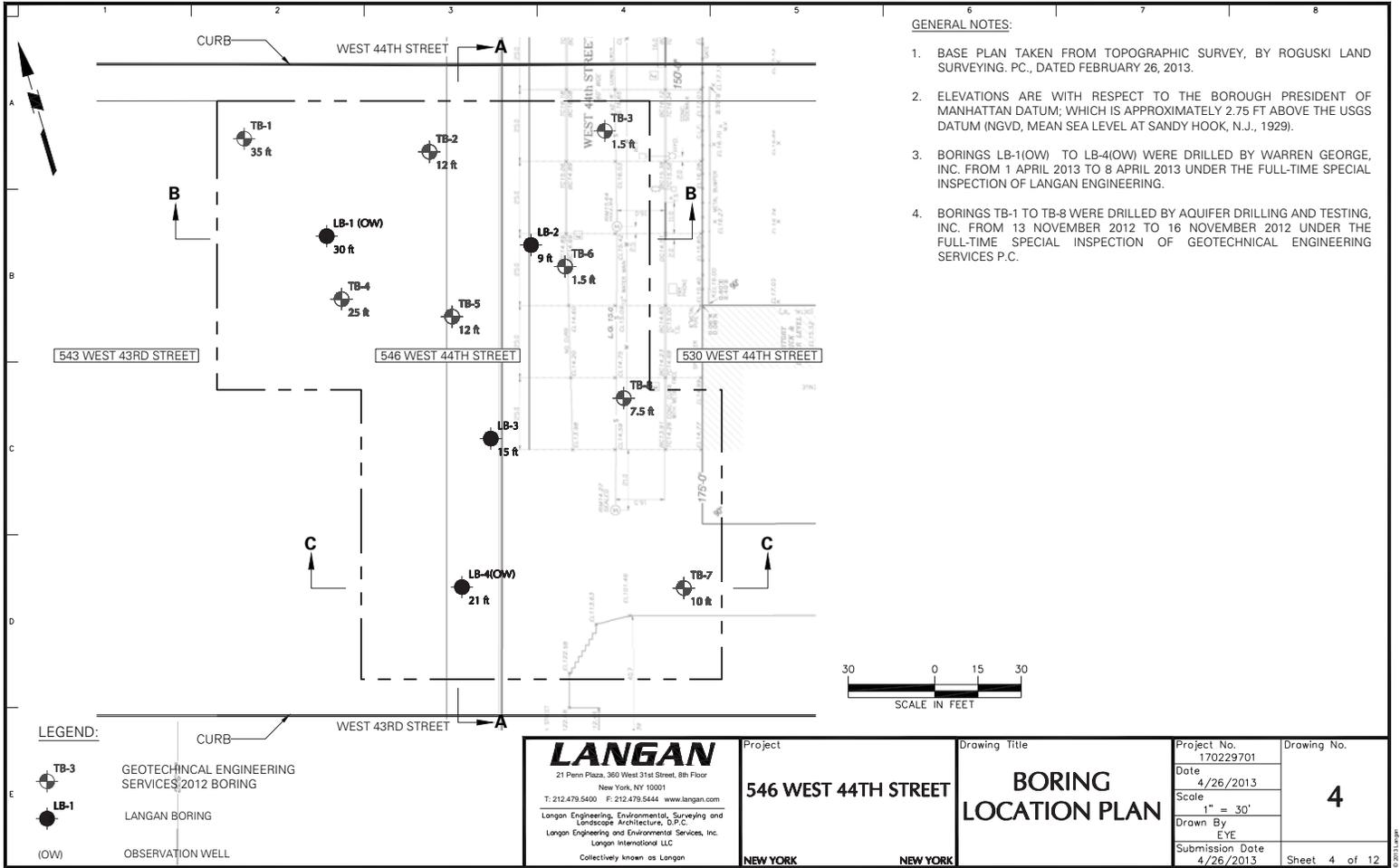
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Sheet 1 of 12



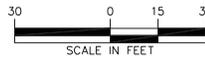
SOURCE: "SANITARY & TOPOGRAPHICAL MAP OF THE CITY AND ISLAND OF NEW YORK," VIELE, 1865.

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	<p>546 WEST 44TH STREET</p> <p>NEW YORK NEW YORK</p>	<p>VIELE MAP (1865)</p>	170229701	<p>3</p> <p>Sheet 3 of 12</p>	
			Date		4/26/2013
			Scale		N.T.S.
			Drawn By		EYE
	Submission Date	4/26/2013			



GENERAL NOTES:

1. BASE PLAN TAKEN FROM TOPOGRAPHIC SURVEY, BY ROGUSKI LAND SURVEYING, PC., DATED FEBRUARY 26, 2013.
2. ELEVATIONS ARE WITH RESPECT TO THE BOROUGH PRESIDENT OF MANHATTAN DATUM; WHICH IS APPROXIMATELY 2.75 FT ABOVE THE USGS DATUM (NGVD, MEAN SEA LEVEL AT SANDY HOOK, N.J., 1929).
3. BORINGS LB-1(OW) TO LB-4(OW) WERE DRILLED BY WARREN GEORGE, INC. FROM 1 APRIL 2013 TO 8 APRIL 2013 UNDER THE FULL-TIME SPECIAL INSPECTION OF LANGAN ENGINEERING.
4. BORINGS TB-1 TO TB-8 WERE DRILLED BY AQUIFER DRILLING AND TESTING, INC. FROM 13 NOVEMBER 2012 TO 16 NOVEMBER 2012 UNDER THE FULL-TIME SPECIAL INSPECTION OF GEOTECHNICAL ENGINEERING SERVICES P.C.



LEGEND:

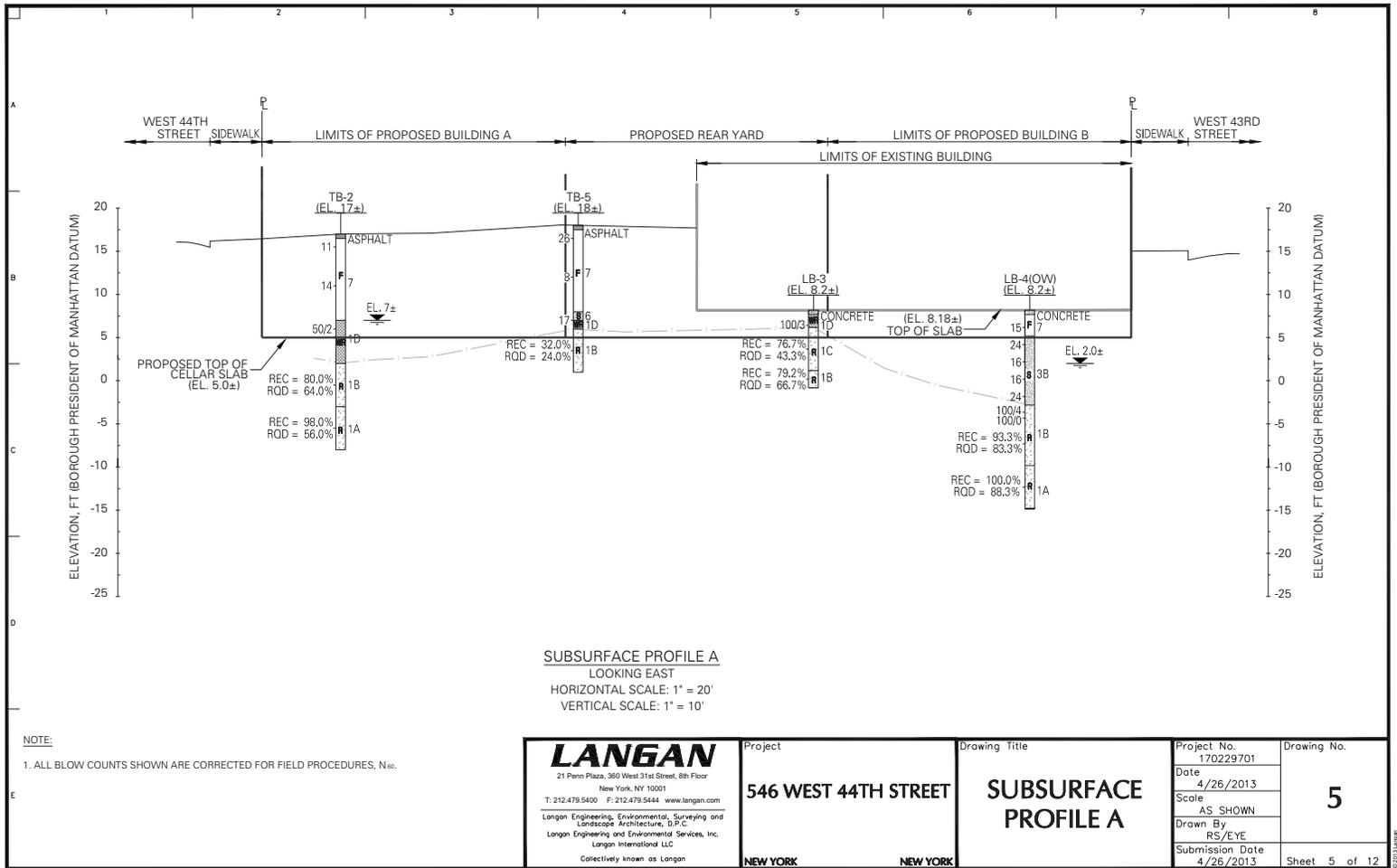
	GEOTECHNICAL ENGINEERING SERVICES 2012 BORING
	LANGAN BORING
	OBSERVATION WELL

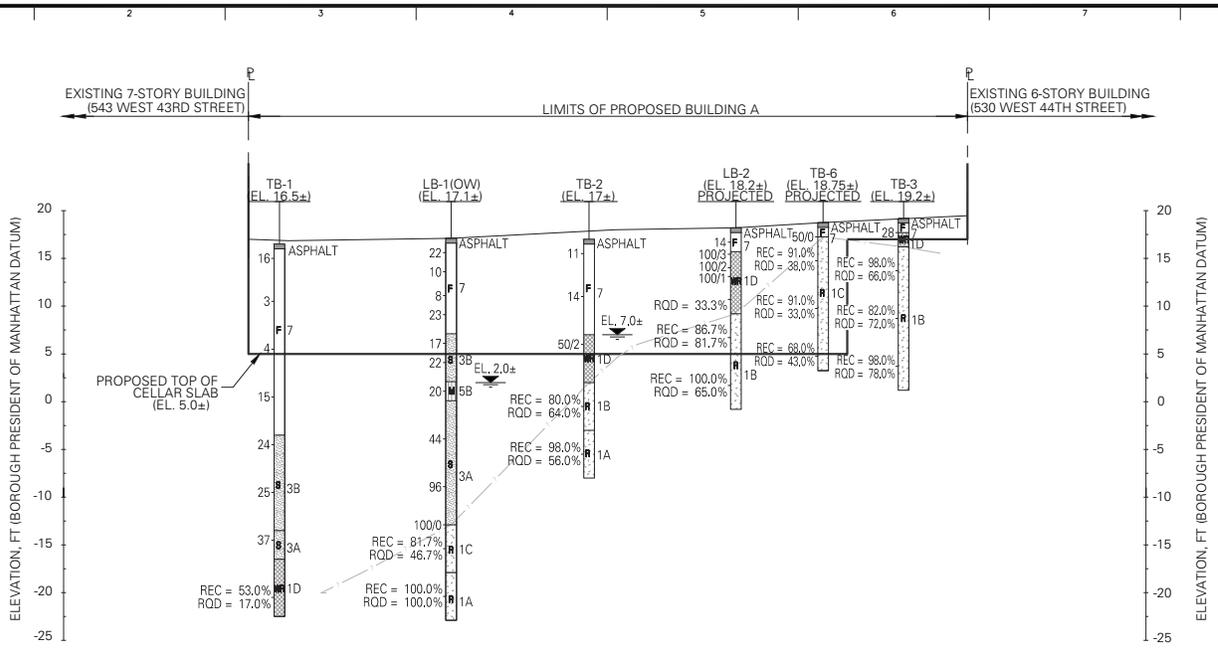
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 21 Penn Plaza, 360 West 31st Street, 8th Floor
 New York, NY 10001
 T: 212.479.5400 F: 212.479.5444 www.langan.com
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Project
546 WEST 44TH STREET
 NEW YORK NEW YORK

Drawing Title
BORING LOCATION PLAN

Project No. 170229701	4
Date 4/26/2013	
Scale 1" = 30'	
Drawn By EYE	
Submission Date 4/26/2013	
Sheet 4 of 12	





SUBSURFACE PROFILE B
 LOOKING NORTH
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 10'

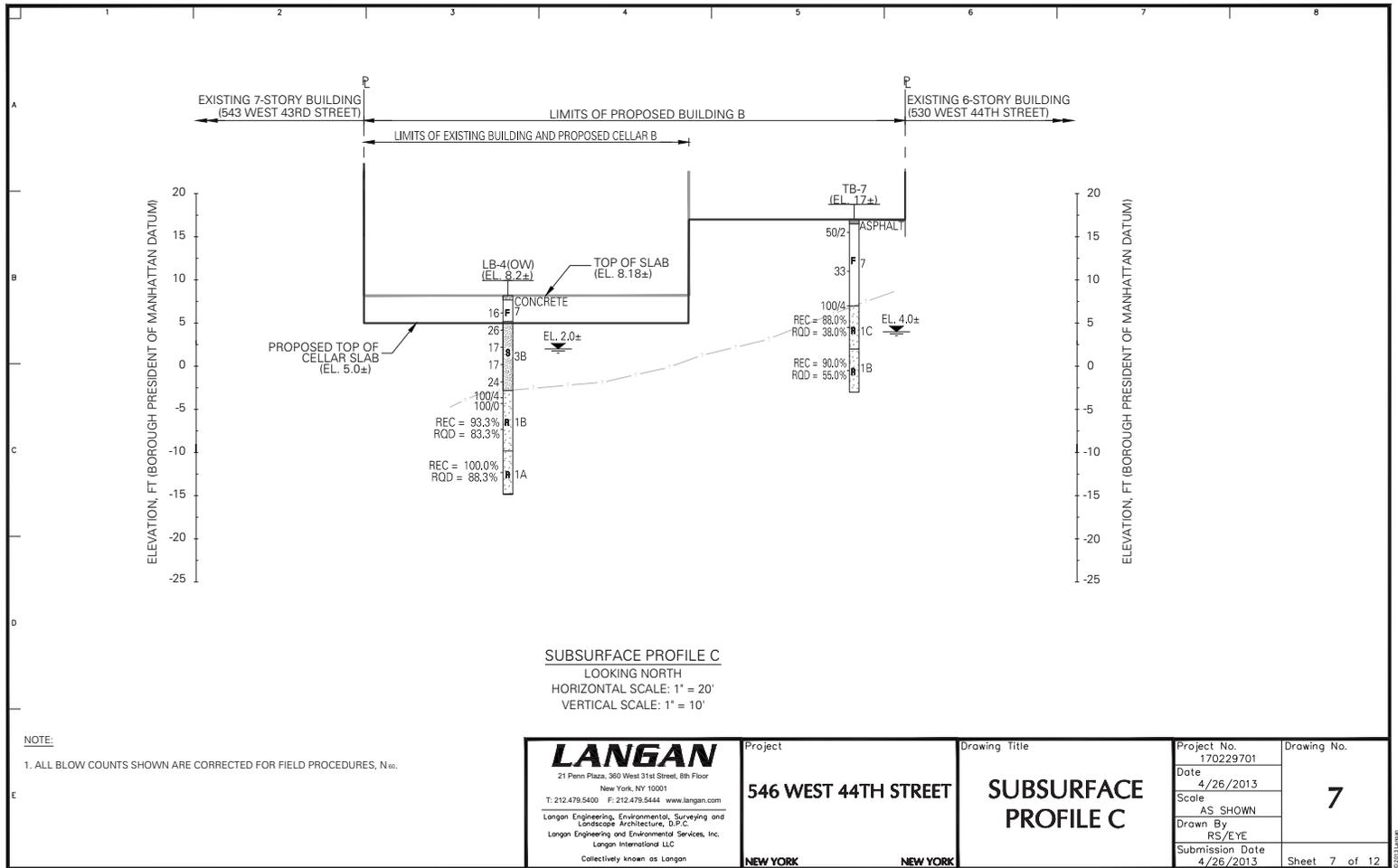
NOTE:
 1. ALL BLOW COUNTS SHOWN ARE CORRECTED FOR FIELD PROCEDURES, N₆₀.

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 New York, NY 10001
 T: 212.479.5400 F: 212.479.5444 www.langan.com
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546 WEST 44TH STREET
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Drawing Title
**SUBSURFACE
 PROFILE B**
 NEW YORK

Project No. 170229701	6
Date 4/26/2013	
Scale AS SHOWN	
Drawn By RS/EYE	
Submission Date 4/26/2013	
Sheet 6 of 12	

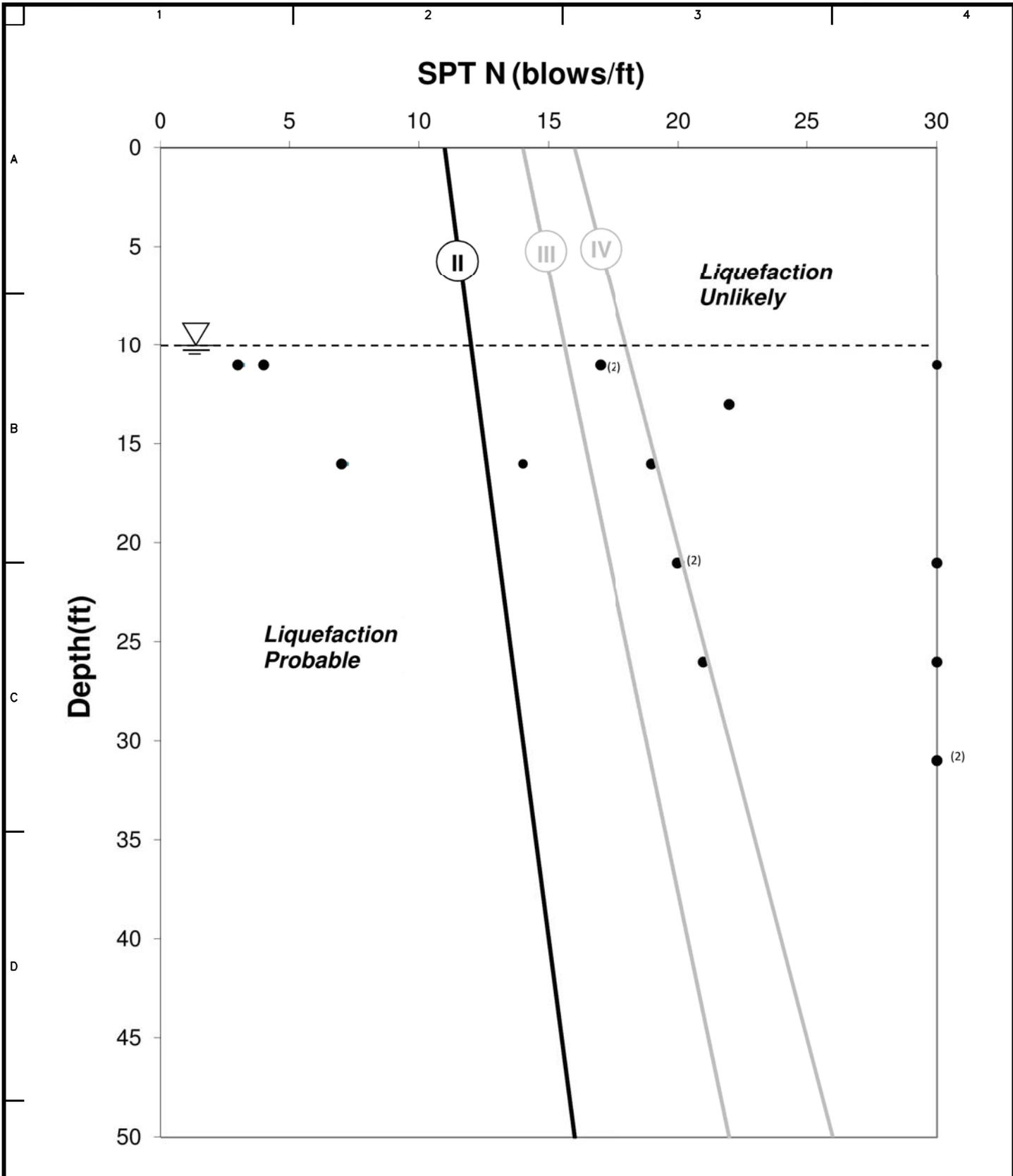


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 New York, NY 10001
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Project
546 WEST 44TH STREET
 NEW YORK

Drawing Title
**SUBSURFACE
 PROFILE C**
 NEW YORK

Project No. 170229701	Drawing No. 7
Date 4/26/2013	
Scale AS SHOWN	
Drawn By RS/EYE	
Submission Date 4/26/2013	Sheet 7 of 12



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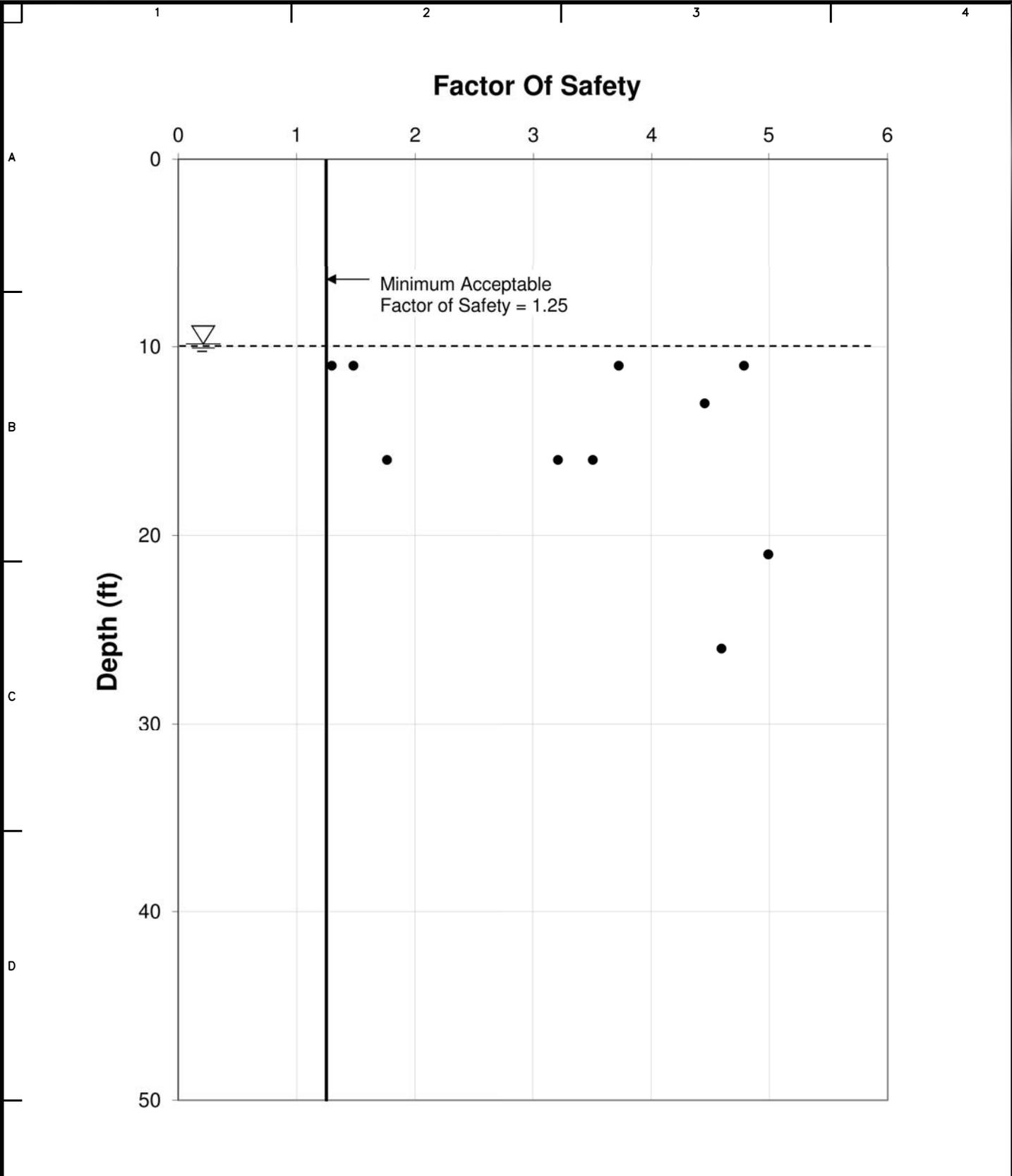
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546 WEST 44TH STREET

NEW YORK NEW YORK

**NYCBC
 LIQUEFACTION
 SCREENING
 CHART**

Project No. 170229701	8
Date 4/26/2013	
Scale NTS	
Drawn By EYE	
Submission Date 4/26/2013	
Sheet 8 of 12	



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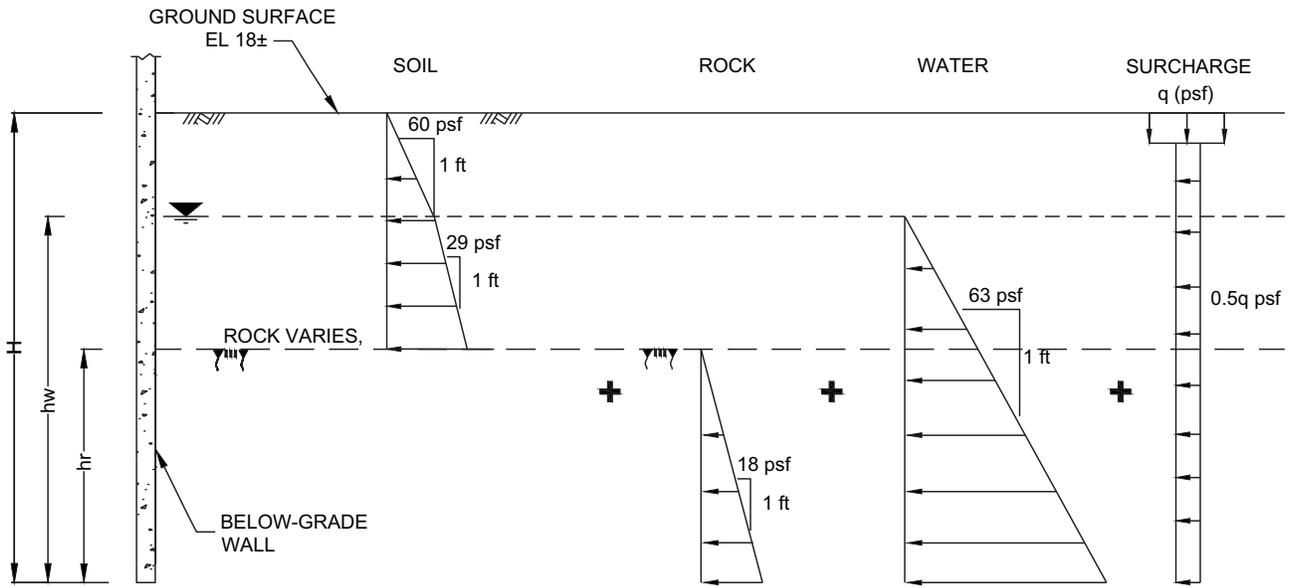
NEW YORK NEW YORK

**YOU D ET AL.
 LIQUEFACTION
 FACTOR OF
 SAFETY CHART**

Project No. 170229701
Date 4/26/2013
Scale NTS
Drawn By EYE
Submission Date 4/26/2013

Drawing No.
9

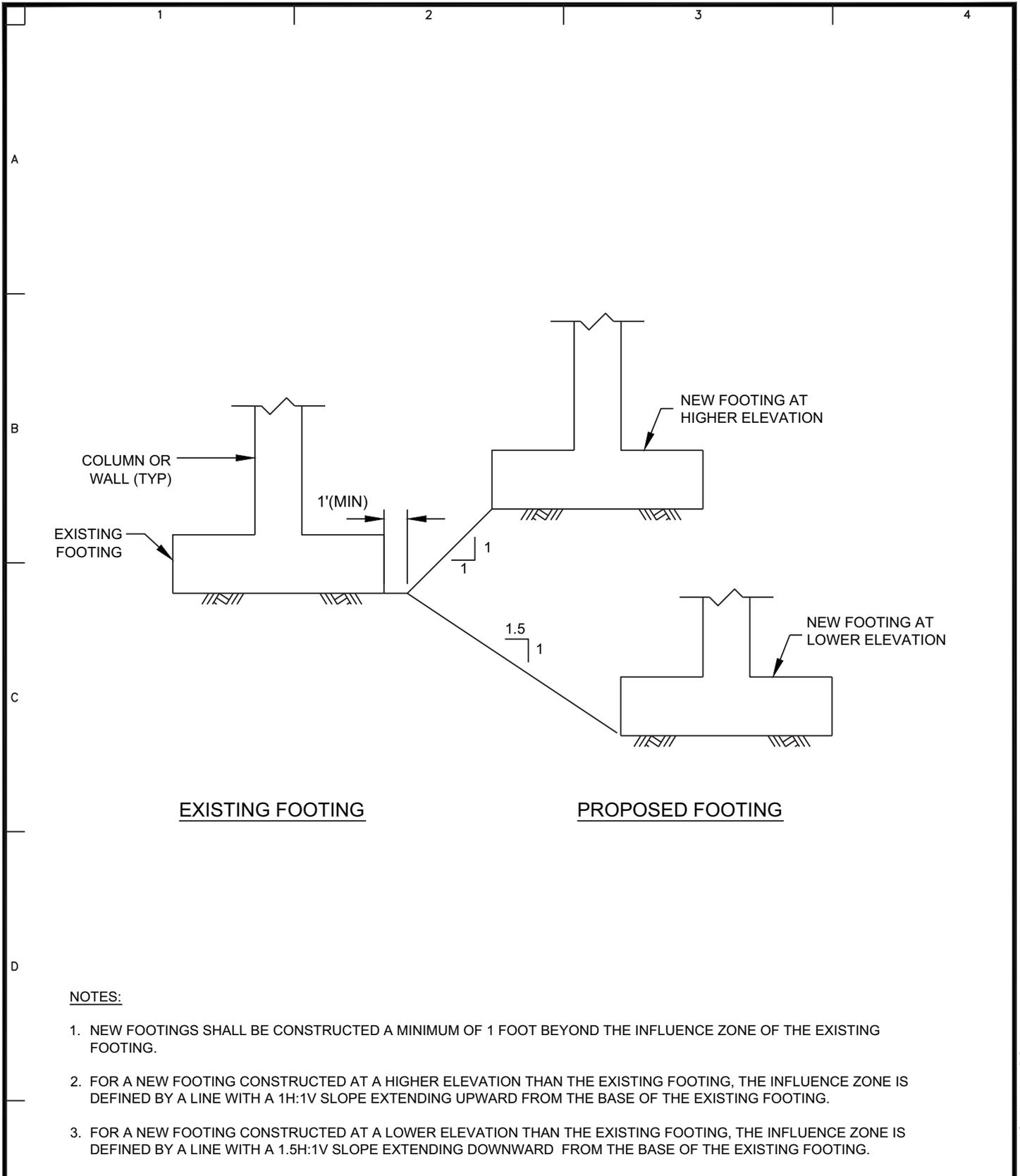
Sheet 9 of 12



LEGEND:

- H = HEIGHT OF BELOW GRADE WALLS (FT)
- hr = HEIGHT OF ROCK (FT)
- hw = DEPTH TO DESIGN GROUNDWATER TABLE, FT, (el 6.0 ±)

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			Date 4/26/2013	<p>10</p>
			Scale N.T.S.	
			Drawn By RSL	
Submission Date 4/26/2013	Sheet 10 of 12			

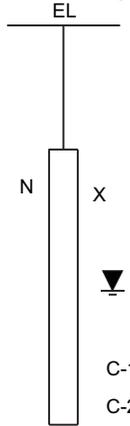


NOTES:

1. NEW FOOTINGS SHALL BE CONSTRUCTED A MINIMUM OF 1 FOOT BEYOND THE INFLUENCE ZONE OF THE EXISTING FOOTING.
2. FOR A NEW FOOTING CONSTRUCTED AT A HIGHER ELEVATION THAN THE EXISTING FOOTING, THE INFLUENCE ZONE IS DEFINED BY A LINE WITH A 1H:1V SLOPE EXTENDING UPWARD FROM THE BASE OF THE EXISTING FOOTING.
3. FOR A NEW FOOTING CONSTRUCTED AT A LOWER ELEVATION THAN THE EXISTING FOOTING, THE INFLUENCE ZONE IS DEFINED BY A LINE WITH A 1.5H:1V SLOPE EXTENDING DOWNWARD FROM THE BASE OF THE EXISTING FOOTING.

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			Date 4/26/2013	
			Scale NTS	
			Drawn By EYE	
			Submission Date 4/26/2013	Sheet 11 of 12

BORING KEY
TB or LB(OW)



- LB LANGAN 2013 BORING IDENTIFICATION
- TB GES 2012 BORING IDENTIFICATION
- EL GROUND SURFACE ELEVATION AT TIME OF BORING
- N STANDARD PENETRATION RESISTANCE; NUMBER OF BLOWS OF A 140 LB. HAMMER FREE FALLING 30 IN. TO DRIVE A 2 IN O.D. SPLIT SPOON SAMPLER 12 IN. AFTER 6 INCHES OF INITIAL PENETRATION.
- REC (LENGTH OF ROCK RETRIEVED) / (LENGTH OF ROCK CORED) * 100 %
- RQD ROCK QUALITY DESIGNATION (LENGTH OF ROCK PIECES 4 INCHES OR LONGER) / (LENGTH OF ROCK CORED) * 100 %
- X NEW YORK CITY BUILDING CODE CLASSIFICATION.
- (OW) GROUNDWATER OBSERVATION WELL
- ▼ MEASURED GROUNDWATER LEVEL
- C-1 ROCK CORE RUN IDENTIFICATION AND LENGTH

MATERIAL SYMBOLS

- UNCONTROLLED FILL
- ORGANIC MATERIALS
- SAND
- WEATHERED ROCK
- SANDY SILT / SILTY SAND
- BEDROCK
- SILT

NEW YORK CITY BUILDING CODE CLASSIFICATION NUMBER

- 1A HARD SOUND ROCK
- 1B MEDIUM SOUND ROCK
- 1C INTERMEDIATE ROCK
- 1D SOFT ROCK-WEATHERED ROCK
- 2A DENSE SANDY GRAVEL & GRAVEL
- 2B MEDIUM SANDY GRAVEL & GRAVEL
- 3A DENSE GRANULAR SOILS
- 3B MEDIUM GRANULAR SOILS
- 4A HARD CLAYS
- 4B STIFF CLAYS
- 4C MEDIUM CLAYS
- 5A DENSE SILTS & SILTY SOILS
- 5B MEDIUM SILTS & SILTY SOILS
- 6 ORGANIC SILTS & CLAYS, PEATS, SOFT CLAYS, LOOSE GRANULAR SOILS, AND VARVED SILTS
- 7 CONTROLLED & UNCONTROLLED FILLS

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APPENDIX A
GES BORING LOGS

Log of Boring TB-1

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032		
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY						
Date(s) Drilled	11/15/12 - 11/15/12	Inspector	Richard Young		Coordinates	North: East:
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov		Approximate Surface Elevation (feet)	NA
Drilling Equipment	CME 75	Drilling Method	Mud Rotary		Completion Depth (feet)	39.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"		Rock Depth (feet)	35.0
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"	
Boring Location As shown on Figure 1					Sampler Type(s)	Split Spoon
					Size/Type of Core Barrel	NX
					No. of Samples	Dist.: 7 Undist.: 0 Core (ft): 4

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						% Fines	
0								about 3-4 inches of Pavement					
	SS S-1	0.7	11 10 7 3					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Bricks, some Asphalt Pieces [7].					
5	SS S-2	0.7	WOH WOH 3 4					FILL: White, gray, and reddish brown fine to coarse Sand, Mica, some Bricks, medium to fine Gravel and Silt [7].					
10	SS S-3	0.9	1 2 2 2					FILL: Tan, medium to fine micaceous Sand, trace Bricks, trace medium to fine Gravel, some Silt [7].					
15	SS S-4	0.9	12 6 8 6					FILL: Gray to tan, fine to medium micaceous Sand, trace Bricks, trace fine Gravel, trace Silt [7].					Rig Chattering
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-1

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
20	SS S-5	1.1	5 7 13 12				[3b]	Brown, fine to coarse micaceous Sand, some Silt, trace Clay (SP-SM) [3b].					20 ft. of 4" casing used.
25	SS S-6	1.1	5 10 11 12				[3b]	SAME. (SP-SM) [3b].					
30	SS S-7	1.0	12 14 17 18				[3a]	SAME. (SP-SM) [3a].					
35							[1d]	Presumed top of weathered rock. Very hard drilling from 33 to 35 ft.					
35	C-1			1	53	17	[1d]	Gray and black, Mica SCHIST, trace Garnet. Coarsely-Crystalline (to 1/4"). Moderate to severe weathering. Medium to soft. Total 6 Joints. [1d].					Loss of circulation at 36 ft.
40								Boring terminated at 39 ft. below existing ground.					Casing slipped and fell in the boring. Could NOT be retrieved. Additional coring, although necessary, it could not have done.

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-2

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032		
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY						
Date(s) Drilled	11/15/12 - 11/16/12	Inspector	Richard Young		Coordinates	North: East:
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov		Approximate Surface Elevation (feet)	NA
Drilling Equipment	CME 75	Drilling Method	Mud Rotary		Completion Depth (feet)	25.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"		Rock Depth (feet)	12.0
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"	
Boring Location As shown on Figure 1					Sampler Type(s)	Split Spoon
					Size/Type of Core Barrel	NX
					No. of Samples	Dist.: 3 Undist.: 0 Core (ft): 10

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						% Fines	
0								about 3-4 inches of Pavement					
	SS S-1	0.9	10 8 4 2					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
5	SS S-2	0.7	2 8 7 6					FILL: White and tan with reddish brown fine to coarse Sand, some Bricks, medium to fine Gravel and Silt [7].					
10	SS S-3	0.1	50/2"					Presumed top of weathered rock. White-black gray with tan Mica SCHIST. Severely weathered. Soft [1d].					too soft to core from 10 to 15 ft. Roller bitted and sat casing to 15 ft.
15	C-1			1	80	64		15-15.3: White and black with gray, coarsely crystalline Mica SCHIST with garnet. Many joints and fractures. Slightly weathered, medium hard. 15.3-20: Gray and black Mica SCHIST, breaks on foliation, 6 joints. Slightly weathered, medium to hard [1-b].					15 ft. of 4" casing used. about 2.5 min/ft. from 15 to 20 ft.
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-2

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
20	C-2			2	98	56		20 to 20.7 ft: Gray and black Mica SCHIST. Fresh. Medium to hard. 2 Joints. [2-65]. 20.7 to 25 ft: White and gray ALASKITE/Quartzo-feldspathic zone. 10 Joints. Hard, Fresh [1a to 1b].					about 3 min/ft. from 15 to 20 ft.
25								Boring terminated at 25 ft. below existing ground. GROUND WATER MONITORING WELL INSTALLED: 2" PVC Tip at 20 ft. 10 ft. Screen 10 ft. Riser Flush-Mount man hole cover					
30													
35													
40													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-3

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032			
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY							
Date(s) Drilled 11/14/12 - 11/15/12		Inspector Ziad Maad/RY			Coordinates North: East:		
Drilling Agency ADT, INC.		Foreman Mr. Rashid Malyukov			Approximate Surface Elevation (feet) NA		
Drilling Equipment CME 75		Drilling Method Mud Rotary			Completion Depth (feet) 18.0		Rock Depth (feet) 1.5
Casing Size/Type 4"-Steel		Size/Type of Bit 3 7/8"			Sampler Type(s) Split Spoon		
Groundwater Level and Date Measured NA		Hammer Wt/Drop Auto-140 lbs/30"		Casing Hammer Wt/Drop Auto-140 lbs/30"		Size/Type of Core Barrel NX	
Boring Location As shown on Figure 1						No. of Samples Dist.: 1 Undist.: 0 Core (ft): 15	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS	1.2	9					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
	S-1		8					Presumed top of weathered rock.					
			22					Gray Mica SCHIST. Severely weathered. Soft [1d].					
			56										
5	C-1			1	98	66		White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, 7 joints, medium to hard [1-b].					about 6 mins/ft. from 3 to 8 ft. 5 ft. of 4" casing used.
10	C-2			2	82	72		White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, medium to hard [1-b].					about 4 mins/ft. from 8 to 13 ft.
15	C-3			3	98	78		13 to 15 ft.: White Quartzo-Feldspathic zone, Fresh Mica SCHIST, trace garnet. Slightly weathered, 3 joints, medium to hard [1-b]. 15 to 18 ft.: White and black with gray, Mica SCHIST, trace garnet. Slightly weathered, 5 joints, hard [1-b].					Loss of circulation at 13-15 ft. about 3 mins/ft. from 8 to 13 ft.
20								Boring terminated at 18 ft. below existing ground.					

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-4

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY					
Date(s) Drilled	11/16/12 - 11/16/12	Inspector	Richard Young	Coordinates North:	
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA	
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	30.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Rock Depth (feet)	25.0
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				Sampler Type(s)	Split Spoon
				Size/Type of Core Barrel	NX
				No. of Samples	Dist.: 5 Undist.: 0 Core (ft): 5

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						% Fines	
0								about 3-4 inches of Pavement					
	SS S-1	0.9	22 12 11 10					FILL: White and gray, fine to coarse Sand and medium to fine Gravel, some Bricks, some Debris [7].					
5	SS S-2	0.4	2 1 2 3					FILL: White, gray, and reddish brown fine to coarse Sand, some Bricks, medium to fine Gravel [7].					
10	SS S-3	0.8	3 2 1 1					Tan and brown, fine to medium micaceous Sand, trace medium to fine Gravel (SM) [6].					
15	SS S-4	1.3	2 1 6 8					SAME [6]. Brown, fine to coarse micaceous Sand, some Silt, trace Clay (SP-SM) [3b].					Boulder at 15 ft. 15 ft. of 4" casing used.
20													

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Log of Boring TB-4

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						% Fines	
20	SS S-5	1.4	9 10 10 11				[Stippled pattern]	Reddish brown, micaceous fine to medium Sand, trace Clay, some Silt (SP-SM) [3b].					
25	C-1			1	96	84	[Cross-hatched pattern]	0-.7 ft.: Black Mica SCHIST, soft, Slightly to moderately weathered, 2 Joints [1d]. 0.7 to 5 ft: White Quartzo-Feldspathic ALASKITE, Medium Hard, Fresh to slightly weathered, 5 Joints [1b].					top of soft rock at about 24 ft. Roller bitted to 25 ft. and cored. about 4.5 mins/ft.
30								Boring terminated at 30 ft. below existing ground.					
35													
40													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-5

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032			
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY							
Date(s) Drilled 11/16/12 - 11/16/12		Inspector Richard Young			Coordinates North: East:		
Drilling Agency ADT, INC.		Foreman Mr. Rashid Malyukov			Approximate Surface Elevation (feet) NA		
Drilling Equipment CME 75		Drilling Method Mud Rotary			Completion Depth (feet) 17.0		Rock Depth (feet) 12.0
Casing Size/Type 4"-Steel		Size/Type of Bit 3 7/8"			Sampler Type(s) Split Spoon		
Groundwater Level and Date Measured NA		Hammer Wt/Drop Auto-140 lbs/30"		Casing Hammer Wt/Drop Auto-140 lbs/30"		Size/Type of Core Barrel NX	
Boring Location As shown on Figure 1						No. of Samples Dist.: 3 Undist.: 0 Core (ft): 5	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						%	
0								about 3-4 inches of Pavement					
	SS S-1	0.8	13 15 13 9					FILL: Black and reddish brown, fine to coarse Sand and medium to fine Gravel, some Bricks, some Debris [7].					
5	SS S-2	0.5	3 4 5 5					FILL: SAME [7].					
10	SS S-3	0.9	2 2 15 50/3"					Tan, fine to medium micaceous Sand, trace Silt, trace medium to fine Gravel (SM) [6]. Weathered Rock: White and black, Mica SCHIST, severe to complete weathering, very soft [1d].					
15	C-1			1	32	24		12 to 13.6 ft.: White and gray ALASKITE/Quartzo-Feldspathic Zone, 5 joints, hard, fresh [1b]. Could be a Boulder, must be investigated in Phase II. 13.6 to 17 ft: Tan fine to medium Sand with Silt, not sure if it is Soil or Wash. See above.					12 ft. of 4 inch casing used.
20								Boring terminated at 17 ft. below existing ground.					Due to mechanical break down, further coring could not be done. This area must be investigated further.

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Log of Boring TB-6

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY					
Date(s) Drilled	11/14/12 - 11/14/12	Inspector	Ziad H. Maad	Coordinates North:	
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA	
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	16.5
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Rock Depth (feet)	1.5
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				Sampler Type(s)	Split Spoon
				Size/Type of Core Barrel	NX
				No. of Samples	Dist.: 1 Undist.: 0 Core (ft): 15

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS S-1	1.0	20 21 50/0"					FILL: Gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
								White and black with gray, Mica SCHIST, some garnet. slightly weathered, moderately fractured, 21 Joints, medium to intermediate Rock [1C]					No casing used for this boring
5	C-1			1	91	38							about 6 mins/ft.
								White and black with gray, Mica SCHIST, some garnet. slightly weathered, moderately fractured, 21 Joints (mineralized), medium to intermediate Rock [1C]					
10	C-2			2	91	33							about 4 mins/ft.
								Gray, Mica SCHIST, some garnet. moderately weathered, moderately fractured, 14 Joints, medium to intermediate Rock [1C]					
15	C-3			3	68	43							about 5 mins/ft.
													
								Boring terminated at 16.5 ft. below existing ground.					
20													

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Log of Boring TB-7

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032	
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY					
Date(s) Drilled	11/13/12 - 11/13/12	Inspector	Ziad H. Maad	Coordinates North:	
Drilling Agency	ADT, INC.	Foreman	Mr. Rashid Malyukov	Approximate Surface Elevation (feet) NA	
Drilling Equipment	CME 75	Drilling Method	Mud Rotary	Completion Depth (feet)	20.0
Casing Size/Type	4"-Steel	Size/Type of Bit	3 7/8"	Rock Depth (feet)	10.0
Groundwater Level and Date Measured	NA	Hammer Wt/Drop	Auto-140 lbs/30"	Casing Hammer Wt/Drop	Auto-140 lbs/30"
Boring Location As shown on Figure 1				Sampler Type(s)	Split Spoon
				Size/Type of Core Barrel	NX
				No. of Samples	Dist.: 3 Undist.: 0 Core (ft): 10

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)							
0								about 3-4 inches of Pavement					
	SS S-1	0.5	16 39 50/2"					FILL: Brown, gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
5	SS S-2	1.0	9 24 11 9					SAME. [7].					
													Loss of circulation at 7 ft.
10	S-3 C-1	0.1	100/4"	1	88	38		Weathered rock [1d]. Gray, Mica SCHIST, moderately fractured, moderately weathered, 14 joints. Intermediate Rock [1C].					10 ft. of 4 inch casing used. about 3 mins/ft.
15	C-2			2	90	55		Gray, Mica SCHIST, moderately fractured, slightly weathered, 13 joints. medium hard Rock [1b].					about 4 mins/ft.
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-7

Project: 534-546 WEST 44 TH . STREET	Project Number: 2012032
Location: BETWEEN 10 AND 11 TH . AVENUE, NYC, NY	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)	% Fines	REMARKS	
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)								
20								Boring terminated at 20 ft. below existing ground.						
25								GROUND WATER MONITORING WELL INSTALLED: 2" PVC Tip at 20 ft. 10 ft. Screen 10 ft. Riser Flush-Mount man hole cover						
30														
35														
40														

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

Log of Boring TB-8

Project: 534-546 WEST 44TH. STREET				Project Number: 2012032			
Location: BETWEEN 10 AND 11TH. AVENUE, NYC, NY							
Date(s) Drilled 11/14/12 - 11/14/12		Inspector Ziad H. Maad			Coordinates North: East:		
Drilling Agency ADT, INC.		Foreman Mr. Rashid Malyukov			Approximate Surface Elevation (feet) NA		
Drilling Equipment CME 75		Drilling Method Mud Rotary			Completion Depth (feet) 12.5		Rock Depth (feet) 7.5
Casing Size/Type 4"-Steel		Size/Type of Bit 3 7/8"			Sampler Type(s) Split Spoon		
Groundwater Level and Date Measured NA		Hammer Wt/Drop Auto-140 lbs/30"		Casing Hammer Wt/Drop Auto-140 lbs/30"		Size/Type of Core Barrel NX	
Boring Location As shown on Figure 1						No. of Samples Dist.: 2 Undist.: 0 Core (ft): 5	

Depth, feet	Soil Samples			Rock Coring			Graphic Log	DESCRIPTION	Liquid Limit	Plastic Limit	Water Cont. (%)		REMARKS
	Type, Number	Recov. (ft)	Pen. Resist. (blows/6 in)	Run Number	Recov. (%)	RQD (%)						% Fines	
0								about 3-4 inches of Pavement					
	SS S-1	1.0	6 28 8 8					FILL: Brown, gray and black fine to coarse Sand and medium to fine Gravel, some Debris [7].					
5	S-2A	1.0	1 2 4					SAME. [7].					
	S-2B	0.5	30					Weathered rock [1d].					
10	C-1			1	83	33		White ALASKITE/Quartzo-Feldspathic. Moderately fractured, slightly weathered, intermediate Rock [1c]					7 feet of 4 inch casing used. about 5 mins/ft.
15								Boring terminated at 12.5 ft. below existing ground.					
20													

Template: GENERAL GES LOGO Proj ID: 534-546 WEST 44TH. STREET (MANHATTAN, NYC, NY). GPJ

APPENDIX B
2012 LANGAN BORING LOGS

Project 546 West 44th Street				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 174.6 BPM Datum			
Drilling Company Warren George Inc				Date Started 4/2/13		Date Finished 4/3/13	
Drilling Equipment DK-525				Completion Depth 40 ft		Rock Depth 30 ft	
Size and Type of Bit 2 7/8, 3 7/8 in Tricone Roller Bit				Number of Samples Disturbed 10		Undisturbed Core 2	
Casing Diameter (in) 4-in OD Flush Joint		Casing Depth (ft) 30		Water Level (ft.) First 16'3"		Completion 24 HR. 16'6"	
Casing Hammer Donut		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Dominick	
Sampler 2-in OD Split Spoon / 2 ft, 5 ft NX Core Barrel				Inspecting Engineer Pragnesh Shah			
Sampler Hammer Donut		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
					Number	Type	Recov. (in)	Penetr. resist. Bl/6in	N-Value (Blows/ft)		
	+174.6			0							
	+174.1		6" asphalt pavement	0							04/02/2013 Drill through asphalt pavement Take S-1 (1'-3')
			Brown-Black medium to fine GRAVELLY SAND, trace silt, trace concrete (wet) [FILL]	1	S-1	SS	6	12	23		2:15 Set the rig on LB-2 Break through asphalt Take S-1 (6"-2'6")
			Brown-Black medium to fine SAND, trace gravel, trace silt (wet) [FILL]	2			3	11			
		7	Red GRAVEL, trace medium to fine sand, trace mica & schist (decomposed rock fragment) (wet) [GP/FILL]	3	S-2	SS	3	6	11		04/03/2013 Drive casing to 4' Drill to 5'
			Red GRAVEL, trace medium to fine sand, trace silt, trace concrete, trace mica & schist (wet) [GP/FILL]	4			3	5			
				5			4	6			
				6	S-3	SS	4	3	9		Take S-3 (5'-7') Take S-4 (7'-9') Drive the casing to 9'
				7			3	6			
				8	S-4	SS	3	17	25		Drill to 10' Take S-5 (10'-12') Take S-6 (12'-14')
				9			3	3			
	+164.6		Green medium to fine SAND, trace silt, trace mica & schist (wet) [SP]	10			3	9			
		3b	Green medium to fine SAND, trace silt, trace mica & schist (wet) Black GRAVEL with MICA SCHIST at tip of spoon	11	S-5	SS	3	9	17		Drive casing to 14' Clean the hole to 15' Heavy rig chatter at 13.5'
				12			3	8			
				13	S-6	SS	3	12	22		
				14			3	10			
	+159.6		Gray SILT, some clay, trace fine sand, tr fibers (moist) [ML/CL] (slight organic odor, upper 9")	15			3	5			Take S-7 (15'-17') Wash color changed at 14.5'-16' Brown wash return at 17'
		5b		16	S-7	SS	12	8	19		
	+157.6			17			12	11			
				18			12	13			
		3a		19							Drill to 20' Take S-8 (20'-22')
				20							

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Project		Project No.								
546 West 44th Street		170229701								
Location		Elevation and Datum								
New York, NY		Approx. 174.6 BPM Datum								
MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
					Number	Type	Recov. (in)	Penetr. resist BL/6in		N-Value (Blows/ft)
	144.6	3a	Brown medium to fine SAND, trace silt (Wet) [SP]	20						
				21	S-8	SS	15	13	37	
				22				24		
				23				23		
				24						
				25						
				26	S-9	SS	13	38	81	
				27				43		
				28				58		
				29						
	139.6	1c	No recovery (Spoon bouncing) White Quartzo-Feldespathic ALASKITE, hard to medium hard, fresh (highly fractured 32'3"-34'1")	30	S-10	SS	0	100/0"	100/0"	
				31						
				32						
				33	C-1	NX	REC=49"/60" =82% RQD=28"/60" =47%			
				34						
	134.6	1a	White Quartzo-Feldespathic ALASKITE, very hard to hard, fresh	35						
				36						
				37						
				38	C-2	NX	REC=60"/60" =100% RQD=60"/60" =100%			
				39						
			End of Boring at 40 ft BGS	40						
				41						
				42						
				43						
				44						
				45						

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Project 546 West 44th Street				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 174.6 BPM Datum			
Drilling Company Warren George Inc				Date Started 4/1/13		Date Finished 4/2/13	
Drilling Equipment DK-525				Completion Depth 14 ft		Rock Depth 9 ft	
Size and Type of Bit 2 7/8, 3 7/8 in Tricone Roller Bit				Number of Samples 4		Undisturbed	Core 3
Casing Diameter (in) 4-in OD Flush Joint		Casing Depth (ft) 9		Water Level (ft.) First ∇		Completion ∇	24 HR. ∇
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30	Drilling Foreman Dominick				
Sampler 2-in OD Split Spoon / 2 ft, 5 ft NX Core Barrel				Inspecting Engineer Pragnesh Shah			
Sampler Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Casing blws./ft Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)			
	+174.6				0								
	+174.1		5" to 6" asphalt pavement		0								04/01/2013 12:45 WGI on site Load equipment till 2:00 PM
		7	Dark gray-green medium to fine SAND, some mica & schist, trace gravel (moist) [SM/FILL]	SPIN	1	S-1	SS	6	8	15			2:15 Set the rig on LB-2 Break through asphalt Take S-1 (6"-2'6")
	+172.1		Green MICA & SCHIST, tr quartz (highly decomposed)	59	2	S-2	SS	1	100/3"	100/3"			04/02/2013 Take S-2 (2'6"-2'9") Spoon refusal at 2'10"
		1d	Green MICA & SCHIST, tr quartz (highly decomposed)		3	S-3	SS	1	100/2"	100/2"			Mica and Schist in the spoon. Possible decomposed rock
			Green MICA & SCHIST, tr quartz (highly decomposed)		4	S-4	SS	1	100/1"	100/1"			Drill to 4' with tri-cone roller bit
			Green MICA & SCHIST, tr quartz (highly decomposed)		5								Take S-3 (4'-4'3") Spoon refusal at 4'3"
	+165.6		Gray MICA & SCHIST with GARNET, medium hard to hard, slightly weathered		6	C-1	NX	REC=39%	RQD=33%				REC=14"/36" =39% RQD=12"/36" =33%
		1b	Gray MICA & SCHIST with GARNET, trace quartz, medium hard to hard, slightly weathered. (Fractured at 15'6"-16'4")		7								Drill to 5' with tri-cone roller bit
					8								Drive casing to 4' Clean the hole to 5'
					9								Take S-4 (5'-5'3") Spoon refusal at 5'3"
					10								Drill to 6' with tri-cone roller bit
					11	C-2	NX	REC=52"/60" =87%	RQD=49"/60" =82%				Install and core with a NX double tube core barrel to 9'
					12								Take C-1 (6'-9") Advance spinning the casing to 9'
					13								11:46 Start coring through rock from 9' to 14'
					14								12:04 Take C-2 (9'-14") 12:18-12:38 Retrieved the 1.5' piece cored previously
					15								12:55 Start coring through rock from 14' to 19'
					16	C-3	NX	REC=60"/60" =100%	RQD=39"/60" =65%				1:31 Take C-3 (14'-19") Core barrel clogged up from 12:55 to 1:10 PM for 1st run
					17								Mobilize the rig
					18								
	+155.6		End of Boring at 19 ft BGS		19								
					20								

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Project 546 West 44th Street				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 174.6 BPM Datum			
Drilling Company Warren George Inc				Date Started 4/4/13		Date Finished 4/5/13	
Drilling Equipment DK-525				Completion Depth 9 ft		Rock Depth 2 ft	
Size and Type of Bit 2 7/8, 3 7/8 in Tricone Roller Bit				Number of Samples 1		Disturbed Undisturbed Core 2	
Casing Diameter (in) 4-in OD Flush Joint		Casing Depth (ft)		Water Level (ft.) First Completion		24 HR.	
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30		Drilling Foreman Dominick			
Sampler 2-in OD Split Spoon / 2 ft, 5 ft NX Core Barrel				Inspecting Engineer Pragnesh Shah			
Casing Hammer Donut	Weight (lbs) 140	Drop (in) 30					

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Coring (min)	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)			
	+174.6				0								
	+174.1	1d	5" concrete slab		1	S-1	SS	3	10				04/04/2013 7:45 WGI brought rig inside the basement 8:15 Placed the rig at LB-3 location 8:17 - 11:18 AM Downtime Break through concrete slab Take S-1 (6"-2'6") Spoon refusal at +/- 2'
	+172.6		Green MICA & SCHIST, trace quartz, moist, (Decomposed Rock)		2				12				100/3"
		1c	Gray MICA & SCHIST with GARNET, fractured	SPIN	3								
					4	C-1	NX	REC=46"/60" = 77%	RQD=26"/60" = 43%				Clean the hole to 2' with a tri-cone roller bit Core through rock with a 2 7/8 NX double tube core barrel Take C-1 Take C-2 REC=19"/24" = 79% RQD=16"/24" = 67%
	+167.6	1b	Gray MICA & SCHIST with GARNET, very hard	14:00	5								
					6								
	+165.6		End of Boring at 9 ft BGS	13:00	7	C-2	NX	REC=79%	RQD=67%				End of drilling Begin well installation
					8								
					9								
					10								
					11								
					12								
					13								
					14								
					15								
					16								
					17								
					18								
					19								
					20								

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Project 546 West 44th Street				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 174.6 BPM Datum			
Drilling Company Warren George Inc				Date Started 4/8/13		Date Finished 4/8/13	
Drilling Equipment DK-525				Completion Depth 23 ft		Rock Depth 13 ft	
Size and Type of Bit 2 7/8, 3 7/8 in Tricone Roller Bit				Number of Samples Disturbed 6		Undisturbed Core 2	
Casing Diameter (in) 4-in OD Flush Joint		Casing Depth (ft) 9		Water Level (ft.) First 15'6"		Completion 24 HR. 11'6"	
Casing Hammer Donut		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Dominick	
Sampler 2-in OD Split Spoon / 2 ft, 5 ft NX Core Barrel				Inspecting Engineer Rene Silvestre			
Sampler Hammer Donut		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Building Code	Sample Description	Casing blws/ft Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
						Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	+174.6				0							
	+174.1		1" concrete slab									04/08/2013 7:00 Take S-1 (1'-3') Take S-2 (3'-5')
		7	Dark gray/black medium to coarse SAND, trace gravel, trace silt, trace concrete, trace organics (moist) [FILL]		10	S-1	SS	6	6	16		
					32			10				
	+171.6		Light brown fine to medium SAND, trace silt, slight organic odor (moist)		50	S-2	SS	12	9	25		Clean the hole to 5' Take S-3 (5'-7') Take S-4 (7'-9') Take S-5 (9'-11')
					55			9				
		3b	Light brown fine SAND, trace silt (moist) (5'-6') Dark gray CLAYEY SILT, trace fine sand, trace organics (moist) (6'-7')		36	S-3	SS	18	8	17		
					34			9				
			Dark gray CLAYEY SILT, trace fine sand, tr organics (MOIST)		50	S-4	SS	22	7	17		Drive 4" casing to 9' with 140 lb hammer Clean the hole to 11' Brown wash, smooth
					54			10				
			Dark gray medium to coarse SAND, some clay, tr till at the tip (MOIST)			S-5	SS	15	12	24		Heavy chattering at 11' Take S-6 (11'-13') Refused at 11'8" Cobble at spoon tip
								13				
	+163.6	3a	Reddish brown fine to medium compacted SAND, tr silt (moist) [TILL]			S-6	SS	6	29	100/4"		Drill to 13' Smooth, brown wash Hard drilling at 12'
			No recovery			S-7	SS	0	100/0"	100/0"		Take S-7 at 13' Refused, spoon bounces
	+161.6				12:00							
		1b	White QUARTZ with pink PEGAMTITE and frequent incrustations of mica schist. Very hard, slightly fractured, unweathered		14	C-1	NX					Install NX double tube core barrel and drill to 18' Whitish wash, smooth
					9:00							
					8:00							
					9:00							
					6:00							
	+156.6				18							Take C-1 (13'-18')
		1a			6:00	C-2	NX					
					7:00							

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APPENDIX C
WELL CONSTRUCTION LOGS

WELL CONSTRUCTION SUMMARY
Well No. LB-1(OW)

PROJECT 544 west 44th Street	PROJECT NO. 170229701	
LOCATION 544 west 44th Street, Manhattan, NY	ELEVATION AND DATUM	
DRILLING AGENCY Warren George, Inc	DATE STARTED 4/2/2013	DATE FINISHED 4/3/2013
DRILLING EQUIPMENT DK 525 Drill Rig	DRILLER Dominick	
SIZE AND TYPE OF BIT 3 7/8" Tricon Roller bit	INSPECTOR Pragnesh Shah	

METHOD OF INSTALLATION
PVC riser and screen were installed to the correct depth to 40 ft; the casing was then removed. As the casing was removed sand filter and bentonite pellets were packed respectively. A flush-mount well cap was then installed.

METHOD OF WELL DEVELOPMENT
The boring was drilled.

TYPE OF CASING Steel	DIAMETER 4"	TYPE OF BACKFILL MATERIAL Existing soil cuttings
TYPE OF SCREEN PVC	DIAMETER 2"	TYPE OF SEAL MATERIAL Bentonite
BOREHOLE DIAMETER 4"	TYPE OF FILTER MATERIAL Filter Sand	

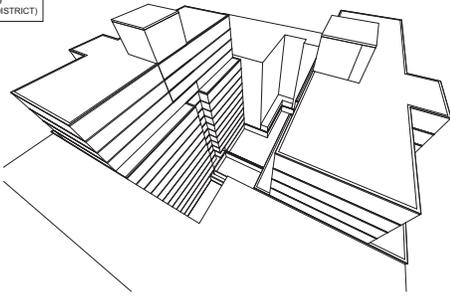
TOP OF CASING	ELEVATION	DEPTH (ft)	WELL DETAILS	SUMMARY SOIL CLASSIFICATION	DEPTH (FT)
		0	<p>The diagram shows a vertical well casing with a cover at the top. Below the cover is a seal. A riser pipe extends from the seal down to a screen. Below the screen is a sand pack. Below the sand pack is another screen, followed by another sand pack. The casing ends at a depth of 40 feet.</p>	<p>The diagram shows a vertical axis with a double-headed arrow labeled 'Sand' indicating the soil type. The depth is marked as 0.0 at the top and 40.0 at the bottom.</p>	0.0
TOP OF SEAL		0			
TOP OF FILTER		10			
TOP OF SCREEN		30			
BOTTOM OF BORING		40			
SCREEN LENGTH	10-ft				
SLOT SIZE					
GROUNDWATER ELEVATIONS					
ELEVATION	DATE	DEPTH TO WATER			
	4/4/2013	16.25			
ELEVATION	DATE	DEPTH TO WATER			
	4/4/2013	16.25			
ELEVATION	DATE	DEPTH TO WATER			
	4/4/2013	16.5			
ELEVATION	DATE	DEPTH TO WATER			
ELEVATION	DATE	DEPTH TO WATER			

OBSERVATION WELL CONSTRUCTION SUMMARY
Well No. LB-4 (OW)

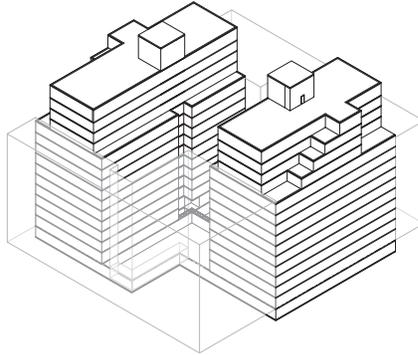
PROJECT 546 West 44th Street			PROJECT NO. 170229701						
LOCATION New York, NY			ELEVATION AND DATUM						
DRILLING AGENCY Warren George Inc.			DATE STARTED 4/8/2013		DATE FINISHED 4/8/2013				
DRILLING EQUIPMENT DK-525			DRILLER DOMINICK						
SIZE AND TYPE OF BIT 2-7/8", 3-7/8" Tricone Rollerbit			INSPECTOR Rene Silvestre						
METHOD OF INSTALLATION A 2 INC PVC SCREEN (10 FT) AND 13 FT OF RISER WERE INSTALLED. THE ANNULAR SPACE WAS FILLED WITH NO. 1 FILTER SAND AND SEALED WITH BENTONITE 10 FT ABOVE THE PVC SCREEN AND A PERMANENT CAP WAS PLACED AND LEVELED TO GRADE.									
METHOD OF WELL DEVELOPMENT FLUSHED AND BAILED MANUALLY AT 2 00 PM									
TYPE OF CASING		DIAMETER	TYPE OF BACKFILL MATERIAL						
STEEL		4 inches	SPOILS						
TYPE OF SCREEN		DIAMETER	TYPE OF SEAL MATERIAL						
PVC		2 inches	BENTONITE CIPS						
BOREHOLE NOMINAL DIAMETER			TYPE OF FILTER MATERIAL						
3 inches			NO. 1 FILTER SAND (SILICA ART SAND)						
TOP OF CASING	ELEVATION	DEPTH (ft)	<p>The diagram illustrates the well construction from the surface down to 23 feet. Key components labeled include: Cover at the top, Grout filling the annular space, a Riser pipe, a Seal at 10 feet depth, a PVC Screen at 13 feet depth, and a Sand Pack at the bottom. The well is shown as a vertical shaft with various materials and components indicated by arrows.</p>		<p style="text-align: center;">SUMMARY SOIL CLASSIFICATION</p>	<p style="text-align: center;">DEPTH (FT)</p>			
TOP OF SEAL	ELEVATION	DEPTH (ft)					0.0		
TOP OF FILTER	ELEVATION	DEPTH (ft)					1		
TOP OF SCREEN	ELEVATION	DEPTH (ft)					1.5		
TOP OF SCREEN	ELEVATION	DEPTH (ft)					13		
BOTTOM OF BORING	ELEVATION	DEPTH (ft)					23		
SCREEN LENGTH		10 FT							
SLOT SIZE		0.01-IN							
GROUNDWATER ELEVATIONS									
ELEVATION	DATE	DEPTH TO WATER							
	4/8/2013	2 35 PM	15' 6"						
ELEVATION	DATE	DEPTH TO WATER							
	4/8/2013	3 35 PM	11' 6"						
ELEVATION	DATE	DEPTH TO WATER							
	4/24/2013	8 00 AM	5' 7"						
ELEVATION	DATE	DEPTH TO WATER							
ELEVATION	DATE	DEPTH TO WATER							
ELEVATION	DATE	DEPTH TO WATER							
LANGAN Engineering and Environmental Services, PC 21 Penn Plaza, 360 W 31st Street, 8th Floor , New York, NY 10001									

APPENDIX B

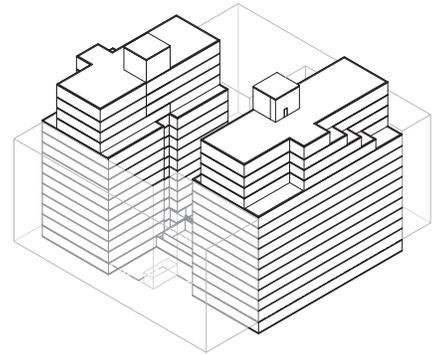
BLOCK: 1072
 LOT: 50
 ZONING DISTRICT R8
 (SPECIAL CLINTON DISTRICT)



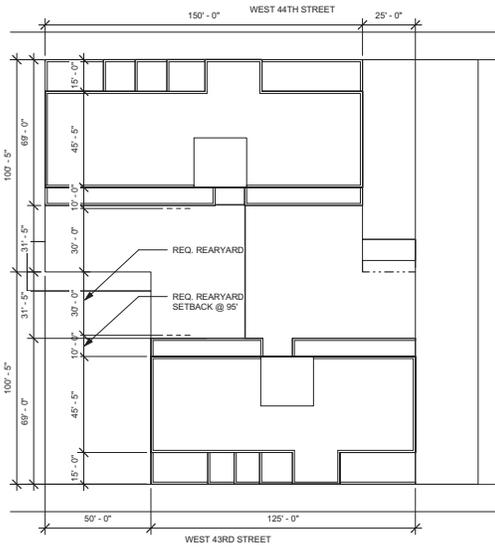
⑤ 3D View 1



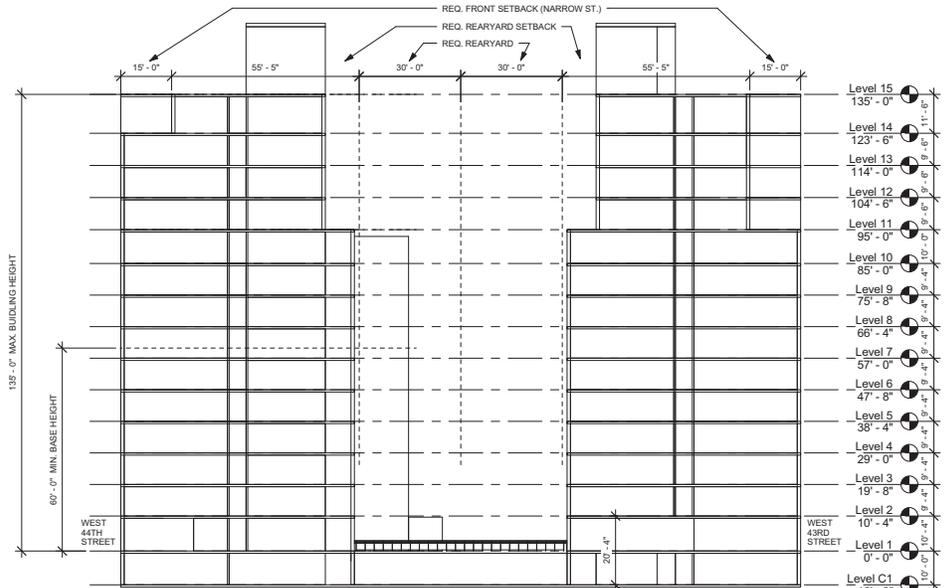
① AXON1



② AXON2



③ SITE PLAN
 1/32" = 1'-0"



④ BUILDING SECTION
 1" = 20'-0"



546 W 44TH STREET
 SITE PLAN AND BUILDING SECTION
 546 W 44TH STREET

DATE	03/01/13	
PROJECT NO.	1303.00	
<small>CETRA/RUDDY ARCHITECTURE PLLC 600 BROADWAY NEW YORK NY 10012 P 212 661 8800 F 212 661 8800 WWW.CETRARUDDY.COM</small>		

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LEGEND
 AMENITY
 MECHANICAL

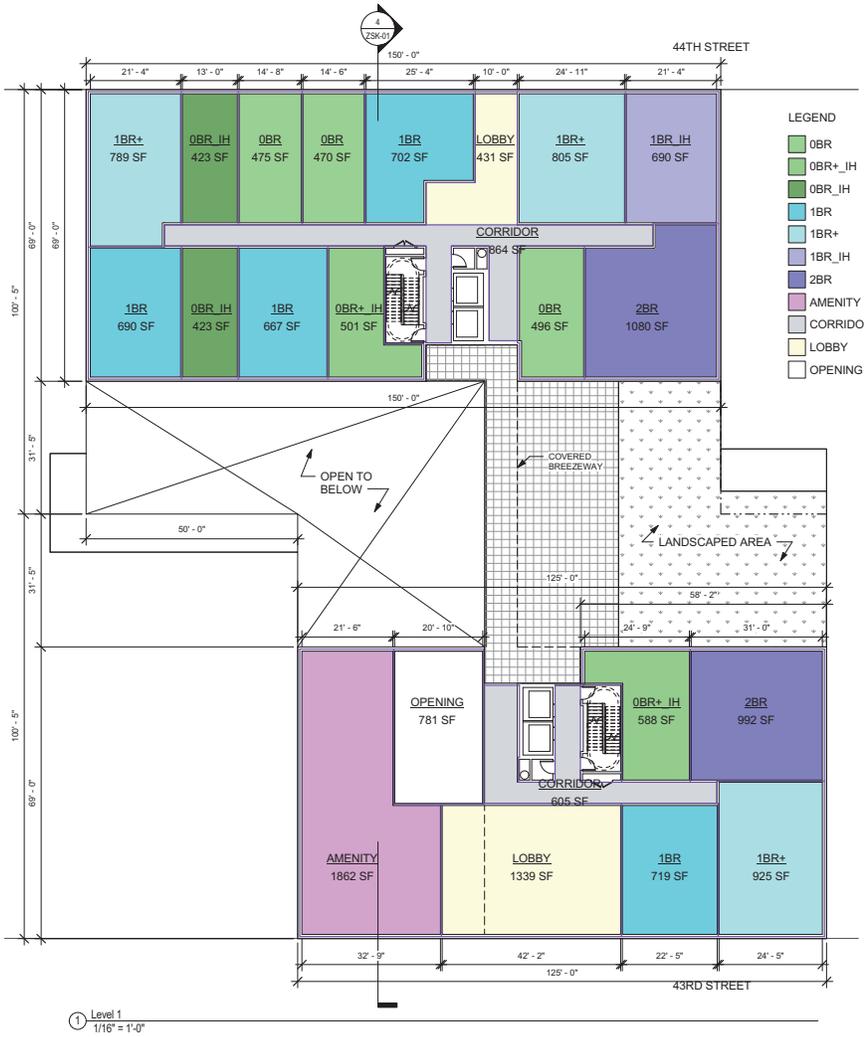
Level C1
 1/16" = 1'-0"



546 W 44TH STREET
 CELLAR FLOOR PLAN
 546 W 44TH STREET

DATE	02/26/13
NO.	1303.00
PROJECT	CETRA/CI ARCHITECTURE PLLC
DRWING	546 BROADWAY NEW YORK NY 10012 T 212 641 8800 F 212 641 8440 WWW.CETRARUDDY.COM

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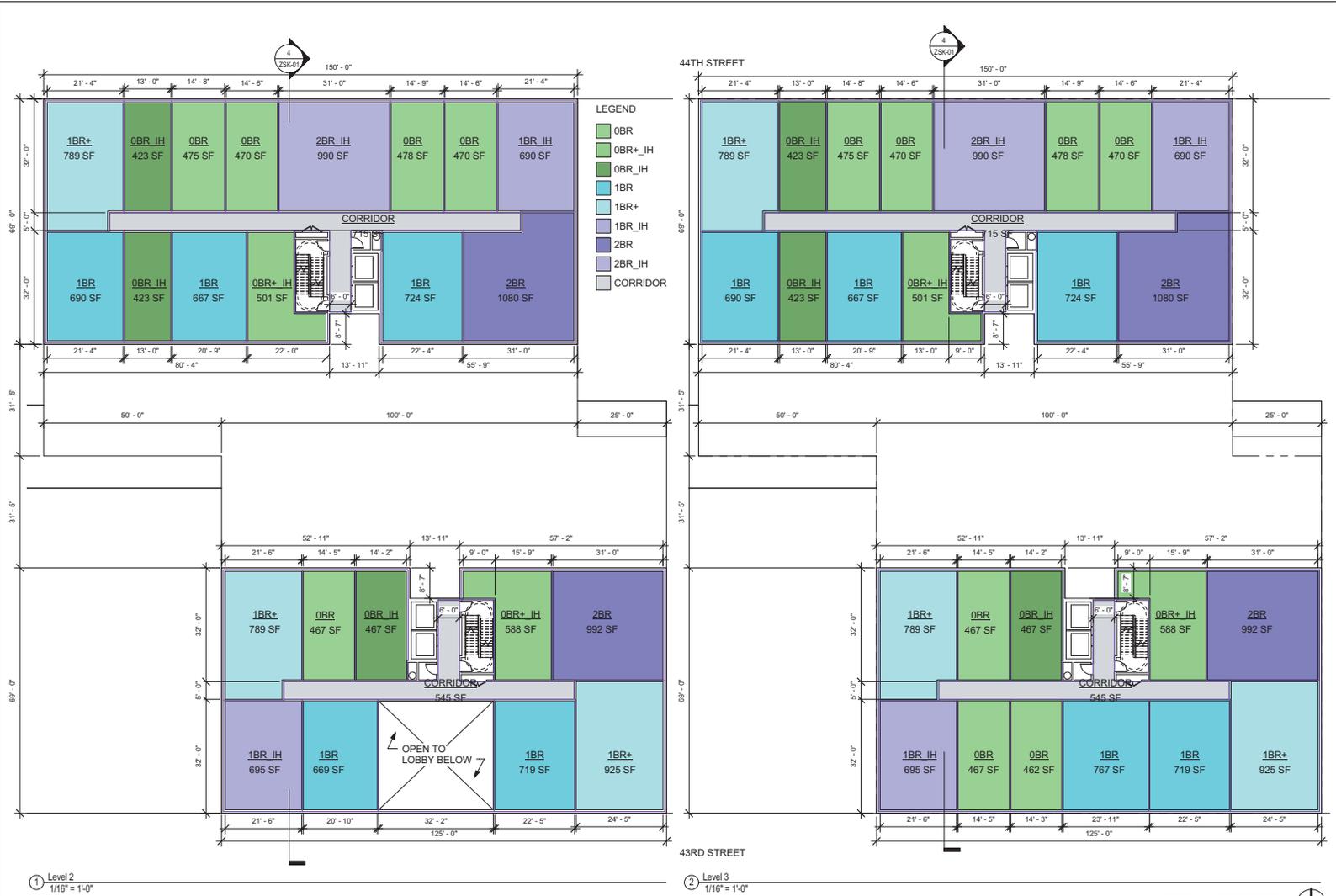
- LEGEND
- 0BR
 - 0BR+_IH
 - 0BR_IH
 - 1BR
 - 1BR+
 - 1BR_IH
 - 2BR
 - AMENITY
 - CORRIDOR
 - LOBBY
 - OPENING

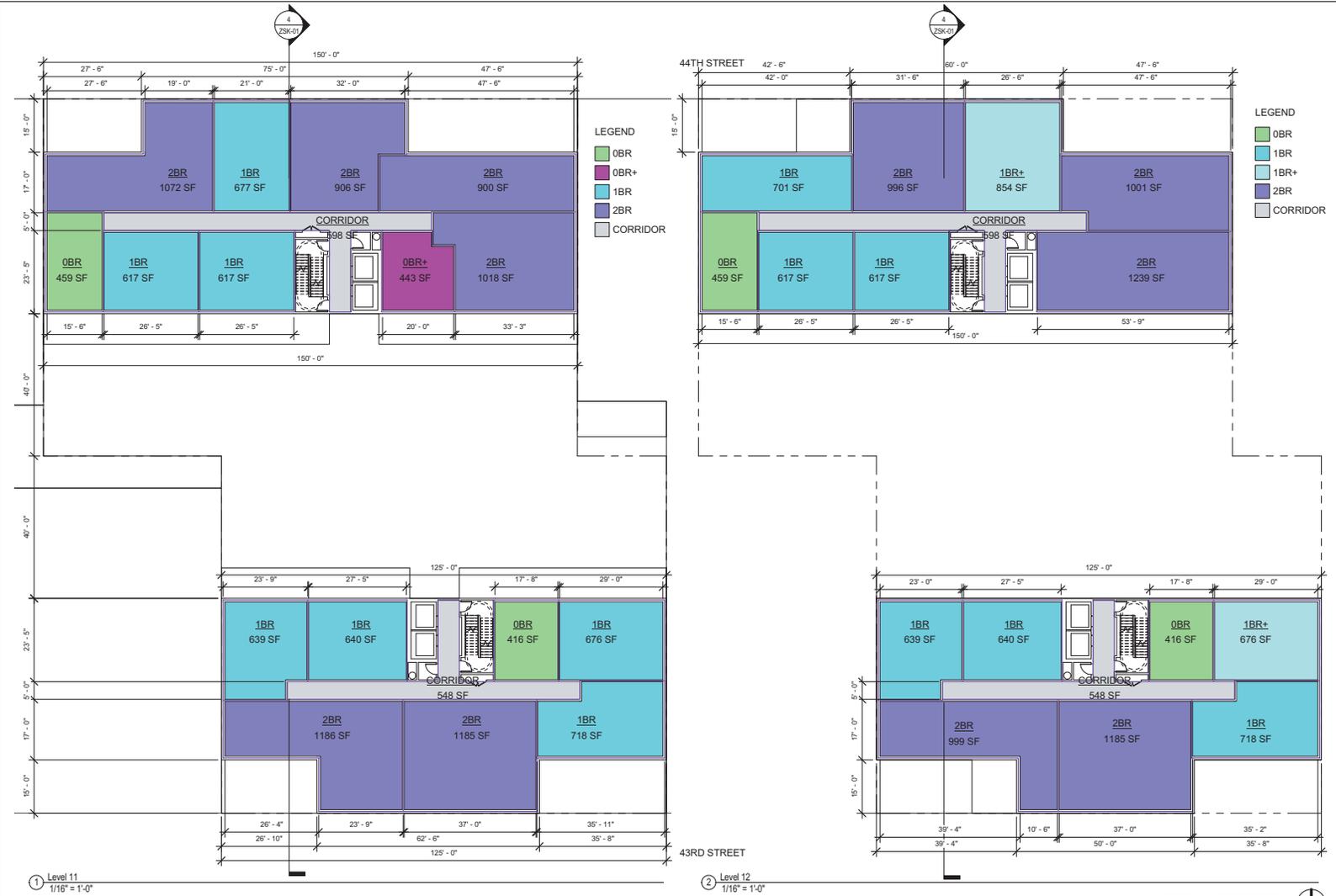


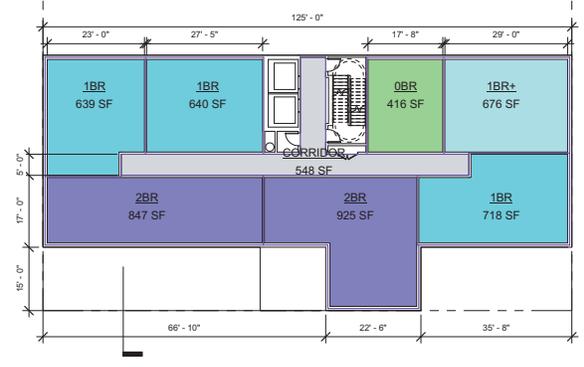
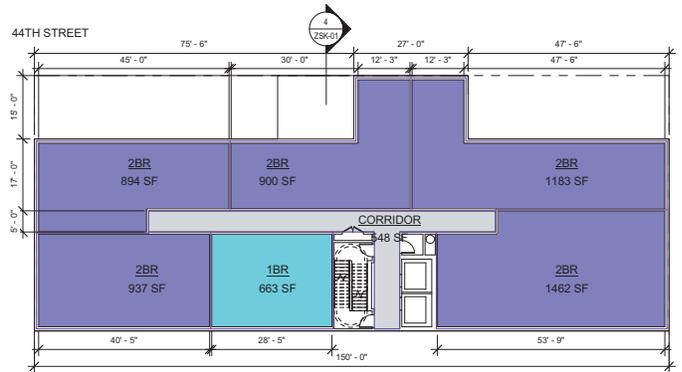
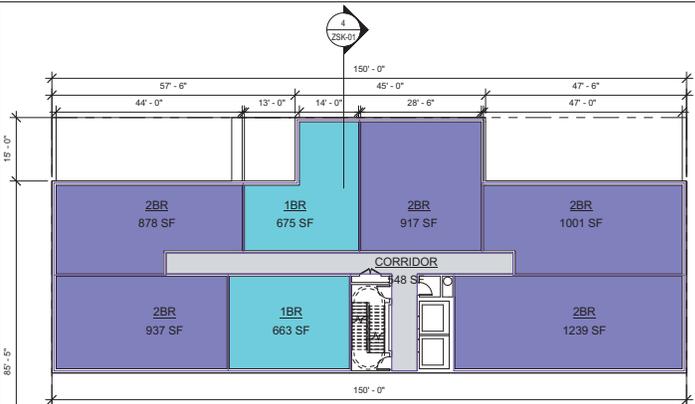
546 W 44TH STREET
GROUND FLOOR PLAN
546 W 44TH STREET

DATE	03/01/13	CETRA/RU ARCHITECTURE PLLC 600 BROADWAY NEW YORK NY 10012 T 212 661 8800 F 212 661 8840 WWW.CETRARUDDY.COM
REVISION	1303.00	
PROJECT NO.		
DRAWING		

CETRA/RU ARCHITECTURE PLLC

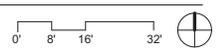






① Level 13
1/16" = 1'-0"

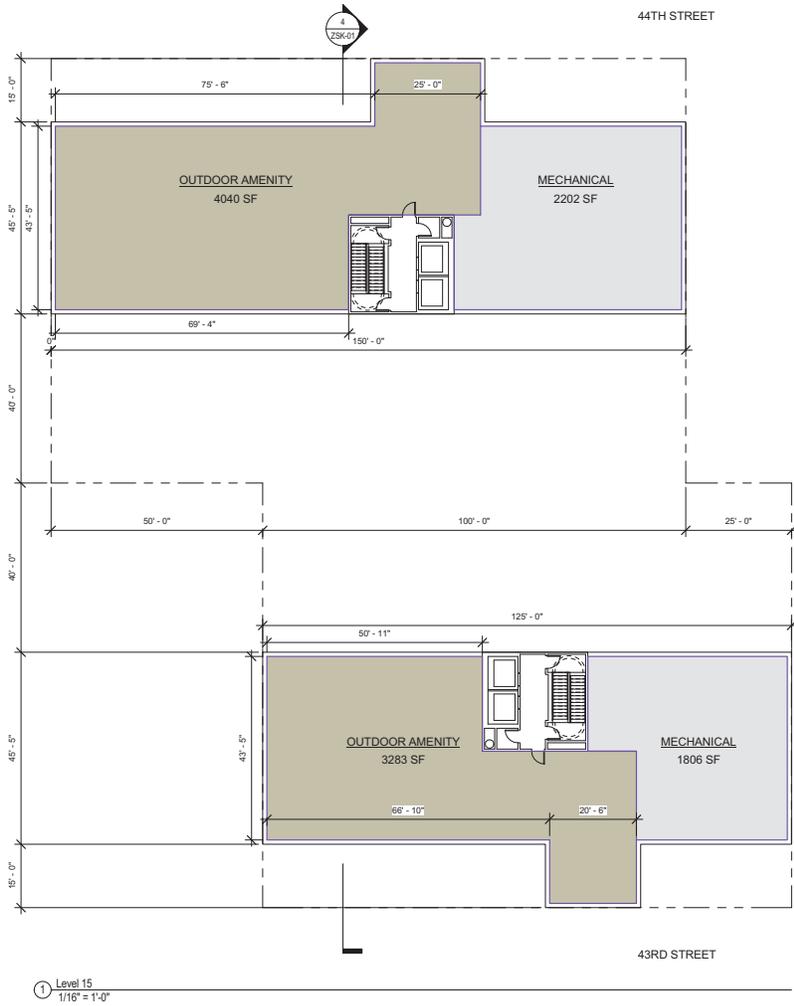
② Level 14
1/16" = 1'-0"



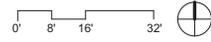
546 W 44TH STREET
13TH AND 14TH FLOOR PLANS
546 W 44TH STREET

DATE	03/01/13	
ISSUED FOR	1303.00	
<small>CETRA/CI ARCHITECTURE PLLC 666 BROADWAY NEW YORK NY 10012 P 212 661 8800 F 212 661 8840 WWW.CETRARUDDY.COM</small>		

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546 W 44TH STREET
ROOF PLAN
546 W 44TH STREET



DATE	03/01/13	CETRARUDDY ARCHITECTURE PLLC 604 BROADWAY NEW YORK NY 10012 P 212 641 8800 F 212 641 8440 WWW.CETRARUDDY.COM
NO. OF SHEETS	1303.00	
DESIGNED BY		SK
DRAWN BY		

CETRARUDDY ARCHITECTURE PLLC

APPENDIX C

NOVA GEOPHYSICAL SERVICES

SUBSURFACE MAPPING SOLUTIONS

56-01 Marathon Parkway, PO Box 765, Douglaston, New York 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.nova-gsi.com

May 6, 2013

Elodie Bourbon

Senior Staff Geologist

Langan Engineering & Environmental Services

21 Penn Plaza – 360 West 31st Street

New York, NY 10001

Direct: 212.479.5554

Mobile: 917.410.1356

Email: ebourbon@langan.com

Re: Geophysical Engineering Survey (GES) Report
Commercial Property
546 West 44th Street
New York, New York 10036

Dear Ms. Bourbon:

Nova Geophysical Services (NOVA) is pleased to provide findings of our geophysical engineering surveys (GES) at the above referenced project site located at 546 West 44th Street, New York, New York (the "Sites"). Please see attached Geophysical Survey map for more details.

INTRODUCTION TO GEOPHYSICAL SURVEY

NOVA performed a Geophysical engineering surveys (GES) consisting of Ground Penetrating Radar (GPR), Electromagnetic (EM) surveys and comprehensive subsurface utility (CSUL) surveys at the project Site. The purpose of this survey is to identify any major anomalies, underground storage tanks (USTs), and subsurface structures that maybe located at the proposed boring locations at the project site on April 30th, 2013.

The equipment selected for this investigation will be included a CSUL Pipe and Cable Locator (an magnetic detector), Ditch-Witch utility locator, Electromagnetic detector (Geonics EM61), Software and Sensor's Noggin's 250 MHz ground-penetrating radar (GPR).

A GPR system consists of a radar control unit, control cable and a transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the transmitter electronics in the transducer via the control cable. The transmitter

electronics amplify the trigger pulses into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

GEOPHYSICAL METHODS

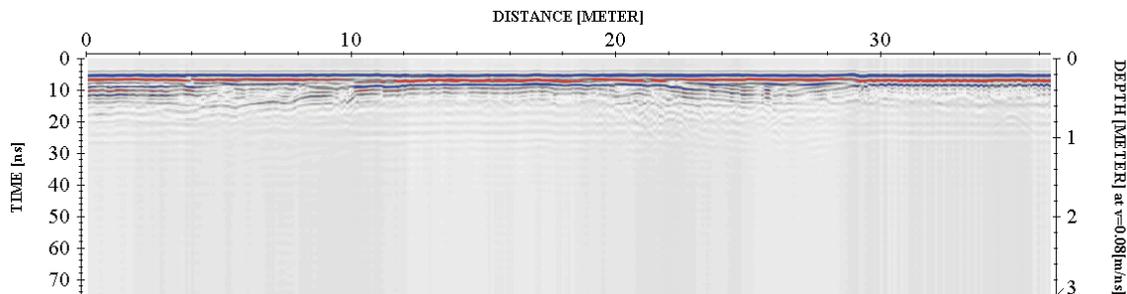
The project site was first screened using the Geonics(tm) electromagnetic detector by carrying the instrument over the boring locations at the site in 5' x 5' traverses. When evidence of anomalies were observed, the Ditch-witch(tm) utility locator was then used to determine if the anomalies were utilities or other large sub-surface metal objects. Finally, GPR profiles were collected over each metal-detector anomaly and inspected for reflections, which could be indicative of major anomalies.

GPR data profiles were collected for the areas of the Site specified by the client. The surveyed area consisted of paved areas with concrete and asphalt (paved) areas.

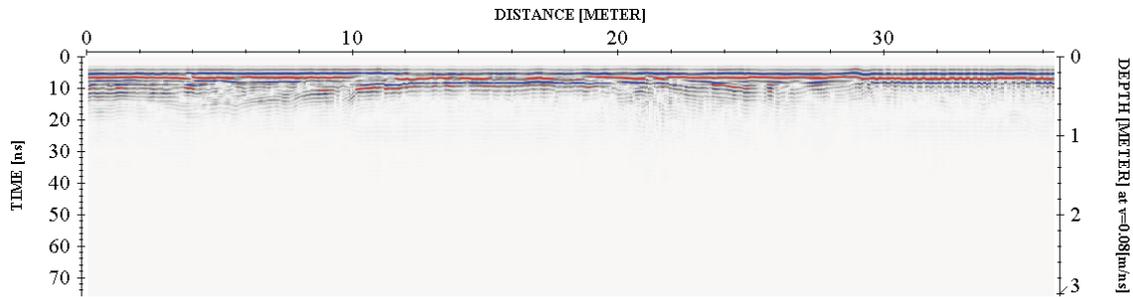
DATA PROCESSING

In order to improve the quality of the results and to better identify subsurface anomalies NOVA processed the collected data. The processes flow is briefly described at this section.

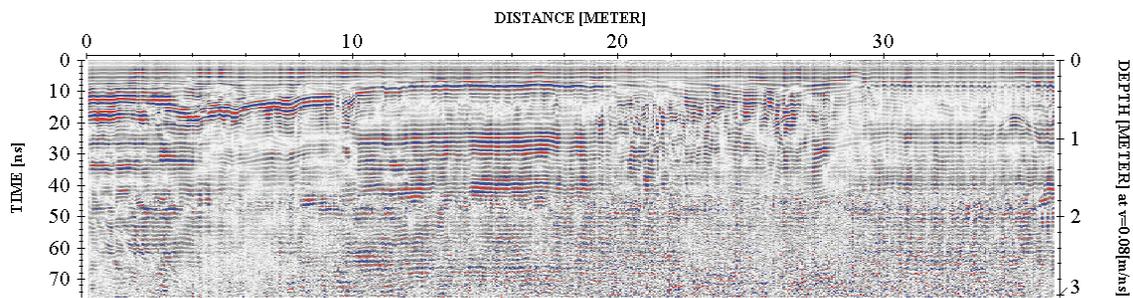
Step 1. Import raw RAMAC data to standard processing format



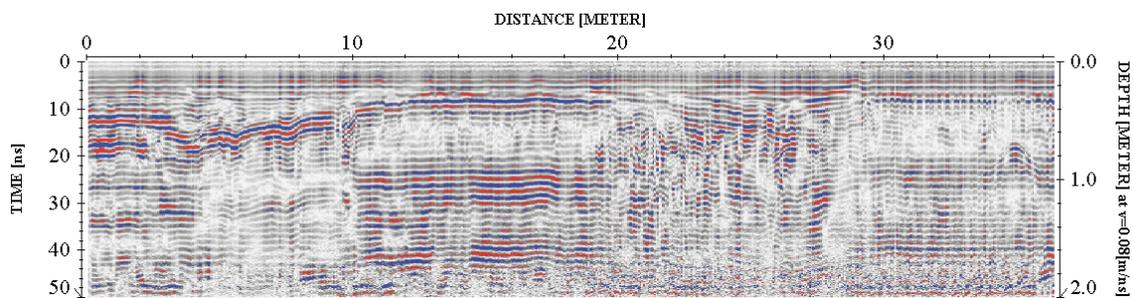
Step 2. Remove instrument noise (*dewow*)



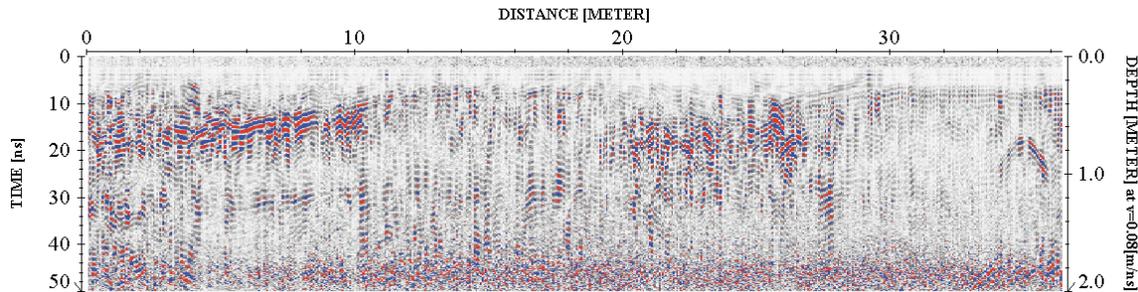
Step 3. Correct for attenuation losses (*energy decay function*)



Step 4. Remove static from bottom of profile (*time cut*)



Step 5. Mute horizontal ringing/noise (subtracting average)



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and describes the subsurface anomalies more accurately.

PHYSICAL SETTINGS

Nova observed following physical conditions at the time of the survey:

The weather: Mostly sunny

Temp: 44 degrees

Surface: Paved with Concrete & Asphalt.

Geophysical Noise Level (GNL): Geophysical Noise Level (GNL) was medium to high due to the parked cars and on-going business activities at the time of the survey.

RESULTS

The results of the geophysical survey identified following at the project Site:

- GES identified scattered anomalies located along the east (southeast & northeast) portion of the project area. Based on their reflection rates, these anomalies were consistent with subsurface hydraulic lines.
- GES identified scattered anomalies located throughout of the project area. Based on their reflection rates and proximity, these anomalies were consistent with fill materials with bricks, stones, concrete blocks, etc. None of these reflections were consistent with the USTs.

- GES identified number of subsurface utility lines located along the 44th Street (water line) and 43rd Street (sewer, gas, electric, etc.) portion of the project site. These anomalies were clearly marked during the survey.
- GES identified a major anomaly located within the basement (lower level) area of the project site building. Based on its reflection rate and proximity, this anomaly was consistent with filled with concrete (abandoned-in place) UST.
- Nova cleared and marked all of the proposed boring areas located throughout of the project area.
- Geophysical Survey Plan portrays the areas investigated during the geophysical survey.

If you have any questions please do not hesitate to contact the undersigned.

Sincerely,

NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.
Project Engineer

Attachments:

Figure 1 Site Location Map
Geophysical Survey Plan
Geophysical Images

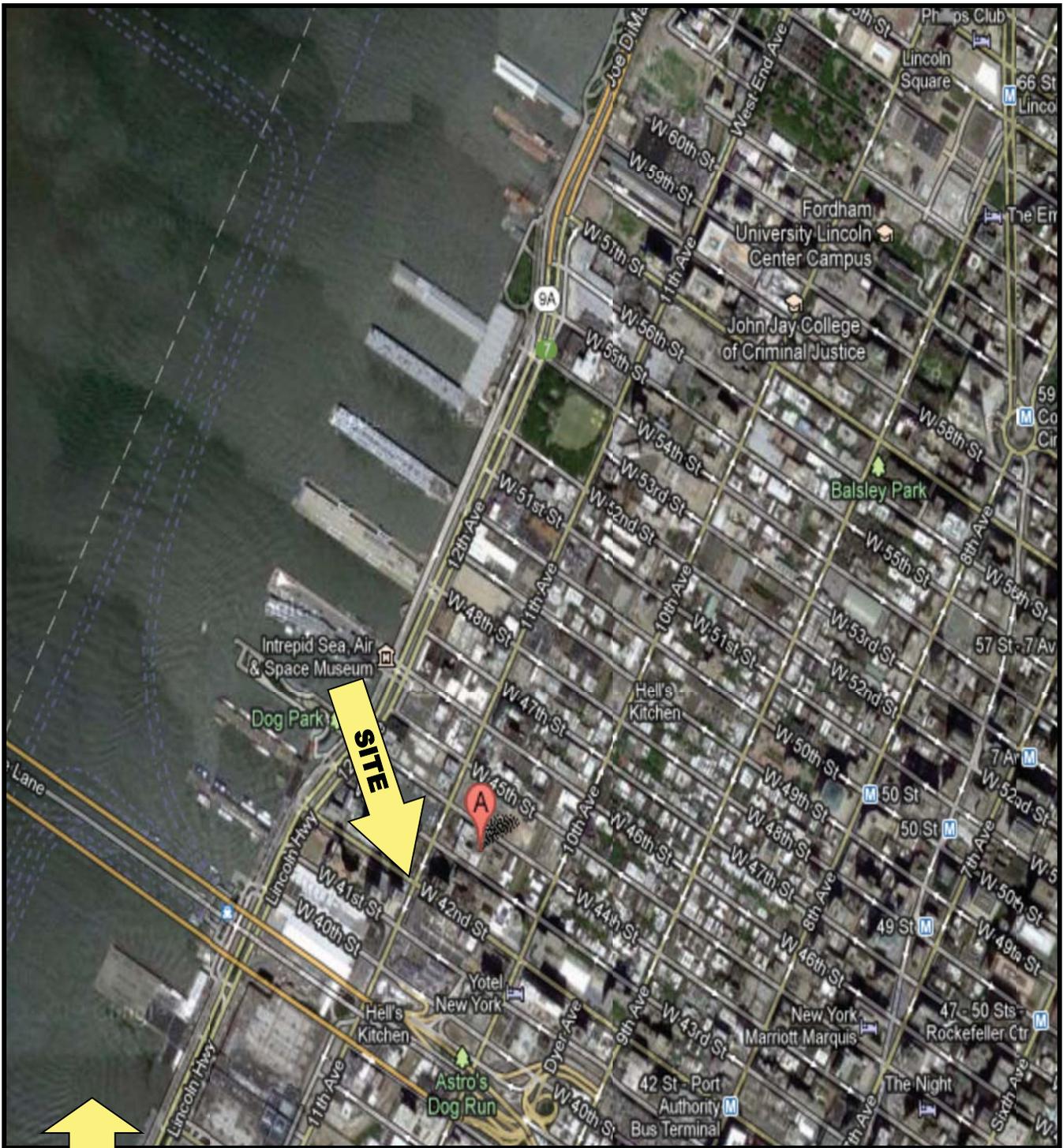


FIGURE 1
SITE LOCATION MAP



NOVA

**Geophysical & Environmental
 Services**

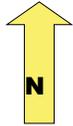
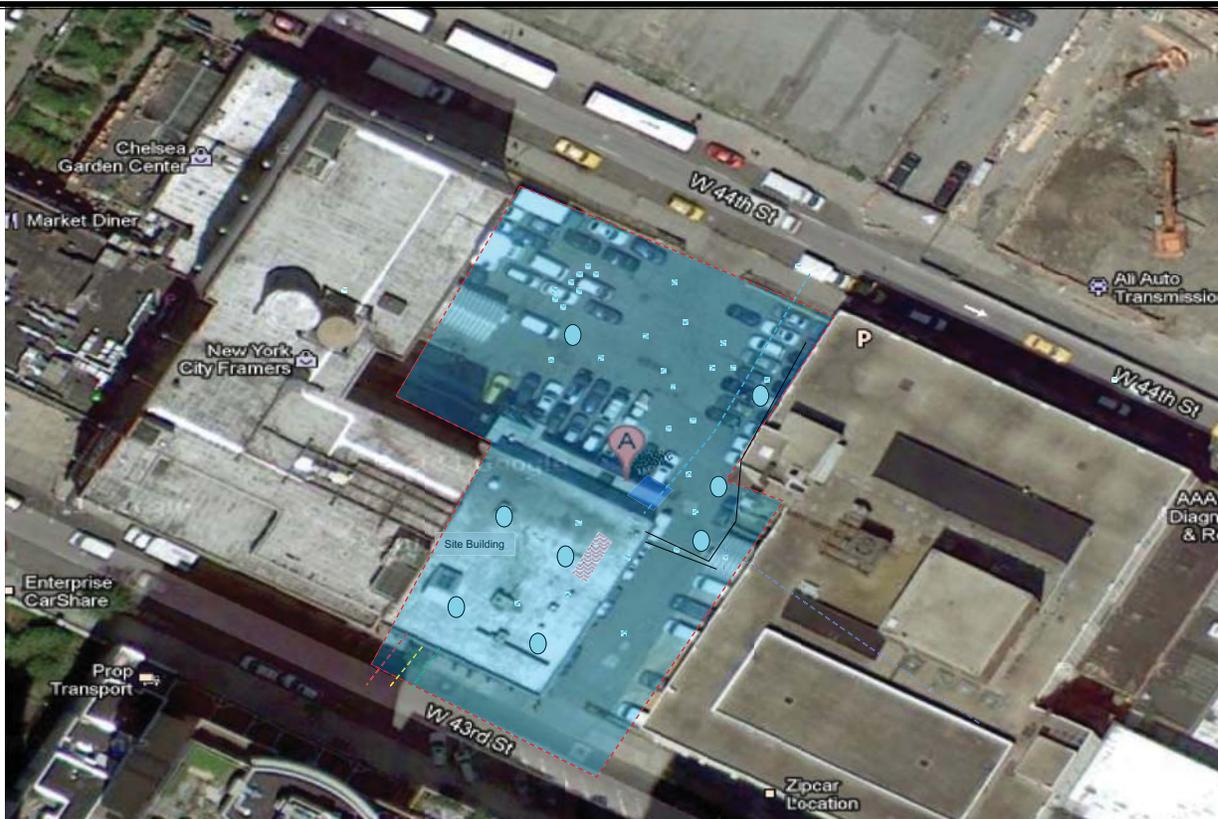
Subsurface Mapping Solutions

56-01 Marathon Pkwy, PO Box 765, Douglaston, NY11362
 (718) 261-1527 Fax (718) 261-1528

www.nova-gsi.com

SITE: **Commercial Property**
 546 West 44th Street
 New York, New York 10036

SCALE: See Map



NOVA
Geophysical Engineering Services
 Subsurface Mapping Solutions
 56-01 Marathon Parkway, # 765
 Douglaston, New York 11362
 Phone (347) 556-7787 * Fax (718) 261-1527
www.nova-gsi.com

GEOPHYSICAL SURVEY SITE PLAN

SITE: 546 West 44th Street, New York, New York 10036
 CLIENT: Langan Engineering & Environmental
 SCALE: See Map
 DATE: 4/29/13

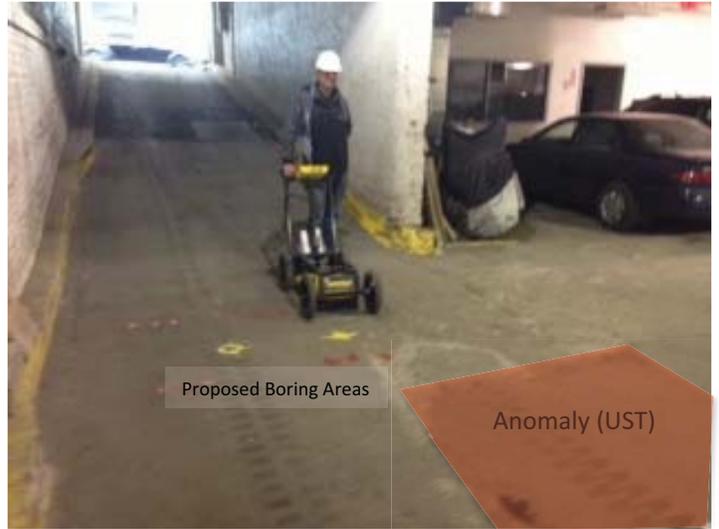
INFORMATION	
	Areas with Disturbed Sediments/Soil
	Anomaly
	Scattered/ Anomaly
	Underground Piping (Sewer, Electric, and gas)
	Proposed Boring Area

GEOPHYSICAL IMAGES

Commercial Property

546 West 44th Street, New York, New York 10036

April 30, 2013

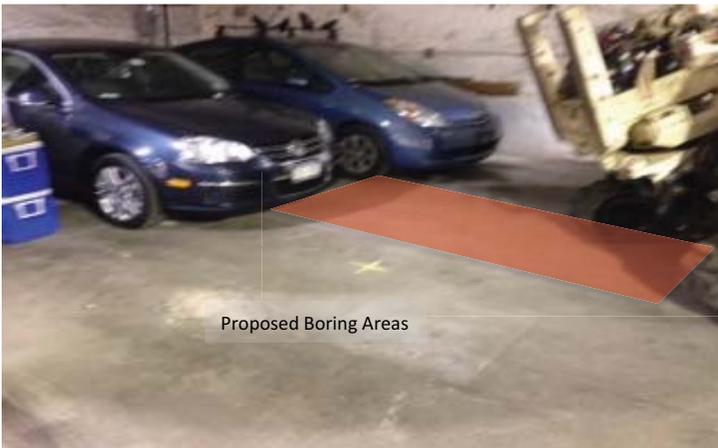


GEOPHYSICAL IMAGES

Commercial Property

546 West 44th Street, New York, New York 10036

April 30, 2013

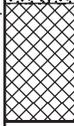


APPENDIX D

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Project 546 W44th St.				Project No. 170229701				
Location New York, NY				Elevation and Datum Approx. 8.5BPM				
Drilling Company Laurel Environmental				Date Started 4/29/13		Date Finished 4/29/13		
Drilling Equipment Geoprobe 7822 DT				Completion Depth 2 ft		Rock Depth 1.8 ft		
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 1	Undisturbed 0	Core 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman Steve Bitetto		
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins				
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist B/Join	PID Reading (ppm)	
	+8.5		0						
	+8.4	Concrete Slab	0						
	+6.5	Brown fine to medium SAND, some bedrock fragments, well sorted, loose, dry [FILL] 1.2-1.5' Silty fine sand lense, moist [FILL]	1	S1	MACROCORE	24		2281	Sample B10_0-2 taken @ 1135
		E.O.B. @ 2.0 ft bgs	2				NA	91.5	Refusal @ 2 ft
			3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

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Project 546 W44th St.				Project No. 170229701				
Location New York, NY				Elevation and Datum Approx. 8.5BPM				
Drilling Company Laurel Environmental				Date Started 4/29/13		Date Finished 4/29/13		
Drilling Equipment Geoprobe 7822 DT				Completion Depth 3 ft		Rock Depth 3 ft		
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 1	Undisturbed 0	Core 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman Steve Bitetto		
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins				
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist	BLU/in	
	+8.5		0						
	+8.4	Concrete Slab							
		Gray-brown fine to coarse SAND, some schistose fragments, trace organics, moist, loose, well graded [FILL]	1	S1	MACROCORE	NA	NA		123
			2						167
		E.O.B. @ 3.0 ft bgs	3						
			4						
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

Sample B11A_0-2 taken @ 0925

Refusal @ 3 ft

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Project 546 W44th St.				Project No. 170229701				
Location New York, NY				Elevation and Datum Approx. 8.5BPM				
Drilling Company Laurel Environmental				Date Started 4/29/13		Date Finished 4/29/13		
Drilling Equipment Geoprobe 7822 DT				Completion Depth 4 ft		Rock Depth 4 ft		
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 1	Undisturbed 0	Core 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman Steve Bitetto		
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins				
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist	BLU/in	
	+8.5		0						
	+8.4	Concrete Slab							
		Brown fine to coarse SAND, some gravel (Schistose fragments), trace organics, dry, loose, well graded. [FILL]	1					168	Sample B11_1-3 taken @ 1005
			2	S1	MACROCORE				
		@3.5-4' 6" Silty fine sand lens, moist [FILL]	3					676	
		E.O.B. @ 4.0 ft bgs	4						Refusal @ 4 ft
			5						
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						

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Project 546 W44th St.				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 17.4BPM			
Drilling Company Laurel Environmental				Date Started 4/30/13		Date Finished 4/30/13	
Drilling Equipment Geoprobe 7822 DT				Completion Depth 23.4 ft		Rock Depth 23.4 ft	
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 5	Undisturbed 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Steve Bitetto			
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins			
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/In	
	+17.4	Asphalt Parking Lot	0					
	+16.9	0.5-1' Black fine to coarse SAND, trace gravel, trace coal fragments, loose, dry, well graded (FILL) 1-2' Brown fine to coarse SAND, some brick fragments, trace silt, trace gravel, moist, loose, well graded (FILL)	1	S1	MACROCORE	30	NA	0.0
		Same as above (1-2')	2					0.0
	+11.9	5.5-6' fine to medium SAND, some silt, trace shell fragments, medium dense, moist, well graded (native)	5	S2	MACROCORE	12	NA	0.0
		10-13' light brown SILT, some fine to medium sand, trace clay, trace cobbles, moist, medium plasticity, well graded (native)	6					0.0
	+7.4	15-17' Gray SILT, some fine to medium sand, trace gravel, med plast, moist, well graded (native)	10	S3	MACROCORE	36	NA	0.0
		17-18' Reddish-brown fine to coarse SAND, trace silt, loose, well graded (native)	11					0.0
	+0.4		15	S4	MACROCORE	48	NA	0.0
			16					0.0
			17					0.0
			18					0.0
			19					0.0
			20					0.0

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Log of Boring

B12/ MW4

Sheet

2

of

2

Project		Project No.							
546 W44th St.		170229701							
Location		Elevation and Datum							
New York, NY		Approx. 17.4BPMD							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		PID Reading (ppm)
		20-21.5' Reddish brown SAND, fines with depth, trace to some silt, wet, loose, well graded (native)	20					0.0	
	-4.1	Reddish brown TILL, silt, sand, trace gravel, med dense, moist, well graded (native) Note- Greenish bedrock fragments in tip	21	S5	MACROCORE	24	NA	0.0	
	-6.0	E.O.B. @ 23.4 ft bgs	22						Refused @ 23.4 ft
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
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			42						
			43						
			44						
			45						

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Project 546 W44th St.				Project No. 170229701				
Location New York, NY				Elevation and Datum Approx. 18.8BPMD				
Drilling Company Laurel Environmental				Date Started 4/30/13		Date Finished 4/30/13		
Drilling Equipment Geoprobe 7822 DT				Completion Depth 2.5 ft		Rock Depth 2.5 ft		
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 1	Undisturbed 0	Core 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽	24 HR. ▽
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Steve Bitetto				
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer Beth Howard				
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist	BLU/in		PID Reading (ppm)
	+18.8		0							
	+18.3	Asphalt Parking Lot, Black-brown fine to coarse SAND, trace gravel, trace coal								
	+17.3	Brown-Black fine to coarse SAND, slightly mosit, well graded, trace gravel trace coal [FILL]	1	S1	MACROCORE	30			0.0	Sample B13_0-2 Taken @ 1100
	+16.3	Schistose Bedrock (weathered)	2				NA		0.0	Refusal @ 2.5 ft
		E.O.B. @ 2.5 ft bgs	3							
			4							
			5							
			6							
			7							
			8							
			9							
			10							
			11							
			12							
			13							
			14							
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			16							
			17							
			18							
			19							
			20							

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Project 546 W44th St.				Project No. 170229701				
Location New York, NY				Elevation and Datum Approx. 17.9BPMD				
Drilling Company Laurel Environmental				Date Started 4/30/13		Date Finished 4/30/13		
Drilling Equipment Geoprobe 7822 DT				Completion Depth 6 ft		Rock Depth 6 ft		
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 2	Undisturbed 0	Core 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.) First -		Completion -	24 HR. -	
Casing Hammer N/A		Weight (lbs) N/A		Drop (in) N/A		Drilling Foreman Steve Bitetto		
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins				
Sampler Hammer N/A		Weight (lbs) N/A		Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/Join	
	+17.9		0					
	+17.4	Asphalt Parking Lot						
		0.5-1 Black-brown fine to coarse SAND, trace gravel, trace coal, loose, moist, well graded [FILL]	1					0.0
		1-1.8 Brown fine to coarse SAND, trace gravel, trace brick fragments, loose, moist, well graded [fill]	2			NA		0.0
		1.8-2 Brown fine to medium SAND, trace silt, loose, moist, well graded [fill]	3	1	MACROCORE	24		0.0
			4					
			5					0.0
	+11.9	Schistose Bedrock (weathered)	6	2	MACROCORE	12		
		E.O.B. @ 6.0 ft bgs	7					
			8					
			9					
			10					
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

Sample B7_0-2 Taken at 1035

Refusal @ 6 ft

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Project 546 W44th St.				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 8.5BPM			
Drilling Company Laurel Environmental				Date Started 4/29/13		Date Finished 4/29/13	
Drilling Equipment Geoprobe 7822 DT				Completion Depth 12 ft		Rock Depth 12 ft	
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 3	Undisturbed 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Steve Bitetto			
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins			
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist B/Join	
	+8.5		0					
	+8.4	Concrete Slab						
		.1-2.8' orange-brown fine to coarse SAND, some gravel (shistose), trace organics, well graded, loose, dry to moist (FILL)	1					Sample B8_1-3 taken at 1300
			2	S1	MACROCORE	36	NA	
	+5.7	2.8-3' gray-brown fine SAND, some silt, trace clay, wet, well graded (native)	3					
			4					
		5-8.5' gray-brown fine SAND, some silt, trace clay, wet, well graded (native)	5					Sample B8_5-7 taken at 1305
			6					
			7	S2	MACROCORE	42	NA	
			8					
			9					
		10-12' Red-brown fine SAND, some silt, trace clay, trace coarse sand, medium dense, moist, well graded (native) (Bedrock fragments in tip)	10					
			11	S3	MACROCORE	24		
			12				NA	
	-3.5	E.O.B. @ 12.0 ft bgs	12					Refusal @ 12 ft
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

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Project 546 W44th St.				Project No. 170229701			
Location New York, NY				Elevation and Datum Approx. 18.8BPMD			
Drilling Company Laurel Environmental				Date Started 4/29/13		Date Finished 4/29/13	
Drilling Equipment Geoprobe 7822 DT				Completion Depth 9.8 ft		Rock Depth 9.8 ft	
Size and Type of Bit 2" Direct Push				Number of Samples		Disturbed 2	Undisturbed 0
Casing Diameter (in) N/A		Casing Depth (ft) N/A		Water Level (ft.)		First ▽	Completion ▽
Casing Hammer N/A		Weight (lbs) N/A	Drop (in) N/A	Drilling Foreman Steve Bitetto			
Sampler 2" diameter x 5' long Macrocore				Inspecting Engineer John Patrick Diggins			
Sampler Hammer N/A		Weight (lbs) N/A	Drop (in) N/A				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist B/Join	
	+18.8		0					
	+18.3	Asphalt Parking Lot	1	S1	MACROCORE	24	NA	77.4
		.5-2' Red-brown fine to coarse SAND and brick fragments, loose, dry, well graded (FILL)	2					81.2
			3					
			4					
		5-6' Red-brown fine to coarse SAND and brick fragments, loose, dry, well graded (FILL)	5	S2	MACROCORE	30	NA	122
		6-7' Medium brown to fine GRAVEL, some sand, loose, dry, well graded (FILL)	6					108
			7					
			8					
	+9.0	E.O.B. @ 9.8 ft bgs	10					Refusal @ 9.8 ft
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					

APPENDIX E

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No. 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below:

Drinking Water Bacteriology

Coliform, Total / E. coli (Qualitative) SM 18-21 9222B(97)/40CFR141.21(F)6;
SM 18-21 9223B (97) (Colifert)
Standard Plate Count SM 18-21 9215B

Drinking Water Metals II

Beryllium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Nickel, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Thallium, Total EPA 200.8 Rev. 5.4

Drinking Water Metals I

Arsenic, Total EPA 200.8 Rev. 5.4
Barium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Cadmium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Chromium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Copper, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Iron, Total EPA 200.7 Rev. 4.4
Lead, Total EPA 200.8 Rev. 5.4
Manganese, Total EPA 200.7 Rev. 4.4
Mercury, Total EPA 245.1 Rev. 3.0
Selenium, Total EPA 200.8 Rev. 5.4
Silver, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
Zinc, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4

Drinking Water Metals III

Calcium, Total EPA 200.7 Rev. 4.4
Magnesium, Total EPA 200.7 Rev. 4.4
Sodium, Total EPA 200.7 Rev. 4.4

Drinking Water Miscellaneous

Organic Carbon, Total SM 18-21 5310C (00)
Perchlorate EPA 332.0 Rev. 1

Drinking Water Non-Metals

Alkalinity SM 18-21 2920B (97)
Calcium Hardness EPA 200.7 Rev. 4.4
Chloride EPA 300.0 Rev. 2.1
Color SM 18-21 2120B (01)
Cyanide SM 18-21 4500-CN E (99)
Fluoride, Total EPA 300.0 Rev. 2.1
SM 18-21 4500-F G (97)
Nitrate (as N) SM 18-21 4500-NO3 F (00)
Nitrite (as N) SM 18-21 4500-NO3 F (00)
Solids, Total Dissolved SM 18-21 2540C (97)
Specific Conductance SM 18-21 2510B (97)

Drinking Water Metals II

Aluminum, Total EPA 200.7 Rev. 4.4
Antimony, Total EPA 200.8 Rev. 5.4

Serial No.: 48541

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab. Id No. 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER

All approved analytes are listed below

Drinking Water Non-Metals

Sulfate (as SO4) EPA 300.0 Rev. 2.1

Drinking Water Trihalomethanes

Bromodichloromethane EPA 524.2

Bromoform EPA 524.2

Chloroform EPA 524.2

Dibromochloromethane EPA 524.2

Total Trihalomethanes EPA 524.2

Fuel Additives

Methyl tert-butyl ether EPA 524.2

Naphthalene EPA 524.2

Microextractibles

1,2-Dibromo-3-chloropropane EPA 504.1

1,2-Dibromoethane EPA 504.1

Volatile Aromatics

1,2,3-Trichlorobenzene EPA 524.2

1,2,4-Trichlorobenzene EPA 524.2

1,2,4-Trimethylbenzene EPA 524.2

1,2-Dichlorobenzene EPA 524.2

1,3,5-Trimethylbenzene EPA 524.2

1,3-Dichlorobenzene EPA 524.2

1,4-Dichlorobenzene EPA 524.2

2-Chlorotoluene EPA 524.2

4-Chlorotoluene EPA 524.2

Benzene EPA 524.2

Volatile Aromatics

Bromobenzene EPA 524.2

Chlorobenzene EPA 524.2

Ethyl benzene EPA 524.2

Hexachlorobutadiene EPA 524.2

Isopropylbenzene EPA 524.2

n-Butylbenzene EPA 524.2

n-Propylbenzene EPA 524.2

p-Isopropyltoluene (P-Cymene) EPA 524.2

sec-Butylbenzene EPA 524.2

Styrene EPA 524.2

tert-Butylbenzene EPA 524.2

Toluene EPA 524.2

Total Xylenes EPA 524.2

Volatile Halocarbons

1,1,1,2-Tetrachloroethane EPA 524.2

1,1,1-Trichloroethane EPA 524.2

1,1,1,2-Tetrachloroethane EPA 524.2

1,1,2-Trichloroethane EPA 524.2

1,1-Dichloroethane EPA 524.2

1,1-Dichloroethene EPA 524.2

1,1-Dichloropropene EPA 524.2

1,2,3-Trichloropropane EPA 524.2

1,2-Dichloroethane EPA 524.2

1,2-Dichloropropane EPA 524.2

1,3-Dichloropropane EPA 524.2

Serial No.: 48541

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id. No. 11148

is hereby APPROVED as an Environmental Laboratory in performance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER

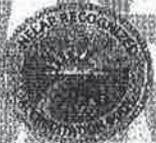
All approved analytes are listed below.

Volatile Halocarbons

2,2-Dichloropropane	EPA 524.2
Bromochloromethane	EPA 524.2
Bromomethane	EPA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chloromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibromomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 524.2
Tetrachloroethene	EPA 524.2
trans-1,2-Dichloroethene	EPA 524.2
trans-1,3-Dichloropropene	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2
Vinyl chloride	EPA 524.2

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All approved analytes are listed below

Acrylates

Acrolein (Propenal) EPA 624
EPA 8260C
Acrylonitrile EPA 624
EPA 8260C
Ethyl methacrylate EPA 8260C

Amines

2-Nitroaniline EPA 8270D
3-Nitroaniline EPA 8270D
4-Chloroaniline EPA 8270D
4-Nitroaniline EPA 8270D
Aniline EPA 8270D
Carbazole EPA 625
EPA 8270D
Pyridine EPA 625
EPA 8270D

Bacteriology

Coliform, Faecal SM 18-21 9221E (99)
SM 18-21 9222D (97)
Coliform, Total SM 18-21 9221B (99)
SM 18-21 9222B (97)
Standard Plate Count SM 18-21 9215B

Benzidines

3,3'-Dichlorobenzidine EPA 625
EPA 8270D

Benzidines

Benzidine EPA 625
EPA 8270D

Chlorinated Hydrocarbon Pesticides

4,4'-DDD EPA 608
EPA 8081B
4,4'-DDE EPA 608
EPA 8081B
4,4'-DDT EPA 608
EPA 8081B
Aldrin EPA 608
EPA 8081B
alpha-BHC EPA 608
EPA 8081B
alpha-Chlordane EPA 6081B
EPA 8081B
beta-BHC EPA 608
EPA 8081B

Chlordane Total

delta-BHC

Dieldrin

Endosulfan I

Endosulfan II

EPA 608
EPA 8081B
EPA 608

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All approved analytes are listed below:

Chlorinated Hydrocarbon Pesticides

Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 608
	EPA 8081B
Endrin	EPA 608
	EPA 8081B
Endrin aldehyde	EPA 608
	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 608
	EPA 8081B
Heptachlor epoxide	EPA 608
	EPA 8081B
Lindane	EPA 608
	EPA 8081B
Melphoxchlor	EPA 608
	EPA 8081B
Toxaphene	EPA 608
	EPA 8081B

Chlorinated Hydrocarbons

2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 625
	EPA 8270D
Hexachlorobutadiene	EPA 625
	EPA 8270D
Hexachlorocyclopentadiene	EPA 625
	EPA 8270D
Hexachloroethane	EPA 625
	EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dinoseb	EPA 8151A

Demand

Biochemical Oxygen Demand	SM 18-21 5210B (01)
Carbonaceous BOD	SM 18-21 5210B (01)
Chemical Oxygen Demand	EPA 410.4 Rev. 2.0
	SM 18-21 5220D (97)

Fuel Oxygenates

Di-isopropyl ether	EPA 8260C
Ethanol	EPA 8260C
Methyl tert-butyl ether	EPA 8260C

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene	EPA 8260C
1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 625
	EPA 8270D
2-Chloronaphthalene	EPA 625

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Fuel Oxygenates

tert-amyl methyl ether (TAME) EPA 8260C
tert-butyl alcohol EPA 8260C
tert-butyl ethyl ether (ETBE) EPA 8260C

Haloothers

4-Bromophenylphenyl ether EPA 625
EPA 8270D
4-Chlorophenylphenyl ether EPA 625
EPA 8270D
Bis(2-chloroethoxy)methane EPA 625
EPA 8270D
Bis(2-chloroethyl) ether EPA 625
EPA 8270D
Bis(2-chloroisopropyl) ether EPA 625
EPA 8270D

Low Level Polynuclear Aromatics

Naphthalene-Low Level EPA 8270D SIM
Mineral
Acidity SM 18-21 2310B.4a (97)
Alkalinity SM 18-21 2320B (97)
Chloride EPA 300.0 Rev. 2.1
SM 18-21 4500-Cl- E (97)
Fluoride, Total EPA 300.0 Rev. 2.1
SM 18-21 4600-F C (97)
Hardness, Total EPA 200.7 Rev. 4.4
SM 18-21 2340B (97)
Sulfate (as SO4) EPA 300.0 Rev. 2.1
SM 15 426 C

Nitroaromatics and Isophorone

1,3,5-Trinitrobenzene EPA 8330
1,3-Dinitrobenzene EPA 8270D
EPA 8330
2,4,6-Trinitrotoluene EPA 8330
2,4-Dinitrotoluene EPA 625
EPA 8270D
EPA 8330
2,6-Dinitrotoluene EPA 625
EPA 8270D
EPA 8330
2-Amino-4,6-dinitrotoluene EPA 8330
2-Nitrotoluene EPA 8330

Low Level Polynuclear Aromatics

Benzo(a)anthracene Low Level EPA 8270D SIM
Benzo(a)pyrene Low Level EPA 8270D SIM
Benzo(b)fluoranthene Low Level EPA 8270D SIM
Benzo(g,h,i)perylene Low Level EPA 8270D SIM
Benzo(k)fluoranthene Low Level EPA 8270D SIM
Chrysene Low Level EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level EPA 8270D SIM
Fluoranthene Low Level EPA 8270D SIM
Fluorene Low Level EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level EPA 8270D SIM

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All approved analytes are listed below:

Nitroaromatics and Isophorone

3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 625
	EPA 8270D
Methyl-2,4,6-trinitrophenylamine	EPA 8330
Nitrobenzene	EPA 625
	EPA 8270D
	EPA 8330
Octahydro-tetranitro-tetrazocine	EPA 8330

Nutrient

Nitrate (as N)	SM 18-21-4500-NO3 F (00)
Nitrite (as N)	SM 18-21-4500-NO2 B (00)
Orthophosphate (as P)	SM 18-21-4500-P E
Phosphorus, Total	SM 18-21-4500-P E

Organophosphate Pesticides

Atrazine	EPA 8270D
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Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015C
Gasoline Range Organics	EPA 8015C

Phthalate Esters

Benzyl butyl phthalate	EPA 625
	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270D
Diethyl phthalate	EPA 625
	EPA 8270D
Dimethyl phthalate	EPA 625
	EPA 8270D
Di-n-butyl phthalate	EPA 625
	EPA 8270D
Di-n-octyl phthalate	EPA 625
	EPA 8270D

Polychlorinated Biphenyls

PCB-1016	EPA 608
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Nitrosoamines

N-Nitrosodimethylamine	EPA 625
	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 625
	EPA 8270D
N-Nitrosodiphenylamine	EPA 625
	EPA 8270D

Nutrient

Ammonia (as N)	EPA 350.1 Rev. 2.0
	SM 18-4500-NH3 H
Kjeldahl Nitrogen, Total	EPA 351.1 Rev. 1978
	LACHAT 10-107-06-2
Nitrate (as N)	EPA 300.0 Rev. 2.1
	EPA 353.2 Rev. 2.0

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All approved analytes are listed below:

Polychlorinated Biphenyls

PCB-1016	EPA-8082A
PCB-1221	EPA 608
	EPA 8082A
PCB-1232	EPA 608
	EPA 8082A
PCB-1242	EPA 608
	EPA 8082A
PCB-1248	EPA 608
	EPA 8082A
PCB-1254	EPA 608
	EPA 8082A
PCB-1260	EPA 608
	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

Polynuclear Aromatics

Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 625
	EPA 8270D
Benzo(ghi)perylene	EPA 625
	EPA 8270D
Benzo(k)fluoranthene	EPA 625
	EPA 8270D
Chrysene	EPA 625
	EPA 8270D
Dibenzo(a,h)anthracene	EPA 625
	EPA 8270D
Fluoranthene	EPA 625
	EPA 8270D
Fluorene	EPA 625
	EPA 8270D

Polynuclear Aromatics

Acenaphthene	EPA 625
	EPA 8270D
Acenaphthylene	EPA 625
	EPA 8270D
Anthracene	EPA 625
	EPA 8270D
Benzo(a)anthracene	EPA 625
	EPA 8270D
Benzo(a)pyrene	EPA 625

Indeno(1,2,3-cd)pyrene	EPA 625
	EPA 8270D
Naphthalene	EPA 625
	EPA 8270D
Phenanthrene	EPA 625
	EPA 8270D
Pyrene	EPA 625
	EPA 8270D

Priority Pollutant Phenols

2,3,4,6 Tetrachlorophenol	EPA 8270D
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Priority Pollutant Phenols

2,4,5-Trichlorophenol	EPA 625 EPA 8270D
2,4,6-Trichlorophenol	EPA 625 EPA 8270D
2,4-Dichlorophenol	EPA 625 EPA 8270D
2,4-Dimethylphenol	EPA 625 EPA 8270D
2,4-Dinitrophenol	EPA 625 EPA 8270D
2-Chlorophenol	EPA 625 EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 625 EPA 8270D
2-Methylphenol	EPA 625 EPA 8270D
2-Nitrophenol	EPA 625 EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 625 EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 625 EPA 8270D
Pentachlorophenol	EPA 625 EPA 8270D

Priority Pollutant Phenols

Phenol	EPA 625 EPA 8270D
Residue	
Solids, Total	SM 18-21 2540B (97)
Solids, Total Dissolved	SM 18-21 2540C (97)
Solids, Total Suspended	SM 18-21 2540D (97)

Semi-Volatile Organics

1,1-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 624 EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C

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Volatile Aromatics

1,3-Dichlorobenzene	EPA 624 EPA 8260C
1,4-Dichlorobenzene	EPA 624 EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 624 EPA 8260C
Chlorobenzene	EPA 624 EPA 8260C
Ethyl benzene	EPA 624 EPA 8260C
Isopropylbenzene	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C
n-Propylbenzene	EPA 8260C
p-Isopropyltoluene (p-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 624 EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 624 EPA 8260C
Total Xylenes	EPA 624 EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 624 EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 624 EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 624 EPA 8260C
1,1-Dichloroethane	EPA 624 EPA 8260C
1,1-Dichloroethene	EPA 624 EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropane	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8011 EPA 8260C
1,2-Dibromoethane	EPA 8011 EPA 8260C
1,2-Dichloroethane	EPA 624 EPA 8260C
1,2-Dichloropropane	EPA 624 EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethyl vinyl ether	EPA 624 EPA 8260C

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Volatile Halocarbons

Bromochloromethane	EPA 8260C
Bromodichloromethane	EPA 624
	EPA 8260C
Bromoform	EPA 624
	EPA 8260C
Bromomethane	EPA 624
	EPA 8260C
Carbon tetrachloride	EPA 624
	EPA 8260C
Chloroethane	EPA 624
	EPA 8260C
Chloroform	EPA 624
	EPA 8260C
Chloromethane	EPA 624
	EPA 8260C
cis-1,2-Dichloroethene	EPA 624
	EPA 8260C
cis-1,3-Dichloropropene	EPA 624
	EPA 8260C
Dibromochloromethane	EPA 624
	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 624
	EPA 8260C
Hexachlorobutadiene, Volatile	EPA 8260C
Methylene chloride	EPA 624

Volatile Halocarbons

Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 624
	EPA 8260C
trans-1,2-Dichloroethene	EPA 624
	EPA 8260C
trans-1,3-Dichloropropene	EPA 624
	EPA 8260C
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 624
	EPA 8260C
Trichlorofluoromethane	EPA 624
	EPA 8260C
Vinyl chloride	EPA 624
	EPA 8260C

Volatiles Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methyl ethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C
4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Di-ethyl ether	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260C

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Volatiles Organics

Vinyl acetate

EPA 3260C

Wastewater Metals I

Lead, Total

EPA 6010C

Wastewater Metals I

Barium, Total

EPA 200.7 Rev. 4.4

Magnesium, Total

EPA 200.7 Rev. 4.4

EPA 200.8 Rev. 5.4

Manganese, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.8 Rev. 5.4

EPA 6020A

EPA 6010C

Cadmium, Total

EPA 200.7 Rev. 4.4

EPA 6020A

EPA 200.8 Rev. 5.4

Nickel, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.8 Rev. 5.4

EPA 6020A

EPA 6010C

Calcium, Total

EPA 200.7 Rev. 4.4

EPA 6020A

EPA 6010C

Potassium, Total

EPA 200.7 Rev. 4.4

Chromium, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.8 Rev. 5.4

Silver, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.8 Rev. 5.4

EPA 6020A

EPA 6010C

Copper, Total

EPA 200.7 Rev. 4.4

EPA 6020A

EPA 200.8 Rev. 5.4

Sodium, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 6010C

EPA 6020A

Iron, Total

EPA 200.7 Rev. 4.4

Wastewater Metals II

Aluminum, Total

EPA 200.7 Rev. 4.4

EPA 6010C

EPA 200.8 Rev. 5.4

EPA 6020A

EPA 6010C

Lead, Total

EPA 200.7 Rev. 4.4

EPA 6020A

EPA 200.8 Rev. 5.4

Serial No.: 48542

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2014
Issued April 01, 2013

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below.

Wastewater Metals II

Antimony, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Arsenic, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Beryllium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Chromium VI EPA 7196A
SM 18-19 3500-CrD

Mercury, Total EPA 245.1 Rev. 3.0
EPA 7470A

Selenium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Vanadium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Zinc, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4

Wastewater Metals II

Zinc, Total EPA 6010C
EPA 6020A

Wastewater Metals III

Cobalt, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Molybdenum, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Thallium, Total EPA 200.7 Rev. 4.4
EPA 200.8 Rev. 5.4
EPA 6010C
EPA 6020A

Tin, Total EPA 200.7 Rev. 4.4
EPA 6010C

Titanium, Total EPA 200.7 Rev. 4.4

Wastewater Miscellaneous

Boron, Total EPA 200.7 Rev. 4.4
EPA 6010C

Bromide EPA 300.0 Rev. 2.1
Color SM 18-21 2120B (01)

Cyanide, Total SM 18-21 4500-CN E (99)
Formaldehyde EPA 8315A

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ENVIRONMENTAL ANALYSES NON POTABLE WATER.

All approved analytes are listed below.

Wastewater Miscellaneous

Oil and Grease Total Recoverable (HEM EPA 1664A)
Organic Carbon, Total SM 18-21 5310C (00)
Phenols EPA 420.1 Rev. 1978
SM 14 510C
Silica, Dissolved EPA 200.7 Rev. 4.4
Specific Conductance EPA 120.1 Rev. 1982
SM 18-21 2510B (97)
Sulfide (as S) SM 18-21 4500-S D (00)
Surfactant (MBAS) SM 18-21 5540C (00)
Total Petroleum Hydrocarbons EPA 1664A

Sample Preparation Methods

EPA 3005A
EPA 3015
EPA 3510C
EPA 5030B
EPA 9010C
EPA 9030B
SM 18-20 4500-CN C
SM 18-21 4500-NH3 B (97)

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Acrylates

Acrolein (Propenal) EPA 8260C
Acrylonitrile EPA 8260C
Ethyl methacrylate EPA 8260C

Amines

1,2-Diphenylhydrazine EPA 8270D
2-Nitroaniline EPA 8270D
3-Nitroaniline EPA 8270D
4-Chloroaniline EPA 8270D
4-Nitroaniline EPA 8270D
Aniline EPA 8270D
Carbazole EPA 8270D

Benzidines

3,3'-Dichlorobenzidine EPA 8270D
Benzidine EPA 8270D

Characteristic Testing

Corrosivity EPA 9040C
EPA 9045D
Ignitability EPA 1010A
EPA 1030
Synthetic Precipitation Leaching Proc. EPA 1312
TCLP EPA 1311

Chlorinated Hydrocarbon Pesticides

4,4'-DDD EPA 8081B
4,4'-DDE EPA 8081B

Chlorinated Hydrocarbon Pesticides

4,4-DDT EPA 8081B
Aldrin EPA 8081B
alpha-BHC EPA 8081B
alpha-Chlordane EPA 8081B
Atrazine EPA 8270D
beta-BHC EPA 8081B
Chlordane Total EPA 8081B
delta-BHC EPA 8081B
Dieldrin EPA 8081B
Endosulfan I EPA 8081B
Endosulfan II EPA 8081B
Endosulfan sulfate EPA 8081B
Endrin EPA 8081B
Endrin aldehyde EPA 8081B
Endrin Ketone EPA 8081B
gamma-Chlordane EPA 8081B
Heptachlor EPA 8081B
Heptachlor epoxide EPA 8081B
Lindane EPA 8081B
Methoxychlor EPA 8081B
Toxaphene EPA 8081B

Chlorinated Hydrocarbons

1,2,3-Trichlorobenzene EPA 8260C
1,2,4,5-Tetrachlorobenzene EPA 8270D
1,2,4-Trichlorobenzene EPA 8270D

Serial No.. 48543

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Chlorinated Hydrocarbons

2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D

Chlorophenoxy Acid Pesticides

2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dalapon	EPA 8151A
Dicamba	EPA 8151A

Haloethers

4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl) ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM

Low Level Polynuclear Aromatic Hydrocarbons

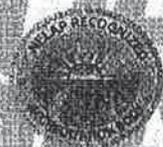
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 6010C
	EPA 6020A
Cadmium, Total	EPA 6010C
	EPA 6020A
Calcium, Total	EPA 6010C
Chromium, Total	EPA 6010C
	EPA 6020A
Copper, Total	EPA 6010C
	EPA 6020A
Iron, Total	EPA 6010C
	EPA 6020A
Lead, Total	EPA 6010C
	EPA 6020A
Magnesium, Total	EPA 6010C

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WADSWORTH CENTER

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MR. CHRISTOPHER WAKEFIELD
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8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No. 11148

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Metals I

Manganese, Total	EPA 6010C
	EPA 6020A
Nickel, Total	EPA 6010C
	EPA 6020A
Potassium, Total	EPA 6010C
Silver, Total	EPA 6010C
	EPA 6020A
Sodium, Total	EPA 6010C

Metals II

Aluminum, Total	EPA 6010C
	EPA 6020A
Antimony, Total	EPA 6010C
	EPA 6020A
Arsenic, Total	EPA 6010C
	EPA 6020A
Beryllium, Total	EPA 6010C
	EPA 6020A
Chromium VI	EPA 7196A
Mercury, Total	EPA 7471B
Selenium, Total	EPA 6010C
	EPA 6020A
Vanadium, Total	EPA 6010C
	EPA 6020A
Zinc, Total	EPA 6010C
	EPA 6020A

Metals III

Cobalt, Total	EPA 6010C
	EPA 6020A
Molybdenum, Total	EPA 6010C
	EPA 6020A
Thallium, Total	EPA 6010C
	EPA 6020A
Tin, Total	EPA 6010C

Minerals

Chloride	EPA 9251
Sulfate (as SO ₄)	EPA 9038

Miscellaneous

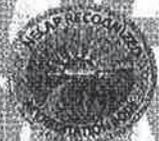
Boron, Total	EPA 6010C
Cyanide, Total	EPA 6012B
	EPA 9014
Formaldehyde	EPA 8315A
Phenols	EPA 9065
Specific Conductance	EPA 9050A

Nitroaromatics and Isophorone

1,3,5-Trinitrobenzene	EPA 8330
1,3-Dinitrobenzene	EPA 8330
2,4,6-Trinitrotoluene	EPA 8330
2,4-Dinitrotoluene	EPA 8270D
	EPA 8330
2,6-Dinitrotoluene	EPA 8270D

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below

Nitroaromatics and Isophorone

2,6-Dinitrotoluene	EPA 8330
2-Amino-4,6-dinitrotoluene	EPA 8330
2-Nitrotoluene	EPA 8330
3-Nitrotoluene	EPA 8330
4-Amino-2,6-dinitrotoluene	EPA 8330
4-Nitrotoluene	EPA 8330
Hexahydro-1,3,5-trinitro-1,3,5-triazine	EPA 8330
Isophorone	EPA 8270D
Methyl-2,4,6-trinitrophenylamine	EPA 8330
Nitrobenzene	EPA 8270D
	EPA 8330
Octahydro-tetra-nitro-tetrazocine	EPA 8330
Pyridine	EPA 8270D

Phthalate Esters

Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
PCB-1254	EPA 8082
PCB-1260	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015G
Gasoline Range Organics	EPA 8015C

Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Dielhyl phthalate	EPA 8270D

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D

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8 WALKUP DR
WESTBOROUGH, MA 01581-1019

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Polynuclear Aromatic Hydrocarbons

Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Semi-Volatile Organics

1,1'-Biphenyl	EPA 8270D
1,2-Dichlorobenzene, Semi-volatile	EPA 8270D

Semi-Volatile Organics

1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzaldehyde	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Caprolactam	EPA 8270D
Dibenzofuran	EPA 8270D

Volatile Aromatics

1,2,4-Trichlorobenzene, volatile	EPA 8260C
1,2,4-Trimethylbenzene	EPA 8260C
1,2-Dichlorobenzene	EPA 8260C
1,3,5-Trimethylbenzene	EPA 8260C
1,3-Dichlorobenzene	EPA 8260C
1,4-Dichlorobenzene	EPA 8260C
2-Chlorotoluene	EPA 8260C
4-Chlorotoluene	EPA 8260C
Benzene	EPA 8260C
Bromobenzene	EPA 8260C
Chlorobenzene	EPA 8260C
Ethyl benzene	EPA 8260C
Isopropylbenzene	EPA 8260C
Naphthalene, Volatile	EPA 8260C
n-Butylbenzene	EPA 8260C

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8 WALKUP DR
WESTBOROUGH, MA 01581-1019

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below

Volatile Aromatics

n-Propylbenzene	EPA 8260C
p-Isopropyltoluene (P-Cymene)	EPA 8260C
sec-Butylbenzene	EPA 8260C
Styrene	EPA 8260C
tert-Butylbenzene	EPA 8260C
Toluene	EPA 8260C
Total Xylenes	EPA 8260C

Volatile Halocarbons

1,1,1,2-Tetrachloroethane	EPA 8260C
1,1,1-Trichloroethane	EPA 8260C
1,1,2,2-Tetrachloroethane	EPA 8260C
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 8260C
1,1,2-Trichloroethane	EPA 8260C
1,1-Dichloroethane	EPA 8260C
1,1-Dichloroethene	EPA 8260C
1,1-Dichloropropene	EPA 8260C
1,2,3-Trichloropropene	EPA 8260C
1,2-Dibromo-3-chloropropane	EPA 8260C
1,2-Dibromethane	EPA 8260C
1,2-Dichloroethane	EPA 8260C
1,2-Dichloropropane	EPA 8260C
1,3-Dichloropropane	EPA 8260C
2,2-Dichloropropane	EPA 8260C
2-Chloroethylvinyl ether	EPA 8260C
Bromochloromethane	EPA 8260C

Volatile Halocarbons

Bromodichloromethane	EPA 8260C
Bromoform	EPA 8260C
Bromomethane	EPA 8260C
Carbon tetrachloride	EPA 8260C
Chloroethane	EPA 8260C
Chloroform	EPA 8260C
Chloromethane	EPA 8260C
cis-1,2-Dichloroethene	EPA 8260C
cis-1,3-Dichloropropene	EPA 8260C
Dibromochloromethane	EPA 8260C
Dibromomethane	EPA 8260C
Dichlorodifluoromethane	EPA 8260C
Hexachlorobutadiene, Volatile	EPA 8260C
Methylene chloride	EPA 8260C
Tetrachloroethene	EPA 8260C
trans-1,2-Dichloroethene	EPA 8260C
trans-1,3-Dichloropropene	EPA 8260C
trans-1,4-Dichloro-2-butene	EPA 8260C
Trichloroethene	EPA 8260C
Trichlorofluoromethane	EPA 8260C
Vinyl chloride	EPA 8260C

Volatile Organics

1,4-Dioxane	EPA 8260C
2-Butanone (Methylethyl ketone)	EPA 8260C
2-Hexanone	EPA 8260C

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MR. CHRISTOPHER WAKEFIELD
ALPHA ANALYTICAL
8 WALKUP DR
WESTBOROUGH, MA 01581-1019

NY Lab Id No: 11148

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below:

Volatile Organics

4-Methyl-2-Pentanone	EPA 8260C
Acetone	EPA 8260C
Carbon Disulfide	EPA 8260C
Cyclohexane	EPA 8260C
Di-ethyl ether	EPA 8260C
Methyl acetate	EPA 8260C
Methyl cyclohexane	EPA 8260B
	EPA 8260C
Methyl tert-butyl ether	EPA 8260C
tert-butyl alcohol	EPA 8260C
Vinyl acetate	EPA 8260C

Sample Preparation Methods

EPA 3005A
EPA 3050B
EPA 3540C
EPA 3546
EPA 3580A
EPA 5035A-H
EPA 5035A-L
EPA 9010C
EPA 9030B

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
Issued April 01, 2013
Revised April 18, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11827

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Amines

1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D
Pyridine	EPA 8270D

Benzidines

3,3'-Dichlorobenzidine	EPA 8270D
3,3'-Dimethylbenzidine	EPA 8270D
Benzidine	EPA 8270D

Chlorinated Hydrocarbon Pesticides

4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B
Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B

Chlorinated Hydrocarbon Pesticides

Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Toxaphene	EPA 8081B

Chlorinated Hydrocarbons

1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropene	EPA 8270D

Dissolved Gases

Ethane	RSK-175
Ethane (Ethylene)	RSK-175
Methane	RSK-175
Propane	RSK-175

Serial No.: 49076

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2014
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Revised April 18, 2013



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:

Haloethers

4-Bromophenylphenyl ether	EPA 8270D
4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl)ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D

Low Level Polynuclear Aromatics

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,h)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Mineral

Alkalinity	SM 18-21, 2320B (97)
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Nitroaromatics and Isophorone

2,4-Dinitrotoluene	EPA 8270D
2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosodi-n-propylamine	EPA 8270D
N-Nitrosodiphenylamine	EPA 8270D

Organophosphate Pesticides

Atrazine	EPA 8270D
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Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
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Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Dihexyl phthalate	EPA 8270D
Dioctyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB 118	EPA 8082A
PCB 126	EPA 8082A
PCB 1016	EPA 8082A

Serial No.: 49076

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WADSWORTH CENTER

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

Is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Polychlorinated Biphenyls

PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1243	EPA 8082A
PCB-1254	EPA 8082A
PCB-1260	EPA 8082A

Polynuclear Aromatics

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(ghi)perylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270D
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Priority Pollutant Phenols

2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D
2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Residue

Solids, Total Suspended	SM 18.21 2540D (97)
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Semi-Volatile Organics

1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D

Serial No.: 49076

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WADSWORTH CENTER

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id. No. 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved analytes are listed below:

Semi-Volatile Organics

Caprolactam EPA 8270D
Dibenzofuran EPA 8270D

Wastewater Metals I

Barium, Total EPA 6020A
Cadmium, Total EPA 6020A
Chromium, Total EPA 6020A
Copper, Total EPA 6020A
Iron, Total EPA 6020A
Lead, Total EPA 6020A
Manganese, Total EPA 6020A
Nickel, Total EPA 6020A
Silver, Total EPA 6020A
Strontium, Total EPA 6020A

Wastewater Metals II

Aluminum, Total EPA 6020A
Antimony, Total EPA 6020A
Arsenic, Total EPA 6020A
Beryllium, Total EPA 6020A
Mercury, Low Level EPA 1631E
Mercury, Total EPA 7470A
Selenium, Total EPA 6020A
Vanadium, Total EPA 6020A
Zinc, Total EPA 6020A

Wastewater Metals III

Cobalt, Total EPA 6020A
Molybdenum, Total EPA 6020A
Thallium, Total EPA 6020A

Wastewater Miscellaneous

Specific Conductance EPA 9050A
Turbidity EPA 180.1 Rev. 2.0

Sample Preparation Methods

EPA 3020A
EPA 3510C

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320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below.

Amines

1,2-Diphenylhydrazine	EPA 8270D
2-Nitroaniline	EPA 8270D
3-Nitroaniline	EPA 8270D
4-Chloroaniline	EPA 8270D
4-Nitroaniline	EPA 8270D
Aniline	EPA 8270D
Carbazole	EPA 8270D

Benzidines

3,3'-Dichlorobenzidine	EPA 8270D
Benzidine	EPA 8270D

Characteristic Testing

Compositivity	EPA 9040C EPA 9045D
TCLP	EPA 1311

Chlorinated Hydrocarbon Pesticides

4,4'-DDD	EPA 8081B
4,4'-DDE	EPA 8081B
4,4'-DDT	EPA 8081B
Aldrin	EPA 8081B
alpha-BHC	EPA 8081B
alpha-Chlordane	EPA 8081B
beta-BHC	EPA 8081B
Chlordane Total	EPA 8081B
delta-BHC	EPA 8081B

Chlorinated Hydrocarbon Pesticides

Dieldrin	EPA 8081B
Endosulfan I	EPA 8081B
Endosulfan II	EPA 8081B
Endosulfan sulfate	EPA 8081B
Endrin	EPA 8081B
Endrin aldehyde	EPA 8081B
Endrin Ketone	EPA 8081B
gamma-Chlordane	EPA 8081B
Heptachlor	EPA 8081B
Heptachlor epoxide	EPA 8081B
Lindane	EPA 8081B
Methoxychlor	EPA 8081B
Pentachloronitrobenzene	EPA 8270D
Toxaphene	EPA 8081B

Chlorinated Hydrocarbons

1,2,4,5-Tetrachlorobenzene	EPA 8270D
1,2,4-Trichlorobenzene	EPA 8270D
2-Chloronaphthalene	EPA 8270D
Hexachlorobenzene	EPA 8270D
Hexachlorobutadiene	EPA 8270D
Hexachlorocyclopentadiene	EPA 8270D
Hexachloroethane	EPA 8270D
Hexachloropropene	EPA 8270D
Halocethers	
4-Bromophenylphenyl ether	EPA 8270D

Serial No.: 49077

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No. 11627

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National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:

Haloethers

4-Chlorophenylphenyl ether	EPA 8270D
Bis(2-chloroethoxy)methane	EPA 8270D
Bis(2-chloroethyl) ether	EPA 8270D
Bis(2-chloroisopropyl) ether	EPA 8270D

Low Level Polynuclear Aromatic Hydrocarbons

Acenaphthene Low Level	EPA 8270D SIM
Acenaphthylene Low Level	EPA 8270D SIM
Anthracene Low Level	EPA 8270D SIM
Benzo(a)anthracene Low Level	EPA 8270D SIM
Benzo(a)pyrene Low Level	EPA 8270D SIM
Benzo(b)fluoranthene Low Level	EPA 8270D SIM
Benzo(g,h,i)perylene Low Level	EPA 8270D SIM
Benzo(k)fluoranthene Low Level	EPA 8270D SIM
Chrysene Low Level	EPA 8270D SIM
Dibenzo(a,f)anthracene Low Level	EPA 8270D SIM
Fluoranthene Low Level	EPA 8270D SIM
Fluorene Low Level	EPA 8270D SIM
Indeno(1,2,3-cd)pyrene Low Level	EPA 8270D SIM
Naphthalene Low Level	EPA 8270D SIM
Phenanthrene Low Level	EPA 8270D SIM
Pyrene Low Level	EPA 8270D SIM

Metals I

Barium, Total	EPA 6020A
Cadmium, Total	EPA 6020A
Chromium, Total	EPA 6020A

Metals I

Copper, Total	EPA 6020A
Iron, Total	EPA 6020A
Lead, Total	EPA 6020A
Manganese, Total	EPA 6020A
Nickel, Total	EPA 6020A
Silver, Total	EPA 6020A

Metals II

Aluminum, Total	EPA 6020A
Antimony, Total	EPA 6020A
Arsenic, Total	EPA 6020A
Beryllium, Total	EPA 6020A
Mercury, Total	EPA 7171B
	EPA 7474
Selenium, Total	EPA 6020A
Vanadium, Total	EPA 6020A
Zinc, Total	EPA 6020A

Metals III

Cobalt, Total	EPA 6020A
Molybdenum, Total	EPA 6020A
Titanium, Total	EPA 6020A

Miscellaneous

Organic Carbon, Total	EPA 8060
Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8270D

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below.

Nitroaromatics and Isophorone

2,6-Dinitrotoluene	EPA 8270D
Isophorone	EPA 8270D
Nitrobenzene	EPA 8270D
Pyridine	EPA 8270D

Nitrosoamines

N-Nitrosodimethylamine	EPA 8270D
N-Nitrosod-n-propylamine	EPA 8270D
N-Nitrosodphenylamine	EPA 8270D

Petroleum Hydrocarbons

Diesel Range Organics	EPA 8015D
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Phthalate Esters

Benzyl butyl phthalate	EPA 8270D
Bis(2-ethylhexyl) phthalate	EPA 8270D
Diethyl phthalate	EPA 8270D
Dimethyl phthalate	EPA 8270D
Di-n-butyl phthalate	EPA 8270D
Di-n-octyl phthalate	EPA 8270D

Polychlorinated Biphenyls

PCB-1	EPA 8082A
PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A

Polychlorinated Biphenyls

PCB-1254	EPA 8082A
PCB-1260	EPA 8082A

Polynuclear Aromatic Hydrocarbons

Acenaphthene	EPA 8270D
Acenaphthylene	EPA 8270D
Anthracene	EPA 8270D
Benzo(a)anthracene	EPA 8270D
Benzo(a)pyrene	EPA 8270D
Benzo(b)fluoranthene	EPA 8270D
Benzo(g)hperylene	EPA 8270D
Benzo(k)fluoranthene	EPA 8270D
Chrysene	EPA 8270D
Dibenzo(a,h)anthracene	EPA 8270D
Fluoranthene	EPA 8270D
Fluorene	EPA 8270D
Indeno(1,2,3-cd)pyrene	EPA 8270D
Naphthalene	EPA 8270D
Phenanthrene	EPA 8270D
Pyrene	EPA 8270D

Priority Pollutant Phenols

2,3,4,6-Tetrachlorophenol	EPA 8270D
2,4,5-Trichlorophenol	EPA 8270D
2,4,6-Trichlorophenol	EPA 8270D
2,4-Dichlorophenol	EPA 8270D
2,4-Dimethylphenol	EPA 8270D

Serial No.: 49077

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE

All approved analytes are listed below

Priority Pollutant Phenols

Sample Preparation Methods

EPA 3580A

2,4-Dinitrophenol	EPA 8270D
2-Chlorophenol	EPA 8270D
2-Methyl-4,6-dinitrophenol	EPA 8270D
2-Methylphenol	EPA 8270D
2-Nitrophenol	EPA 8270D
3-Methylphenol	EPA 8270D
4-Chloro-3-methylphenol	EPA 8270D
4-Methylphenol	EPA 8270D
4-Nitrophenol	EPA 8270D
Pentachlorophenol	EPA 8270D
Phenol	EPA 8270D

Semi-Volatile Organics

1,2-Dichlorobenzene, Semi-volatile	EPA 8270D
1,3-Dichlorobenzene, Semi-volatile	EPA 8270D
1,4-Dichlorobenzene, Semi-volatile	EPA 8270D
2-Methylnaphthalene	EPA 8270D
Acetophenone	EPA 8270D
Benzoic Acid	EPA 8270D
Benzyl alcohol	EPA 8270D
Dibenzofuran	EPA 8270D

Sample Preparation Methods

EPA 3050B
EPA 3051A
EPA 3540C
EPA 3570

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320 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab Id No: 11627

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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Acrylates

Acetonitrile	EPA TO-15
Acrylonitrile	EPA TO-15
Methyl methacrylate	EPA TO-15

Chlorinated Hydrocarbons

1,2,4-Trichlorobenzene	EPA TO-15
Hexachlorobutadiene	EPA TO-15

Polychlorinated Biphenyls

PCB-1016	EPA TO-10A
PCB-1221	EPA TO-10A
PCB-1232	EPA TO-10A
PCB-1242	EPA TO-10A
PCB-1248	EPA TO-10A
PCB-1254	EPA TO-10A
PCB-1260	EPA TO-10A
PCB-1262	EPA TO-10A
PCB-1266	EPA TO-10A

Polynuclear Aromatics

Naphthalene	EPA TO-15
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Purgeable Aromatics

1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15

Purgeable Aromatics

2-Chlorotoluene	EPA TO-15
Benzene	EPA TO-15
Chlorobenzene	EPA TO-15
Ethyl benzene	EPA TO-15
Isopropylbenzene	EPA TO-15
m/p-Xylenes	EPA TO-15
o-Xylene	EPA TO-15
Styrene	EPA TO-15
Toluene	EPA TO-15
Total Xylenes	EPA TO-15

Purgeable Halocarbons

1,1,1-Trichloroethane	EPA TO-15
1,1,2,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2-Dibromo-3-chloropropane	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
3-Chloropropene (Allyl chloride)	EPA TO-15
Bromodichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15

Serial No.: 49078

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WADSWORTH CENTER

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MR. JOSEPH L. WATKINS
ALPHA ANALYTICAL
326 FORBES BOULEVARD
MANSFIELD, MA 02048

NY Lab ID No. 11627

is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS

All approved analytes are listed below.

Purgeable Halocarbons

Carbon tetrachloride	EPA TO-15
Chloroethane	EPA TO-15
Chloroform	EPA TO-15
Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-15
cis-1,3-Dichloropropene	EPA TO-15
Dibromochloromethane	EPA TO-15
Dichlorodifluoromethane	EPA TO-15
Methylene chloride	EPA TO-15
Tetrachloroethene	EPA TO-15
trans-1,2-Dichloroethene	EPA TO-15
trans-1,3-Dichloropropene	EPA TO-15
Trichloroethene	EPA TO-15
Trichlorofluoromethane	EPA TO-15
Vinyl bromide	EPA TO-15
Vinyl chloride	EPA TO-15

Volatile Organics

Acetone	EPA TO-15
Carbon Disulfide	EPA TO-15
Cyclohexane	EPA TO-15
Hexane	EPA TO-15
Isopropanol	EPA TO-15
Methanol	EPA TO-15
Methyl tert-butyl ether	EPA TO-15
n-Heptane	EPA TO-15
tert-butyl alcohol	EPA TO-15
Vinyl acetate	EPA TO-15

Volatile Chlorinated Organics

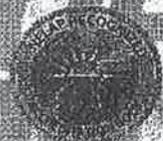
Benzyl chloride	EPA TO-15
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Volatile Organics

1,2-Dichlorotetrafluoroethane	EPA TO-15
1,3-Butadiene	EPA TO-15
1,4-Dioxane	EPA TO-15
2,2,4-Trimethylpentane	EPA TO-15
2-Butanone (Methyl ethyl ketone)	EPA TO-15
Acetaldehyde	EPA TO-15

Serial No.: 49078

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APPENDIX F



ANALYTICAL REPORT

Lab Number:	L1307603
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Elodie Bourbon
Phone:	(212) 479-5400
Project Name:	546 W 44TH ST
Project Number:	170229701
Report Date:	05/06/13

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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.

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



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1307603-01	B11A_0-2	NEW YORK, NY	04/29/13 09:25
L1307603-02	B11B_1-3	NEW YORK, NY	04/29/13 10:05
L1307603-03	B10_0-2	NEW YORK, NY	04/29/13 11:35
L1307603-04	B8_1-3	NEW YORK, NY	04/29/13 13:00
L1307603-05	B8_5-7	NEW YORK, NY	04/29/13 13:05
L1307603-06	B9_0-2	NEW YORK, NY	04/29/13 14:15
L1307603-07	DUP01	NEW YORK, NY	04/29/13 14:11
L1307603-08	B9_5-7	NEW YORK, NY	04/29/13 14:30

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

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 free of charge for 30 days from the date the project is completed. After 30 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.

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

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

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.

Volatile Organics

L1307603-04: The analysis of Volatile Organics by EPA Method 5035/8260 Low Level could not be performed due to the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L1307603-03, -06 and -07 have elevated detection limits due to the dilutions required by the matrix interferences encountered during the concentration of the samples and the analytical dilutions required by the sample matrices

L1307603-08 has elevated detection limits due to the dilution required by matrix interferences encountered during the concentration of the sample.

The WG604805-2/-3 LCS/LCSD recoveries, associated with L1307603-01 through -08, are below the acceptance criteria for Benzoic Acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Pesticides

L1307603-05 and -07 have elevated detection limits due to the dilutions required by the sample matrices.

The surrogate recoveries for L1307603-05 and -07 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene and Decachlorobiphenyl (all at 0%) due to the dilutions required to quantitate the samples. Re-extraction was not required; therefore, the results of the original analyses are reported.

Chromium, Hexavalent

SRM Lot#: ERA D079-921

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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 05/06/13

ORGANICS

VOLATILES

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
Client ID: B11A_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 16:19
Analyst: BN
Percent Solids: 91%

Date Collected: 04/29/13 09:25
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	16	3.3	1
1,1-Dichloroethane	ND		ug/kg	2.5	0.29	1
Chloroform	ND		ug/kg	2.5	0.61	1
Carbon tetrachloride	ND		ug/kg	1.6	0.35	1
1,2-Dichloropropane	ND		ug/kg	5.8	0.38	1
Dibromochloromethane	ND		ug/kg	1.6	0.51	1
1,1,2-Trichloroethane	ND		ug/kg	2.5	0.50	1
Tetrachloroethene	1.8		ug/kg	1.6	0.23	1
Chlorobenzene	ND		ug/kg	1.6	0.58	1
Trichlorofluoromethane	ND		ug/kg	8.3	0.20	1
1,2-Dichloroethane	ND		ug/kg	1.6	0.24	1
1,1,1-Trichloroethane	ND		ug/kg	1.6	0.18	1
Bromodichloromethane	ND		ug/kg	1.6	0.38	1
trans-1,3-Dichloropropene	ND		ug/kg	1.6	0.20	1
cis-1,3-Dichloropropene	ND		ug/kg	1.6	0.21	1
1,1-Dichloropropene	ND		ug/kg	8.3	0.76	1
Bromoform	ND		ug/kg	6.6	0.69	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.6	0.28	1
Benzene	ND		ug/kg	1.6	0.20	1
Toluene	ND		ug/kg	2.5	0.18	1
Ethylbenzene	ND		ug/kg	1.6	0.24	1
Chloromethane	ND		ug/kg	8.3	1.3	1
Bromomethane	ND		ug/kg	3.3	0.56	1
Vinyl chloride	ND		ug/kg	3.3	0.23	1
Chloroethane	ND		ug/kg	3.3	0.52	1
1,1-Dichloroethene	ND		ug/kg	1.6	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	2.5	0.35	1
Trichloroethene	ND		ug/kg	1.6	0.25	1
1,2-Dichlorobenzene	ND		ug/kg	8.3	0.30	1
1,3-Dichlorobenzene	ND		ug/kg	8.3	0.30	1
1,4-Dichlorobenzene	ND		ug/kg	8.3	0.40	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	3.3	0.17	1
p/m-Xylene	ND		ug/kg	3.3	0.53	1
o-Xylene	ND		ug/kg	3.3	0.45	1
cis-1,2-Dichloroethene	ND		ug/kg	1.6	0.25	1
Dibromomethane	ND		ug/kg	16	0.27	1
Styrene	ND		ug/kg	3.3	0.51	1
Dichlorodifluoromethane	ND		ug/kg	16	0.36	1
Acetone	8.8	J	ug/kg	16	5.1	1
Carbon disulfide	ND		ug/kg	16	3.3	1
2-Butanone	ND		ug/kg	16	0.59	1
Vinyl acetate	ND		ug/kg	16	0.80	1
4-Methyl-2-pentanone	ND		ug/kg	16	0.40	1
1,2,3-Trichloropropane	ND		ug/kg	16	0.37	1
2-Hexanone	ND		ug/kg	16	0.31	1
Bromochloromethane	ND		ug/kg	8.3	0.33	1
2,2-Dichloropropane	ND		ug/kg	8.3	0.37	1
1,2-Dibromoethane	ND		ug/kg	6.6	0.29	1
1,3-Dichloropropane	ND		ug/kg	8.3	0.29	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.6	0.53	1
Bromobenzene	ND		ug/kg	8.3	0.34	1
n-Butylbenzene	ND		ug/kg	1.6	0.33	1
sec-Butylbenzene	ND		ug/kg	1.6	0.34	1
tert-Butylbenzene	ND		ug/kg	8.3	0.93	1
o-Chlorotoluene	ND		ug/kg	8.3	0.26	1
p-Chlorotoluene	ND		ug/kg	8.3	0.25	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	8.3	1.3	1
Hexachlorobutadiene	ND		ug/kg	8.3	0.70	1
Isopropylbenzene	ND		ug/kg	1.6	0.28	1
p-Isopropyltoluene	ND		ug/kg	1.6	0.32	1
Acrylonitrile	ND		ug/kg	16	0.39	1
n-Propylbenzene	ND		ug/kg	1.6	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	8.3	0.28	1
1,2,4-Trichlorobenzene	ND		ug/kg	8.3	1.3	1
1,3,5-Trimethylbenzene	ND		ug/kg	8.3	0.24	1
1,2,4-Trimethylbenzene	ND		ug/kg	8.3	0.95	1
1,4-Dioxane	ND		ug/kg	160	29.	1
1,4-Diethylbenzene	ND		ug/kg	6.6	0.26	1
4-Ethyltoluene	ND		ug/kg	6.6	0.19	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	6.6	0.22	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	8.3	0.44	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	8.3	0.74	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	79		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-02
Client ID: B11B_1-3
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 16:47
Analyst: BN
Percent Solids: 92%

Date Collected: 04/29/13 10:05
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - 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
1,2-Dichloropropane	ND		ug/kg	4.1	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	ND		ug/kg	1.2	0.16	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
Trichlorofluoromethane	ND		ug/kg	5.9	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.9	0.54	1
Bromoform	ND		ug/kg	4.7	0.49	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	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
Chloromethane	ND		ug/kg	5.9	0.92	1
Bromomethane	ND		ug/kg	2.4	0.40	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.37	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

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
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
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.4	0.36	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.57	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.26	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.9	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.9	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.7	0.21	1
1,3-Dichloropropane	ND		ug/kg	5.9	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	5.9	0.24	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
o-Chlorotoluene	ND		ug/kg	5.9	0.19	1
p-Chlorotoluene	ND		ug/kg	5.9	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.9	0.93	1
Hexachlorobutadiene	ND		ug/kg	5.9	0.50	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.22	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.9	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.9	0.93	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
1,4-Diethylbenzene	ND		ug/kg	4.7	0.19	1
4-Ethyltoluene	ND		ug/kg	4.7	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.7	0.15	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	5.9	0.31	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.9	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	100		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-03
Client ID: B10_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 17:15
Analyst: BN
Percent Solids: 84%

Date Collected: 04/29/13 11:35
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - 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
1,2-Dichloropropane	ND		ug/kg	4.2	0.27	1
Dibromochloromethane	ND		ug/kg	1.2	0.36	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.36	1
Tetrachloroethene	0.98	J	ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.41	1
Trichlorofluoromethane	ND		ug/kg	5.9	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.17	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.13	1
Bromodichloromethane	ND		ug/kg	1.2	0.27	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
1,1-Dichloropropene	ND		ug/kg	5.9	0.54	1
Bromoform	ND		ug/kg	4.8	0.49	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.20	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	0.18	1
Chloromethane	ND		ug/kg	5.9	0.93	1
Bromomethane	ND		ug/kg	2.4	0.40	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.38	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	0.29	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-03
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
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
Dibromomethane	ND		ug/kg	12	0.19	1
Styrene	ND		ug/kg	2.4	0.37	1
Dichlorodifluoromethane	ND		ug/kg	12	0.26	1
Acetone	ND		ug/kg	12	3.7	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	ND		ug/kg	12	0.42	1
Vinyl acetate	ND		ug/kg	12	0.57	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.29	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.27	1
2-Hexanone	ND		ug/kg	12	0.22	1
Bromochloromethane	ND		ug/kg	5.9	0.23	1
2,2-Dichloropropane	ND		ug/kg	5.9	0.27	1
1,2-Dibromoethane	ND		ug/kg	4.8	0.21	1
1,3-Dichloropropane	ND		ug/kg	5.9	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.38	1
Bromobenzene	ND		ug/kg	5.9	0.25	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	0.67	1
o-Chlorotoluene	ND		ug/kg	5.9	0.19	1
p-Chlorotoluene	ND		ug/kg	5.9	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.9	0.94	1
Hexachlorobutadiene	ND		ug/kg	5.9	0.50	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.28	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.9	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.9	0.94	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	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.8	0.19	1
4-Ethyltoluene	ND		ug/kg	4.8	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.8	0.15	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-03
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	5.9	0.32	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.9	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
Client ID: B8_1-3
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 05/01/13 18:47
Analyst: BN
Percent Solids: 85%

Date Collected: 04/29/13 13:00
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	840	170	1
1,1-Dichloroethane	ND		ug/kg	130	15.	1
Chloroform	ND		ug/kg	130	31.	1
Carbon tetrachloride	ND		ug/kg	84	18.	1
1,2-Dichloropropane	ND		ug/kg	290	19.	1
Dibromochloromethane	ND		ug/kg	84	26.	1
1,1,2-Trichloroethane	ND		ug/kg	130	26.	1
Tetrachloroethene	ND		ug/kg	84	12.	1
Chlorobenzene	ND		ug/kg	84	29.	1
Trichlorofluoromethane	ND		ug/kg	420	10.	1
1,2-Dichloroethane	ND		ug/kg	84	12.	1
1,1,1-Trichloroethane	ND		ug/kg	84	9.3	1
Bromodichloromethane	ND		ug/kg	84	19.	1
trans-1,3-Dichloropropene	ND		ug/kg	84	10.	1
cis-1,3-Dichloropropene	ND		ug/kg	84	11.	1
1,1-Dichloropropene	ND		ug/kg	420	38.	1
Bromoform	ND		ug/kg	340	35.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	84	14.	1
Benzene	ND		ug/kg	84	9.9	1
Toluene	ND		ug/kg	130	9.4	1
Ethylbenzene	ND		ug/kg	84	12.	1
Chloromethane	ND		ug/kg	420	66.	1
Bromomethane	ND		ug/kg	170	28.	1
Vinyl chloride	ND		ug/kg	170	12.	1
Chloroethane	ND		ug/kg	170	27.	1
1,1-Dichloroethene	ND		ug/kg	84	17.	1
trans-1,2-Dichloroethene	ND		ug/kg	130	18.	1
Trichloroethene	ND		ug/kg	84	13.	1
1,2-Dichlorobenzene	ND		ug/kg	420	15.	1
1,3-Dichlorobenzene	ND		ug/kg	420	15.	1
1,4-Dichlorobenzene	ND		ug/kg	420	20.	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	170	8.8	1
p/m-Xylene	ND		ug/kg	170	27.	1
o-Xylene	ND		ug/kg	170	23.	1
cis-1,2-Dichloroethene	ND		ug/kg	84	12.	1
Dibromomethane	ND		ug/kg	840	14.	1
Styrene	ND		ug/kg	170	26.	1
Dichlorodifluoromethane	ND		ug/kg	840	18.	1
Acetone	ND		ug/kg	840	260	1
Carbon disulfide	ND		ug/kg	840	170	1
2-Butanone	ND		ug/kg	840	30.	1
Vinyl acetate	ND		ug/kg	840	40.	1
4-Methyl-2-pentanone	ND		ug/kg	840	20.	1
1,2,3-Trichloropropane	ND		ug/kg	840	19.	1
2-Hexanone	ND		ug/kg	840	16.	1
Bromochloromethane	ND		ug/kg	420	16.	1
2,2-Dichloropropane	ND		ug/kg	420	19.	1
1,2-Dibromoethane	ND		ug/kg	340	15.	1
1,3-Dichloropropane	ND		ug/kg	420	14.	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	84	27.	1
Bromobenzene	ND		ug/kg	420	18.	1
n-Butylbenzene	ND		ug/kg	84	17.	1
sec-Butylbenzene	ND		ug/kg	84	17.	1
tert-Butylbenzene	ND		ug/kg	420	47.	1
o-Chlorotoluene	ND		ug/kg	420	13.	1
p-Chlorotoluene	ND		ug/kg	420	13.	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	420	66.	1
Hexachlorobutadiene	ND		ug/kg	420	36.	1
Isopropylbenzene	ND		ug/kg	84	14.	1
p-Isopropyltoluene	ND		ug/kg	84	16.	1
Acrylonitrile	ND		ug/kg	840	20.	1
n-Propylbenzene	ND		ug/kg	84	10.	1
1,2,3-Trichlorobenzene	ND		ug/kg	420	14.	1
1,2,4-Trichlorobenzene	ND		ug/kg	420	66.	1
1,3,5-Trimethylbenzene	ND		ug/kg	420	12.	1
1,2,4-Trimethylbenzene	ND		ug/kg	420	48.	1
1,4-Dioxane	ND		ug/kg	8400	1500	1
1,4-Diethylbenzene	ND		ug/kg	340	13.	1
4-Ethyltoluene	ND		ug/kg	340	9.8	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	340	11.	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	420	22.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	420	38.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	98		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05
Client ID: B8_5-7
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 17:43
Analyst: BN
Percent Solids: 73%

Date Collected: 04/29/13 13:05
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - 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
1,2-Dichloropropane	ND		ug/kg	4.3	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.38	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.37	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.43	1
Trichlorofluoromethane	ND		ug/kg	6.1	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.14	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.16	1
1,1-Dichloropropene	ND		ug/kg	6.1	0.56	1
Bromoform	ND		ug/kg	4.9	0.51	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	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
Chloromethane	ND		ug/kg	6.1	0.96	1
Bromomethane	ND		ug/kg	2.4	0.42	1
Vinyl chloride	ND		ug/kg	2.4	0.17	1
Chloroethane	ND		ug/kg	2.4	0.39	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	0.19	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	0.30	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.4	0.13	1
p/m-Xylene	ND		ug/kg	2.4	0.40	1
o-Xylene	ND		ug/kg	2.4	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.4	0.38	1
Dichlorodifluoromethane	ND		ug/kg	12	0.27	1
Acetone	7.9	J	ug/kg	12	3.8	1
Carbon disulfide	ND		ug/kg	12	2.4	1
2-Butanone	1.9	J	ug/kg	12	0.44	1
Vinyl acetate	ND		ug/kg	12	0.59	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.28	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.1	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.1	0.28	1
1,2-Dibromoethane	ND		ug/kg	4.9	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.1	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.39	1
Bromobenzene	ND		ug/kg	6.1	0.26	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	0.69	1
o-Chlorotoluene	ND		ug/kg	6.1	0.20	1
p-Chlorotoluene	ND		ug/kg	6.1	0.19	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.1	0.97	1
Hexachlorobutadiene	ND		ug/kg	6.1	0.52	1
Isopropylbenzene	ND		ug/kg	1.2	0.20	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.23	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.1	0.21	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.1	0.97	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.1	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.1	0.70	1
1,4-Dioxane	ND		ug/kg	120	21.	1
1,4-Diethylbenzene	ND		ug/kg	4.9	0.20	1
4-Ethyltoluene	ND		ug/kg	4.9	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.9	0.16	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	6.1	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.1	0.55	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06
Client ID: B9_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 18:12
Analyst: BN
Percent Solids: 88%

Date Collected: 04/29/13 14:15
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.3	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
1,2-Dichloropropane	ND		ug/kg	4.0	0.26	1
Dibromochloromethane	ND		ug/kg	1.1	0.35	1
1,1,2-Trichloroethane	ND		ug/kg	1.7	0.34	1
Tetrachloroethene	ND		ug/kg	1.1	0.16	1
Chlorobenzene	ND		ug/kg	1.1	0.39	1
Trichlorofluoromethane	ND		ug/kg	5.7	0.14	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.26	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.14	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.14	1
1,1-Dichloropropene	ND		ug/kg	5.7	0.52	1
Bromoform	ND		ug/kg	4.5	0.47	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.19	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
Chloromethane	ND		ug/kg	5.7	0.89	1
Bromomethane	ND		ug/kg	2.3	0.38	1
Vinyl chloride	ND		ug/kg	2.3	0.16	1
Chloroethane	ND		ug/kg	2.3	0.36	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	5.7	0.21	1
1,3-Dichlorobenzene	ND		ug/kg	5.7	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	5.7	0.27	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-06
 Client ID: B9_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:15
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.3	0.12	1
p/m-Xylene	0.70	J	ug/kg	2.3	0.37	1
o-Xylene	ND		ug/kg	2.3	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.17	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.3	0.35	1
Dichlorodifluoromethane	ND		ug/kg	11	0.25	1
Acetone	ND		ug/kg	11	3.5	1
Carbon disulfide	ND		ug/kg	11	2.3	1
2-Butanone	ND		ug/kg	11	0.40	1
Vinyl acetate	ND		ug/kg	11	0.54	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.28	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.26	1
2-Hexanone	ND		ug/kg	11	0.21	1
Bromochloromethane	ND		ug/kg	5.7	0.22	1
2,2-Dichloropropane	ND		ug/kg	5.7	0.26	1
1,2-Dibromoethane	ND		ug/kg	4.5	0.20	1
1,3-Dichloropropane	ND		ug/kg	5.7	0.20	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.36	1
Bromobenzene	ND		ug/kg	5.7	0.24	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	5.7	0.64	1
o-Chlorotoluene	ND		ug/kg	5.7	0.18	1
p-Chlorotoluene	ND		ug/kg	5.7	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.7	0.90	1
Hexachlorobutadiene	ND		ug/kg	5.7	0.48	1
Isopropylbenzene	ND		ug/kg	1.1	0.19	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.22	1
Acrylonitrile	ND		ug/kg	11	0.27	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.7	0.19	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.7	0.90	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.7	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.7	0.65	1
1,4-Dioxane	ND		ug/kg	110	20.	1
1,4-Diethylbenzene	ND		ug/kg	4.5	0.18	1
4-Ethyltoluene	ND		ug/kg	4.5	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.5	0.15	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06
 Client ID: B9_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:15
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	5.7	0.30	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.7	0.51	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	101		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-07
Client ID: DUP01
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/30/13 18:40
Analyst: BN
Percent Solids: 90%

Date Collected: 04/29/13 14:11
Date Received: 04/29/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	12	2.5	1
1,1-Dichloroethane	ND		ug/kg	1.8	0.22	1
Chloroform	ND		ug/kg	1.8	0.46	1
Carbon tetrachloride	ND		ug/kg	1.2	0.26	1
1,2-Dichloropropane	ND		ug/kg	4.3	0.28	1
Dibromochloromethane	ND		ug/kg	1.2	0.38	1
1,1,2-Trichloroethane	ND		ug/kg	1.8	0.38	1
Tetrachloroethene	ND		ug/kg	1.2	0.17	1
Chlorobenzene	ND		ug/kg	1.2	0.43	1
Trichlorofluoromethane	ND		ug/kg	6.2	0.15	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.18	1
1,1,1-Trichloroethane	ND		ug/kg	1.2	0.14	1
Bromodichloromethane	ND		ug/kg	1.2	0.28	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.15	1
cis-1,3-Dichloropropene	ND		ug/kg	1.2	0.16	1
1,1-Dichloropropene	ND		ug/kg	6.2	0.56	1
Bromoform	ND		ug/kg	4.9	0.51	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.21	1
Benzene	ND		ug/kg	1.2	0.15	1
Toluene	ND		ug/kg	1.8	0.14	1
Ethylbenzene	0.83	J	ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	6.2	0.97	1
Bromomethane	ND		ug/kg	2.5	0.42	1
Vinyl chloride	ND		ug/kg	2.5	0.17	1
Chloroethane	ND		ug/kg	2.5	0.39	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	0.19	1
1,2-Dichlorobenzene	ND		ug/kg	6.2	0.23	1
1,3-Dichlorobenzene	ND		ug/kg	6.2	0.23	1
1,4-Dichlorobenzene	ND		ug/kg	6.2	0.30	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-07
 Client ID: DUP01
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.5	0.13	1
p/m-Xylene	3.7		ug/kg	2.5	0.40	1
o-Xylene	1.8	J	ug/kg	2.5	0.34	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Dibromomethane	ND		ug/kg	12	0.20	1
Styrene	ND		ug/kg	2.5	0.38	1
Dichlorodifluoromethane	ND		ug/kg	12	0.27	1
Acetone	ND		ug/kg	12	3.8	1
Carbon disulfide	ND		ug/kg	12	2.5	1
2-Butanone	ND		ug/kg	12	0.44	1
Vinyl acetate	ND		ug/kg	12	0.59	1
4-Methyl-2-pentanone	ND		ug/kg	12	0.30	1
1,2,3-Trichloropropane	ND		ug/kg	12	0.28	1
2-Hexanone	ND		ug/kg	12	0.23	1
Bromochloromethane	ND		ug/kg	6.2	0.24	1
2,2-Dichloropropane	ND		ug/kg	6.2	0.28	1
1,2-Dibromoethane	ND		ug/kg	4.9	0.22	1
1,3-Dichloropropane	ND		ug/kg	6.2	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.2	0.39	1
Bromobenzene	ND		ug/kg	6.2	0.26	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	6.2	0.69	1
o-Chlorotoluene	ND		ug/kg	6.2	0.20	1
p-Chlorotoluene	ND		ug/kg	6.2	0.19	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.2	0.98	1
Hexachlorobutadiene	ND		ug/kg	6.2	0.52	1
Isopropylbenzene	ND		ug/kg	1.2	0.21	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.24	1
Acrylonitrile	ND		ug/kg	12	0.29	1
n-Propylbenzene	ND		ug/kg	1.2	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.2	0.21	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.2	0.98	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.2	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.2	0.71	1
1,4-Dioxane	ND		ug/kg	120	22.	1
1,4-Diethylbenzene	ND		ug/kg	4.9	0.20	1
4-Ethyltoluene	ND		ug/kg	4.9	0.14	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.9	0.16	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-07
 Client ID: DUP01
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	6.2	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	0.55	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/01/13 15:38
 Analyst: BN
 Percent Solids: 91%

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	15	3.0	1
1,1-Dichloroethane	ND		ug/kg	2.3	0.27	1
Chloroform	ND		ug/kg	2.3	0.57	1
Carbon tetrachloride	ND		ug/kg	1.5	0.32	1
1,2-Dichloropropane	ND		ug/kg	5.4	0.35	1
Dibromochloromethane	ND		ug/kg	1.5	0.47	1
1,1,2-Trichloroethane	ND		ug/kg	2.3	0.46	1
Tetrachloroethene	ND		ug/kg	1.5	0.21	1
Chlorobenzene	ND		ug/kg	1.5	0.53	1
Trichlorofluoromethane	ND		ug/kg	7.6	0.18	1
1,2-Dichloroethane	ND		ug/kg	1.5	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	1.5	0.17	1
Bromodichloromethane	ND		ug/kg	1.5	0.35	1
trans-1,3-Dichloropropene	ND		ug/kg	1.5	0.18	1
cis-1,3-Dichloropropene	ND		ug/kg	1.5	0.19	1
1,1-Dichloropropene	ND		ug/kg	7.6	0.70	1
Bromoform	ND		ug/kg	6.1	0.63	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.5	0.26	1
Benzene	ND		ug/kg	1.5	0.18	1
Toluene	ND		ug/kg	2.3	0.17	1
Ethylbenzene	ND		ug/kg	1.5	0.22	1
Chloromethane	ND		ug/kg	7.6	1.2	1
Bromomethane	ND		ug/kg	3.0	0.52	1
Vinyl chloride	ND		ug/kg	3.0	0.22	1
Chloroethane	ND		ug/kg	3.0	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.5	0.31	1
trans-1,2-Dichloroethene	ND		ug/kg	2.3	0.32	1
Trichloroethene	ND		ug/kg	1.5	0.23	1
1,2-Dichlorobenzene	ND		ug/kg	7.6	0.28	1
1,3-Dichlorobenzene	ND		ug/kg	7.6	0.28	1
1,4-Dichlorobenzene	ND		ug/kg	7.6	0.37	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	3.0	0.16	1
p/m-Xylene	ND		ug/kg	3.0	0.49	1
o-Xylene	ND		ug/kg	3.0	0.41	1
cis-1,2-Dichloroethene	ND		ug/kg	1.5	0.23	1
Dibromomethane	ND		ug/kg	15	0.25	1
Styrene	ND		ug/kg	3.0	0.47	1
Dichlorodifluoromethane	ND		ug/kg	15	0.33	1
Acetone	6.8	J	ug/kg	15	4.7	1
Carbon disulfide	ND		ug/kg	15	3.0	1
2-Butanone	ND		ug/kg	15	0.54	1
Vinyl acetate	ND		ug/kg	15	0.73	1
4-Methyl-2-pentanone	ND		ug/kg	15	0.37	1
1,2,3-Trichloropropane	ND		ug/kg	15	0.34	1
2-Hexanone	ND		ug/kg	15	0.29	1
Bromochloromethane	ND		ug/kg	7.6	0.30	1
2,2-Dichloropropane	ND		ug/kg	7.6	0.34	1
1,2-Dibromoethane	ND		ug/kg	6.1	0.27	1
1,3-Dichloropropane	ND		ug/kg	7.6	0.26	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.5	0.49	1
Bromobenzene	ND		ug/kg	7.6	0.32	1
n-Butylbenzene	ND		ug/kg	1.5	0.30	1
sec-Butylbenzene	ND		ug/kg	1.5	0.31	1
tert-Butylbenzene	ND		ug/kg	7.6	0.86	1
o-Chlorotoluene	ND		ug/kg	7.6	0.24	1
p-Chlorotoluene	ND		ug/kg	7.6	0.24	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	7.6	1.2	1
Hexachlorobutadiene	ND		ug/kg	7.6	0.65	1
Isopropylbenzene	ND		ug/kg	1.5	0.26	1
p-Isopropyltoluene	ND		ug/kg	1.5	0.29	1
Acrylonitrile	ND		ug/kg	15	0.36	1
n-Propylbenzene	ND		ug/kg	1.5	0.19	1
1,2,3-Trichlorobenzene	ND		ug/kg	7.6	0.26	1
1,2,4-Trichlorobenzene	ND		ug/kg	7.6	1.2	1
1,3,5-Trimethylbenzene	ND		ug/kg	7.6	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	7.6	0.88	1
1,4-Dioxane	ND		ug/kg	150	27.	1
1,4-Diethylbenzene	ND		ug/kg	6.1	0.24	1
4-Ethyltoluene	ND		ug/kg	6.1	0.18	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	6.1	0.20	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	7.6	0.41	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	7.6	0.68	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	101		70-130

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/30/13 08:49
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-07 Batch: WG604874-3					
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
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
1,1-Dichloropropene	ND		ug/kg	5.0	0.46
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
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

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/30/13 08:49
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-07 Batch: WG604874-3					
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
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
Vinyl acetate	ND		ug/kg	10	0.48
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.22
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
2,2-Dichloropropane	ND		ug/kg	5.0	0.22
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
1,3-Dichloropropane	ND		ug/kg	5.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
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
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Hexachlorobutadiene	ND		ug/kg	5.0	0.42
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/30/13 08:49
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-07 Batch: WG604874-3					
Acrylonitrile	ND		ug/kg	10	0.24
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	0.91
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Ethyl Acetate	ND		ug/kg	20	0.82
Acrolein	ND		ug/kg	25	9.2
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	0.38
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.45
Methyl cyclohexane	ND		ug/kg	4.0	1.3
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.42
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.58

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C

Analytical Date: 04/30/13 08:49

Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-07 Batch: WG604874-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/01/13 13:46
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG605374-3					
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
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
1,1-Dichloropropene	ND		ug/kg	5.0	0.46
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
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

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/01/13 13:46
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG605374-3					
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
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
Vinyl acetate	ND		ug/kg	10	0.48
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.22
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
2,2-Dichloropropane	ND		ug/kg	5.0	0.22
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
1,3-Dichloropropane	ND		ug/kg	5.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
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
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Hexachlorobutadiene	ND		ug/kg	5.0	0.42
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77

Project Name: 546 W 44TH ST
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
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Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG605374-3					
Acrylonitrile	ND		ug/kg	10	0.24
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	0.91
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Ethyl Acetate	ND		ug/kg	20	0.82
Acrolein	ND		ug/kg	25	9.2
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	0.38
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.45
Methyl cyclohexane	ND		ug/kg	4.0	1.3
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.42
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.58

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Analytical Method: 1,8260C

Analytical Date: 05/01/13 13:46

Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
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Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 08 Batch: WG605374-3					
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Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	99		70-130

Project Name: 546 W 44TH ST
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Analytical Method: 1,8260C
Analytical Date: 05/01/13 12:40
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG605376-3					
Methylene chloride	ND		ug/kg	500	100
1,1-Dichloroethane	ND		ug/kg	75	8.9
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	15.
2-Chloroethylvinyl ether	ND		ug/kg	1000	31.
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	6.1
1,2-Dichloroethane	ND		ug/kg	50	7.3
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	11.
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	6.4
1,1-Dichloropropene	ND		ug/kg	250	23.
Bromoform	ND		ug/kg	200	21.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	8.5
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	5.6
Ethylbenzene	ND		ug/kg	50	7.4
Chloromethane	ND		ug/kg	250	39.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	7.1
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	10.
trans-1,2-Dichloroethene	ND		ug/kg	75	10.
Trichloroethene	ND		ug/kg	50	7.6
1,2-Dichlorobenzene	ND		ug/kg	250	9.2
1,3-Dichlorobenzene	ND		ug/kg	250	9.2

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/01/13 12:40
Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG605376-3					
1,4-Dichlorobenzene	ND		ug/kg	250	12.
Methyl tert butyl ether	ND		ug/kg	100	5.2
p/m-Xylene	ND		ug/kg	100	16.
o-Xylene	ND		ug/kg	100	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	7.5
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	15.
Dichlorodifluoromethane	ND		ug/kg	500	11.
Acetone	ND		ug/kg	500	160
Carbon disulfide	ND		ug/kg	500	100
2-Butanone	ND		ug/kg	500	18.
Vinyl acetate	ND		ug/kg	500	24.
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	11.
2-Hexanone	ND		ug/kg	500	9.4
Bromochloromethane	ND		ug/kg	250	9.8
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.9
1,3-Dichloropropane	ND		ug/kg	250	8.6
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	9.9
sec-Butylbenzene	ND		ug/kg	50	10.
tert-Butylbenzene	ND		ug/kg	250	28.
o-Chlorotoluene	ND		ug/kg	250	8.0
p-Chlorotoluene	ND		ug/kg	250	7.7
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	39.
Hexachlorobutadiene	ND		ug/kg	250	21.
Isopropylbenzene	ND		ug/kg	50	8.4
p-Isopropyltoluene	ND		ug/kg	50	9.6
Naphthalene	ND		ug/kg	250	38.

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Analytical Method: 1,8260C
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Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG605376-3					
Acrylonitrile	ND		ug/kg	500	12.
Isopropyl Ether	ND		ug/kg	200	7.0
tert-Butyl Alcohol	ND		ug/kg	3000	45.
n-Propylbenzene	ND		ug/kg	50	6.3
1,2,3-Trichlorobenzene	ND		ug/kg	250	8.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	39.
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	29.
Methyl Acetate	ND		ug/kg	1000	38.
Ethyl Acetate	ND		ug/kg	1000	41.
Acrolein	ND		ug/kg	1200	460
Cyclohexane	ND		ug/kg	1000	54.
1,4-Dioxane	ND		ug/kg	5000	870
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	1000	14.
1,4-Diethylbenzene	ND		ug/kg	200	8.0
4-Ethyltoluene	ND		ug/kg	200	5.8
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
Tetrahydrofuran	ND		ug/kg	1000	19.
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	22.
Methyl cyclohexane	ND		ug/kg	200	63.
Ethyl-Tert-Butyl-Ether	ND		ug/kg	200	21.
Tertiary-Amyl Methyl Ether	ND		ug/kg	200	29.

Project Name: 546 W 44TH ST

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Batch Quality Control**

Analytical Method: 1,8260C

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Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
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Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG605376-3					
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Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	99		70-130

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Lab Control Sample Analysis
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG604874-1 WG604874-2								
Methylene chloride	95		90		70-130	5		30
1,1-Dichloroethane	104		97		70-130	7		30
Chloroform	100		95		70-130	5		30
Carbon tetrachloride	109		96		70-130	13		30
1,2-Dichloropropane	101		95		70-130	6		30
Dibromochloromethane	96		92		70-130	4		30
2-Chloroethylvinyl ether	101		95			6		30
1,1,2-Trichloroethane	91		89		70-130	2		30
Tetrachloroethene	111		101		70-130	9		30
Chlorobenzene	105		100		70-130	5		30
Trichlorofluoromethane	102		90		70-139	13		30
1,2-Dichloroethane	93		89		70-130	4		30
1,1,1-Trichloroethane	105		94		70-130	11		30
Bromodichloromethane	97		93		70-130	4		30
trans-1,3-Dichloropropene	98		94		70-130	4		30
cis-1,3-Dichloropropene	97		92		70-130	5		30
1,1-Dichloropropene	108		96		70-130	12		30
Bromoform	85		82		70-130	4		30
1,1,2,2-Tetrachloroethane	85		82		70-130	4		30
Benzene	102		95		70-130	7		30
Toluene	102		95		70-130	7		30



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Lab Control Sample Analysis
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Project Name: 546 W 44TH ST
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Lab Number: L1307603
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG604874-1 WG604874-2								
Ethylbenzene	107		99		70-130	8		30
Chloromethane	115		106		52-130	8		30
Bromomethane	90		81		57-147	11		30
Vinyl chloride	107		95		67-130	12		30
Chloroethane	92		85		50-151	8		30
1,1-Dichloroethene	110		100		65-135	10		30
trans-1,2-Dichloroethene	109		98		70-130	11		30
Trichloroethene	101		92		70-130	9		30
1,2-Dichlorobenzene	104		102		70-130	2		30
1,3-Dichlorobenzene	108		104		70-130	4		30
1,4-Dichlorobenzene	106		101		70-130	5		30
Methyl tert butyl ether	88		86		66-130	2		30
p/m-Xylene	109		102		70-130	7		30
o-Xylene	106		99		70-130	7		30
cis-1,2-Dichloroethene	102		96		70-130	6		30
Dibromomethane	94		89		70-130	5		30
Styrene	103		97		70-130	6		30
Dichlorodifluoromethane	115		99		30-146	15		30
Acetone	119		83		54-140	36	Q	30
Carbon disulfide	100		89		59-130	12		30
2-Butanone	101		77		70-130	27		30



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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG604874-1 WG604874-2								
Vinyl acetate	82		80		70-130	2		30
4-Methyl-2-pentanone	70		66	Q	70-130	6		30
1,2,3-Trichloropropane	80		82		68-130	2		30
2-Hexanone	87		69	Q	70-130	23		30
Bromochloromethane	100		96		70-130	4		30
2,2-Dichloropropane	104		94		70-130	10		30
1,2-Dibromoethane	94		91		70-130	3		30
1,3-Dichloropropane	94		92		69-130	2		30
1,1,1,2-Tetrachloroethane	101		97		70-130	4		30
Bromobenzene	103		100		70-130	3		30
n-Butylbenzene	116		106		70-130	9		30
sec-Butylbenzene	115		104		70-130	10		30
tert-Butylbenzene	116		108		70-130	7		30
o-Chlorotoluene	114		108		70-130	5		30
p-Chlorotoluene	109		103		70-130	6		30
1,2-Dibromo-3-chloropropane	84		82		68-130	2		30
Hexachlorobutadiene	124		113		67-130	9		30
Isopropylbenzene	111		103		70-130	7		30
p-Isopropyltoluene	117		107		70-130	9		30
Naphthalene	91		89		70-130	2		30
Acrylonitrile	79		76		70-130	4		30



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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG604874-1 WG604874-2								
Isopropyl Ether	100		97		66-130	3		30
tert-Butyl Alcohol	66	Q	65	Q	70-130	2		30
n-Propylbenzene	111		102		70-130	8		30
1,2,3-Trichlorobenzene	104		103		70-130	1		30
1,2,4-Trichlorobenzene	112		108		70-130	4		30
1,3,5-Trimethylbenzene	113		105		70-130	7		30
1,2,4-Trimethylbenzene	113		107		70-130	5		30
Methyl Acetate	75		74		51-146	1		30
Ethyl Acetate	69	Q	68	Q	70-130	1		30
Acrolein	78		75		70-130	4		30
Cyclohexane	110		97		59-142	13		30
1,4-Dioxane	86		82		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		96		50-139	14		30
1,4-Diethylbenzene	116		107		70-130	8		30
4-Ethyltoluene	112		104		70-130	7		30
1,2,4,5-Tetramethylbenzene	116		111		70-130	4		30
Tetrahydrofuran	76		74		66-130	3		30
Ethyl ether	86		84		67-130	2		30
trans-1,4-Dichloro-2-butene	78		77		70-130	1		30
Methyl cyclohexane	111		96		70-130	14		30
Ethyl-Tert-Butyl-Ether	95		92		70-130	3		30



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Lab Control Sample Analysis
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Project Name: 546 W 44TH ST
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-07 Batch: WG604874-1 WG604874-2								
Tertiary-Amyl Methyl Ether	92		89		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		90		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	100		101		70-130
Dibromofluoromethane	99		100		70-130

Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG605374-1 WG605374-2								
Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Methylene chloride	103		106		70-130	3		30
1,1-Dichloroethane	103		106		70-130	3		30
Chloroform	102		105		70-130	3		30
Carbon tetrachloride	107		112		70-130	5		30
1,2-Dichloropropane	101		103		70-130	2		30
Dibromochloromethane	100		100		70-130	0		30
2-Chloroethylvinyl ether	101		103			2		30
1,1,2-Trichloroethane	100		100		70-130	0		30
Tetrachloroethene	106		109		70-130	3		30



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Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG605374-1 WG605374-2								
Chlorobenzene	103		104		70-130	1		30
Trichlorofluoromethane	116		124		70-139	7		30
1,2-Dichloroethane	100		101		70-130	1		30
1,1,1-Trichloroethane	104		109		70-130	5		30
Bromodichloromethane	100		102		70-130	2		30
trans-1,3-Dichloropropene	103		103		70-130	0		30
cis-1,3-Dichloropropene	103		105		70-130	2		30
1,1-Dichloropropene	108		113		70-130	5		30
Bromoform	96		98		70-130	2		30
1,1,2,2-Tetrachloroethane	97		98		70-130	1		30
Benzene	102		105		70-130	3		30
Toluene	102		104		70-130	2		30
Ethylbenzene	105		108		70-130	3		30
Chloromethane	94		100		52-130	6		30
Bromomethane	138		147		57-147	6		30
Vinyl chloride	107		113		67-130	5		30
Chloroethane	99		106		50-151	7		30
1,1-Dichloroethene	108		101		65-135	7		30
trans-1,2-Dichloroethene	103		107		70-130	4		30
Trichloroethene	102		106		70-130	4		30
1,2-Dichlorobenzene	101		104		70-130	3		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG605374-1 WG605374-2								
1,3-Dichlorobenzene	102		106		70-130	4		30
1,4-Dichlorobenzene	101		104		70-130	3		30
Methyl tert butyl ether	100		101		66-130	1		30
p/m-Xylene	106		108		70-130	2		30
o-Xylene	107		109		70-130	2		30
cis-1,2-Dichloroethene	102		106		70-130	4		30
Dibromomethane	99		99		70-130	0		30
Styrene	107		109		70-130	2		30
Dichlorodifluoromethane	116		123		30-146	6		30
Acetone	137		169	Q	54-140	21		30
Carbon disulfide	104		96		59-130	8		30
2-Butanone	115		141	Q	70-130	20		30
Vinyl acetate	104		104		70-130	0		30
4-Methyl-2-pentanone	95		96		70-130	1		30
1,2,3-Trichloropropane	99		98		68-130	1		30
2-Hexanone	107		119		70-130	11		30
Bromochloromethane	101		102		70-130	1		30
2,2-Dichloropropane	106		112		70-130	6		30
1,2-Dibromoethane	99		100		70-130	1		30
1,3-Dichloropropane	100		101		69-130	1		30
1,1,1,2-Tetrachloroethane	101		102		70-130	1		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG605374-1 WG605374-2								
Bromobenzene	101		104		70-130	3		30
n-Butylbenzene	108		113		70-130	5		30
sec-Butylbenzene	109		113		70-130	4		30
tert-Butylbenzene	108		111		70-130	3		30
o-Chlorotoluene	105		108		70-130	3		30
p-Chlorotoluene	104		108		70-130	4		30
1,2-Dibromo-3-chloropropane	98		92		68-130	6		30
Hexachlorobutadiene	106		111		67-130	5		30
Isopropylbenzene	108		112		70-130	4		30
p-Isopropyltoluene	108		113		70-130	5		30
Naphthalene	99		100		70-130	1		30
Acrylonitrile	97		100		70-130	3		30
Isopropyl Ether	103		105		66-130	2		30
tert-Butyl Alcohol	96		99		70-130	3		30
n-Propylbenzene	107		111		70-130	4		30
1,2,3-Trichlorobenzene	102		104		70-130	2		30
1,2,4-Trichlorobenzene	102		107		70-130	5		30
1,3,5-Trimethylbenzene	106		110		70-130	4		30
1,2,4-Trimethylbenzene	107		110		70-130	3		30
Methyl Acetate	92		95		51-146	3		30
Ethyl Acetate	96		96		70-130	0		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 08 Batch: WG605374-1 WG605374-2								
Acrolein	95		98		70-130	3		30
Cyclohexane	118		124		59-142	5		30
1,4-Dioxane	97		99		65-136	2		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	116		121		50-139	4		30
1,4-Diethylbenzene	107		112		70-130	5		30
4-Ethyltoluene	107		111		70-130	4		30
1,2,4,5-Tetramethylbenzene	108		112		70-130	4		30
Tetrahydrofuran	96		98		66-130	2		30
Ethyl ether	100		102		67-130	2		30
trans-1,4-Dichloro-2-butene	100		100		70-130	0		30
Methyl cyclohexane	106		111		70-130	5		30
Ethyl-Tert-Butyl-Ether	103		105		70-130	2		30
Tertiary-Amyl Methyl Ether	101		102		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		97		70-130
Toluene-d8	101		99		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	98		98		70-130



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG605376-1 WG605376-2								
Methylene chloride	98		89		70-130	10		30
1,1-Dichloroethane	107		89		70-130	18		30
Chloroform	102		89		70-130	14		30
Carbon tetrachloride	105		81		70-130	26		30
1,2-Dichloropropane	103		91		70-130	12		30
Dibromochloromethane	96		88		70-130	9		30
2-Chloroethylvinyl ether	103		91			12		30
1,1,2-Trichloroethane	93		88		70-130	6		30
Tetrachloroethene	108		88		70-130	20		30
Chlorobenzene	104		91		70-130	13		30
Trichlorofluoromethane	98		74		70-139	28		30
1,2-Dichloroethane	96		86		70-130	11		30
1,1,1-Trichloroethane	105		84		70-130	22		30
Bromodichloromethane	99		89		70-130	11		30
trans-1,3-Dichloropropene	98		90		70-130	9		30
cis-1,3-Dichloropropene	98		87		70-130	12		30
1,1-Dichloropropene	107		84		70-130	24		30
Bromoform	85		82		70-130	4		30
1,1,2,2-Tetrachloroethane	87		81		70-130	7		30
Benzene	103		87		70-130	17		30
Toluene	102		87		70-130	16		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG605376-1 WG605376-2								
Ethylbenzene	106		89		70-130	17		30
Chloromethane	118		90		52-130	27		30
Bromomethane	86		71		57-147	19		30
Vinyl chloride	110		80		67-130	32	Q	30
Chloroethane	96		78		50-151	21		30
1,1-Dichloroethene	110		85		65-135	26		30
trans-1,2-Dichloroethene	107		87		70-130	21		30
Trichloroethene	100		82		70-130	20		30
1,2-Dichlorobenzene	106		95		70-130	11		30
1,3-Dichlorobenzene	108		94		70-130	14		30
1,4-Dichlorobenzene	107		95		70-130	12		30
Methyl tert butyl ether	90		83		66-130	8		30
p/m-Xylene	108		91		70-130	17		30
o-Xylene	105		91		70-130	14		30
cis-1,2-Dichloroethene	102		89		70-130	14		30
Dibromomethane	95		87		70-130	9		30
Styrene	101		89		70-130	13		30
Dichlorodifluoromethane	112		78		30-146	36	Q	30
Acetone	98		97		54-140	1		30
Carbon disulfide	102		77		59-130	28		30
2-Butanone	94		88		70-130	7		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG605376-1 WG605376-2								
Vinyl acetate	85		76		70-130	11		30
4-Methyl-2-pentanone	70		64	Q	70-130	9		30
1,2,3-Trichloropropane	87		81		68-130	7		30
2-Hexanone	78		73		70-130	7		30
Bromochloromethane	101		92		70-130	9		30
2,2-Dichloropropane	104		82		70-130	24		30
1,2-Dibromoethane	93		88		70-130	6		30
1,3-Dichloropropane	96		88		69-130	9		30
1,1,1,2-Tetrachloroethane	101		90		70-130	12		30
Bromobenzene	104		95		70-130	9		30
n-Butylbenzene	117		94		70-130	22		30
sec-Butylbenzene	114		92		70-130	21		30
tert-Butylbenzene	116		96		70-130	19		30
o-Chlorotoluene	115		90		70-130	24		30
p-Chlorotoluene	109		94		70-130	15		30
1,2-Dibromo-3-chloropropane	87		61	Q	68-130	35	Q	30
Hexachlorobutadiene	123		96		67-130	25		30
Isopropylbenzene	110		93		70-130	17		30
p-Isopropyltoluene	115		94		70-130	20		30
Naphthalene	92		84		70-130	9		30
Acrylonitrile	83		74		70-130	11		30



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Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG605376-1 WG605376-2								
Isopropyl Ether	102		92		66-130	10		30
tert-Butyl Alcohol	69	Q	61	Q	70-130	12		30
n-Propylbenzene	110		91		70-130	19		30
1,2,3-Trichlorobenzene	105		94		70-130	11		30
1,2,4-Trichlorobenzene	112		97		70-130	14		30
1,3,5-Trimethylbenzene	113		96		70-130	16		30
1,2,4-Trimethylbenzene	114		98		70-130	15		30
Methyl Acetate	78		72		51-146	8		30
Ethyl Acetate	73		71		70-130	3		30
Acrolein	80		72		70-130	11		30
Cyclohexane	105		79		59-142	28		30
1,4-Dioxane	83		77		65-136	8		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	104		78		50-139	29		30
1,4-Diethylbenzene	115		94		70-130	20		30
4-Ethyltoluene	111		92		70-130	19		30
1,2,4,5-Tetramethylbenzene	116		100		70-130	15		30
Tetrahydrofuran	80		71		66-130	12		30
Ethyl ether	89		84		67-130	6		30
trans-1,4-Dichloro-2-butene	78		74		70-130	5		30
Methyl cyclohexane	105		79		70-130	28		30
Ethyl-Tert-Butyl-Ether	97		89		70-130	9		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG605376-1 WG605376-2								
Tertiary-Amyl Methyl Ether	93		85		70-130	9		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		90		70-130
Toluene-d8	103		104		70-130
4-Bromofluorobenzene	100		102		70-130
Dibromofluoromethane	100		99		70-130



SEMIVOLATILES

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 13:20
 Analyst: RC
 Percent Solids: 91%

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	37.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	58.	1
Hexachlorobenzene	ND		ug/kg	110	33.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	50.	1
2-Chloronaphthalene	ND		ug/kg	180	58.	1
1,2-Dichlorobenzene	ND		ug/kg	180	58.	1
1,3-Dichlorobenzene	ND		ug/kg	180	56.	1
1,4-Dichlorobenzene	ND		ug/kg	180	54.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	47.	1
2,4-Dinitrotoluene	ND		ug/kg	180	38.	1
2,6-Dinitrotoluene	ND		ug/kg	180	46.	1
Fluoranthene	54	J	ug/kg	110	33.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	54.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	41.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	63.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	54.	1
Hexachlorobutadiene	ND		ug/kg	180	50.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	110	1
Hexachloroethane	ND		ug/kg	140	32.	1
Isophorone	ND		ug/kg	160	47.	1
Naphthalene	ND		ug/kg	180	59.	1
Nitrobenzene	ND		ug/kg	160	42.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	37.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	53.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	47.	1
Butyl benzyl phthalate	ND		ug/kg	180	35.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	44.	1
Diethyl phthalate	ND		ug/kg	180	38.	1
Dimethyl phthalate	ND		ug/kg	180	45.	1
Benzo(a)anthracene	ND		ug/kg	110	35.	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	ND		ug/kg	110	36.	1
Benzo(k)fluoranthene	ND		ug/kg	110	34.	1
Chrysene	ND		ug/kg	110	35.	1
Acenaphthylene	ND		ug/kg	140	33.	1
Anthracene	ND		ug/kg	110	30.	1
Benzo(ghi)perylene	ND		ug/kg	140	37.	1
Fluorene	ND		ug/kg	180	51.	1
Phenanthrene	46	J	ug/kg	110	35.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	34.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	40.	1
Pyrene	60	J	ug/kg	110	35.	1
Biphenyl	ND		ug/kg	410	59.	1
4-Chloroaniline	ND		ug/kg	180	47.	1
2-Nitroaniline	ND		ug/kg	180	50.	1
3-Nitroaniline	ND		ug/kg	180	49.	1
4-Nitroaniline	ND		ug/kg	180	48.	1
Dibenzofuran	ND		ug/kg	180	60.	1
2-Methylnaphthalene	ND		ug/kg	210	57.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	55.	1
Acetophenone	ND		ug/kg	180	55.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	52.	1
2-Chlorophenol	ND		ug/kg	180	54.	1
2,4-Dichlorophenol	ND		ug/kg	160	58.	1
2,4-Dimethylphenol	ND		ug/kg	180	53.	1
2-Nitrophenol	ND		ug/kg	380	56.	1
4-Nitrophenol	ND		ug/kg	250	58.	1
2,4-Dinitrophenol	ND		ug/kg	860	240	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	65.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	180	53.	1
2-Methylphenol	ND		ug/kg	180	57.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	58.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	58.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	ND		ug/kg	180	38.	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		25-120
Phenol-d6	83		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	105		30-120
2,4,6-Tribromophenol	49		0-136
4-Terphenyl-d14	127	Q	18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 13:47
 Analyst: RC
 Percent Solids: 92%

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	37.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	58.	1
Hexachlorobenzene	ND		ug/kg	110	33.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	50.	1
2-Chloronaphthalene	ND		ug/kg	180	58.	1
1,2-Dichlorobenzene	ND		ug/kg	180	58.	1
1,3-Dichlorobenzene	ND		ug/kg	180	56.	1
1,4-Dichlorobenzene	ND		ug/kg	180	54.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	47.	1
2,4-Dinitrotoluene	ND		ug/kg	180	38.	1
2,6-Dinitrotoluene	ND		ug/kg	180	46.	1
Fluoranthene	75	J	ug/kg	110	33.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	54.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	41.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	63.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	54.	1
Hexachlorobutadiene	ND		ug/kg	180	50.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	110	1
Hexachloroethane	ND		ug/kg	140	32.	1
Isophorone	ND		ug/kg	160	47.	1
Naphthalene	ND		ug/kg	180	59.	1
Nitrobenzene	ND		ug/kg	160	42.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	140	37.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	53.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	47.	1
Butyl benzyl phthalate	ND		ug/kg	180	35.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	44.	1
Diethyl phthalate	ND		ug/kg	180	38.	1
Dimethyl phthalate	ND		ug/kg	180	45.	1
Benzo(a)anthracene	37	J	ug/kg	110	35.	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	43	J	ug/kg	110	36.	1
Benzo(k)fluoranthene	ND		ug/kg	110	34.	1
Chrysene	41	J	ug/kg	110	35.	1
Acenaphthylene	ND		ug/kg	140	33.	1
Anthracene	ND		ug/kg	110	30.	1
Benzo(ghi)perylene	ND		ug/kg	140	37.	1
Fluorene	ND		ug/kg	180	51.	1
Phenanthrene	53	J	ug/kg	110	35.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	34.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	140	40.	1
Pyrene	74	J	ug/kg	110	35.	1
Biphenyl	ND		ug/kg	410	59.	1
4-Chloroaniline	ND		ug/kg	180	47.	1
2-Nitroaniline	ND		ug/kg	180	50.	1
3-Nitroaniline	ND		ug/kg	180	49.	1
4-Nitroaniline	ND		ug/kg	180	48.	1
Dibenzofuran	ND		ug/kg	180	59.	1
2-Methylnaphthalene	ND		ug/kg	210	57.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	55.	1
Acetophenone	ND		ug/kg	180	55.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
P-Chloro-M-Cresol	ND		ug/kg	180	52.	1
2-Chlorophenol	ND		ug/kg	180	54.	1
2,4-Dichlorophenol	ND		ug/kg	160	58.	1
2,4-Dimethylphenol	ND		ug/kg	180	53.	1
2-Nitrophenol	ND		ug/kg	380	56.	1
4-Nitrophenol	ND		ug/kg	250	58.	1
2,4-Dinitrophenol	ND		ug/kg	860	240	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	65.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	180	53.	1
2-Methylphenol	ND		ug/kg	180	57.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	58.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	58.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	ND		ug/kg	180	38.	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		25-120
Phenol-d6	81		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	114		30-120
2,4,6-Tribromophenol	29		0-136
4-Terphenyl-d14	128	Q	18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-03 D
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/05/13 17:09
 Analyst: RC
 Percent Solids: 84%

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	1200		ug/kg	630	160	4
1,2,4-Trichlorobenzene	ND		ug/kg	780	260	4
Hexachlorobenzene	ND		ug/kg	470	150	4
Bis(2-chloroethyl)ether	ND		ug/kg	700	220	4
2-Chloronaphthalene	ND		ug/kg	780	260	4
1,2-Dichlorobenzene	ND		ug/kg	780	260	4
1,3-Dichlorobenzene	ND		ug/kg	780	250	4
1,4-Dichlorobenzene	ND		ug/kg	780	240	4
3,3'-Dichlorobenzidine	ND		ug/kg	780	210	4
2,4-Dinitrotoluene	ND		ug/kg	780	170	4
2,6-Dinitrotoluene	ND		ug/kg	780	200	4
Fluoranthene	10000		ug/kg	470	140	4
4-Chlorophenyl phenyl ether	ND		ug/kg	780	240	4
4-Bromophenyl phenyl ether	ND		ug/kg	780	180	4
Bis(2-chloroisopropyl)ether	ND		ug/kg	940	280	4
Bis(2-chloroethoxy)methane	ND		ug/kg	850	240	4
Hexachlorobutadiene	ND		ug/kg	780	220	4
Hexachlorocyclopentadiene	ND		ug/kg	2200	500	4
Hexachloroethane	ND		ug/kg	630	140	4
Isophorone	ND		ug/kg	700	210	4
Naphthalene	ND		ug/kg	780	260	4
Nitrobenzene	ND		ug/kg	700	190	4
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	630	160	4
n-Nitrosodi-n-propylamine	ND		ug/kg	780	230	4
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	780	200	4
Butyl benzyl phthalate	ND		ug/kg	780	150	4
Di-n-butylphthalate	ND		ug/kg	780	150	4
Di-n-octylphthalate	ND		ug/kg	780	190	4
Diethyl phthalate	ND		ug/kg	780	160	4
Dimethyl phthalate	ND		ug/kg	780	200	4
Benzo(a)anthracene	5200		ug/kg	470	150	4

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-03 D
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	3700		ug/kg	630	190	4
Benzo(b)fluoranthene	3700		ug/kg	470	160	4
Benzo(k)fluoranthene	2000		ug/kg	470	150	4
Chrysene	6500		ug/kg	470	150	4
Acenaphthylene	ND		ug/kg	630	150	4
Anthracene	2300		ug/kg	470	130	4
Benzo(ghi)perylene	2100		ug/kg	630	160	4
Fluorene	1100		ug/kg	780	220	4
Phenanthrene	15000		ug/kg	470	150	4
Dibenzo(a,h)anthracene	570		ug/kg	470	150	4
Indeno(1,2,3-cd)Pyrene	1500		ug/kg	630	170	4
Pyrene	14000		ug/kg	470	150	4
Biphenyl	ND		ug/kg	1800	260	4
4-Chloroaniline	ND		ug/kg	780	210	4
2-Nitroaniline	ND		ug/kg	780	220	4
3-Nitroaniline	ND		ug/kg	780	220	4
4-Nitroaniline	ND		ug/kg	780	210	4
Dibenzofuran	360	J	ug/kg	780	260	4
2-Methylnaphthalene	250	J	ug/kg	940	250	4
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	780	240	4
Acetophenone	ND		ug/kg	780	240	4
2,4,6-Trichlorophenol	ND		ug/kg	470	150	4
P-Chloro-M-Cresol	ND		ug/kg	780	230	4
2-Chlorophenol	ND		ug/kg	780	240	4
2,4-Dichlorophenol	ND		ug/kg	700	250	4
2,4-Dimethylphenol	ND		ug/kg	780	230	4
2-Nitrophenol	ND		ug/kg	1700	240	4
4-Nitrophenol	ND		ug/kg	1100	250	4
2,4-Dinitrophenol	ND		ug/kg	3800	1100	4
4,6-Dinitro-o-cresol	ND		ug/kg	2000	290	4
Pentachlorophenol	ND		ug/kg	630	170	4
Phenol	ND		ug/kg	780	230	4
2-Methylphenol	ND		ug/kg	780	250	4
3-Methylphenol/4-Methylphenol	ND		ug/kg	1100	260	4
2,4,5-Trichlorophenol	ND		ug/kg	780	250	4
Benzoic Acid	ND		ug/kg	2500	790	4
Benzyl Alcohol	ND		ug/kg	780	240	4
Carbazole	460	J	ug/kg	780	170	4

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-03 D

Date Collected: 04/29/13 11:35

Client ID: B10_0-2

Date Received: 04/29/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		25-120
Phenol-d6	67		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	82		0-136
4-Terphenyl-d14	90		18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 14:41
 Analyst: RC
 Percent Solids: 85%

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	40.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	64.	1
Hexachlorobenzene	ND		ug/kg	120	36.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	54.	1
2-Chloronaphthalene	ND		ug/kg	190	63.	1
1,2-Dichlorobenzene	ND		ug/kg	190	64.	1
1,3-Dichlorobenzene	ND		ug/kg	190	61.	1
1,4-Dichlorobenzene	ND		ug/kg	190	59.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	52.	1
2,4-Dinitrotoluene	ND		ug/kg	190	42.	1
2,6-Dinitrotoluene	ND		ug/kg	190	50.	1
Fluoranthene	52	J	ug/kg	120	36.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	59.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	45.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	68.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	59.	1
Hexachlorobutadiene	ND		ug/kg	190	55.	1
Hexachlorocyclopentadiene	ND		ug/kg	560	120	1
Hexachloroethane	ND		ug/kg	160	35.	1
Isophorone	ND		ug/kg	170	52.	1
Naphthalene	ND		ug/kg	190	64.	1
Nitrobenzene	ND		ug/kg	170	46.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	160	41.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	58.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	51.	1
Butyl benzyl phthalate	ND		ug/kg	190	38.	1
Di-n-butylphthalate	ND		ug/kg	190	37.	1
Di-n-octylphthalate	ND		ug/kg	190	48.	1
Diethyl phthalate	ND		ug/kg	190	41.	1
Dimethyl phthalate	ND		ug/kg	190	49.	1
Benzo(a)anthracene	ND		ug/kg	120	38.	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	160	48.	1
Benzo(b)fluoranthene	50	J	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	160	36.	1
Anthracene	ND		ug/kg	120	32.	1
Benzo(ghi)perylene	ND		ug/kg	160	40.	1
Fluorene	ND		ug/kg	190	56.	1
Phenanthrene	ND		ug/kg	120	38.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	38.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	43.	1
Pyrene	53	J	ug/kg	120	38.	1
Biphenyl	ND		ug/kg	440	64.	1
4-Chloroaniline	ND		ug/kg	190	51.	1
2-Nitroaniline	ND		ug/kg	190	55.	1
3-Nitroaniline	ND		ug/kg	190	54.	1
4-Nitroaniline	ND		ug/kg	190	52.	1
Dibenzofuran	ND		ug/kg	190	65.	1
2-Methylnaphthalene	ND		ug/kg	230	62.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	60.	1
Acetophenone	ND		ug/kg	190	60.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	37.	1
P-Chloro-M-Cresol	ND		ug/kg	190	56.	1
2-Chlorophenol	ND		ug/kg	190	59.	1
2,4-Dichlorophenol	ND		ug/kg	170	63.	1
2,4-Dimethylphenol	ND		ug/kg	190	58.	1
2-Nitrophenol	ND		ug/kg	420	61.	1
4-Nitrophenol	ND		ug/kg	270	63.	1
2,4-Dinitrophenol	ND		ug/kg	930	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	500	71.	1
Pentachlorophenol	ND		ug/kg	160	42.	1
Phenol	ND		ug/kg	190	58.	1
2-Methylphenol	ND		ug/kg	190	62.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	64.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	63.	1
Benzoic Acid	ND		ug/kg	630	200	1
Benzyl Alcohol	ND		ug/kg	190	60.	1
Carbazole	ND		ug/kg	190	42.	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	86		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	98		30-120
2,4,6-Tribromophenol	75		0-136
4-Terphenyl-d14	121	Q	18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05
Client ID: B8_5-7
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/02/13 15:08
Analyst: RC
Percent Solids: 73%

Date Collected: 04/29/13 13:05
Date Received: 04/29/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	180	46.	1
1,2,4-Trichlorobenzene	ND		ug/kg	230	74.	1
Hexachlorobenzene	ND		ug/kg	140	42.	1
Bis(2-chloroethyl)ether	ND		ug/kg	200	63.	1
2-Chloronaphthalene	ND		ug/kg	230	74.	1
1,2-Dichlorobenzene	ND		ug/kg	230	74.	1
1,3-Dichlorobenzene	ND		ug/kg	230	71.	1
1,4-Dichlorobenzene	ND		ug/kg	230	69.	1
3,3'-Dichlorobenzidine	ND		ug/kg	230	60.	1
2,4-Dinitrotoluene	ND		ug/kg	230	49.	1
2,6-Dinitrotoluene	ND		ug/kg	230	58.	1
Fluoranthene	ND		ug/kg	140	42.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	230	69.	1
4-Bromophenyl phenyl ether	ND		ug/kg	230	52.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	270	80.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	240	68.	1
Hexachlorobutadiene	ND		ug/kg	230	64.	1
Hexachlorocyclopentadiene	ND		ug/kg	650	140	1
Hexachloroethane	ND		ug/kg	180	41.	1
Isophorone	ND		ug/kg	200	60.	1
Naphthalene	ND		ug/kg	230	75.	1
Nitrobenzene	ND		ug/kg	200	54.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	180	47.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	230	67.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	230	59.	1
Butyl benzyl phthalate	ND		ug/kg	230	44.	1
Di-n-butylphthalate	ND		ug/kg	230	44.	1
Di-n-octylphthalate	ND		ug/kg	230	56.	1
Diethyl phthalate	ND		ug/kg	230	48.	1
Dimethyl phthalate	ND		ug/kg	230	57.	1
Benzo(a)anthracene	ND		ug/kg	140	44.	1

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	180	55.	1
Benzo(b)fluoranthene	ND		ug/kg	140	46.	1
Benzo(k)fluoranthene	ND		ug/kg	140	43.	1
Chrysene	ND		ug/kg	140	44.	1
Acenaphthylene	ND		ug/kg	180	42.	1
Anthracene	ND		ug/kg	140	38.	1
Benzo(ghi)perylene	ND		ug/kg	180	47.	1
Fluorene	ND		ug/kg	230	65.	1
Phenanthrene	ND		ug/kg	140	44.	1
Dibenzo(a,h)anthracene	ND		ug/kg	140	44.	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	180	50.	1
Pyrene	ND		ug/kg	140	44.	1
Biphenyl	ND		ug/kg	520	74.	1
4-Chloroaniline	ND		ug/kg	230	60.	1
2-Nitroaniline	ND		ug/kg	230	64.	1
3-Nitroaniline	ND		ug/kg	230	62.	1
4-Nitroaniline	ND		ug/kg	230	61.	1
Dibenzofuran	ND		ug/kg	230	75.	1
2-Methylnaphthalene	ND		ug/kg	270	72.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	230	70.	1
Acetophenone	ND		ug/kg	230	70.	1
2,4,6-Trichlorophenol	ND		ug/kg	140	43.	1
P-Chloro-M-Cresol	ND		ug/kg	230	66.	1
2-Chlorophenol	ND		ug/kg	230	68.	1
2,4-Dichlorophenol	ND		ug/kg	200	73.	1
2,4-Dimethylphenol	ND		ug/kg	230	67.	1
2-Nitrophenol	ND		ug/kg	490	70.	1
4-Nitrophenol	ND		ug/kg	320	73.	1
2,4-Dinitrophenol	ND		ug/kg	1100	310	1
4,6-Dinitro-o-cresol	ND		ug/kg	590	83.	1
Pentachlorophenol	ND		ug/kg	180	48.	1
Phenol	ND		ug/kg	230	67.	1
2-Methylphenol	ND		ug/kg	230	73.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	320	74.	1
2,4,5-Trichlorophenol	ND		ug/kg	230	73.	1
Benzoic Acid	ND		ug/kg	730	230	1
Benzyl Alcohol	ND		ug/kg	230	70.	1
Carbazole	ND		ug/kg	230	49.	1

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab						
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	111		25-120
Phenol-d6	109		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	94		30-120
2,4,6-Tribromophenol	138	Q	0-136
4-Terphenyl-d14	97		18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06 D
 Client ID: B9_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 15:35
 Analyst: RC
 Percent Solids: 88%

Date Collected: 04/29/13 14:15
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	1500	380	10
1,2,4-Trichlorobenzene	ND		ug/kg	1800	610	10
Hexachlorobenzene	ND		ug/kg	1100	340	10
Bis(2-chloroethyl)ether	ND		ug/kg	1700	520	10
2-Chloronaphthalene	ND		ug/kg	1800	600	10
1,2-Dichlorobenzene	ND		ug/kg	1800	610	10
1,3-Dichlorobenzene	ND		ug/kg	1800	580	10
1,4-Dichlorobenzene	ND		ug/kg	1800	560	10
3,3'-Dichlorobenzidine	ND		ug/kg	1800	490	10
2,4-Dinitrotoluene	ND		ug/kg	1800	400	10
2,6-Dinitrotoluene	ND		ug/kg	1800	470	10
Fluoranthene	570	J	ug/kg	1100	340	10
4-Chlorophenyl phenyl ether	ND		ug/kg	1800	560	10
4-Bromophenyl phenyl ether	ND		ug/kg	1800	420	10
Bis(2-chloroisopropyl)ether	ND		ug/kg	2200	650	10
Bis(2-chloroethoxy)methane	ND		ug/kg	2000	560	10
Hexachlorobutadiene	ND		ug/kg	1800	520	10
Hexachlorocyclopentadiene	ND		ug/kg	5300	1200	10
Hexachloroethane	ND		ug/kg	1500	340	10
Isophorone	ND		ug/kg	1700	490	10
Naphthalene	ND		ug/kg	1800	610	10
Nitrobenzene	ND		ug/kg	1700	440	10
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	1500	390	10
n-Nitrosodi-n-propylamine	ND		ug/kg	1800	550	10
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	1800	480	10
Butyl benzyl phthalate	ND		ug/kg	1800	360	10
Di-n-butylphthalate	ND		ug/kg	1800	360	10
Di-n-octylphthalate	ND		ug/kg	1800	460	10
Diethyl phthalate	ND		ug/kg	1800	390	10
Dimethyl phthalate	ND		ug/kg	1800	470	10
Benzo(a)anthracene	ND		ug/kg	1100	360	10

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-06 D
 Client ID: B9_0-2
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:15
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	ND		ug/kg	1500	450	10
Benzo(b)fluoranthene	420	J	ug/kg	1100	370	10
Benzo(k)fluoranthene	ND		ug/kg	1100	350	10
Chrysene	ND		ug/kg	1100	360	10
Acenaphthylene	ND		ug/kg	1500	340	10
Anthracene	ND		ug/kg	1100	310	10
Benzo(ghi)perylene	ND		ug/kg	1500	380	10
Fluorene	ND		ug/kg	1800	530	10
Phenanthrene	ND		ug/kg	1100	360	10
Dibenzo(a,h)anthracene	ND		ug/kg	1100	360	10
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	1500	410	10
Pyrene	510	J	ug/kg	1100	360	10
Biphenyl	ND		ug/kg	4200	610	10
4-Chloroaniline	ND		ug/kg	1800	490	10
2-Nitroaniline	ND		ug/kg	1800	520	10
3-Nitroaniline	ND		ug/kg	1800	510	10
4-Nitroaniline	ND		ug/kg	1800	500	10
Dibenzofuran	ND		ug/kg	1800	620	10
2-Methylnaphthalene	ND		ug/kg	2200	590	10
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	1800	570	10
Acetophenone	ND		ug/kg	1800	570	10
2,4,6-Trichlorophenol	ND		ug/kg	1100	350	10
P-Chloro-M-Cresol	ND		ug/kg	1800	540	10
2-Chlorophenol	ND		ug/kg	1800	560	10
2,4-Dichlorophenol	ND		ug/kg	1700	600	10
2,4-Dimethylphenol	ND		ug/kg	1800	550	10
2-Nitrophenol	ND		ug/kg	4000	580	10
4-Nitrophenol	ND		ug/kg	2600	600	10
2,4-Dinitrophenol	ND		ug/kg	8900	2500	10
4,6-Dinitro-o-cresol	ND		ug/kg	4800	680	10
Pentachlorophenol	ND		ug/kg	1500	400	10
Phenol	ND		ug/kg	1800	550	10
2-Methylphenol	ND		ug/kg	1800	600	10
3-Methylphenol/4-Methylphenol	ND		ug/kg	2700	610	10
2,4,5-Trichlorophenol	ND		ug/kg	1800	600	10
Benzoic Acid	ND		ug/kg	6000	1900	10
Benzyl Alcohol	ND		ug/kg	1800	570	10
Carbazole	ND		ug/kg	1800	400	10

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06 D

Date Collected: 04/29/13 14:15

Client ID: B9_0-2

Date Received: 04/29/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	87		25-120
Phenol-d6	89		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	110		30-120
2,4,6-Tribromophenol	128		0-136
4-Terphenyl-d14	104		18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-07 D
 Client ID: DUP01
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 16:02
 Analyst: RC
 Percent Solids: 90%

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	580	150	4
1,2,4-Trichlorobenzene	ND		ug/kg	730	240	4
Hexachlorobenzene	ND		ug/kg	440	140	4
Bis(2-chloroethyl)ether	ND		ug/kg	650	200	4
2-Chloronaphthalene	ND		ug/kg	730	240	4
1,2-Dichlorobenzene	ND		ug/kg	730	240	4
1,3-Dichlorobenzene	ND		ug/kg	730	230	4
1,4-Dichlorobenzene	ND		ug/kg	730	220	4
3,3'-Dichlorobenzidine	ND		ug/kg	730	190	4
2,4-Dinitrotoluene	ND		ug/kg	730	160	4
2,6-Dinitrotoluene	ND		ug/kg	730	190	4
Fluoranthene	570		ug/kg	440	130	4
4-Chlorophenyl phenyl ether	ND		ug/kg	730	220	4
4-Bromophenyl phenyl ether	ND		ug/kg	730	170	4
Bis(2-chloroisopropyl)ether	ND		ug/kg	870	260	4
Bis(2-chloroethoxy)methane	ND		ug/kg	780	220	4
Hexachlorobutadiene	ND		ug/kg	730	200	4
Hexachlorocyclopentadiene	ND		ug/kg	2100	470	4
Hexachloroethane	ND		ug/kg	580	130	4
Isophorone	ND		ug/kg	650	190	4
Naphthalene	ND		ug/kg	730	240	4
Nitrobenzene	ND		ug/kg	650	170	4
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	580	150	4
n-Nitrosodi-n-propylamine	ND		ug/kg	730	220	4
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	730	190	4
Butyl benzyl phthalate	ND		ug/kg	730	140	4
Di-n-butylphthalate	ND		ug/kg	730	140	4
Di-n-octylphthalate	ND		ug/kg	730	180	4
Diethyl phthalate	ND		ug/kg	730	150	4
Dimethyl phthalate	ND		ug/kg	730	180	4
Benzo(a)anthracene	300	J	ug/kg	440	140	4

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-07 D
 Client ID: DUP01
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	360	J	ug/kg	580	180	4
Benzo(b)fluoranthene	570		ug/kg	440	150	4
Benzo(k)fluoranthene	200	J	ug/kg	440	140	4
Chrysene	360	J	ug/kg	440	140	4
Acenaphthylene	150	J	ug/kg	580	140	4
Anthracene	130	J	ug/kg	440	120	4
Benzo(ghi)perylene	340	J	ug/kg	580	150	4
Fluorene	ND		ug/kg	730	210	4
Phenanthrene	320	J	ug/kg	440	140	4
Dibenzo(a,h)anthracene	ND		ug/kg	440	140	4
Indeno(1,2,3-cd)Pyrene	380	J	ug/kg	580	160	4
Pyrene	440		ug/kg	440	140	4
Biphenyl	ND		ug/kg	1600	240	4
4-Chloroaniline	ND		ug/kg	730	190	4
2-Nitroaniline	ND		ug/kg	730	200	4
3-Nitroaniline	ND		ug/kg	730	200	4
4-Nitroaniline	ND		ug/kg	730	200	4
Dibenzofuran	ND		ug/kg	730	240	4
2-Methylnaphthalene	ND		ug/kg	870	230	4
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	730	220	4
Acetophenone	ND		ug/kg	730	220	4
2,4,6-Trichlorophenol	ND		ug/kg	440	140	4
P-Chloro-M-Cresol	ND		ug/kg	730	210	4
2-Chlorophenol	ND		ug/kg	730	220	4
2,4-Dichlorophenol	ND		ug/kg	650	240	4
2,4-Dimethylphenol	ND		ug/kg	730	220	4
2-Nitrophenol	ND		ug/kg	1600	230	4
4-Nitrophenol	ND		ug/kg	1000	240	4
2,4-Dinitrophenol	ND		ug/kg	3500	1000	4
4,6-Dinitro-o-cresol	ND		ug/kg	1900	270	4
Pentachlorophenol	ND		ug/kg	580	160	4
Phenol	ND		ug/kg	730	220	4
2-Methylphenol	ND		ug/kg	730	230	4
3-Methylphenol/4-Methylphenol	ND		ug/kg	1000	240	4
2,4,5-Trichlorophenol	ND		ug/kg	730	240	4
Benzoic Acid	ND		ug/kg	2400	740	4
Benzyl Alcohol	ND		ug/kg	730	220	4
Carbazole	ND		ug/kg	730	160	4

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-07 D

Date Collected: 04/29/13 14:11

Client ID: DUP01

Date Received: 04/29/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		25-120
Phenol-d6	84		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	94		30-120
2,4,6-Tribromophenol	123		0-136
4-Terphenyl-d14	93		18-120

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 16:29
 Analyst: RC
 Percent Solids: 91%

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	260	J	ug/kg	280	74.	2
1,2,4-Trichlorobenzene	ND		ug/kg	360	120	2
Hexachlorobenzene	ND		ug/kg	210	66.	2
Bis(2-chloroethyl)ether	ND		ug/kg	320	100	2
2-Chloronaphthalene	ND		ug/kg	360	120	2
1,2-Dichlorobenzene	ND		ug/kg	360	120	2
1,3-Dichlorobenzene	ND		ug/kg	360	110	2
1,4-Dichlorobenzene	ND		ug/kg	360	110	2
3,3'-Dichlorobenzidine	ND		ug/kg	360	95.	2
2,4-Dinitrotoluene	ND		ug/kg	360	77.	2
2,6-Dinitrotoluene	ND		ug/kg	360	91.	2
Fluoranthene	6300		ug/kg	210	66.	2
4-Chlorophenyl phenyl ether	ND		ug/kg	360	110	2
4-Bromophenyl phenyl ether	ND		ug/kg	360	82.	2
Bis(2-chloroisopropyl)ether	ND		ug/kg	430	120	2
Bis(2-chloroethoxy)methane	ND		ug/kg	380	110	2
Hexachlorobutadiene	ND		ug/kg	360	100	2
Hexachlorocyclopentadiene	ND		ug/kg	1000	230	2
Hexachloroethane	ND		ug/kg	280	65.	2
Isophorone	ND		ug/kg	320	95.	2
Naphthalene	140	J	ug/kg	360	120	2
Nitrobenzene	ND		ug/kg	320	85.	2
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	280	75.	2
n-Nitrosodi-n-propylamine	ND		ug/kg	360	110	2
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	360	94.	2
Butyl benzyl phthalate	ND		ug/kg	360	70.	2
Di-n-butylphthalate	ND		ug/kg	360	69.	2
Di-n-octylphthalate	ND		ug/kg	360	88.	2
Diethyl phthalate	ND		ug/kg	360	75.	2
Dimethyl phthalate	ND		ug/kg	360	91.	2
Benzo(a)anthracene	2600		ug/kg	210	70.	2

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	1900		ug/kg	280	87.	2
Benzo(b)fluoranthene	2600		ug/kg	210	72.	2
Benzo(k)fluoranthene	1100		ug/kg	210	68.	2
Chrysene	2600		ug/kg	210	70.	2
Acenaphthylene	800		ug/kg	280	67.	2
Anthracene	1300		ug/kg	210	59.	2
Benzo(ghi)perylene	850		ug/kg	280	74.	2
Fluorene	790		ug/kg	360	100	2
Phenanthrene	7800		ug/kg	210	70.	2
Dibenzo(a,h)anthracene	310		ug/kg	210	69.	2
Indeno(1,2,3-cd)Pyrene	1000		ug/kg	280	79.	2
Pyrene	4900		ug/kg	210	69.	2
Biphenyl	ND		ug/kg	810	120	2
4-Chloroaniline	ND		ug/kg	360	94.	2
2-Nitroaniline	ND		ug/kg	360	100	2
3-Nitroaniline	ND		ug/kg	360	98.	2
4-Nitroaniline	ND		ug/kg	360	96.	2
Dibenzofuran	690		ug/kg	360	120	2
2-Methylnaphthalene	250	J	ug/kg	430	110	2
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	360	110	2
Acetophenone	ND		ug/kg	360	110	2
2,4,6-Trichlorophenol	ND		ug/kg	210	67.	2
P-Chloro-M-Cresol	ND		ug/kg	360	100	2
2-Chlorophenol	ND		ug/kg	360	110	2
2,4-Dichlorophenol	ND		ug/kg	320	120	2
2,4-Dimethylphenol	ND		ug/kg	360	110	2
2-Nitrophenol	ND		ug/kg	770	110	2
4-Nitrophenol	ND		ug/kg	500	120	2
2,4-Dinitrophenol	ND		ug/kg	1700	490	2
4,6-Dinitro-o-cresol	ND		ug/kg	930	130	2
Pentachlorophenol	ND		ug/kg	280	76.	2
Phenol	ND		ug/kg	360	100	2
2-Methylphenol	ND		ug/kg	360	110	2
3-Methylphenol/4-Methylphenol	ND		ug/kg	510	120	2
2,4,5-Trichlorophenol	ND		ug/kg	360	120	2
Benzoic Acid	ND		ug/kg	1200	360	2
Benzyl Alcohol	ND		ug/kg	360	110	2
Carbazole	640		ug/kg	360	77.	2

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	91		25-120
Phenol-d6	95		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	111		30-120
2,4,6-Tribromophenol	130		0-136
4-Terphenyl-d14	124	Q	18-120

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/30/13 11:19
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG604805-1					
Acenaphthene	ND		ug/kg	130	34.
Benzidine	ND		ug/kg	540	130
n-Nitrosodimethylamine	ND		ug/kg	330	53.
1,2,4-Trichlorobenzene	ND		ug/kg	160	54.
Hexachlorobenzene	ND		ug/kg	98	30.
Bis(2-chloroethyl)ether	ND		ug/kg	150	46.
2-Chloronaphthalene	ND		ug/kg	160	53.
1,2-Dichlorobenzene	ND		ug/kg	160	54.
1,3-Dichlorobenzene	ND		ug/kg	160	52.
1,4-Dichlorobenzene	ND		ug/kg	160	50.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	35.
2,6-Dinitrotoluene	ND		ug/kg	160	42.
Fluoranthene	ND		ug/kg	98	30.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	50.
4-Bromophenyl phenyl ether	ND		ug/kg	160	38.
Azobenzene	ND		ug/kg	160	44.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	58.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	50.
Hexachlorobutadiene	ND		ug/kg	160	46.
Hexachlorocyclopentadiene	ND		ug/kg	470	100
Hexachloroethane	ND		ug/kg	130	30.
Isophorone	ND		ug/kg	150	44.
Naphthalene	ND		ug/kg	160	54.
Nitrobenzene	ND		ug/kg	150	39.
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	130	34.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	49.
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	43.
Butyl benzyl phthalate	ND		ug/kg	160	32.
Di-n-butylphthalate	ND		ug/kg	160	32.
Di-n-octylphthalate	ND		ug/kg	160	40.

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/30/13 11:19
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG604805-1					
Diethyl phthalate	ND		ug/kg	160	35.
Dimethyl phthalate	ND		ug/kg	160	42.
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.
Biphenyl	ND		ug/kg	370	54.
Aniline	ND		ug/kg	200	33.
4-Chloroaniline	ND		ug/kg	160	43.
2-Nitroaniline	ND		ug/kg	160	46.
3-Nitroaniline	ND		ug/kg	160	45.
4-Nitroaniline	ND		ug/kg	160	44.
Dibenzofuran	ND		ug/kg	160	55.
2-Methylnaphthalene	ND		ug/kg	200	52.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	51.
Acetophenone	ND		ug/kg	160	51.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
P-Chloro-M-Cresol	ND		ug/kg	160	47.
2-Chlorophenol	ND		ug/kg	160	49.
2,4-Dichlorophenol	ND		ug/kg	150	53.
2,4-Dimethylphenol	ND		ug/kg	160	49.
2-Nitrophenol	ND		ug/kg	350	51.

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
Analytical Date: 04/30/13 11:19
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 04/30/13 03:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG604805-1					
4-Nitrophenol	ND		ug/kg	230	53.
2,4-Dinitrophenol	ND		ug/kg	780	220
4,6-Dinitro-o-cresol	ND		ug/kg	420	60.
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.
2,4,5-Trichlorophenol	ND		ug/kg	160	53.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	35.
Benzaldehyde	ND		ug/kg	220	66.
Caprolactam	ND		ug/kg	160	45.
Atrazine	ND		ug/kg	130	37.
Pyridine	ND		ug/kg	650	59.
Parathion, ethyl	ND		ug/kg	160	65.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		25-120
Phenol-d6	86		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	84		30-120
2,4,6-Tribromophenol	85		0-136
4-Terphenyl-d14	98		18-120

Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG604805-2 WG604805-3								
Acenaphthene	86		84		31-137	2		50
Benzidine	48		42			13		50
n-Nitrosodimethylamine	74		79			7		50
1,2,4-Trichlorobenzene	74		82		38-107	10		50
Hexachlorobenzene	83		83		40-140	0		50
Bis(2-chloroethyl)ether	73		78		40-140	7		50
2-Chloronaphthalene	83		83		40-140	0		50
1,2-Dichlorobenzene	74		80		40-140	8		50
1,3-Dichlorobenzene	73		78		40-140	7		50
1,4-Dichlorobenzene	74		79		28-104	7		50
3,3'-Dichlorobenzidine	64		64		40-140	0		50
2,4-Dinitrotoluene	90	Q	87		28-89	3		50
2,6-Dinitrotoluene	85		86		40-140	1		50
Fluoranthene	94		92		40-140	2		50
4-Chlorophenyl phenyl ether	87		86		40-140	1		50
4-Bromophenyl phenyl ether	86		87		40-140	1		50
Azobenzene	88		85		40-140	3		50
Bis(2-chloroisopropyl)ether	73		77		40-140	5		50
Bis(2-chloroethoxy)methane	76		80		40-117	5		50
Hexachlorobutadiene	79		85		40-140	7		50
Hexachlorocyclopentadiene	80		87		40-140	8		50



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG604805-2 WG604805-3								
Hexachloroethane	74		80		40-140	8		50
Isophorone	75		78		40-140	4		50
Naphthalene	76		80		40-140	5		50
Nitrobenzene	77		79		40-140	3		50
NitrosoDiPhenylAmine(NDPA)/DPA	92		90			2		50
n-Nitrosodi-n-propylamine	77		79		32-121	3		50
Bis(2-Ethylhexyl)phthalate	93		94		40-140	1		50
Butyl benzyl phthalate	96		93		40-140	3		50
Di-n-butylphthalate	95		95		40-140	0		50
Di-n-octylphthalate	96		96		40-140	0		50
Diethyl phthalate	91		89		40-140	2		50
Dimethyl phthalate	85		85		40-140	0		50
Benzo(a)anthracene	87		87		40-140	0		50
Benzo(a)pyrene	92		85		40-140	8		50
Benzo(b)fluoranthene	80		79		40-140	1		50
Benzo(k)fluoranthene	104		106		40-140	2		50
Chrysene	85		86		40-140	1		50
Acenaphthylene	86		85		40-140	1		50
Anthracene	93		92		40-140	1		50
Benzo(ghi)perylene	87		87		40-140	0		50
Fluorene	87		85		40-140	2		50



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG604805-2 WG604805-3								
Phenanthrene	89		88		40-140	1		50
Dibenzo(a,h)anthracene	88		91		40-140	3		50
Indeno(1,2,3-cd)Pyrene	86		85		40-140	1		50
Pyrene	93		92		35-142	1		50
Biphenyl	84		85			1		50
Aniline	54		56		40-140	4		50
4-Chloroaniline	71		61		40-140	15		50
2-Nitroaniline	88		87		47-134	1		50
3-Nitroaniline	56		50		26-129	11		50
4-Nitroaniline	79		78		41-125	1		50
Dibenzofuran	85		84		40-140	1		50
2-Methylnaphthalene	78		81		40-140	4		50
1,2,4,5-Tetrachlorobenzene	78		82		40-117	5		50
Acetophenone	76		81		14-144	6		50
2,4,6-Trichlorophenol	82		83		30-130	1		50
P-Chloro-M-Cresol	88		86		26-103	2		50
2-Chlorophenol	79		83		25-102	5		50
2,4-Dichlorophenol	85		87		30-130	2		50
2,4-Dimethylphenol	90		90		30-130	0		50
2-Nitrophenol	77		80		30-130	4		50
4-Nitrophenol	88		86		11-114	2		50



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG604805-2 WG604805-3								
2,4-Dinitrophenol	59		60		4-130	2		50
4,6-Dinitro-o-cresol	79		79		10-130	0		50
Pentachlorophenol	70		70		17-109	0		50
Phenol	85		84		26-90	1		50
2-Methylphenol	81		85		30-130	5		50
3-Methylphenol/4-Methylphenol	86		87		30-130	1		50
2,4,5-Trichlorophenol	83		83		30-130	0		50
Benzoic Acid	0		0			NC		50
Benzyl Alcohol	78		81		40-140	4		50
Carbazole	94		92		54-128	2		50
Benzaldehyde	74		77			4		50
Caprolactam	68		69			1		50
Atrazine	101		98			3		50
Pyridine	50		50		10-93	0		50
Parathion, ethyl	105		102		40-140	3		50



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Semivolatiles Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG604805-2 WG604805-3								

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2-Fluorophenol	87		89		25-120
Phenol-d6	89		90		10-120
Nitrobenzene-d5	83		85		23-120
2-Fluorobiphenyl	88		89		30-120
2,4,6-Tribromophenol	96		96		0-136
4-Terphenyl-d14	99		95		18-120



PCBS

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
Client ID: B11A_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/01/13 19:52
Analyst: KB
Percent Solids: 91%

Date Collected: 04/29/13 09:25
Date Received: 04/29/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/30/13 18:18
Cleanup Method1: EPA 3665A
Cleanup Date1: 05/01/13
Cleanup Method2: EPA 3660B
Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	34.4	6.80	1
Aroclor 1221	ND		ug/kg	34.4	10.4	1
Aroclor 1232	ND		ug/kg	34.4	7.31	1
Aroclor 1242	ND		ug/kg	34.4	6.53	1
Aroclor 1248	ND		ug/kg	34.4	4.16	1
Aroclor 1254	ND		ug/kg	34.4	5.42	1
Aroclor 1260	ND		ug/kg	34.4	5.97	1
Aroclor 1262	ND		ug/kg	34.4	2.54	1
Aroclor 1268	ND		ug/kg	34.4	4.99	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	113		30-150
Decachlorobiphenyl	111		30-150
2,4,5,6-Tetrachloro-m-xylene	99		30-150
Decachlorobiphenyl	105		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-02
Client ID: B11B_1-3
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/01/13 20:05
Analyst: KB
Percent Solids: 92%

Date Collected: 04/29/13 10:05
Date Received: 04/29/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/30/13 18:18
Cleanup Method1: EPA 3665A
Cleanup Date1: 05/01/13
Cleanup Method2: EPA 3660B
Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	34.8	6.87	1
Aroclor 1221	ND		ug/kg	34.8	10.5	1
Aroclor 1232	ND		ug/kg	34.8	7.39	1
Aroclor 1242	ND		ug/kg	34.8	6.60	1
Aroclor 1248	ND		ug/kg	34.8	4.21	1
Aroclor 1254	ND		ug/kg	34.8	5.48	1
Aroclor 1260	ND		ug/kg	34.8	6.04	1
Aroclor 1262	ND		ug/kg	34.8	2.57	1
Aroclor 1268	ND		ug/kg	34.8	5.04	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	90		30-150
Decachlorobiphenyl	85		30-150
2,4,5,6-Tetrachloro-m-xylene	80		30-150
Decachlorobiphenyl	84		30-150

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-03
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/01/13 20:18
 Analyst: KB
 Percent Solids: 84%

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	39.3	7.76	1
Aroclor 1221	ND		ug/kg	39.3	11.9	1
Aroclor 1232	ND		ug/kg	39.3	8.35	1
Aroclor 1242	ND		ug/kg	39.3	7.46	1
Aroclor 1248	ND		ug/kg	39.3	4.76	1
Aroclor 1254	ND		ug/kg	39.3	6.20	1
Aroclor 1260	ND		ug/kg	39.3	6.82	1
Aroclor 1262	ND		ug/kg	39.3	2.91	1
Aroclor 1268	ND		ug/kg	39.3	5.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	81		30-150
2,4,5,6-Tetrachloro-m-xylene	63		30-150
Decachlorobiphenyl	85		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/01/13 20:31
 Analyst: KB
 Percent Solids: 85%

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	38.4	7.59	1
Aroclor 1221	ND		ug/kg	38.4	11.6	1
Aroclor 1232	ND		ug/kg	38.4	8.16	1
Aroclor 1242	ND		ug/kg	38.4	7.29	1
Aroclor 1248	ND		ug/kg	38.4	4.65	1
Aroclor 1254	ND		ug/kg	38.4	6.06	1
Aroclor 1260	ND		ug/kg	38.4	6.67	1
Aroclor 1262	ND		ug/kg	38.4	2.84	1
Aroclor 1268	ND		ug/kg	38.4	5.57	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	93		30-150
Decachlorobiphenyl	88		30-150
2,4,5,6-Tetrachloro-m-xylene	82		30-150
Decachlorobiphenyl	88		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/01/13 20:44
 Analyst: KB
 Percent Solids: 73%

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	44.5	8.79	1
Aroclor 1221	ND		ug/kg	44.5	13.4	1
Aroclor 1232	ND		ug/kg	44.5	9.45	1
Aroclor 1242	ND		ug/kg	44.5	8.44	1
Aroclor 1248	ND		ug/kg	44.5	5.38	1
Aroclor 1254	ND		ug/kg	44.5	7.01	1
Aroclor 1260	ND		ug/kg	44.5	7.72	1
Aroclor 1262	ND		ug/kg	44.5	3.29	1
Aroclor 1268	ND		ug/kg	44.5	6.45	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	64		30-150
Decachlorobiphenyl	62		30-150
2,4,5,6-Tetrachloro-m-xylene	57		30-150
Decachlorobiphenyl	61		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06
Client ID: B9_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 05/01/13 20:57
Analyst: KB
Percent Solids: 88%

Date Collected: 04/29/13 14:15
Date Received: 04/29/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/30/13 18:18
Cleanup Method1: EPA 3665A
Cleanup Date1: 05/01/13
Cleanup Method2: EPA 3660B
Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	36.2	7.16	1
Aroclor 1221	ND		ug/kg	36.2	10.9	1
Aroclor 1232	ND		ug/kg	36.2	7.70	1
Aroclor 1242	ND		ug/kg	36.2	6.88	1
Aroclor 1248	ND		ug/kg	36.2	4.38	1
Aroclor 1254	ND		ug/kg	36.2	5.71	1
Aroclor 1260	ND		ug/kg	36.2	6.29	1
Aroclor 1262	ND		ug/kg	36.2	2.68	1
Aroclor 1268	ND		ug/kg	36.2	5.26	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	72		30-150
Decachlorobiphenyl	64		30-150
2,4,5,6-Tetrachloro-m-xylene	63		30-150
Decachlorobiphenyl	65		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-07
 Client ID: DUP01
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/01/13 21:11
 Analyst: KB
 Percent Solids: 90%

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	35.4	7.00	1
Aroclor 1221	ND		ug/kg	35.4	10.7	1
Aroclor 1232	ND		ug/kg	35.4	7.53	1
Aroclor 1242	ND		ug/kg	35.4	6.73	1
Aroclor 1248	ND		ug/kg	35.4	4.29	1
Aroclor 1254	ND		ug/kg	35.4	5.59	1
Aroclor 1260	ND		ug/kg	35.4	6.15	1
Aroclor 1262	ND		ug/kg	35.4	2.62	1
Aroclor 1268	ND		ug/kg	35.4	5.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	68		30-150
Decachlorobiphenyl	67		30-150
2,4,5,6-Tetrachloro-m-xylene	60		30-150
Decachlorobiphenyl	71		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/01/13 21:24
 Analyst: KB
 Percent Solids: 91%

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	35.8	7.08	1
Aroclor 1221	ND		ug/kg	35.8	10.8	1
Aroclor 1232	ND		ug/kg	35.8	7.61	1
Aroclor 1242	ND		ug/kg	35.8	6.80	1
Aroclor 1248	ND		ug/kg	35.8	4.33	1
Aroclor 1254	ND		ug/kg	35.8	5.65	1
Aroclor 1260	ND		ug/kg	35.8	6.22	1
Aroclor 1262	ND		ug/kg	35.8	2.65	1
Aroclor 1268	ND		ug/kg	35.8	5.20	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	78		30-150
Decachlorobiphenyl	67		30-150
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	70		30-150

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8082A
 Analytical Date: 05/01/13 19:12
 Analyst: KB

Extraction Method: EPA 3546
 Extraction Date: 04/30/13 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/01/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/01/13

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-08 Batch: WG605013-1					
Aroclor 1016	ND		ug/kg	32.6	6.44
Aroclor 1221	ND		ug/kg	32.6	9.83
Aroclor 1232	ND		ug/kg	32.6	6.92
Aroclor 1242	ND		ug/kg	32.6	6.18
Aroclor 1248	ND		ug/kg	32.6	3.94
Aroclor 1254	ND		ug/kg	32.6	5.14
Aroclor 1260	ND		ug/kg	32.6	5.66
Aroclor 1262	ND		ug/kg	32.6	2.41
Aroclor 1268	ND		ug/kg	32.6	4.73

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	113		30-150
Decachlorobiphenyl	114		30-150
2,4,5,6-Tetrachloro-m-xylene	100		30-150
Decachlorobiphenyl	104		30-150

Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG605013-2 WG605013-3								
Aroclor 1016	93		94		40-140	1		50
Aroclor 1260	99		103		40-140	4		50

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2,4,5,6-Tetrachloro-m-xylene	102		97		30-150
Decachlorobiphenyl	105		105		30-150
2,4,5,6-Tetrachloro-m-xylene	89		84		30-150
Decachlorobiphenyl	96		95		30-150



PESTICIDES

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 16:37
 Analyst: BW
 Percent Solids: 91%

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.70	0.333	1
Lindane	ND		ug/kg	0.710	0.317	1
Alpha-BHC	ND		ug/kg	0.710	0.202	1
Beta-BHC	ND		ug/kg	1.70	0.646	1
Heptachlor	ND		ug/kg	0.851	0.382	1
Aldrin	ND		ug/kg	1.70	0.600	1
Heptachlor epoxide	ND		ug/kg	3.19	0.958	1
Endrin	ND		ug/kg	0.710	0.291	1
Endrin ketone	ND		ug/kg	1.70	0.438	1
Dieldrin	ND		ug/kg	1.06	0.532	1
4,4'-DDE	ND		ug/kg	1.70	0.394	1
4,4'-DDD	ND		ug/kg	1.70	0.607	1
4,4'-DDT	ND		ug/kg	3.19	1.37	1
Endosulfan I	ND		ug/kg	1.70	0.402	1
Endosulfan II	ND		ug/kg	1.70	0.569	1
Endosulfan sulfate	ND		ug/kg	0.710	0.324	1
Methoxychlor	ND		ug/kg	3.19	0.993	1
Toxaphene	ND		ug/kg	31.9	8.94	1
cis-Chlordane	ND		ug/kg	2.13	0.593	1
trans-Chlordane	ND		ug/kg	2.13	0.562	1
Chlordane	ND		ug/kg	13.8	5.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	149		30-150	A
Decachlorobiphenyl	114		30-150	A
2,4,5,6-Tetrachloro-m-xylene	106		30-150	B
Decachlorobiphenyl	89		30-150	B

Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 16:50
 Analyst: BW
 Percent Solids: 92%

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.64	0.322	1
Lindane	ND		ug/kg	0.684	0.306	1
Alpha-BHC	ND		ug/kg	0.684	0.194	1
Beta-BHC	ND		ug/kg	1.64	0.622	1
Heptachlor	ND		ug/kg	0.821	0.368	1
Aldrin	ND		ug/kg	1.64	0.578	1
Heptachlor epoxide	ND		ug/kg	3.08	0.924	1
Endrin	ND		ug/kg	0.684	0.280	1
Endrin ketone	ND		ug/kg	1.64	0.423	1
Dieldrin	ND		ug/kg	1.03	0.513	1
4,4'-DDE	ND		ug/kg	1.64	0.380	1
4,4'-DDD	ND		ug/kg	1.64	0.586	1
4,4'-DDT	ND		ug/kg	3.08	1.32	1
Endosulfan I	ND		ug/kg	1.64	0.388	1
Endosulfan II	ND		ug/kg	1.64	0.549	1
Endosulfan sulfate	ND		ug/kg	0.684	0.313	1
Methoxychlor	ND		ug/kg	3.08	0.958	1
Toxaphene	ND		ug/kg	30.8	8.62	1
cis-Chlordane	ND		ug/kg	2.05	0.572	1
trans-Chlordane	ND		ug/kg	2.05	0.542	1
Chlordane	ND		ug/kg	13.3	5.44	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	156	Q	30-150	A
Decachlorobiphenyl	119		30-150	A
2,4,5,6-Tetrachloro-m-xylene	114		30-150	B
Decachlorobiphenyl	90		30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-03
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 17:03
 Analyst: BW
 Percent Solids: 84%

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.86	0.365	1
Lindane	ND		ug/kg	0.777	0.347	1
Alpha-BHC	ND		ug/kg	0.777	0.220	1
Beta-BHC	ND		ug/kg	1.86	0.707	1
Heptachlor	ND		ug/kg	0.932	0.418	1
Aldrin	ND		ug/kg	1.86	0.656	1
Heptachlor epoxide	ND		ug/kg	3.49	1.05	1
Endrin	ND		ug/kg	0.777	0.318	1
Endrin ketone	ND		ug/kg	1.86	0.480	1
Dieldrin	ND		ug/kg	1.16	0.582	1
4,4'-DDE	ND		ug/kg	1.86	0.431	1
4,4'-DDD	ND		ug/kg	1.86	0.665	1
4,4'-DDT	ND		ug/kg	3.49	1.50	1
Endosulfan I	ND		ug/kg	1.86	0.440	1
Endosulfan II	ND		ug/kg	1.86	0.623	1
Endosulfan sulfate	ND		ug/kg	0.777	0.355	1
Methoxychlor	ND		ug/kg	3.49	1.09	1
Toxaphene	ND		ug/kg	34.9	9.78	1
cis-Chlordane	ND		ug/kg	2.33	0.649	1
trans-Chlordane	ND		ug/kg	2.33	0.615	1
Chlordane	ND		ug/kg	15.1	6.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	150		30-150	A
Decachlorobiphenyl	120		30-150	A
2,4,5,6-Tetrachloro-m-xylene	111		30-150	B
Decachlorobiphenyl	92		30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 17:15
 Analyst: BW
 Percent Solids: 85%

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.88	0.368	1
Lindane	ND		ug/kg	0.783	0.350	1
Alpha-BHC	ND		ug/kg	0.783	0.222	1
Beta-BHC	ND		ug/kg	1.88	0.712	1
Heptachlor	ND		ug/kg	0.939	0.421	1
Aldrin	ND		ug/kg	1.88	0.661	1
Heptachlor epoxide	ND		ug/kg	3.52	1.06	1
Endrin	ND		ug/kg	0.783	0.321	1
Endrin ketone	ND		ug/kg	1.88	0.484	1
Dieldrin	ND		ug/kg	1.17	0.587	1
4,4'-DDE	ND		ug/kg	1.88	0.434	1
4,4'-DDD	ND		ug/kg	1.88	0.670	1
4,4'-DDT	ND		ug/kg	3.52	1.51	1
Endosulfan I	ND		ug/kg	1.88	0.444	1
Endosulfan II	ND		ug/kg	1.88	0.628	1
Endosulfan sulfate	ND		ug/kg	0.783	0.358	1
Methoxychlor	ND		ug/kg	3.52	1.10	1
Toxaphene	ND		ug/kg	35.2	9.86	1
cis-Chlordane	ND		ug/kg	2.35	0.654	1
trans-Chlordane	ND		ug/kg	2.35	0.620	1
Chlordane	ND		ug/kg	15.3	6.22	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	143		30-150	A
Decachlorobiphenyl	96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	112		30-150	B
Decachlorobiphenyl	78		30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-05 D
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 17:28
 Analyst: BW
 Percent Solids: 73%

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	43.2	8.47	20
Lindane	ND		ug/kg	18.0	8.05	20
Alpha-BHC	ND		ug/kg	18.0	5.12	20
Beta-BHC	ND		ug/kg	43.2	16.4	20
Heptachlor	ND		ug/kg	21.6	9.69	20
Aldrin	ND		ug/kg	43.2	15.2	20
Heptachlor epoxide	ND		ug/kg	81.1	24.3	20
Endrin	ND		ug/kg	18.0	7.39	20
Endrin ketone	ND		ug/kg	43.2	11.1	20
Dieldrin	ND		ug/kg	27.0	13.5	20
4,4'-DDE	ND		ug/kg	43.2	10.0	20
4,4'-DDD	ND		ug/kg	43.2	15.4	20
4,4'-DDT	ND		ug/kg	81.1	34.8	20
Endosulfan I	ND		ug/kg	43.2	10.2	20
Endosulfan II	ND		ug/kg	43.2	14.4	20
Endosulfan sulfate	ND		ug/kg	18.0	8.23	20
Methoxychlor	ND		ug/kg	81.1	25.2	20
Toxaphene	ND		ug/kg	811	227.	20
cis-Chlordane	ND		ug/kg	54.0	15.1	20
trans-Chlordane	ND		ug/kg	54.0	14.3	20
Chlordane	ND		ug/kg	351	143.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-06
Client ID: B9_0-2
Sample Location: NEW YORK, NY
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 05/03/13 17:41
Analyst: BW
Percent Solids: 88%

Date Collected: 04/29/13 14:15
Date Received: 04/29/13
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/29/13 23:04
Cleanup Method1: EPA 3620B
Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.80	0.352	1
Lindane	ND		ug/kg	0.749	0.335	1
Alpha-BHC	ND		ug/kg	0.749	0.213	1
Beta-BHC	ND		ug/kg	1.80	0.682	1
Heptachlor	ND		ug/kg	0.899	0.403	1
Aldrin	ND		ug/kg	1.80	0.633	1
Heptachlor epoxide	ND		ug/kg	3.37	1.01	1
Endrin	ND		ug/kg	0.749	0.307	1
Endrin ketone	ND		ug/kg	1.80	0.463	1
Dieldrin	ND		ug/kg	1.12	0.562	1
4,4'-DDE	ND		ug/kg	1.80	0.416	1
4,4'-DDD	ND		ug/kg	1.80	0.641	1
4,4'-DDT	ND		ug/kg	3.37	1.45	1
Endosulfan I	ND		ug/kg	1.80	0.425	1
Endosulfan II	ND		ug/kg	1.80	0.601	1
Endosulfan sulfate	ND		ug/kg	0.749	0.342	1
Methoxychlor	ND		ug/kg	3.37	1.05	1
Toxaphene	ND		ug/kg	33.7	9.44	1
cis-Chlordane	ND		ug/kg	2.25	0.626	1
trans-Chlordane	ND		ug/kg	2.25	0.593	1
Chlordane	ND		ug/kg	14.6	5.96	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	142		30-150	A
Decachlorobiphenyl	116		30-150	A
2,4,5,6-Tetrachloro-m-xylene	108		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-07 D
 Client ID: DUP01
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 17:54
 Analyst: BW
 Percent Solids: 90%

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	35.0	6.86	20
Lindane	ND		ug/kg	14.6	6.52	20
Alpha-BHC	ND		ug/kg	14.6	4.14	20
Beta-BHC	ND		ug/kg	35.0	13.3	20
Heptachlor	ND		ug/kg	17.5	7.85	20
Aldrin	ND		ug/kg	35.0	12.3	20
Heptachlor epoxide	ND		ug/kg	65.6	19.7	20
Endrin	ND		ug/kg	14.6	5.98	20
Endrin ketone	ND		ug/kg	35.0	9.01	20
Dieldrin	ND		ug/kg	21.9	10.9	20
4,4'-DDE	ND		ug/kg	35.0	8.09	20
4,4'-DDD	ND		ug/kg	35.0	12.5	20
4,4'-DDT	ND		ug/kg	65.6	28.1	20
Endosulfan I	ND		ug/kg	35.0	8.27	20
Endosulfan II	ND		ug/kg	35.0	11.7	20
Endosulfan sulfate	ND		ug/kg	14.6	6.66	20
Methoxychlor	ND		ug/kg	65.6	20.4	20
Toxaphene	ND		ug/kg	656	184.	20
cis-Chlordane	ND		ug/kg	43.8	12.2	20
trans-Chlordane	ND		ug/kg	43.8	11.6	20
Chlordane	ND		ug/kg	284	116.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	A
Decachlorobiphenyl	0	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150	B
Decachlorobiphenyl	0	Q	30-150	B

Project Name: 546 W 44TH ST**Lab Number:** L1307603**Project Number:** 170229701**Report Date:** 05/06/13**SAMPLE RESULTS**

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 18:07
 Analyst: BW
 Percent Solids: 91%

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 04/29/13 23:04
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.71	0.334	1
Lindane	ND		ug/kg	0.712	0.318	1
Alpha-BHC	ND		ug/kg	0.712	0.202	1
Beta-BHC	ND		ug/kg	1.71	0.648	1
Heptachlor	ND		ug/kg	0.854	0.383	1
Aldrin	ND		ug/kg	1.71	0.602	1
Heptachlor epoxide	ND		ug/kg	3.20	0.961	1
Endrin	ND		ug/kg	0.712	0.292	1
Endrin ketone	ND		ug/kg	1.71	0.440	1
Dieldrin	ND		ug/kg	1.07	0.534	1
4,4'-DDE	ND		ug/kg	1.71	0.395	1
4,4'-DDD	ND		ug/kg	1.71	0.609	1
4,4'-DDT	ND		ug/kg	3.20	1.37	1
Endosulfan I	ND		ug/kg	1.71	0.404	1
Endosulfan II	ND		ug/kg	1.71	0.571	1
Endosulfan sulfate	ND		ug/kg	0.712	0.325	1
Methoxychlor	ND		ug/kg	3.20	0.997	1
Toxaphene	ND		ug/kg	32.0	8.97	1
cis-Chlordane	ND		ug/kg	2.14	0.595	1
trans-Chlordane	ND		ug/kg	2.14	0.564	1
Chlordane	ND		ug/kg	13.9	5.66	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	158	Q	30-150	A
Decachlorobiphenyl	175	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	108		30-150	B
Decachlorobiphenyl	166	Q	30-150	B

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8081B
Analytical Date: 04/30/13 12:48
Analyst: BW

Extraction Method: EPA 3546
Extraction Date: 04/29/13 23:04
Cleanup Method1: EPA 3620B
Cleanup Date1: 04/30/13

Parameter	Result	Qualifier	Units	RL	MDL
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-08 Batch: WG604775-1					
Delta-BHC	ND		ug/kg	1.57	0.307
Lindane	ND		ug/kg	0.653	0.292
Alpha-BHC	ND		ug/kg	0.653	0.185
Beta-BHC	ND		ug/kg	1.57	0.594
Heptachlor	ND		ug/kg	0.783	0.351
Aldrin	ND		ug/kg	1.57	0.552
Heptachlor epoxide	ND		ug/kg	2.94	0.881
Endrin	ND		ug/kg	0.653	0.268
Endrin ketone	ND		ug/kg	1.57	0.403
Dieldrin	ND		ug/kg	0.979	0.490
4,4'-DDE	ND		ug/kg	1.57	0.362
4,4'-DDD	ND		ug/kg	1.57	0.559
4,4'-DDT	ND		ug/kg	2.94	1.26
Endosulfan I	ND		ug/kg	1.57	0.370
Endosulfan II	ND		ug/kg	1.57	0.523
Endosulfan sulfate	ND		ug/kg	0.653	0.298
Methoxychlor	ND		ug/kg	2.94	0.914
Toxaphene	ND		ug/kg	29.4	8.22
cis-Chlordane	ND		ug/kg	1.96	0.546
trans-Chlordane	ND		ug/kg	1.96	0.517
Chlordane	ND		ug/kg	12.7	5.19

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	111		30-150	A
Decachlorobiphenyl	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	109		30-150	B
Decachlorobiphenyl	155	Q	30-150	B

Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG604775-2 WG604775-3								
Delta-BHC	71		80		30-150	12		30
Lindane	89		97		30-150	9		30
Alpha-BHC	90		98		30-150	9		30
Beta-BHC	88		98		30-150	11		30
Heptachlor	94		103		30-150	9		30
Aldrin	96		105		30-150	9		30
Heptachlor epoxide	95		103		30-150	8		30
Endrin	104		122		30-150	16		30
Endrin ketone	71		84		30-150	17		30
Dieldrin	92		101		30-150	9		30
4,4'-DDE	95		104		30-150	9		30
4,4'-DDD	85		92		30-150	8		30
4,4'-DDT	88		98		30-150	11		30
Endosulfan I	90		99		30-150	10		30
Endosulfan II	71		81		30-150	13		30
Endosulfan sulfate	61		70		30-150	14		30
Methoxychlor	102		117		30-150	14		30
cis-Chlordane	90		100		30-150	11		30
trans-Chlordane	99		106		30-150	7		30



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG604775-2 WG604775-3								

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	115		121		30-150	A
Decachlorobiphenyl	90		75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	121		127		30-150	B
Decachlorobiphenyl	171	Q	185	Q	30-150	B



METALS

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-01
 Client ID: B11A_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 91%

Date Collected: 04/29/13 09:25
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	17000		mg/kg	4.2	0.84	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Antimony, Total	3.3		mg/kg	2.1	0.42	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Arsenic, Total	2.3		mg/kg	0.42	0.13	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Barium, Total	210		mg/kg	0.42	0.13	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Beryllium, Total	0.58		mg/kg	0.21	0.02	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Cadmium, Total	0.06	J	mg/kg	0.42	0.03	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Calcium, Total	15000		mg/kg	4.2	0.84	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Chromium, Total	37		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Cobalt, Total	12		mg/kg	0.84	0.21	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Copper, Total	51		mg/kg	0.42	0.21	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Iron, Total	22000		mg/kg	2.1	0.84	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Lead, Total	25		mg/kg	2.1	0.13	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Magnesium, Total	7900		mg/kg	4.2	1.7	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Manganese, Total	120		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Mercury, Total	0.55		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 13:22	EPA 7471B	1,7471B	TT
Nickel, Total	27		mg/kg	1.0	0.17	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Potassium, Total	10000		mg/kg	100	34.	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.84	0.13	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Sodium, Total	920		mg/kg	84	34.	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Thallium, Total	2.1		mg/kg	0.84	0.25	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Vanadium, Total	47		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG
Zinc, Total	79		mg/kg	2.1	0.21	1	05/01/13 12:20	05/02/13 09:51	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-02
 Client ID: B11B_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 92%

Date Collected: 04/29/13 10:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	7700		mg/kg	4.2	0.84	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Antimony, Total	1.4	J	mg/kg	2.1	0.42	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Arsenic, Total	2.4		mg/kg	0.42	0.12	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Barium, Total	85		mg/kg	0.42	0.12	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Beryllium, Total	0.38		mg/kg	0.21	0.02	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Cadmium, Total	0.04	J	mg/kg	0.42	0.03	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Calcium, Total	20000		mg/kg	4.2	0.84	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Chromium, Total	12		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Cobalt, Total	6.4		mg/kg	0.84	0.21	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Copper, Total	32		mg/kg	0.42	0.21	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Iron, Total	10000		mg/kg	2.1	0.84	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Lead, Total	43		mg/kg	2.1	0.12	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Magnesium, Total	2700		mg/kg	4.2	1.7	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Manganese, Total	160		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Mercury, Total	0.06	J	mg/kg	0.09	0.02	1	05/03/13 09:14	05/03/13 13:24	EPA 7471B	1,7471B	TT
Nickel, Total	15		mg/kg	1.0	0.17	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Potassium, Total	3400		mg/kg	100	34.	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Selenium, Total	0.14	J	mg/kg	0.84	0.12	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Sodium, Total	1000		mg/kg	84	34.	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Thallium, Total	1.1		mg/kg	0.84	0.25	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Vanadium, Total	22		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG
Zinc, Total	55		mg/kg	2.1	0.21	1	05/01/13 12:20	05/02/13 09:55	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-03
 Client ID: B10_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 84%

Date Collected: 04/29/13 11:35
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	12000		mg/kg	4.6	0.92	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Antimony, Total	2.0	J	mg/kg	2.3	0.46	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Arsenic, Total	4.5		mg/kg	0.46	0.14	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Barium, Total	120		mg/kg	0.46	0.14	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Beryllium, Total	0.42		mg/kg	0.23	0.02	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Cadmium, Total	0.04	J	mg/kg	0.46	0.03	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Calcium, Total	17000		mg/kg	4.6	0.92	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Chromium, Total	20		mg/kg	0.46	0.09	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Cobalt, Total	7.0		mg/kg	0.92	0.23	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Copper, Total	23		mg/kg	0.46	0.23	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Iron, Total	18000		mg/kg	2.3	0.92	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Lead, Total	43		mg/kg	2.3	0.14	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Magnesium, Total	5200		mg/kg	4.6	1.8	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Manganese, Total	220		mg/kg	0.46	0.09	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Mercury, Total	0.17		mg/kg	0.09	0.02	1	05/03/13 09:14	05/03/13 13:26	EPA 7471B	1,7471B	TT
Nickel, Total	15		mg/kg	1.1	0.18	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Potassium, Total	4500		mg/kg	110	37.	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.92	0.14	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.46	0.09	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Sodium, Total	930		mg/kg	92	37.	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Thallium, Total	1.9		mg/kg	0.92	0.27	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Vanadium, Total	31		mg/kg	0.46	0.09	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG
Zinc, Total	67		mg/kg	2.3	0.23	1	05/01/13 12:20	05/02/13 10:16	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-04
 Client ID: B8_1-3
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 85%

Date Collected: 04/29/13 13:00
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	8800		mg/kg	4.5	0.90	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Antimony, Total	1.5	J	mg/kg	2.2	0.45	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Arsenic, Total	1.6		mg/kg	0.45	0.13	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Barium, Total	110		mg/kg	0.45	0.13	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Beryllium, Total	0.34		mg/kg	0.22	0.02	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.45	0.03	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Calcium, Total	14000		mg/kg	4.5	0.90	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Chromium, Total	13		mg/kg	0.45	0.09	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Cobalt, Total	5.4		mg/kg	0.90	0.22	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Copper, Total	10		mg/kg	0.45	0.22	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Iron, Total	13000		mg/kg	2.2	0.90	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Lead, Total	20		mg/kg	2.2	0.13	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Magnesium, Total	5200		mg/kg	4.5	1.8	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Manganese, Total	290		mg/kg	0.45	0.09	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Mercury, Total	0.05	J	mg/kg	0.09	0.02	1	05/03/13 09:14	05/03/13 13:28	EPA 7471B	1,7471B	TT
Nickel, Total	11		mg/kg	1.1	0.18	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Potassium, Total	4800		mg/kg	110	36.	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Selenium, Total	0.16	J	mg/kg	0.90	0.13	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.45	0.09	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Sodium, Total	830		mg/kg	90	36.	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Thallium, Total	1.6		mg/kg	0.90	0.27	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Vanadium, Total	21		mg/kg	0.45	0.09	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG
Zinc, Total	40		mg/kg	2.2	0.22	1	05/01/13 12:20	05/02/13 10:19	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-05
 Client ID: B8_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 73%

Date Collected: 04/29/13 13:05
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	13000		mg/kg	5.4	1.1	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Antimony, Total	1.8	J	mg/kg	2.7	0.54	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Arsenic, Total	2.5		mg/kg	0.54	0.16	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Barium, Total	79		mg/kg	0.54	0.16	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Beryllium, Total	0.63		mg/kg	0.27	0.02	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.54	0.03	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Calcium, Total	1100		mg/kg	5.4	1.1	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Chromium, Total	18		mg/kg	0.54	0.11	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Cobalt, Total	8.2		mg/kg	1.1	0.27	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Copper, Total	16		mg/kg	0.54	0.27	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Iron, Total	19000		mg/kg	2.7	1.1	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Lead, Total	38		mg/kg	2.7	0.16	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Magnesium, Total	3100		mg/kg	5.4	2.2	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Manganese, Total	520		mg/kg	0.54	0.11	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Mercury, Total	0.15		mg/kg	0.10	0.02	1	05/03/13 09:14	05/03/13 13:29	EPA 7471B	1,7471B	TT
Nickel, Total	14		mg/kg	1.4	0.22	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Potassium, Total	1500		mg/kg	140	44.	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Selenium, Total	0.34	J	mg/kg	1.1	0.16	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.54	0.11	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Sodium, Total	730		mg/kg	110	44.	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Thallium, Total	1.7		mg/kg	1.1	0.33	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Vanadium, Total	27		mg/kg	0.54	0.11	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG
Zinc, Total	40		mg/kg	2.7	0.27	1	05/01/13 12:20	05/02/13 10:22	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-06
 Client ID: B9_0-2
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 88%

Date Collected: 04/29/13 14:15
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	11000		mg/kg	4.4	0.88	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Antimony, Total	2.0	J	mg/kg	2.2	0.44	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Arsenic, Total	7.9		mg/kg	0.44	0.13	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Barium, Total	560		mg/kg	0.44	0.13	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Beryllium, Total	0.58		mg/kg	0.22	0.02	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Cadmium, Total	0.47		mg/kg	0.44	0.03	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Calcium, Total	30000		mg/kg	440	88.	100	05/01/13 12:20	05/02/13 10:45	EPA 3050B	1,6010C	MG
Chromium, Total	23		mg/kg	0.44	0.09	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Cobalt, Total	5.9		mg/kg	0.88	0.22	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Copper, Total	29		mg/kg	0.44	0.22	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Iron, Total	14000		mg/kg	2.2	0.88	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Lead, Total	820		mg/kg	2.2	0.13	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Magnesium, Total	4200		mg/kg	4.4	1.8	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Manganese, Total	200		mg/kg	0.44	0.09	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Mercury, Total	0.48		mg/kg	0.09	0.02	1	05/03/13 09:14	05/03/13 13:31	EPA 7471B	1,7471B	TT
Nickel, Total	15		mg/kg	1.1	0.18	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Potassium, Total	1300		mg/kg	110	35.	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.88	0.13	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Silver, Total	0.34	J	mg/kg	0.44	0.09	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Sodium, Total	1100		mg/kg	88	35.	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Thallium, Total	1.1		mg/kg	0.88	0.26	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Vanadium, Total	33		mg/kg	0.44	0.09	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG
Zinc, Total	390		mg/kg	2.2	0.22	1	05/01/13 12:20	05/02/13 10:26	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-07
 Client ID: DUP01
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 90%

Date Collected: 04/29/13 14:11
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	15000		mg/kg	4.3	0.86	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Antimony, Total	3.0		mg/kg	2.2	0.43	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Arsenic, Total	11		mg/kg	0.43	0.13	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Barium, Total	490		mg/kg	0.43	0.13	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Beryllium, Total	1.1		mg/kg	0.22	0.02	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Cadmium, Total	0.27	J	mg/kg	0.43	0.03	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Calcium, Total	16000		mg/kg	4.3	0.86	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Chromium, Total	50		mg/kg	0.43	0.09	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Cobalt, Total	7.2		mg/kg	0.86	0.22	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Copper, Total	52		mg/kg	0.43	0.22	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Iron, Total	23000		mg/kg	2.2	0.86	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Lead, Total	810		mg/kg	2.2	0.13	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Magnesium, Total	2900		mg/kg	4.3	1.7	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Manganese, Total	140		mg/kg	0.43	0.09	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Mercury, Total	0.89		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 13:33	EPA 7471B	1,7471B	TT
Nickel, Total	20		mg/kg	1.1	0.17	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Potassium, Total	1400		mg/kg	110	34.	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.86	0.13	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Silver, Total	0.11	J	mg/kg	0.43	0.09	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Sodium, Total	1100		mg/kg	86	34.	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Thallium, Total	2.2		mg/kg	0.86	0.26	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Vanadium, Total	33		mg/kg	0.43	0.09	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG
Zinc, Total	340		mg/kg	2.2	0.22	1	05/01/13 12:20	05/02/13 10:29	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-08
 Client ID: B9_5-7
 Sample Location: NEW YORK, NY
 Matrix: Soil
 Percent Solids: 91%

Date Collected: 04/29/13 14:30
 Date Received: 04/29/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	14000		mg/kg	4.2	0.84	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Antimony, Total	1.9	J	mg/kg	2.1	0.42	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Arsenic, Total	2.5		mg/kg	0.42	0.13	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Barium, Total	180		mg/kg	0.42	0.13	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Beryllium, Total	0.72		mg/kg	0.21	0.02	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.42	0.03	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Calcium, Total	39000		mg/kg	420	84.	100	05/01/13 12:20	05/02/13 11:49	EPA 3050B	1,6010C	MG
Chromium, Total	25		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Cobalt, Total	7.9		mg/kg	0.84	0.21	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Copper, Total	20		mg/kg	0.42	0.21	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Iron, Total	15000		mg/kg	2.1	0.84	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Lead, Total	210		mg/kg	2.1	0.13	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Magnesium, Total	5800		mg/kg	4.2	1.7	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Manganese, Total	180		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Mercury, Total	0.10		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 13:35	EPA 7471B	1,7471B	TT
Nickel, Total	18		mg/kg	1.0	0.17	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Potassium, Total	5200		mg/kg	100	34.	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.84	0.13	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Sodium, Total	400		mg/kg	84	34.	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Thallium, Total	1.9		mg/kg	0.84	0.25	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Vanadium, Total	36		mg/kg	0.42	0.08	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG
Zinc, Total	110		mg/kg	2.1	0.21	1	05/01/13 12:20	05/02/13 10:32	EPA 3050B	1,6010C	MG



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

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): 01-08 Batch: WG605181-1										
Aluminum, Total	1.6	J	mg/kg	4.0	0.80	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Antimony, Total	ND		mg/kg	2.0	0.40	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Arsenic, Total	ND		mg/kg	0.40	0.12	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Barium, Total	ND		mg/kg	0.40	0.12	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Beryllium, Total	ND		mg/kg	0.20	0.02	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Cadmium, Total	0.05	J	mg/kg	0.40	0.02	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Calcium, Total	ND		mg/kg	4.0	0.80	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Chromium, Total	ND		mg/kg	0.40	0.08	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Cobalt, Total	ND		mg/kg	0.80	0.20	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Copper, Total	ND		mg/kg	0.40	0.20	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Iron, Total	1.1	J	mg/kg	2.0	0.80	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Lead, Total	ND		mg/kg	2.0	0.12	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Magnesium, Total	ND		mg/kg	4.0	1.6	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Manganese, Total	ND		mg/kg	0.40	0.08	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Nickel, Total	ND		mg/kg	1.0	0.16	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Potassium, Total	ND		mg/kg	100	32.	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Selenium, Total	ND		mg/kg	0.80	0.12	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Silver, Total	0.23	J	mg/kg	0.40	0.08	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Sodium, Total	ND		mg/kg	80	32.	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Thallium, Total	ND		mg/kg	0.80	0.24	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Vanadium, Total	ND		mg/kg	0.40	0.08	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG
Zinc, Total	ND		mg/kg	2.0	0.20	1	05/01/13 12:20	05/02/13 14:44	1,6010C	MG

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): 01-08 Batch: WG605422-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 12:34	1,7471B	TT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Westborough Lab Associated sample(s): 01-08 Batch: WG605181-2 SRM Lot Number: 0518-10-02								
Aluminum, Total	101		-		29-171	-		
Antimony, Total	112		-		4-196	-		
Arsenic, Total	100		-		81-119	-		
Barium, Total	96		-		83-118	-		
Beryllium, Total	98		-		83-117	-		
Cadmium, Total	94		-		82-117	-		
Calcium, Total	87		-		83-117	-		
Chromium, Total	97		-		80-119	-		
Cobalt, Total	100		-		83-117	-		
Copper, Total	101		-		83-117	-		
Iron, Total	94		-		51-150	-		
Lead, Total	93		-		80-120	-		
Magnesium, Total	97		-		74-126	-		
Manganese, Total	97		-		83-117	-		
Nickel, Total	99		-		82-117	-		
Potassium, Total	99		-		74-126	-		
Selenium, Total	109		-		80-120	-		
Silver, Total	101		-		66-134	-		
Sodium, Total	117		-		74-127	-		
Thallium, Total	96		-		79-120	-		
Vanadium, Total	98		-		79-121	-		



Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-08 Batch: WG605181-2 SRM Lot Number: 0518-10-02					
Zinc, Total	91	-	82-119	-	
Total Metals - Westborough Lab Associated sample(s): 01-08 Batch: WG605422-2 SRM Lot Number: 0518-10-02					
Mercury, Total	98	-	67-133	-	



Serial_No:05061317:05

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

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): 01-08 QC Batch ID: WG605181-4 QC Sample: L1307601-01 Client ID: MS Sample												
Aluminum, Total	6600	168	6400	0	Q	-	-		75-125	-		35
Antimony, Total	1.6J	42	37	88		-	-		75-125	-		35
Arsenic, Total	2.5	10.1	12	94		-	-		75-125	-		35
Barium, Total	50.	168	200	89		-	-		75-125	-		35
Beryllium, Total	0.44	4.2	4.3	92		-	-		75-125	-		35
Cadmium, Total	0.40J	4.29	36	84		-	-		75-125	-		35
Calcium, Total	7000	840	3000	0	Q	-	-		75-125	-		35
Chromium, Total	15.	16.8	30	89		-	-		75-125	-		35
Cobalt, Total	8.1	42	44	85		-	-		75-125	-		35
Copper, Total	22.	21	40	86		-	-		75-125	-		35
Iron, Total	13000	84	12000	0	Q	-	-		75-125	-		35
Lead, Total	40.	42.9	75	82		-	-		75-125	-		35
Magnesium, Total	2700	840	2900	24	Q	-	-		75-125	-		35
Manganese, Total	320	42	240	0	Q	-	-		75-125	-		35
Nickel, Total	11.	42	49	90		-	-		75-125	-		35
Potassium, Total	960	840	1900	112		-	-		75-125	-		35
Selenium, Total	ND	10.1	10	99		-	-		75-125	-		35
Silver, Total	ND	25.2	24	95		-	-		75-125	-		35
Sodium, Total	150	840	1100	113		-	-		75-125	-		35
Thallium, Total	1.4	10.1	11	95		-	-		75-125	-		35
Vanadium, Total	22.	42	63	98		-	-		75-125	-		35



Serial_No:05061317:05

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

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): 01-08 QC Batch ID: WG605181-4 QC Sample: L1307601-01 Client ID: MS Sample									
Zinc, Total	48.	42	78	71	Q	-	75-125	-	35
Total Metals - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605422-4 QC Sample: L1307601-01 Client ID: MS Sample									
Mercury, Total	0.09	0.174	0.24	138	Q	-	70-130	-	35



Serial_No:05061317:05

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605181-3 QC Sample: L1307601-01 Client ID: DUP Sample						
Aluminum, Total	6600	6100	mg/kg	8		35
Antimony, Total	1.6J	1.6J	mg/kg	NC		35
Arsenic, Total	2.5	2.2	mg/kg	13		35
Barium, Total	50.	42	mg/kg	17		35
Beryllium, Total	0.44	0.37	mg/kg	17		35
Cadmium, Total	0.40J	0.22J	mg/kg	NC		35
Calcium, Total	7000	3100	mg/kg	77	Q	35
Chromium, Total	15.	17	mg/kg	13		35
Cobalt, Total	8.1	4.8	mg/kg	51	Q	35
Copper, Total	22.	22	mg/kg	0		35
Iron, Total	13000	12000	mg/kg	8		35
Lead, Total	40.	59	mg/kg	38	Q	35
Magnesium, Total	2700	2200	mg/kg	20		35
Manganese, Total	320	210	mg/kg	42	Q	35
Nickel, Total	11.	10	mg/kg	10		35
Potassium, Total	960	880	mg/kg	9		35
Selenium, Total	ND	ND	mg/kg	NC		35
Silver, Total	ND	ND	mg/kg	NC		35
Sodium, Total	150	170	mg/kg	13		35



Serial_No:05061317:05

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1307603
Report Date: 05/06/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605181-3 QC Sample: L1307601-01 Client ID: DUP Sample					
Thallium, Total	1.4	1.2	mg/kg	15	35
Vanadium, Total	22.	21	mg/kg	5	35
Zinc, Total	48.	46	mg/kg	4	35
Total Metals - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605422-3 QC Sample: L1307601-01 Client ID: DUP Sample					
Mercury, Total	0.09	0.07J	mg/kg	NC	35



INORGANICS & MISCELLANEOUS

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-01
Client ID: B11A_0-2
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 09:25
Date Received: 04/29/13
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	37		mg/kg	0.88	0.88	1	-	05/06/13 11:20	107,-	JO
Solids, Total	91.4		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.1	0.25	1	04/30/13 10:00	04/30/13 13:01	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.88	0.20	1	04/30/13 22:00	05/02/13 02:00	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-02
Client ID: B11B_1-3
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 10:05
Date Received: 04/29/13
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	12		mg/kg	0.87	0.87	1	-	05/06/13 11:20	107,-	JO
Solids, Total	92.1		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.0	0.24	1	04/30/13 10:00	04/30/13 13:01	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.87	0.20	1	04/30/13 22:00	05/02/13 02:00	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-03
Client ID: B10_0-2
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 11:35
Date Received: 04/29/13
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	20		mg/kg	0.95	0.95	1	-	05/06/13 11:20	107,-	JO
Solids, Total	84.1		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.2	0.27	1	04/30/13 10:00	04/30/13 13:02	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.95	0.21	1	04/30/13 22:00	05/02/13 02:00	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-04
Client ID: B8_1-3
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 13:00
Date Received: 04/29/13
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	13		mg/kg	0.94	0.94	1	-	05/06/13 11:20	107,-	JO
Solids, Total	85.0		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.1	0.25	1	04/30/13 10:00	04/30/13 13:03	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.94	0.21	1	04/30/13 22:00	05/02/13 02:02	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-05
Client ID: B8_5-7
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 13:05
Date Received: 04/29/13
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	18		mg/kg	1.1	1.1	1	-	05/06/13 11:20	107,-	JO
Solids, Total	72.7		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.4	0.32	1	04/30/13 10:00	04/30/13 13:04	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	1.1	0.25	1	04/30/13 22:00	05/02/13 02:03	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-06
Client ID: B9_0-2
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 14:15
Date Received: 04/29/13
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	23		mg/kg	0.91	0.91	1	-	05/06/13 11:20	107,-	JO
Solids, Total	88.1		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.0	0.25	1	05/01/13 14:00	05/06/13 12:32	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.91	0.20	1	04/30/13 22:00	05/02/13 02:03	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-07
Client ID: DUP01
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 14:11
Date Received: 04/29/13
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	50		mg/kg	0.89	0.89	1	-	05/06/13 11:20	107,-	JO
Solids, Total	89.8		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.1	0.26	1	05/01/13 14:00	05/06/13 12:34	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.89	0.20	1	04/30/13 22:00	05/02/13 02:04	1,7196A	JT



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

SAMPLE RESULTS

Lab ID: L1307603-08
Client ID: B9_5-7
Sample Location: NEW YORK, NY
Matrix: Soil

Date Collected: 04/29/13 14:30
Date Received: 04/29/13
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	25		mg/kg	0.88	0.88	1	-	05/06/13 11:20	107,-	JO
Solids, Total	90.8		%	0.100	NA	1	-	04/30/13 00:01	30,2540G	RD
Cyanide, Total	ND		mg/kg	1.1	0.26	1	05/01/13 14:00	05/06/13 12:35	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.88	0.20	1	04/30/13 22:00	05/02/13 02:05	1,7196A	JT



Project Name: 546 W 44TH ST

Lab Number: L1307603

Project Number: 170229701

Report Date: 05/06/13

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: WG604845-1									
Cyanide, Total	ND	mg/kg	0.95	0.22	1	04/30/13 10:00	04/30/13 12:51	1,9010C/9012A	JO
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG605072-1									
Chromium, Hexavalent	ND	mg/l	0.80	0.18	1	04/30/13 22:00	05/02/13 01:58	1,7196A	JT
General Chemistry - Westborough Lab for sample(s): 06-08 Batch: WG605221-1									
Cyanide, Total	ND	mg/kg	0.85	0.20	1	05/01/13 14:00	05/06/13 12:29	1,9010C/9012A	JO

Serial_No:05061317:05

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG604845-2 WG604845-3								
Cyanide, Total	109		109		80-120	0		35
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG605072-2								
Chromium, Hexavalent	100		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 06-08 Batch: WG605221-2 WG605221-3								
Cyanide, Total	90		100		80-120	11		35



Serial_No:05061317:05

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG604845-4 WG604845-5 QC Sample: L1307580-01 Client ID: MS Sample												
Cyanide, Total	ND	11	11	100		10	100		65-135	10		35
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605072-5 QC Sample: L1307603-08 Client ID: B9_5-7												
Chromium, Hexavalent	ND	1340	1400	100		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 06-08 QC Batch ID: WG605221-4 WG605221-5 QC Sample: L1307603-06 Client ID: B9_0-2												
Cyanide, Total	ND	11	12	100		12	110		65-135	0		35



Serial_No:05061317:05

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG604780-1 QC Sample: L1307597-01 Client ID: DUP Sample						
Solids, Total	90.6	89.4	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG605072-4 QC Sample: L1307603-08 Client ID: B9_5-7						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 04/29/2013 21:48

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-01A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-01B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-01C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-01D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-01E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-01F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-01G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-01H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-01I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-02A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-02B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)

*Values in parentheses indicate holding time in days



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-02C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-02D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-02E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-02F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-02G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-02H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-02I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-03A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-03B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-03C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-03D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-03E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-03F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-03G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)

*Values in parentheses indicate holding time in days



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-03H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-03I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-04A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-04B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-04C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-04D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-04E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-04F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-04G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-04H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-04I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-05A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-05B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-05C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-05D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-05E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-05F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-05G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-05H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-05I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-06A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-06B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)

*Values in parentheses indicate holding time in days



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307603
Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-06C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-06D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-06E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-06F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-06G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-06H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-06I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-07A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-07B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-07C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-07D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-07E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-07F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-07G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)

*Values in parentheses indicate holding time in days



Project Name: 546 W 44TH ST
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Lab Number: L1307603
Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-07H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-07I	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307603-08A	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-08B	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-08C	5 gram Encore Sampler	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(2)
L1307603-08D	Vial MeOH preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-08E	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-08F	Vial Water preserved split	A	N/A	2.6	Y	Absent	NYTCL-8260HLW(14)
L1307603-08G	Plastic 2oz unpreserved for TS	A	N/A	2.6	Y	Absent	TS(7)
L1307603-08H	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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



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Lab Number: L1307603

Report Date: 05/06/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307603-081	Amber 250ml unpreserved	A	N/A	2.6	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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



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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 five times (5x) 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 RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers



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Data Qualifiers

due to obvious interference.

- 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.
- 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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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 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.



C **A** **r** **S**
 Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
 For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

C **D** **r** **S** **Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. *Organic Parameters:* Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). *Microbiology Parameters:* Total Coliform-MF mEndo (SM9222B), Total Coliform – Coliart (SM9223, Enumeration and P/A), E. Coli. – Coliart (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. *Microbiology Parameters:* Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Coliart (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. *Organic Parameters:* PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

M **D** **r** **S** **Certificate/Lab ID: 2009024.**

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. *Organic Parameters:* 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. *Organic Parameters:* 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. *Organic Parameters:* ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

M **D** **r** **E** **r** **Certificate/Lab ID: M-MA086.**

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. *Organic Parameters:* (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. *Microbiology Parameters:* SM9215B; ENZ. SUB. SM9223; Coliart, SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. *Microbiology Parameters:* (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

N **o** **r** **D** **o** **r** **C** **e** **r** **t** **i** **f** **i** **c** **a** **t** **e** **/** **L** **a** **b** **I** **D** **:** 200307. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. *Organic Parameters:* 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. *Organic Parameters:* SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. *Organic Parameters:* SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

N **o** **r** **D** **o** **r** **C** **e** **r** **t** **i** **f** **i** **c** **a** **t** **e** **/** **L** **a** **b** **I** **D** **:** MA935. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. *Organic Parameters:* EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. *Organic Parameters:* SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. *Organic Parameters:* SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

N **o** **r** **D** **o** **r** **C** **e** **r** **t** **i** **f** **i** **c** **a** **t** **e** **/** **L** **a** **b** **I** **D** **:** 11148. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. *Organic Parameters:* EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. *Organic Parameters:* EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. *Organic Parameters:* EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

Norfolk County Department of Environmental and Planning Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. **Organic Parameters:** 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (**Inorganic Parameters:** Chloride EPA 300.0. **Organic Parameters:** 524.2)

Drinking Water Certificate/Lab ID : 68-03671. NELAP Accredited.
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. **Organic Parameters:** EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. **Organic Parameters:** EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. **Organic Parameters:** 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rock Hill Department of Environmental and Planning Certificate/Lab ID: LAO00065. NELAP Accredited via NJ-DEP.
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Tarrant County Department of Environmental and Planning Certificate/Lab ID: T104704476. NELAP Accredited.
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻D, 510C, 5210B, 5220D, 5310C, 5540C. **Organic Parameters:** EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Franklin County Department of Environmental and Planning Laboratory Services Certificate/Lab ID: 460195. NELAP Accredited.
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. **Organic Parameters:** EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. **Organic Parameters:** EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. **Organic Parameters:** EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Drinking Water Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. **Organic Parameters:** EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. **Organic Parameters:** EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

T **o** **o** **r** **NELA** **TNI S** **o** **A**
E **A** **B** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **E** **A** **A** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **E** **A** **C** Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **E** **A** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **E** **A** Total Petroleum Hydrocarbons, Oil & Grease.



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Serial No: 05061317:05

Client Information

Client: Lange

Address: 310 W 31st St 8th floor
New York, NY 10001

Phone: (212) 479-5400

Fax: (212) 479-5444

Email: pdiggins@lange.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: SYL W44th St

Project Location: New York, NY

Project #: 170229701

Project Manager: Elodie Bourson

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: 5/6/13 Time:

Report Information - Data Deliverables

FAX EMAIL

ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: NYSDOL Criteria: Part 375 (Unrestricted)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										SAMPLE HANDLING	TOTAL # BOTTLES		
		Date	Time			VOCs	SVOCs	PCBs	Pest/Herb	Metals/CA	Cr+6	o/s	S-135	Cr+3	Filtration			Done	Not needed
07603-1	B11A-0-2	4/21/13	0925	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
2	B11B-1-3	4/21/13	1005	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
3	B10-0-2	4/21/13	1135	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
4	B8-1-3	4/21/13	1300	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
5	B8-5-7	4/21/13	1305	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
6	B9-0-2	4/21/13	1415	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
7	DUPG1	4/21/13	1411	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6
8	B9-5-7	4/21/13	1430	S	JPD	3	X	X	X	X	X	X	X	X	X	1		3 excore, 2 Amber, 1 Phos	6

Container Type: E A A A A A P

Preservative: A A A A A A

Relinquished By: [Signature] Date/Time: 4/21/13 1537

Received By: [Signature] Date/Time: 4/21/13 1537

Relinquished By: [Signature] Date/Time: 4/21/13 1720

Received By: [Signature] Date/Time: 4/21/13 1720

Relinquished By: [Signature] Date/Time: 4/21/13 2140

Received By: [Signature] Date/Time: 4/21/13 2140

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1307639
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Elodie Bourbon
Phone:	(212) 479-5400
Project Name:	170229701
Project Number:	170229701
Report Date:	05/07/13

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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.

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



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1307639-01	B12_0-2	546 W 44TH ST	04/30/13 08:45
L1307639-02	B12_11-13	546 W 44TH ST	04/30/13 09:00
L1307639-03	B7_0-2	546 W 44TH ST	04/30/13 10:35
L1307639-04	B13_0-2	546 W 44TH ST	04/30/13 11:00

Project Name: 170229701**Lab Number:** L1307639**Project Number:** 170229701**Report Date:** 05/07/13

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 free of charge for 30 days from the date the project is completed. After 30 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.

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

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

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.

Volatile Organics

L1307639-04: The internal standard (IS) response for 1,4-Dichlorobenzene-d4 (48%) and the surrogate recovery for 4-Bromofluorobenzene (144%) were outside the acceptance criteria; however, re-analysis achieved similar results for 1,4-Dichlorobenzene-d4 (33%) and 4-Bromofluorobenzene (170%). The results of both analyses are reported.

Semivolatile Organics

L1307639-03 and -04 have elevated detection limits due to the dilutions required by the sample matrices. The WG605277-2/-3 LCS/LCSD recoveries, associated with L1307639-01 through -04, are below the acceptance criteria for Benzoic Acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Pesticides

The dual column RPD for L1307639-03 is above the acceptance criteria for Dieldrin; however, obvious column interferences are present. Due to these interferences, the lower of the two results is reported and qualified with a "P".

The WG605367-3 LCSD recovery, associated with L1307639-01 through -04, was above the acceptance criteria for Endrin (163%); however, the associated samples were non-detect for this target compound. The results of the original analysis are reported.

Metals

The WG605264-4 MS recoveries for Aluminum (0%), Calcium (224%), Iron (0%), Lead (0%), Manganese (67%), and Zinc (0%), performed on L1307639-01, do not apply because the sample concentration is greater than four times the spike amount added.

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Case Narrative (continued)

The WG605264-4 MS recoveries, performed on L1307639-01, are below the acceptance criteria for Antimony (70%), Potassium (34%), Selenium (46%), Sodium (67%), and Thallium (74%). A post digestion spike was performed with acceptable recoveries of Antimony (89%), Potassium (102%), Selenium (94%), Sodium (113%), and Thallium (85%).

The WG605264-4 MS recoveries, performed on L1307639-01, are below the acceptance criteria for Arsenic (0%), Barium (56%), Cadmium (73%), and Magnesium (67%). A post digestion spike was performed with unacceptable recoveries of Arsenic (75%), Barium (68%), Cadmium (76%), and Magnesium (68%). This has been attributed to sample matrix.

The WG605264-3 Laboratory Duplicate RPDs, performed on L1307639-01, are outside the acceptance criteria for Antimony (50%), Arsenic (71%), Barium (36%), Cadmium (53%), Potassium (38%), Selenium (73%), and Sodium (65%). The elevated RPDs have 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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 05/07/13

ORGANICS

VOLATILES

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/02/13 11:08
 Analyst: BN
 Percent Solids: 87%

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	15	2.9	1
1,1-Dichloroethane	ND		ug/kg	2.2	0.26	1
Chloroform	ND		ug/kg	2.2	0.54	1
Carbon tetrachloride	ND		ug/kg	1.5	0.31	1
1,2-Dichloropropane	ND		ug/kg	5.2	0.34	1
Dibromochloromethane	ND		ug/kg	1.5	0.45	1
1,1,2-Trichloroethane	ND		ug/kg	2.2	0.45	1
Tetrachloroethene	1.0	J	ug/kg	1.5	0.21	1
Chlorobenzene	ND		ug/kg	1.5	0.51	1
Trichlorofluoromethane	ND		ug/kg	7.4	0.18	1
1,2-Dichloroethane	ND		ug/kg	1.5	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	1.5	0.16	1
Bromodichloromethane	ND		ug/kg	1.5	0.34	1
trans-1,3-Dichloropropene	ND		ug/kg	1.5	0.18	1
cis-1,3-Dichloropropene	ND		ug/kg	1.5	0.19	1
1,1-Dichloropropene	ND		ug/kg	7.4	0.67	1
Bromoform	ND		ug/kg	5.9	0.61	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.5	0.25	1
Benzene	ND		ug/kg	1.5	0.17	1
Toluene	ND		ug/kg	2.2	0.16	1
Ethylbenzene	ND		ug/kg	1.5	0.22	1
Chloromethane	ND		ug/kg	7.4	1.2	1
Bromomethane	1.6	J	ug/kg	2.9	0.50	1
Vinyl chloride	ND		ug/kg	2.9	0.21	1
Chloroethane	ND		ug/kg	2.9	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.5	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	2.2	0.31	1
Trichloroethene	ND		ug/kg	1.5	0.22	1
1,2-Dichlorobenzene	ND		ug/kg	7.4	0.27	1
1,3-Dichlorobenzene	ND		ug/kg	7.4	0.27	1
1,4-Dichlorobenzene	ND		ug/kg	7.4	0.36	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.9	0.15	1
p/m-Xylene	ND		ug/kg	2.9	0.48	1
o-Xylene	ND		ug/kg	2.9	0.40	1
cis-1,2-Dichloroethene	ND		ug/kg	1.5	0.22	1
Dibromomethane	ND		ug/kg	15	0.24	1
Styrene	ND		ug/kg	2.9	0.46	1
Dichlorodifluoromethane	ND		ug/kg	15	0.32	1
Acetone	ND		ug/kg	15	4.6	1
Carbon disulfide	ND		ug/kg	15	2.9	1
2-Butanone	ND		ug/kg	15	0.52	1
Vinyl acetate	ND		ug/kg	15	0.71	1
4-Methyl-2-pentanone	ND		ug/kg	15	0.36	1
1,2,3-Trichloropropane	ND		ug/kg	15	0.33	1
2-Hexanone	ND		ug/kg	15	0.28	1
Bromochloromethane	ND		ug/kg	7.4	0.29	1
2,2-Dichloropropane	ND		ug/kg	7.4	0.33	1
1,2-Dibromoethane	ND		ug/kg	5.9	0.26	1
1,3-Dichloropropane	ND		ug/kg	7.4	0.25	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.5	0.47	1
Bromobenzene	ND		ug/kg	7.4	0.31	1
n-Butylbenzene	ND		ug/kg	1.5	0.29	1
sec-Butylbenzene	ND		ug/kg	1.5	0.30	1
tert-Butylbenzene	ND		ug/kg	7.4	0.83	1
o-Chlorotoluene	ND		ug/kg	7.4	0.24	1
p-Chlorotoluene	ND		ug/kg	7.4	0.23	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	7.4	1.2	1
Hexachlorobutadiene	ND		ug/kg	7.4	0.62	1
Isopropylbenzene	ND		ug/kg	1.5	0.25	1
p-Isopropyltoluene	ND		ug/kg	1.5	0.28	1
Acrylonitrile	ND		ug/kg	15	0.35	1
n-Propylbenzene	ND		ug/kg	1.5	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	7.4	0.25	1
1,2,4-Trichlorobenzene	ND		ug/kg	7.4	1.2	1
1,3,5-Trimethylbenzene	ND		ug/kg	7.4	0.21	1
1,2,4-Trimethylbenzene	ND		ug/kg	7.4	0.84	1
1,4-Dioxane	ND		ug/kg	150	26.	1
1,4-Diethylbenzene	ND		ug/kg	5.9	0.24	1
4-Ethyltoluene	ND		ug/kg	5.9	0.17	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.9	0.19	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	7.4	0.39	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	7.4	0.66	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	97		70-130

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/02/13 11:42
 Analyst: BN
 Percent Solids: 89%

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	13	2.6	1
1,1-Dichloroethane	ND		ug/kg	2.0	0.23	1
Chloroform	1.0	J	ug/kg	2.0	0.48	1
Carbon tetrachloride	ND		ug/kg	1.3	0.27	1
1,2-Dichloropropane	ND		ug/kg	4.6	0.30	1
Dibromochloromethane	ND		ug/kg	1.3	0.40	1
1,1,2-Trichloroethane	ND		ug/kg	2.0	0.40	1
Tetrachloroethene	ND		ug/kg	1.3	0.18	1
Chlorobenzene	ND		ug/kg	1.3	0.45	1
Trichlorofluoromethane	ND		ug/kg	6.5	0.16	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.19	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.14	1
Bromodichloromethane	ND		ug/kg	1.3	0.30	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	0.17	1
1,1-Dichloropropene	ND		ug/kg	6.5	0.60	1
Bromoform	ND		ug/kg	5.2	0.54	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	0.22	1
Benzene	ND		ug/kg	1.3	0.15	1
Toluene	ND		ug/kg	2.0	0.15	1
Ethylbenzene	ND		ug/kg	1.3	0.19	1
Chloromethane	ND		ug/kg	6.5	1.0	1
Bromomethane	1.1	J	ug/kg	2.6	0.44	1
Vinyl chloride	ND		ug/kg	2.6	0.18	1
Chloroethane	ND		ug/kg	2.6	0.41	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	6.5	0.24	1
1,3-Dichlorobenzene	ND		ug/kg	6.5	0.24	1
1,4-Dichlorobenzene	ND		ug/kg	6.5	0.32	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.6	0.14	1
p/m-Xylene	ND		ug/kg	2.6	0.42	1
o-Xylene	ND		ug/kg	2.6	0.35	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.20	1
Dibromomethane	ND		ug/kg	13	0.21	1
Styrene	ND		ug/kg	2.6	0.40	1
Dichlorodifluoromethane	ND		ug/kg	13	0.28	1
Acetone	ND		ug/kg	13	4.0	1
Carbon disulfide	ND		ug/kg	13	2.6	1
2-Butanone	ND		ug/kg	13	0.46	1
Vinyl acetate	ND		ug/kg	13	0.63	1
4-Methyl-2-pentanone	ND		ug/kg	13	0.32	1
1,2,3-Trichloropropane	ND		ug/kg	13	0.29	1
2-Hexanone	ND		ug/kg	13	0.25	1
Bromochloromethane	ND		ug/kg	6.5	0.26	1
2,2-Dichloropropane	ND		ug/kg	6.5	0.30	1
1,2-Dibromoethane	ND		ug/kg	5.2	0.23	1
1,3-Dichloropropane	ND		ug/kg	6.5	0.23	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	0.42	1
Bromobenzene	ND		ug/kg	6.5	0.27	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	6.5	0.73	1
o-Chlorotoluene	ND		ug/kg	6.5	0.21	1
p-Chlorotoluene	ND		ug/kg	6.5	0.20	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.5	1.0	1
Hexachlorobutadiene	ND		ug/kg	6.5	0.55	1
Isopropylbenzene	ND		ug/kg	1.3	0.22	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.25	1
Acrylonitrile	ND		ug/kg	13	0.31	1
n-Propylbenzene	ND		ug/kg	1.3	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.5	0.22	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.5	1.0	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.5	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.5	0.75	1
1,4-Dioxane	ND		ug/kg	130	23.	1
1,4-Diethylbenzene	ND		ug/kg	5.2	0.21	1
4-Ethyltoluene	ND		ug/kg	5.2	0.15	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.2	0.17	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	6.5	0.35	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.5	0.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	101		70-130

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/02/13 12:16
 Analyst: BN
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	11	2.2	1
1,1-Dichloroethane	ND		ug/kg	1.6	0.20	1
Chloroform	ND		ug/kg	1.6	0.41	1
Carbon tetrachloride	ND		ug/kg	1.1	0.23	1
1,2-Dichloropropane	ND		ug/kg	3.8	0.25	1
Dibromochloromethane	ND		ug/kg	1.1	0.34	1
1,1,2-Trichloroethane	ND		ug/kg	1.6	0.33	1
Tetrachloroethene	ND		ug/kg	1.1	0.15	1
Chlorobenzene	ND		ug/kg	1.1	0.38	1
Trichlorofluoromethane	ND		ug/kg	5.5	0.13	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	1.1	0.12	1
Bromodichloromethane	ND		ug/kg	1.1	0.25	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.13	1
cis-1,3-Dichloropropene	ND		ug/kg	1.1	0.14	1
1,1-Dichloropropene	ND		ug/kg	5.5	0.50	1
Bromoform	ND		ug/kg	4.4	0.46	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.1	0.19	1
Benzene	ND		ug/kg	1.1	0.13	1
Toluene	0.47	J	ug/kg	1.6	0.12	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	5.5	0.86	1
Bromomethane	0.83	J	ug/kg	2.2	0.37	1
Vinyl chloride	ND		ug/kg	2.2	0.16	1
Chloroethane	ND		ug/kg	2.2	0.35	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.23	1
Trichloroethene	ND		ug/kg	1.1	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	5.5	0.20	1
1,3-Dichlorobenzene	ND		ug/kg	5.5	0.20	1
1,4-Dichlorobenzene	ND		ug/kg	5.5	0.26	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
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	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.16	1
Dibromomethane	ND		ug/kg	11	0.18	1
Styrene	ND		ug/kg	2.2	0.34	1
Dichlorodifluoromethane	ND		ug/kg	11	0.24	1
Acetone	3.4	J	ug/kg	11	3.4	1
Carbon disulfide	ND		ug/kg	11	2.2	1
2-Butanone	ND		ug/kg	11	0.39	1
Vinyl acetate	ND		ug/kg	11	0.53	1
4-Methyl-2-pentanone	ND		ug/kg	11	0.27	1
1,2,3-Trichloropropane	ND		ug/kg	11	0.25	1
2-Hexanone	ND		ug/kg	11	0.21	1
Bromochloromethane	ND		ug/kg	5.5	0.22	1
2,2-Dichloropropane	ND		ug/kg	5.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	4.4	0.20	1
1,3-Dichloropropane	ND		ug/kg	5.5	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.1	0.35	1
Bromobenzene	ND		ug/kg	5.5	0.23	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	5.5	0.62	1
o-Chlorotoluene	ND		ug/kg	5.5	0.18	1
p-Chlorotoluene	ND		ug/kg	5.5	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.5	0.87	1
Hexachlorobutadiene	ND		ug/kg	5.5	0.46	1
Isopropylbenzene	ND		ug/kg	1.1	0.18	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.21	1
Acrylonitrile	ND		ug/kg	11	0.26	1
n-Propylbenzene	ND		ug/kg	1.1	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	5.5	0.18	1
1,2,4-Trichlorobenzene	ND		ug/kg	5.5	0.87	1
1,3,5-Trimethylbenzene	ND		ug/kg	5.5	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	5.5	0.63	1
1,4-Dioxane	ND		ug/kg	110	19.	1
1,4-Diethylbenzene	ND		ug/kg	4.4	0.18	1
4-Ethyltoluene	ND		ug/kg	4.4	0.13	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.4	0.14	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	5.5	0.29	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.5	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	96		70-130

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/02/13 12:51
 Analyst: BN
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	13	2.7	1
1,1-Dichloroethane	ND		ug/kg	2.0	0.24	1
Chloroform	ND		ug/kg	2.0	0.50	1
Carbon tetrachloride	ND		ug/kg	1.3	0.28	1
1,2-Dichloropropane	ND		ug/kg	4.7	0.31	1
Dibromochloromethane	ND		ug/kg	1.3	0.41	1
1,1,2-Trichloroethane	ND		ug/kg	2.0	0.41	1
Tetrachloroethene	ND		ug/kg	1.3	0.19	1
Chlorobenzene	ND		ug/kg	1.3	0.47	1
Trichlorofluoromethane	ND		ug/kg	6.7	0.16	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.20	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.15	1
Bromodichloromethane	ND		ug/kg	1.3	0.31	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	0.17	1
1,1-Dichloropropene	ND		ug/kg	6.7	0.61	1
Bromoform	ND		ug/kg	5.4	0.56	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	0.23	1
Benzene	ND		ug/kg	1.3	0.16	1
Toluene	0.33	J	ug/kg	2.0	0.15	1
Ethylbenzene	ND		ug/kg	1.3	0.20	1
Chloromethane	ND		ug/kg	6.7	1.0	1
Bromomethane	ND		ug/kg	2.7	0.45	1
Vinyl chloride	ND		ug/kg	2.7	0.19	1
Chloroethane	ND		ug/kg	2.7	0.42	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.28	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	6.7	0.25	1
1,3-Dichlorobenzene	ND		ug/kg	6.7	0.25	1
1,4-Dichlorobenzene	ND		ug/kg	6.7	0.32	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.7	0.14	1
p/m-Xylene	ND		ug/kg	2.7	0.43	1
o-Xylene	ND		ug/kg	2.7	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.20	1
Dibromomethane	ND		ug/kg	13	0.22	1
Styrene	ND		ug/kg	2.7	0.42	1
Dichlorodifluoromethane	ND		ug/kg	13	0.29	1
Acetone	ND		ug/kg	13	4.2	1
Carbon disulfide	ND		ug/kg	13	2.7	1
2-Butanone	ND		ug/kg	13	0.48	1
Vinyl acetate	ND		ug/kg	13	0.64	1
4-Methyl-2-pentanone	ND		ug/kg	13	0.33	1
1,2,3-Trichloropropane	ND		ug/kg	13	0.30	1
2-Hexanone	ND		ug/kg	13	0.25	1
Bromochloromethane	ND		ug/kg	6.7	0.26	1
2,2-Dichloropropane	ND		ug/kg	6.7	0.30	1
1,2-Dibromoethane	ND		ug/kg	5.4	0.24	1
1,3-Dichloropropane	ND		ug/kg	6.7	0.23	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	0.43	1
Bromobenzene	ND		ug/kg	6.7	0.28	1
n-Butylbenzene	ND		ug/kg	1.3	0.26	1
sec-Butylbenzene	ND		ug/kg	1.3	0.28	1
tert-Butylbenzene	ND		ug/kg	6.7	0.75	1
o-Chlorotoluene	ND		ug/kg	6.7	0.21	1
p-Chlorotoluene	ND		ug/kg	6.7	0.21	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.7	1.1	1
Hexachlorobutadiene	ND		ug/kg	6.7	0.57	1
Isopropylbenzene	ND		ug/kg	1.3	0.22	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.26	1
Acrylonitrile	ND		ug/kg	13	0.32	1
n-Propylbenzene	ND		ug/kg	1.3	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.7	0.22	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.7	1.1	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.7	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.7	0.77	1
1,4-Dioxane	ND		ug/kg	130	23.	1
1,4-Diethylbenzene	ND		ug/kg	5.4	0.21	1
4-Ethyltoluene	ND		ug/kg	5.4	0.16	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.4	0.18	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Ethyl ether	ND		ug/kg	6.7	0.36	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.7	0.60	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	144	Q	70-130
Dibromofluoromethane	100		70-130

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 R
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 05/02/13 19:13
 Analyst: BN
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	13	2.7	1
1,1-Dichloroethane	ND		ug/kg	2.0	0.24	1
Chloroform	ND		ug/kg	2.0	0.50	1
Carbon tetrachloride	ND		ug/kg	1.3	0.28	1
1,2-Dichloropropane	ND		ug/kg	4.7	0.31	1
Dibromochloromethane	ND		ug/kg	1.3	0.41	1
1,1,2-Trichloroethane	ND		ug/kg	2.0	0.41	1
Tetrachloroethene	ND		ug/kg	1.3	0.19	1
Chlorobenzene	ND		ug/kg	1.3	0.47	1
Trichlorofluoromethane	ND		ug/kg	6.7	0.16	1
1,2-Dichloroethane	ND		ug/kg	1.3	0.20	1
1,1,1-Trichloroethane	ND		ug/kg	1.3	0.15	1
Bromodichloromethane	ND		ug/kg	1.3	0.31	1
trans-1,3-Dichloropropene	ND		ug/kg	1.3	0.16	1
cis-1,3-Dichloropropene	ND		ug/kg	1.3	0.17	1
1,1-Dichloropropene	ND		ug/kg	6.7	0.61	1
Bromoform	ND		ug/kg	5.4	0.56	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.3	0.23	1
Benzene	ND		ug/kg	1.3	0.16	1
Toluene	0.54	J	ug/kg	2.0	0.15	1
Ethylbenzene	ND		ug/kg	1.3	0.20	1
Chloromethane	ND		ug/kg	6.7	1.0	1
Bromomethane	ND		ug/kg	2.7	0.45	1
Vinyl chloride	ND		ug/kg	2.7	0.19	1
Chloroethane	ND		ug/kg	2.7	0.42	1
1,1-Dichloroethene	ND		ug/kg	1.3	0.28	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	6.7	0.25	1
1,3-Dichlorobenzene	ND		ug/kg	6.7	0.25	1
1,4-Dichlorobenzene	ND		ug/kg	6.7	0.32	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 R
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methyl tert butyl ether	ND		ug/kg	2.7	0.14	1
p/m-Xylene	ND		ug/kg	2.7	0.43	1
o-Xylene	ND		ug/kg	2.7	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.20	1
Dibromomethane	ND		ug/kg	13	0.22	1
Styrene	ND		ug/kg	2.7	0.42	1
Dichlorodifluoromethane	ND		ug/kg	13	0.29	1
Acetone	5.9	J	ug/kg	13	4.2	1
Carbon disulfide	ND		ug/kg	13	2.7	1
2-Butanone	ND		ug/kg	13	0.48	1
Vinyl acetate	ND		ug/kg	13	0.64	1
4-Methyl-2-pentanone	ND		ug/kg	13	0.33	1
1,2,3-Trichloropropane	ND		ug/kg	13	0.30	1
2-Hexanone	ND		ug/kg	13	0.25	1
Bromochloromethane	ND		ug/kg	6.7	0.26	1
2,2-Dichloropropane	ND		ug/kg	6.7	0.30	1
1,2-Dibromoethane	ND		ug/kg	5.4	0.24	1
1,3-Dichloropropane	ND		ug/kg	6.7	0.23	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.3	0.43	1
Bromobenzene	ND		ug/kg	6.7	0.28	1
n-Butylbenzene	ND		ug/kg	1.3	0.26	1
sec-Butylbenzene	ND		ug/kg	1.3	0.28	1
tert-Butylbenzene	ND		ug/kg	6.7	0.75	1
o-Chlorotoluene	ND		ug/kg	6.7	0.21	1
p-Chlorotoluene	ND		ug/kg	6.7	0.21	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	6.7	1.1	1
Hexachlorobutadiene	ND		ug/kg	6.7	0.57	1
Isopropylbenzene	ND		ug/kg	1.3	0.22	1
p-Isopropyltoluene	ND		ug/kg	1.3	0.26	1
Acrylonitrile	ND		ug/kg	13	0.32	1
n-Propylbenzene	ND		ug/kg	1.3	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	6.7	0.22	1
1,2,4-Trichlorobenzene	ND		ug/kg	6.7	1.1	1
1,3,5-Trimethylbenzene	ND		ug/kg	6.7	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	6.7	0.77	1
1,4-Dioxane	ND		ug/kg	130	23.	1
1,4-Diethylbenzene	ND		ug/kg	5.4	0.21	1
4-Ethyltoluene	ND		ug/kg	5.4	0.16	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	5.4	0.18	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 R

Date Collected: 04/30/13 11:00

Client ID: B13_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by 8260/5035 - Westborough Lab

Ethyl ether	ND		ug/kg	6.7	0.36	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.7	0.60	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	119		70-130
4-Bromofluorobenzene	170	Q	70-130
Dibromofluoromethane	99		70-130

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
 Analytical Date: 05/02/13 10:33
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG605580-3					
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
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.31
2-Chloroethylvinyl ether	ND		ug/kg	20	0.62
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.12
1,2-Dichloroethane	ND		ug/kg	1.0	0.15
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.23
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.13
1,1-Dichloropropene	ND		ug/kg	5.0	0.46
Bromoform	ND		ug/kg	4.0	0.41
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.17
Benzene	ND		ug/kg	1.0	0.12
Toluene	0.21	J	ug/kg	1.5	0.11
Ethylbenzene	ND		ug/kg	1.0	0.15
Chloromethane	ND		ug/kg	5.0	0.78
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.14
Chloroethane	ND		ug/kg	2.0	0.32
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

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 05/02/13 10:33
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG605580-3					
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
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.31
Dichlorodifluoromethane	ND		ug/kg	10	0.22
Acetone	ND		ug/kg	10	3.1
Carbon disulfide	ND		ug/kg	10	2.0
2-Butanone	ND		ug/kg	10	0.36
Vinyl acetate	ND		ug/kg	10	0.48
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.22
2-Hexanone	ND		ug/kg	10	0.19
Bromochloromethane	ND		ug/kg	5.0	0.20
2,2-Dichloropropane	ND		ug/kg	5.0	0.22
1,2-Dibromoethane	ND		ug/kg	4.0	0.18
1,3-Dichloropropane	ND		ug/kg	5.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
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
o-Chlorotoluene	ND		ug/kg	5.0	0.16
p-Chlorotoluene	ND		ug/kg	5.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.79
Hexachlorobutadiene	ND		ug/kg	5.0	0.42
Isopropylbenzene	ND		ug/kg	1.0	0.17
p-Isopropyltoluene	ND		ug/kg	1.0	0.19
Naphthalene	ND		ug/kg	5.0	0.77

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
 Analytical Date: 05/02/13 10:33
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG605580-3					
Acrylonitrile	ND		ug/kg	10	0.24
Isopropyl Ether	ND		ug/kg	4.0	0.14
tert-Butyl Alcohol	ND		ug/kg	60	0.91
n-Propylbenzene	ND		ug/kg	1.0	0.12
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.17
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.79
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.57
Methyl Acetate	ND		ug/kg	20	0.76
Ethyl Acetate	ND		ug/kg	20	0.82
Acrolein	ND		ug/kg	25	9.2
Cyclohexane	ND		ug/kg	20	1.1
1,4-Dioxane	ND		ug/kg	100	17.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	20	0.27
1,4-Diethylbenzene	ND		ug/kg	4.0	0.16
4-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Tetrahydrofuran	ND		ug/kg	20	0.38
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.45
Methyl cyclohexane	ND		ug/kg	4.0	1.3
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	0.42
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	0.58

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
 Analytical Date: 05/02/13 10:33
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01-04 Batch: WG605580-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG605580-1 WG605580-2								
Methylene chloride	100		104		70-130	4		30
1,1-Dichloroethane	105		111		70-130	6		30
Chloroform	100		105		70-130	5		30
Carbon tetrachloride	102		107		70-130	5		30
1,2-Dichloropropane	106		112		70-130	6		30
Dibromochloromethane	100		101		70-130	1		30
2-Chloroethylvinyl ether	114		120			5		30
1,1,2-Trichloroethane	105		108		70-130	3		30
Tetrachloroethene	100		107		70-130	7		30
Chlorobenzene	104		108		70-130	4		30
Trichlorofluoromethane	104		110		70-139	6		30
1,2-Dichloroethane	101		105		70-130	4		30
1,1,1-Trichloroethane	102		108		70-130	6		30
Bromodichloromethane	99		104		70-130	5		30
trans-1,3-Dichloropropene	90		92		70-130	2		30
cis-1,3-Dichloropropene	103		107		70-130	4		30
1,1-Dichloropropene	107		114		70-130	6		30
Bromoform	98		100		70-130	2		30
1,1,2,2-Tetrachloroethane	108		110		70-130	2		30
Benzene	105		111		70-130	6		30
Toluene	106		112		70-130	6		30



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG605580-1 WG605580-2								
Ethylbenzene	109		114		70-130	4		30
Chloromethane	103		109		52-130	6		30
Bromomethane	98		105		57-147	7		30
Vinyl chloride	112		120		67-130	7		30
Chloroethane	107		117		50-151	9		30
1,1-Dichloroethene	105		112		65-135	6		30
trans-1,2-Dichloroethene	103		108		70-130	5		30
Trichloroethene	102		109		70-130	7		30
1,2-Dichlorobenzene	105		110		70-130	5		30
1,3-Dichlorobenzene	106		110		70-130	4		30
1,4-Dichlorobenzene	105		109		70-130	4		30
Methyl tert butyl ether	106		109		66-130	3		30
p/m-Xylene	107		113		70-130	5		30
o-Xylene	109		114		70-130	4		30
cis-1,2-Dichloroethene	102		106		70-130	4		30
Dibromomethane	98		104		70-130	6		30
Styrene	108		113		70-130	5		30
Dichlorodifluoromethane	100		108		30-146	8		30
Acetone	132		162	Q	54-140	20		30
Carbon disulfide	103		110		59-130	7		30
2-Butanone	124		148	Q	70-130	18		30



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG605580-1 WG605580-2								
Vinyl acetate	97		99		70-130	2		30
4-Methyl-2-pentanone	101		106		70-130	5		30
1,2,3-Trichloropropane	108		110		68-130	2		30
2-Hexanone	117		134	Q	70-130	14		30
Bromochloromethane	96		102		70-130	6		30
2,2-Dichloropropane	93		99		70-130	6		30
1,2-Dibromoethane	104		106		70-130	2		30
1,3-Dichloropropane	107		110		69-130	3		30
1,1,1,2-Tetrachloroethane	100		104		70-130	4		30
Bromobenzene	104		110		70-130	6		30
n-Butylbenzene	115		122		70-130	6		30
sec-Butylbenzene	115		121		70-130	5		30
tert-Butylbenzene	113		118		70-130	4		30
o-Chlorotoluene	110		116		70-130	5		30
p-Chlorotoluene	111		116		70-130	4		30
1,2-Dibromo-3-chloropropane	104		105		68-130	1		30
Hexachlorobutadiene	104		111		67-130	7		30
Isopropylbenzene	108		114		70-130	5		30
p-Isopropyltoluene	113		119		70-130	5		30
Naphthalene	103		105		70-130	2		30
Acrylonitrile	105		109		70-130	4		30



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG605580-1 WG605580-2								
Isopropyl Ether	114		119		66-130	4		30
tert-Butyl Alcohol	106		110		70-130	4		30
n-Propylbenzene	110		116		70-130	5		30
1,2,3-Trichlorobenzene	107		112		70-130	5		30
1,2,4-Trichlorobenzene	109		112		70-130	3		30
1,3,5-Trimethylbenzene	112		117		70-130	4		30
1,2,4-Trimethylbenzene	112		117		70-130	4		30
Methyl Acetate	102		105		51-146	3		30
Ethyl Acetate	108		110		70-130	2		30
Acrolein	107		109		70-130	2		30
Cyclohexane	117		126		59-142	7		30
1,4-Dioxane	106		105		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		114		50-139	7		30
1,4-Diethylbenzene	111		118		70-130	6		30
4-Ethyltoluene	114		120		70-130	5		30
1,2,4,5-Tetramethylbenzene	114		119		70-130	4		30
Tetrahydrofuran	106		109		66-130	3		30
Ethyl ether	104		107		67-130	3		30
trans-1,4-Dichloro-2-butene	100		102		70-130	2		30
Methyl cyclohexane	112		121		70-130	8		30
Ethyl-Tert-Butyl-Ether	112		116		70-130	4		30



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01-04 Batch: WG605580-1 WG605580-2								
Tertiary-Amyl Methyl Ether	109		114		70-130	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		100		70-130
Toluene-d8	104		104		70-130
4-Bromofluorobenzene	108		109		70-130
Dibromofluoromethane	98		99		70-130



SEMIVOLATILES

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 18:17
 Analyst: RC
 Percent Solids: 87%

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	45	J	ug/kg	150	39.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	62.	1
Hexachlorobenzene	ND		ug/kg	110	35.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	53.	1
2-Chloronaphthalene	ND		ug/kg	190	61.	1
1,2-Dichlorobenzene	ND		ug/kg	190	62.	1
1,3-Dichlorobenzene	ND		ug/kg	190	59.	1
1,4-Dichlorobenzene	ND		ug/kg	190	57.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	50.	1
2,4-Dinitrotoluene	ND		ug/kg	190	40.	1
2,6-Dinitrotoluene	ND		ug/kg	190	48.	1
Fluoranthene	970		ug/kg	110	34.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	57.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	43.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	66.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	57.	1
Hexachlorobutadiene	ND		ug/kg	190	53.	1
Hexachlorocyclopentadiene	ND		ug/kg	540	120	1
Hexachloroethane	ND		ug/kg	150	34.	1
Isophorone	ND		ug/kg	170	50.	1
Naphthalene	ND		ug/kg	190	62.	1
Nitrobenzene	ND		ug/kg	170	45.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	39.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	56.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	190	49.	1
Butyl benzyl phthalate	ND		ug/kg	190	37.	1
Di-n-butylphthalate	ND		ug/kg	190	36.	1
Di-n-octylphthalate	ND		ug/kg	190	46.	1
Diethyl phthalate	ND		ug/kg	190	40.	1
Dimethyl phthalate	ND		ug/kg	190	48.	1
Benzo(a)anthracene	400		ug/kg	110	37.	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	390		ug/kg	150	46.	1
Benzo(b)fluoranthene	500		ug/kg	110	38.	1
Benzo(k)fluoranthene	220		ug/kg	110	36.	1
Chrysene	430		ug/kg	110	37.	1
Acenaphthylene	47	J	ug/kg	150	35.	1
Anthracene	100	J	ug/kg	110	31.	1
Benzo(ghi)perylene	260		ug/kg	150	39.	1
Fluorene	ND		ug/kg	190	54.	1
Phenanthrene	650		ug/kg	110	37.	1
Dibenzo(a,h)anthracene	65	J	ug/kg	110	36.	1
Indeno(1,2,3-cd)Pyrene	280		ug/kg	150	42.	1
Pyrene	880		ug/kg	110	36.	1
Biphenyl	ND		ug/kg	430	62.	1
4-Chloroaniline	ND		ug/kg	190	50.	1
2-Nitroaniline	ND		ug/kg	190	53.	1
3-Nitroaniline	ND		ug/kg	190	52.	1
4-Nitroaniline	ND		ug/kg	190	51.	1
Dibenzofuran	ND		ug/kg	190	63.	1
2-Methylnaphthalene	ND		ug/kg	220	60.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	58.	1
Acetophenone	ND		ug/kg	190	58.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	35.	1
P-Chloro-M-Cresol	ND		ug/kg	190	54.	1
2-Chlorophenol	ND		ug/kg	190	57.	1
2,4-Dichlorophenol	ND		ug/kg	170	61.	1
2,4-Dimethylphenol	ND		ug/kg	190	56.	1
2-Nitrophenol	ND		ug/kg	400	58.	1
4-Nitrophenol	ND		ug/kg	260	61.	1
2,4-Dinitrophenol	ND		ug/kg	900	260	1
4,6-Dinitro-o-cresol	ND		ug/kg	490	69.	1
Pentachlorophenol	ND		ug/kg	150	40.	1
Phenol	ND		ug/kg	190	56.	1
2-Methylphenol	ND		ug/kg	190	60.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	62.	1
2,4,5-Trichlorophenol	ND		ug/kg	190	61.	1
Benzoic Acid	ND		ug/kg	610	190	1
Benzyl Alcohol	ND		ug/kg	190	58.	1
Carbazole	63	J	ug/kg	190	40.	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01

Date Collected: 04/30/13 08:45

Client ID: B12_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	73		10-120
Nitrobenzene-d5	68		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	97		0-136
4-Terphenyl-d14	55		18-120

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 18:44
 Analyst: RC
 Percent Solids: 89%

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	38.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	60.	1
Hexachlorobenzene	ND		ug/kg	110	34.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	52.	1
2-Chloronaphthalene	ND		ug/kg	180	60.	1
1,2-Dichlorobenzene	ND		ug/kg	180	60.	1
1,3-Dichlorobenzene	ND		ug/kg	180	58.	1
1,4-Dichlorobenzene	ND		ug/kg	180	56.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	49.	1
2,4-Dinitrotoluene	ND		ug/kg	180	40.	1
2,6-Dinitrotoluene	ND		ug/kg	180	47.	1
Fluoranthene	ND		ug/kg	110	34.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	56.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	42.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	65.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	56.	1
Hexachlorobutadiene	ND		ug/kg	180	52.	1
Hexachlorocyclopentadiene	ND		ug/kg	530	120	1
Hexachloroethane	ND		ug/kg	150	33.	1
Isophorone	ND		ug/kg	160	49.	1
Naphthalene	ND		ug/kg	180	61.	1
Nitrobenzene	ND		ug/kg	160	44.	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	150	39.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	55.	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	180	48.	1
Butyl benzyl phthalate	ND		ug/kg	180	36.	1
Di-n-butylphthalate	ND		ug/kg	180	35.	1
Di-n-octylphthalate	ND		ug/kg	180	45.	1
Diethyl phthalate	ND		ug/kg	180	39.	1
Dimethyl phthalate	ND		ug/kg	180	47.	1
Benzo(a)anthracene	ND		ug/kg	110	36.	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
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	30.	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
Biphenyl	ND		ug/kg	420	61.	1
4-Chloroaniline	ND		ug/kg	180	48.	1
2-Nitroaniline	ND		ug/kg	180	52.	1
3-Nitroaniline	ND		ug/kg	180	51.	1
4-Nitroaniline	ND		ug/kg	180	50.	1
Dibenzofuran	ND		ug/kg	180	61.	1
2-Methylnaphthalene	ND		ug/kg	220	59.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	57.	1
Acetophenone	ND		ug/kg	180	57.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	35.	1
P-Chloro-M-Cresol	ND		ug/kg	180	53.	1
2-Chlorophenol	ND		ug/kg	180	56.	1
2,4-Dichlorophenol	ND		ug/kg	160	60.	1
2,4-Dimethylphenol	ND		ug/kg	180	55.	1
2-Nitrophenol	ND		ug/kg	400	57.	1
4-Nitrophenol	ND		ug/kg	260	60.	1
2,4-Dinitrophenol	ND		ug/kg	880	250	1
4,6-Dinitro-o-cresol	ND		ug/kg	480	67.	1
Pentachlorophenol	ND		ug/kg	150	39.	1
Phenol	ND		ug/kg	180	54.	1
2-Methylphenol	ND		ug/kg	180	59.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	60.	1
2,4,5-Trichlorophenol	ND		ug/kg	180	60.	1
Benzoic Acid	ND		ug/kg	600	190	1
Benzyl Alcohol	ND		ug/kg	180	57.	1
Carbazole	ND		ug/kg	180	40.	1

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	99		25-120
Phenol-d6	82		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	111		0-136
4-Terphenyl-d14	70		18-120

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03 D
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 19:11
 Analyst: RC
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	87	J	ug/kg	290	74.	2
1,2,4-Trichlorobenzene	ND		ug/kg	360	120	2
Hexachlorobenzene	ND		ug/kg	220	67.	2
Bis(2-chloroethyl)ether	ND		ug/kg	320	100	2
2-Chloronaphthalene	ND		ug/kg	360	120	2
1,2-Dichlorobenzene	ND		ug/kg	360	120	2
1,3-Dichlorobenzene	ND		ug/kg	360	110	2
1,4-Dichlorobenzene	ND		ug/kg	360	110	2
3,3'-Dichlorobenzidine	ND		ug/kg	360	96.	2
2,4-Dinitrotoluene	ND		ug/kg	360	78.	2
2,6-Dinitrotoluene	ND		ug/kg	360	93.	2
Fluoranthene	1600		ug/kg	220	66.	2
4-Chlorophenyl phenyl ether	ND		ug/kg	360	110	2
4-Bromophenyl phenyl ether	ND		ug/kg	360	83.	2
Bis(2-chloroisopropyl)ether	ND		ug/kg	430	130	2
Bis(2-chloroethoxy)methane	ND		ug/kg	390	110	2
Hexachlorobutadiene	ND		ug/kg	360	100	2
Hexachlorocyclopentadiene	ND		ug/kg	1000	230	2
Hexachloroethane	ND		ug/kg	290	66.	2
Isophorone	ND		ug/kg	320	96.	2
Naphthalene	ND		ug/kg	360	120	2
Nitrobenzene	ND		ug/kg	320	86.	2
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	290	76.	2
n-Nitrosodi-n-propylamine	ND		ug/kg	360	110	2
Bis(2-Ethylhexyl)phthalate	150	J	ug/kg	360	95.	2
Butyl benzyl phthalate	ND		ug/kg	360	71.	2
Di-n-butylphthalate	ND		ug/kg	360	70.	2
Di-n-octylphthalate	ND		ug/kg	360	89.	2
Diethyl phthalate	ND		ug/kg	360	76.	2
Dimethyl phthalate	ND		ug/kg	360	92.	2
Benzo(a)anthracene	730		ug/kg	220	71.	2

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03 D
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	720		ug/kg	290	88.	2
Benzo(b)fluoranthene	920		ug/kg	220	73.	2
Benzo(k)fluoranthene	320		ug/kg	220	69.	2
Chrysene	750		ug/kg	220	71.	2
Acenaphthylene	82	J	ug/kg	290	68.	2
Anthracene	230		ug/kg	220	60.	2
Benzo(ghi)perylene	480		ug/kg	290	75.	2
Fluorene	ND		ug/kg	360	100	2
Phenanthrene	1200		ug/kg	220	71.	2
Dibenzo(a,h)anthracene	100	J	ug/kg	220	70.	2
Indeno(1,2,3-cd)Pyrene	480		ug/kg	290	80.	2
Pyrene	1600		ug/kg	220	70.	2
Biphenyl	ND		ug/kg	820	120	2
4-Chloroaniline	ND		ug/kg	360	96.	2
2-Nitroaniline	ND		ug/kg	360	100	2
3-Nitroaniline	ND		ug/kg	360	100	2
4-Nitroaniline	ND		ug/kg	360	98.	2
Dibenzofuran	ND		ug/kg	360	120	2
2-Methylnaphthalene	ND		ug/kg	430	120	2
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	360	110	2
Acetophenone	ND		ug/kg	360	110	2
2,4,6-Trichlorophenol	ND		ug/kg	220	68.	2
P-Chloro-M-Cresol	ND		ug/kg	360	100	2
2-Chlorophenol	ND		ug/kg	360	110	2
2,4-Dichlorophenol	ND		ug/kg	320	120	2
2,4-Dimethylphenol	ND		ug/kg	360	110	2
2-Nitrophenol	ND		ug/kg	780	110	2
4-Nitrophenol	ND		ug/kg	510	120	2
2,4-Dinitrophenol	ND		ug/kg	1700	500	2
4,6-Dinitro-o-cresol	ND		ug/kg	940	130	2
Pentachlorophenol	ND		ug/kg	290	77.	2
Phenol	ND		ug/kg	360	110	2
2-Methylphenol	ND		ug/kg	360	120	2
3-Methylphenol/4-Methylphenol	ND		ug/kg	520	120	2
2,4,5-Trichlorophenol	ND		ug/kg	360	120	2
Benzoic Acid	ND		ug/kg	1200	370	2
Benzyl Alcohol	ND		ug/kg	360	110	2
Carbazole	79	J	ug/kg	360	78.	2

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03 D

Date Collected: 04/30/13 10:35

Client ID: B7_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	13	Q	25-120
Phenol-d6	48		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	85		30-120
2,4,6-Tribromophenol	6		0-136
4-Terphenyl-d14	71		18-120

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 D
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 05/02/13 19:37
 Analyst: RC
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	320		ug/kg	280	73.	2
1,2,4-Trichlorobenzene	ND		ug/kg	360	120	2
Hexachlorobenzene	ND		ug/kg	210	66.	2
Bis(2-chloroethyl)ether	ND		ug/kg	320	100	2
2-Chloronaphthalene	ND		ug/kg	360	120	2
1,2-Dichlorobenzene	ND		ug/kg	360	120	2
1,3-Dichlorobenzene	ND		ug/kg	360	110	2
1,4-Dichlorobenzene	ND		ug/kg	360	110	2
3,3'-Dichlorobenzidine	ND		ug/kg	360	94.	2
2,4-Dinitrotoluene	ND		ug/kg	360	77.	2
2,6-Dinitrotoluene	ND		ug/kg	360	91.	2
Fluoranthene	4900		ug/kg	210	65.	2
4-Chlorophenyl phenyl ether	ND		ug/kg	360	110	2
4-Bromophenyl phenyl ether	ND		ug/kg	360	82.	2
Bis(2-chloroisopropyl)ether	ND		ug/kg	430	120	2
Bis(2-chloroethoxy)methane	ND		ug/kg	380	110	2
Hexachlorobutadiene	ND		ug/kg	360	100	2
Hexachlorocyclopentadiene	ND		ug/kg	1000	230	2
Hexachloroethane	ND		ug/kg	280	65.	2
Isophorone	ND		ug/kg	320	94.	2
Naphthalene	ND		ug/kg	360	120	2
Nitrobenzene	ND		ug/kg	320	84.	2
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	280	75.	2
n-Nitrosodi-n-propylamine	ND		ug/kg	360	100	2
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	360	93.	2
Butyl benzyl phthalate	ND		ug/kg	360	69.	2
Di-n-butylphthalate	ND		ug/kg	360	69.	2
Di-n-octylphthalate	ND		ug/kg	360	87.	2
Diethyl phthalate	ND		ug/kg	360	75.	2
Dimethyl phthalate	ND		ug/kg	360	90.	2
Benzo(a)anthracene	2100		ug/kg	210	70.	2

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 D
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzo(a)pyrene	2200		ug/kg	280	87.	2
Benzo(b)fluoranthene	2500		ug/kg	210	72.	2
Benzo(k)fluoranthene	1000		ug/kg	210	68.	2
Chrysene	2200		ug/kg	210	70.	2
Acenaphthylene	110	J	ug/kg	280	66.	2
Anthracene	890		ug/kg	210	59.	2
Benzo(ghi)perylene	1300		ug/kg	280	74.	2
Fluorene	320	J	ug/kg	360	100	2
Phenanthrene	3800		ug/kg	210	70.	2
Dibenzo(a,h)anthracene	320		ug/kg	210	69.	2
Indeno(1,2,3-cd)Pyrene	1400		ug/kg	280	79.	2
Pyrene	4400		ug/kg	210	69.	2
Biphenyl	ND		ug/kg	810	120	2
4-Chloroaniline	ND		ug/kg	360	94.	2
2-Nitroaniline	ND		ug/kg	360	100	2
3-Nitroaniline	ND		ug/kg	360	98.	2
4-Nitroaniline	ND		ug/kg	360	96.	2
Dibenzofuran	180	J	ug/kg	360	120	2
2-Methylnaphthalene	ND		ug/kg	430	110	2
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	360	110	2
Acetophenone	ND		ug/kg	360	110	2
2,4,6-Trichlorophenol	ND		ug/kg	210	67.	2
P-Chloro-M-Cresol	ND		ug/kg	360	100	2
2-Chlorophenol	ND		ug/kg	360	110	2
2,4-Dichlorophenol	ND		ug/kg	320	120	2
2,4-Dimethylphenol	ND		ug/kg	360	100	2
2-Nitrophenol	ND		ug/kg	770	110	2
4-Nitrophenol	ND		ug/kg	500	120	2
2,4-Dinitrophenol	ND		ug/kg	1700	490	2
4,6-Dinitro-o-cresol	ND		ug/kg	920	130	2
Pentachlorophenol	ND		ug/kg	280	76.	2
Phenol	ND		ug/kg	360	100	2
2-Methylphenol	ND		ug/kg	360	110	2
3-Methylphenol/4-Methylphenol	ND		ug/kg	510	120	2
2,4,5-Trichlorophenol	ND		ug/kg	360	120	2
Benzoic Acid	ND		ug/kg	1200	360	2
Benzyl Alcohol	ND		ug/kg	360	110	2
Carbazole	330	J	ug/kg	360	76.	2

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04 D

Date Collected: 04/30/13 11:00

Client ID: B13_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	96		25-120
Phenol-d6	76		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	83		30-120
2,4,6-Tribromophenol	111		0-136
4-Terphenyl-d14	75		18-120

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
 Analytical Date: 05/02/13 13:21
 Analyst: RC

Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG605277-1					
Acenaphthene	ND		ug/kg	130	34.
Benzidine	ND		ug/kg	540	130
n-Nitrosodimethylamine	ND		ug/kg	330	54.
1,2,4-Trichlorobenzene	ND		ug/kg	160	54.
Hexachlorobenzene	ND		ug/kg	99	31.
Bis(2-chloroethyl)ether	ND		ug/kg	150	46.
2-Chloronaphthalene	ND		ug/kg	160	54.
1,2-Dichlorobenzene	ND		ug/kg	160	54.
1,3-Dichlorobenzene	ND		ug/kg	160	52.
1,4-Dichlorobenzene	ND		ug/kg	160	50.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	36.
2,6-Dinitrotoluene	ND		ug/kg	160	42.
Fluoranthene	ND		ug/kg	99	30.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	50.
4-Bromophenyl phenyl ether	ND		ug/kg	160	38.
Azobenzene	ND		ug/kg	160	44.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	58.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	50.
Hexachlorobutadiene	ND		ug/kg	160	47.
Hexachlorocyclopentadiene	ND		ug/kg	470	110
Hexachloroethane	ND		ug/kg	130	30.
Isophorone	ND		ug/kg	150	44.
Naphthalene	ND		ug/kg	160	55.
Nitrobenzene	ND		ug/kg	150	39.
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/kg	130	35.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	49.
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	43.
Butyl benzyl phthalate	ND		ug/kg	160	32.
Di-n-butylphthalate	ND		ug/kg	160	32.
Di-n-octylphthalate	ND		ug/kg	160	41.

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
 Analytical Date: 05/02/13 13:21
 Analyst: RC

Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG605277-1					
Diethyl phthalate	ND		ug/kg	160	35.
Dimethyl phthalate	ND		ug/kg	160	42.
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.
Biphenyl	ND		ug/kg	380	54.
Aniline	ND		ug/kg	200	34.
4-Chloroaniline	ND		ug/kg	160	44.
2-Nitroaniline	ND		ug/kg	160	47.
3-Nitroaniline	ND		ug/kg	160	46.
4-Nitroaniline	ND		ug/kg	160	45.
Dibenzofuran	ND		ug/kg	160	55.
2-Methylnaphthalene	ND		ug/kg	200	53.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	51.
Acetophenone	ND		ug/kg	160	51.
2,4,6-Trichlorophenol	ND		ug/kg	99	31.
P-Chloro-M-Cresol	ND		ug/kg	160	48.
2-Chlorophenol	ND		ug/kg	160	50.
2,4-Dichlorophenol	ND		ug/kg	150	54.
2,4-Dimethylphenol	ND		ug/kg	160	49.
2-Nitrophenol	ND		ug/kg	360	52.

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
 Analytical Date: 05/02/13 13:21
 Analyst: RC

Extraction Method: EPA 3546
 Extraction Date: 05/01/13 17:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG605277-1					
4-Nitrophenol	ND		ug/kg	230	54.
2,4-Dinitrophenol	ND		ug/kg	790	230
4,6-Dinitro-o-cresol	ND		ug/kg	430	60.
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.
2,4,5-Trichlorophenol	ND		ug/kg	160	54.
Benzoic Acid	ND		ug/kg	540	170
Benzyl Alcohol	ND		ug/kg	160	51.
Carbazole	ND		ug/kg	160	36.
Benzaldehyde	ND		ug/kg	220	67.
Caprolactam	ND		ug/kg	160	46.
Atrazine	ND		ug/kg	130	37.
Pyridine	ND		ug/kg	660	59.
Parathion, ethyl	ND		ug/kg	160	65.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	75		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	70		30-120
2,4,6-Tribromophenol	76		0-136
4-Terphenyl-d14	82		18-120

Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG605277-2 WG605277-3								
Acenaphthene	80		82		31-137	2		50
Benzidine	33		40			19		50
n-Nitrosodimethylamine	65		70			7		50
1,2,4-Trichlorobenzene	69		71		38-107	3		50
Hexachlorobenzene	82		84		40-140	2		50
Bis(2-chloroethyl)ether	73		75		40-140	3		50
2-Chloronaphthalene	79		81		40-140	3		50
1,2-Dichlorobenzene	69		72		40-140	4		50
1,3-Dichlorobenzene	69		70		40-140	1		50
1,4-Dichlorobenzene	70		71		28-104	1		50
3,3'-Dichlorobenzidine	56		62		40-140	10		50
2,4-Dinitrotoluene	86		89		28-89	3		50
2,6-Dinitrotoluene	85		89		40-140	5		50
Fluoranthene	85		89		40-140	5		50
4-Chlorophenyl phenyl ether	80		82		40-140	2		50
4-Bromophenyl phenyl ether	85		88		40-140	3		50
Azobenzene	92		93		40-140	1		50
Bis(2-chloroisopropyl)ether	74		78		40-140	5		50
Bis(2-chloroethoxy)methane	76		80		40-117	5		50
Hexachlorobutadiene	73		75		40-140	3		50
Hexachlorocyclopentadiene	56		58		40-140	4		50



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG605277-2 WG605277-3								
Hexachloroethane	72		74		40-140	3		50
Isophorone	77		81		40-140	5		50
Naphthalene	73		75		40-140	3		50
Nitrobenzene	76		78		40-140	3		50
NitrosoDiPhenylAmine(NDPA)/DPA	87		91			4		50
n-Nitrosodi-n-propylamine	80		81		32-121	1		50
Bis(2-Ethylhexyl)phthalate	95		98		40-140	3		50
Butyl benzyl phthalate	91		95		40-140	4		50
Di-n-butylphthalate	91		98		40-140	7		50
Di-n-octylphthalate	99		102		40-140	3		50
Diethyl phthalate	90		92		40-140	2		50
Dimethyl phthalate	86		87		40-140	1		50
Benzo(a)anthracene	86		88		40-140	2		50
Benzo(a)pyrene	82		92		40-140	11		50
Benzo(b)fluoranthene	85		87		40-140	2		50
Benzo(k)fluoranthene	91		96		40-140	5		50
Chrysene	86		89		40-140	3		50
Acenaphthylene	83		86		40-140	4		50
Anthracene	90		94		40-140	4		50
Benzo(ghi)perylene	84		89		40-140	6		50
Fluorene	84		84		40-140	0		50



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG605277-2 WG605277-3								
Phenanthrene	87		91		40-140	4		50
Dibenzo(a,h)anthracene	84		91		40-140	8		50
Indeno(1,2,3-cd)Pyrene	84		88		40-140	5		50
Pyrene	84		88		35-142	5		50
Biphenyl	81		81			0		50
Aniline	37	Q	44		40-140	17		50
4-Chloroaniline	72		73		40-140	1		50
2-Nitroaniline	87		90		47-134	3		50
3-Nitroaniline	35		42		26-129	18		50
4-Nitroaniline	74		76		41-125	3		50
Dibenzofuran	84		86		40-140	2		50
2-Methylnaphthalene	76		76		40-140	0		50
1,2,4,5-Tetrachlorobenzene	76		78		40-117	3		50
Acetophenone	77		80		14-144	4		50
2,4,6-Trichlorophenol	83		84		30-130	1		50
P-Chloro-M-Cresol	89		92		26-103	3		50
2-Chlorophenol	76		79		25-102	4		50
2,4-Dichlorophenol	79		83		30-130	5		50
2,4-Dimethylphenol	90		92		30-130	2		50
2-Nitrophenol	73		76		30-130	4		50
4-Nitrophenol	97		101		11-114	4		50



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG605277-2 WG605277-3								
2,4-Dinitrophenol	65		64		4-130	2		50
4,6-Dinitro-o-cresol	75		78		10-130	4		50
Pentachlorophenol	87		91		17-109	4		50
Phenol	79		83		26-90	5		50
2-Methylphenol	78		82		30-130	5		50
3-Methylphenol/4-Methylphenol	80		87		30-130	8		50
2,4,5-Trichlorophenol	82		88		30-130	7		50
Benzoic Acid	0		0			NC		50
Benzyl Alcohol	81		83		40-140	2		50
Carbazole	87		92		54-128	6		50
Benzaldehyde	70		74			6		50
Caprolactam	64		61			5		50
Atrazine	93		104			11		50
Pyridine	55		57		10-93	4		50
Parathion, ethyl	109		112		40-140	3		50



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatiles Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG605277-2 WG605277-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	74		76		25-120
Phenol-d6	78		79		10-120
Nitrobenzene-d5	78		81		23-120
2-Fluorobiphenyl	75		77		30-120
2,4,6-Tribromophenol	83		90		0-136
4-Terphenyl-d14	81		83		18-120



PCBS

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/03/13 20:15
 Analyst: KB
 Percent Solids: 87%

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 22:14
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/02/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/02/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	37.5	7.40	1
Aroclor 1221	ND		ug/kg	37.5	11.3	1
Aroclor 1232	ND		ug/kg	37.5	7.96	1
Aroclor 1242	ND		ug/kg	37.5	7.11	1
Aroclor 1248	ND		ug/kg	37.5	4.53	1
Aroclor 1254	ND		ug/kg	37.5	5.90	1
Aroclor 1260	ND		ug/kg	37.5	6.50	1
Aroclor 1262	ND		ug/kg	37.5	2.77	1
Aroclor 1268	ND		ug/kg	37.5	5.43	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	103		30-150
Decachlorobiphenyl	104		30-150
2,4,5,6-Tetrachloro-m-xylene	89		30-150
Decachlorobiphenyl	105		30-150

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/03/13 20:28
 Analyst: KB
 Percent Solids: 89%

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 22:14
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/02/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/02/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	37.3	7.37	1
Aroclor 1221	ND		ug/kg	37.3	11.2	1
Aroclor 1232	ND		ug/kg	37.3	7.92	1
Aroclor 1242	ND		ug/kg	37.3	7.08	1
Aroclor 1248	ND		ug/kg	37.3	4.51	1
Aroclor 1254	ND		ug/kg	37.3	5.88	1
Aroclor 1260	ND		ug/kg	37.3	6.47	1
Aroclor 1262	ND		ug/kg	37.3	2.76	1
Aroclor 1268	ND		ug/kg	37.3	5.41	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	76		30-150
Decachlorobiphenyl	70		30-150
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	73		30-150

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/07/13 07:35
 Analyst: KB
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 22:14
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/02/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/02/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	37.1	7.34	1
Aroclor 1221	ND		ug/kg	37.1	11.2	1
Aroclor 1232	ND		ug/kg	37.1	7.89	1
Aroclor 1242	ND		ug/kg	37.1	7.05	1
Aroclor 1248	ND		ug/kg	37.1	4.49	1
Aroclor 1254	ND		ug/kg	37.1	5.86	1
Aroclor 1260	425		ug/kg	37.1	6.45	1
Aroclor 1262	ND		ug/kg	37.1	2.75	1
Aroclor 1268	ND		ug/kg	37.1	5.39	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	89		30-150
Decachlorobiphenyl	80		30-150
2,4,5,6-Tetrachloro-m-xylene	80		30-150
Decachlorobiphenyl	82		30-150

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8082A
 Analytical Date: 05/07/13 07:48
 Analyst: KB
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/01/13 22:14
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/02/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/02/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	34.8	6.87	1
Aroclor 1221	ND		ug/kg	34.8	10.5	1
Aroclor 1232	ND		ug/kg	34.8	7.39	1
Aroclor 1242	ND		ug/kg	34.8	6.60	1
Aroclor 1248	ND		ug/kg	34.8	4.21	1
Aroclor 1254	ND		ug/kg	34.8	5.48	1
Aroclor 1260	11.6	J	ug/kg	34.8	6.04	1
Aroclor 1262	ND		ug/kg	34.8	2.57	1
Aroclor 1268	ND		ug/kg	34.8	5.04	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	104		30-150
Decachlorobiphenyl	95		30-150
2,4,5,6-Tetrachloro-m-xylene	89		30-150
Decachlorobiphenyl	97		30-150

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8082A
Analytical Date: 05/03/13 18:56
Analyst: KB

Extraction Method: EPA 3546
Extraction Date: 05/01/13 22:14
Cleanup Method1: EPA 3665A
Cleanup Date1: 05/02/13
Cleanup Method2: EPA 3660B
Cleanup Date2: 05/02/13

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG605322-1					
Aroclor 1016	ND		ug/kg	32.9	6.50
Aroclor 1221	ND		ug/kg	32.9	9.92
Aroclor 1232	ND		ug/kg	32.9	6.99
Aroclor 1242	ND		ug/kg	32.9	6.24
Aroclor 1248	ND		ug/kg	32.9	3.98
Aroclor 1254	ND		ug/kg	32.9	5.18
Aroclor 1260	ND		ug/kg	32.9	5.71
Aroclor 1262	ND		ug/kg	32.9	2.43
Aroclor 1268	ND		ug/kg	32.9	4.77

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	107		30-150
Decachlorobiphenyl	92		30-150
2,4,5,6-Tetrachloro-m-xylene	95		30-150
Decachlorobiphenyl	103		30-150

Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG605322-2 WG605322-3								
Aroclor 1016	90		94		40-140	4		50
Aroclor 1260	80		86		40-140	7		50

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
2,4,5,6-Tetrachloro-m-xylene	108		114		30-150
Decachlorobiphenyl	94		100		30-150
2,4,5,6-Tetrachloro-m-xylene	94		98		30-150
Decachlorobiphenyl	100		105		30-150



PESTICIDES

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 21:18
 Analyst: SH
 Percent Solids: 87%

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.82	0.356	1
Lindane	ND		ug/kg	0.757	0.338	1
Alpha-BHC	ND		ug/kg	0.757	0.215	1
Beta-BHC	ND		ug/kg	1.82	0.688	1
Heptachlor	ND		ug/kg	0.908	0.407	1
Aldrin	ND		ug/kg	1.82	0.639	1
Heptachlor epoxide	ND		ug/kg	3.40	1.02	1
Endrin	ND		ug/kg	0.757	0.310	1
Endrin ketone	ND		ug/kg	1.82	0.468	1
Dieldrin	ND		ug/kg	1.14	0.568	1
4,4'-DDE	ND		ug/kg	1.82	0.420	1
4,4'-DDD	ND		ug/kg	1.82	0.648	1
4,4'-DDT	ND		ug/kg	3.40	1.46	1
Endosulfan I	ND		ug/kg	1.82	0.429	1
Endosulfan II	ND		ug/kg	1.82	0.607	1
Endosulfan sulfate	ND		ug/kg	0.757	0.346	1
Methoxychlor	ND		ug/kg	3.40	1.06	1
Toxaphene	ND		ug/kg	34.0	9.53	1
cis-Chlordane	ND		ug/kg	2.27	0.633	1
trans-Chlordane	ND		ug/kg	2.27	0.599	1
Chlordane	ND		ug/kg	14.8	6.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 21:30
 Analyst: SH
 Percent Solids: 89%

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.74	0.341	1
Lindane	ND		ug/kg	0.726	0.324	1
Alpha-BHC	ND		ug/kg	0.726	0.206	1
Beta-BHC	ND		ug/kg	1.74	0.660	1
Heptachlor	ND		ug/kg	0.871	0.390	1
Aldrin	ND		ug/kg	1.74	0.613	1
Heptachlor epoxide	ND		ug/kg	3.26	0.980	1
Endrin	ND		ug/kg	0.726	0.298	1
Endrin ketone	ND		ug/kg	1.74	0.448	1
Dieldrin	ND		ug/kg	1.09	0.544	1
4,4'-DDE	ND		ug/kg	1.74	0.403	1
4,4'-DDD	ND		ug/kg	1.74	0.621	1
4,4'-DDT	ND		ug/kg	3.26	1.40	1
Endosulfan I	ND		ug/kg	1.74	0.411	1
Endosulfan II	ND		ug/kg	1.74	0.582	1
Endosulfan sulfate	ND		ug/kg	0.726	0.332	1
Methoxychlor	ND		ug/kg	3.26	1.02	1
Toxaphene	ND		ug/kg	32.6	9.14	1
cis-Chlordane	ND		ug/kg	2.18	0.607	1
trans-Chlordane	ND		ug/kg	2.18	0.575	1
Chlordane	ND		ug/kg	14.2	5.77	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	127		30-150	A
Decachlorobiphenyl	111		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 21:43
 Analyst: SH
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Dieldrin	10.2	P	ug/kg	1.08	0.538	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	113		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 21:43
 Analyst: SH
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.72	0.337	1
Lindane	ND		ug/kg	0.717	0.320	1
Alpha-BHC	ND		ug/kg	0.717	0.204	1
Beta-BHC	ND		ug/kg	1.72	0.652	1
Heptachlor	ND		ug/kg	0.860	0.386	1
Aldrin	ND		ug/kg	1.72	0.606	1
Heptachlor epoxide	ND		ug/kg	3.22	0.968	1
Endrin	ND		ug/kg	0.717	0.294	1
Endrin ketone	ND		ug/kg	1.72	0.443	1
4,4'-DDE	ND		ug/kg	1.72	0.398	1
4,4'-DDD	ND		ug/kg	1.72	0.614	1
4,4'-DDT	ND		ug/kg	3.22	1.38	1
Endosulfan I	ND		ug/kg	1.72	0.406	1
Endosulfan II	ND		ug/kg	1.72	0.575	1
Endosulfan sulfate	ND		ug/kg	0.717	0.328	1
Methoxychlor	ND		ug/kg	3.22	1.00	1
Toxaphene	ND		ug/kg	32.2	9.03	1
cis-Chlordane	ND		ug/kg	2.15	0.599	1
trans-Chlordane	ND		ug/kg	2.15	0.568	1
Chlordane	ND		ug/kg	14.0	5.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	113		30-150	A
Decachlorobiphenyl	105		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Analytical Method: 1,8081B
 Analytical Date: 05/03/13 21:56
 Analyst: SH
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/kg	1.65	0.323	1
Lindane	ND		ug/kg	0.688	0.307	1
Alpha-BHC	ND		ug/kg	0.688	0.195	1
Beta-BHC	ND		ug/kg	1.65	0.626	1
Heptachlor	ND		ug/kg	0.825	0.370	1
Aldrin	ND		ug/kg	1.65	0.581	1
Heptachlor epoxide	ND		ug/kg	3.09	0.928	1
Endrin	ND		ug/kg	0.688	0.282	1
Endrin ketone	ND		ug/kg	1.65	0.425	1
Dieldrin	ND		ug/kg	1.03	0.516	1
4,4'-DDE	ND		ug/kg	1.65	0.382	1
4,4'-DDD	ND		ug/kg	1.65	0.588	1
4,4'-DDT	ND		ug/kg	3.09	1.33	1
Endosulfan I	ND		ug/kg	1.65	0.390	1
Endosulfan II	ND		ug/kg	1.65	0.551	1
Endosulfan sulfate	ND		ug/kg	0.688	0.314	1
Methoxychlor	ND		ug/kg	3.09	0.962	1
Toxaphene	ND		ug/kg	30.9	8.66	1
cis-Chlordane	ND		ug/kg	2.06	0.575	1
trans-Chlordane	ND		ug/kg	2.06	0.544	1
Chlordane	ND		ug/kg	13.4	5.46	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	111		30-150	A
Decachlorobiphenyl	118		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	133		30-150	B

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8081B
 Analytical Date: 05/03/13 19:48
 Analyst: SH

Extraction Method: EPA 3546
 Extraction Date: 05/02/13 08:06
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/03/13

Parameter	Result	Qualifier	Units	RL	MDL
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG605367-1					
Delta-BHC	ND		ug/kg	1.56	0.306
Lindane	ND		ug/kg	0.651	0.291
Alpha-BHC	ND		ug/kg	0.651	0.185
Beta-BHC	ND		ug/kg	1.56	0.592
Heptachlor	ND		ug/kg	0.781	0.350
Aldrin	ND		ug/kg	1.56	0.550
Heptachlor epoxide	ND		ug/kg	2.93	0.878
Endrin	ND		ug/kg	0.651	0.267
Endrin ketone	ND		ug/kg	1.56	0.402
Dieldrin	ND		ug/kg	0.976	0.488
4,4'-DDE	ND		ug/kg	1.56	0.361
4,4'-DDD	ND		ug/kg	1.56	0.557
4,4'-DDT	ND		ug/kg	2.93	1.26
Endosulfan I	ND		ug/kg	1.56	0.369
Endosulfan II	ND		ug/kg	1.56	0.522
Endosulfan sulfate	ND		ug/kg	0.651	0.297
Methoxychlor	ND		ug/kg	2.93	0.911
Toxaphene	ND		ug/kg	29.3	8.20
cis-Chlordane	ND		ug/kg	1.95	0.544
trans-Chlordane	ND		ug/kg	1.95	0.515
Chlordane	ND		ug/kg	12.7	5.17

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	125		30-150	A
Decachlorobiphenyl	114		30-150	A
2,4,5,6-Tetrachloro-m-xylene	91		30-150	B
Decachlorobiphenyl	87		30-150	B



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG605367-2 WG605367-3								
Delta-BHC	88		107		30-150	19		30
Lindane	93		113		30-150	19		30
Alpha-BHC	75		100		30-150	29		30
Beta-BHC	105		110		30-150	5		30
Heptachlor	104		121		30-150	15		30
Aldrin	96		117		30-150	20		30
Heptachlor epoxide	96		117		30-150	20		30
Endrin	139		163	Q	30-150	16		30
Endrin ketone	96		105		30-150	9		30
Dieldrin	108		127		30-150	16		30
4,4'-DDE	98		121		30-150	21		30
4,4'-DDD	106		129		30-150	20		30
4,4'-DDT	109		133		30-150	20		30
Endosulfan I	105		124		30-150	17		30
Endosulfan II	103		121		30-150	16		30
Endosulfan sulfate	98		111		30-150	12		30
Methoxychlor	115		119		30-150	3		30
cis-Chlordane	104		127		30-150	20		30
trans-Chlordane	107		124		30-150	15		30



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG605367-2 WG605367-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	107		130		30-150	A
Decachlorobiphenyl	83		116		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		95		30-150	B
Decachlorobiphenyl	82		91		30-150	B



METALS

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01
 Client ID: B12_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Percent Solids: 87%

Date Collected: 04/30/13 08:45
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	6300		mg/kg	4.4	0.88	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Antimony, Total	9.8		mg/kg	2.2	0.44	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Arsenic, Total	44		mg/kg	0.44	0.13	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Barium, Total	460		mg/kg	0.44	0.13	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Beryllium, Total	0.33		mg/kg	0.22	0.02	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Cadmium, Total	3.8		mg/kg	0.44	0.03	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Calcium, Total	60000		mg/kg	440	88.	100	05/01/13 15:57	05/02/13 12:18	EPA 3050B	1,6010C	MG
Chromium, Total	14		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Cobalt, Total	4.0		mg/kg	0.88	0.22	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Copper, Total	32		mg/kg	0.44	0.22	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Iron, Total	16000		mg/kg	2.2	0.88	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Lead, Total	620		mg/kg	2.2	0.13	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Magnesium, Total	2200		mg/kg	4.4	1.8	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Manganese, Total	190		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Mercury, Total	1.1		mg/kg	0.09	0.02	1	05/03/13 09:14	05/03/13 13:45	EPA 7471B	1,7471B	TT
Nickel, Total	13		mg/kg	1.1	0.18	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Potassium, Total	1900		mg/kg	110	35.	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Selenium, Total	11		mg/kg	0.88	0.13	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Silver, Total	0.53		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Sodium, Total	1000		mg/kg	88	35.	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Thallium, Total	2.0		mg/kg	0.88	0.26	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Vanadium, Total	18		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 11:30	EPA 3050B	1,6010C	MG
Zinc, Total	770		mg/kg	220	22.	100	05/01/13 15:57	05/02/13 12:18	EPA 3050B	1,6010C	MG



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02
 Client ID: B12_11-13
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Percent Solids: 89%

Date Collected: 04/30/13 09:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	13000		mg/kg	4.2	0.85	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Antimony, Total	2.9		mg/kg	2.1	0.42	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Arsenic, Total	2.9		mg/kg	0.42	0.13	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Barium, Total	140		mg/kg	0.42	0.13	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Beryllium, Total	0.51		mg/kg	0.21	0.02	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.42	0.03	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Calcium, Total	1600		mg/kg	4.2	0.85	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Chromium, Total	23		mg/kg	0.42	0.09	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Cobalt, Total	8.4		mg/kg	0.85	0.21	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Copper, Total	66		mg/kg	0.42	0.21	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Iron, Total	18000		mg/kg	2.1	0.85	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Lead, Total	60		mg/kg	2.1	0.13	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Magnesium, Total	4500		mg/kg	4.2	1.7	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Manganese, Total	200		mg/kg	0.42	0.09	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Mercury, Total	0.12		mg/kg	0.07	0.02	1	05/03/13 09:14	05/03/13 13:47	EPA 7471B	1,7471B	TT
Nickel, Total	18		mg/kg	1.1	0.17	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Potassium, Total	4400		mg/kg	110	34.	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Selenium, Total	0.42	J	mg/kg	0.85	0.13	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.42	0.09	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Sodium, Total	200		mg/kg	85	34.	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Thallium, Total	1.9		mg/kg	0.85	0.26	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Vanadium, Total	32		mg/kg	0.42	0.09	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG
Zinc, Total	63		mg/kg	2.1	0.21	1	05/01/13 15:57	05/02/13 11:43	EPA 3050B	1,6010C	MG



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03
 Client ID: B7_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Percent Solids: 89%

Date Collected: 04/30/13 10:35
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	9800		mg/kg	4.4	0.88	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Antimony, Total	2.0	J	mg/kg	2.2	0.44	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Arsenic, Total	5.2		mg/kg	0.44	0.13	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Barium, Total	110		mg/kg	0.44	0.13	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Beryllium, Total	0.44		mg/kg	0.22	0.02	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Cadmium, Total	0.07	J	mg/kg	0.44	0.03	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Calcium, Total	64000		mg/kg	440	88.	100	05/01/13 15:57	05/02/13 13:19	EPA 3050B	1,6010C	MG
Chromium, Total	18		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Cobalt, Total	6.8		mg/kg	0.88	0.22	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Copper, Total	37		mg/kg	0.44	0.22	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Iron, Total	17000		mg/kg	2.2	0.88	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Lead, Total	130		mg/kg	2.2	0.13	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Magnesium, Total	7600		mg/kg	4.4	1.8	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Manganese, Total	300		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Mercury, Total	0.94		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 13:49	EPA 7471B	1,7471B	TT
Nickel, Total	16		mg/kg	1.1	0.18	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Potassium, Total	3600		mg/kg	110	35.	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.88	0.13	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Silver, Total	0.12	J	mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Sodium, Total	560		mg/kg	88	35.	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Thallium, Total	1.9		mg/kg	0.88	0.26	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Vanadium, Total	24		mg/kg	0.44	0.09	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG
Zinc, Total	100		mg/kg	2.2	0.22	1	05/01/13 15:57	05/02/13 12:06	EPA 3050B	1,6010C	MG



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04
 Client ID: B13_0-2
 Sample Location: 546 W 44TH ST
 Matrix: Soil
 Percent Solids: 93%

Date Collected: 04/30/13 11:00
 Date Received: 04/30/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	16000		mg/kg	4.2	0.84	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Antimony, Total	2.5		mg/kg	2.1	0.42	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Arsenic, Total	3.6		mg/kg	0.42	0.13	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Barium, Total	170		mg/kg	0.42	0.13	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Beryllium, Total	0.44		mg/kg	0.21	0.02	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.42	0.03	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Calcium, Total	2600		mg/kg	4.2	0.84	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Chromium, Total	29		mg/kg	0.42	0.08	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Cobalt, Total	13		mg/kg	0.84	0.21	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Copper, Total	34		mg/kg	0.42	0.21	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Iron, Total	22000		mg/kg	2.1	0.84	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Lead, Total	110		mg/kg	2.1	0.13	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Magnesium, Total	8200		mg/kg	4.2	1.7	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Manganese, Total	120		mg/kg	0.42	0.08	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Mercury, Total	1.2		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 13:51	EPA 7471B	1,7471B	TT
Nickel, Total	28		mg/kg	1.0	0.17	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Potassium, Total	8500		mg/kg	100	34.	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Selenium, Total	ND		mg/kg	0.84	0.13	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Silver, Total	ND		mg/kg	0.42	0.08	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Sodium, Total	340		mg/kg	84	34.	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Thallium, Total	2.6		mg/kg	0.84	0.25	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Vanadium, Total	45		mg/kg	0.42	0.08	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG
Zinc, Total	110		mg/kg	2.1	0.21	1	05/01/13 15:57	05/02/13 12:09	EPA 3050B	1,6010C	MG



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

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): 01-04 Batch: WG605264-1										
Aluminum, Total	1.3	J	mg/kg	4.0	0.80	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Antimony, Total	ND		mg/kg	2.0	0.40	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Arsenic, Total	ND		mg/kg	0.40	0.12	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Barium, Total	ND		mg/kg	0.40	0.12	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Beryllium, Total	ND		mg/kg	0.20	0.02	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Cadmium, Total	ND		mg/kg	0.40	0.02	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Calcium, Total	ND		mg/kg	4.0	0.80	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Chromium, Total	ND		mg/kg	0.40	0.08	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Cobalt, Total	ND		mg/kg	0.80	0.20	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Copper, Total	ND		mg/kg	0.40	0.20	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Iron, Total	0.94	J	mg/kg	2.0	0.80	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Lead, Total	ND		mg/kg	2.0	0.12	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Magnesium, Total	ND		mg/kg	4.0	1.6	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Manganese, Total	ND		mg/kg	0.40	0.08	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Nickel, Total	ND		mg/kg	1.0	0.16	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Potassium, Total	ND		mg/kg	100	32.	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Selenium, Total	ND		mg/kg	0.80	0.12	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Silver, Total	ND		mg/kg	0.40	0.08	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Sodium, Total	ND		mg/kg	80	32.	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Thallium, Total	ND		mg/kg	0.80	0.24	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Vanadium, Total	ND		mg/kg	0.40	0.08	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG
Zinc, Total	ND		mg/kg	2.0	0.20	1	05/01/13 15:57	05/02/13 11:21	1,6010C	MG

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): 01-04 Batch: WG605422-1										
Mercury, Total	ND		mg/kg	0.08	0.02	1	05/03/13 09:14	05/03/13 12:34	1,7471B	TT



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG605264-2 SRM Lot Number: 0518-10-02								
Aluminum, Total	92		-		29-171	-		
Antimony, Total	106		-		4-196	-		
Arsenic, Total	100		-		81-119	-		
Barium, Total	96		-		83-118	-		
Beryllium, Total	92		-		83-117	-		
Cadmium, Total	89		-		82-117	-		
Calcium, Total	83		-		83-117	-		
Chromium, Total	92		-		80-119	-		
Cobalt, Total	96		-		83-117	-		
Copper, Total	101		-		83-117	-		
Iron, Total	94		-		51-150	-		
Lead, Total	94		-		80-120	-		
Magnesium, Total	92		-		74-126	-		
Manganese, Total	95		-		83-117	-		
Nickel, Total	99		-		82-117	-		
Potassium, Total	91		-		74-126	-		
Selenium, Total	98		-		80-120	-		
Silver, Total	100		-		66-134	-		
Sodium, Total	114		-		74-127	-		
Thallium, Total	96		-		79-120	-		
Vanadium, Total	98		-		79-121	-		



Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG605264-2 SRM Lot Number: 0518-10-02					
Zinc, Total	88	-	82-119	-	
Total Metals - Westborough Lab Associated sample(s): 01-04 Batch: WG605422-2 SRM Lot Number: 0518-10-02					
Mercury, Total	98	-	67-133	-	



Serial_No:05071316:50

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

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): 01-04 QC Batch ID: WG605264-4 QC Sample: L1307639-01 Client ID: B12_0-2												
Aluminum, Total	6300	179	5200	0	Q	-	-		75-125	-		35
Antimony, Total	9.8	44.7	41	70	Q	-	-		75-125	-		35
Arsenic, Total	44.	10.7	36	0	Q	-	-		75-125	-		35
Barium, Total	460	179	560	56	Q	-	-		75-125	-		35
Beryllium, Total	0.33	4.47	4.2	86		-	-		75-125	-		35
Cadmium, Total	3.8	4.56	37	73		-	-		75-125	-		35
Calcium, Total	60000	894	62000	224	Q	-	-		75-125	-		35
Chromium, Total	14.	17.9	29	84		-	-		75-125	-		35
Cobalt, Total	4.0	44.7	43	87		-	-		75-125	-		35
Copper, Total	32.	22.4	49	76		-	-		75-125	-		35
Iron, Total	16000	89.4	11000	0	Q	-	-		75-125	-		35
Lead, Total	620	45.6	400	0	Q	-	-		75-125	-		35
Magnesium, Total	2200	894	2800	67	Q	-	-		75-125	-		35
Manganese, Total	190	44.7	220	67	Q	-	-		75-125	-		35
Nickel, Total	13.	44.7	49	80		-	-		75-125	-		35
Potassium, Total	1900	894	2200	34	Q	-	-		75-125	-		35
Selenium, Total	11.	10.7	16	46	Q	-	-		75-125	-		35
Silver, Total	0.53	26.8	26	95		-	-		75-125	-		35
Sodium, Total	1000	894	1600	67	Q	-	-		75-125	-		35
Thallium, Total	2.0	10.7	10	74	Q	-	-		75-125	-		35
Vanadium, Total	18.	44.7	58	89		-	-		75-125	-		35



Serial_No:05071316:50

Matrix Spike Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

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): 01-04 QC Batch ID: WG605264-4 QC Sample: L1307639-01 Client ID: B12_0-2									
Zinc, Total	770	44.7	560	0	Q	-	75-125	-	35
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605422-4 QC Sample: L1307601-01 Client ID: MS Sample									
Mercury, Total	0.09	0.174	0.24	138	Q	-	70-130	-	35



Serial_No:05071316:50

Lab Duplicate Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605264-3 QC Sample: L1307639-01 Client ID: B12_0-2						
Aluminum, Total	6300	5100	mg/kg	21		35
Antimony, Total	9.8	5.9	mg/kg	50	Q	35
Arsenic, Total	44.	21	mg/kg	71	Q	35
Barium, Total	460	660	mg/kg	36	Q	35
Beryllium, Total	0.33	0.29	mg/kg	13		35
Cadmium, Total	3.8	2.2	mg/kg	53	Q	35
Chromium, Total	14.	13	mg/kg	7		35
Cobalt, Total	4.0	4.0	mg/kg	0		35
Copper, Total	32.	33	mg/kg	3		35
Iron, Total	16000	13000	mg/kg	21		35
Lead, Total	620	530	mg/kg	16		35
Magnesium, Total	2200	1900	mg/kg	15		35
Manganese, Total	190	170	mg/kg	11		35
Nickel, Total	13.	12	mg/kg	8		35
Potassium, Total	1900	1300	mg/kg	38	Q	35
Selenium, Total	11.	5.1	mg/kg	73	Q	35
Silver, Total	0.53	0.35J	mg/kg	NC		35
Sodium, Total	1000	510	mg/kg	65	Q	35
Thallium, Total	2.0	1.4	mg/kg	35		35



Serial_No:05071316:50

Lab Duplicate Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605264-3 QC Sample: L1307639-01 Client ID: B12_0-2					
Vanadium, Total	18.	17	mg/kg	6	35
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605264-3 QC Sample: L1307639-01 Client ID: B12_0-2					
Calcium, Total	60000	58000	mg/kg	3	35
Zinc, Total	770	650	mg/kg	17	35
Total Metals - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605422-3 QC Sample: L1307601-01 Client ID: DUP Sample					
Mercury, Total	0.09	0.07J	mg/kg	NC	35



INORGANICS & MISCELLANEOUS

Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-01

Date Collected: 04/30/13 08:45

Client ID: B12_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	14		mg/kg	0.92	0.92	1	-	05/07/13 11:45	107,-	JO
Solids, Total	87.0		%	0.100	NA	1	-	05/01/13 14:06	30,2540G	MO
Cyanide, Total	ND		mg/kg	1.1	0.26	1	05/01/13 14:00	05/06/13 12:39	1,9010C/9012A	JO
Chromium, Hexavalent	0.23	J	mg/kg	0.92	0.21	1	05/01/13 10:30	05/02/13 11:11	1,7196A	ST



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-02

Date Collected: 04/30/13 09:00

Client ID: B12_11-13

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	23		mg/kg	0.90	0.90	1	-	05/07/13 11:45	107,-	JO
Solids, Total	88.9		%	0.100	NA	1	-	05/01/13 14:06	30,2540G	MO
Cyanide, Total	ND		mg/kg	1.0	0.24	1	05/01/13 14:00	05/06/13 12:40	1,9010C/9012A	JO
Chromium, Hexavalent	0.42	J	mg/kg	0.90	0.20	1	05/01/13 10:30	05/02/13 11:11	1,7196A	ST



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-03

Date Collected: 04/30/13 10:35

Client ID: B7_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	18		mg/kg	0.90	0.90	1	-	05/07/13 11:45	107,-	JO
Solids, Total	89.2		%	0.100	NA	1	-	05/01/13 14:06	30,2540G	MO
Cyanide, Total	ND		mg/kg	1.1	0.25	1	05/01/13 14:00	05/06/13 12:41	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/kg	0.90	0.20	1	05/01/13 10:30	05/02/13 11:11	1,7196A	ST



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

SAMPLE RESULTS

Lab ID: L1307639-04

Date Collected: 04/30/13 11:00

Client ID: B13_0-2

Date Received: 04/30/13

Sample Location: 546 W 44TH ST

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Trivalent	29		mg/kg	0.86	0.86	1	-	05/07/13 11:45	107,-	JO
Solids, Total	93.0		%	0.100	NA	1	-	05/01/13 14:06	30,2540G	MO
Cyanide, Total	ND		mg/kg	1.0	0.23	1	05/01/13 14:00	05/06/13 12:41	1,9010C/9012A	JO
Chromium, Hexavalent	0.40	J	mg/kg	0.86	0.19	1	05/01/13 10:30	05/02/13 11:12	1,7196A	ST



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

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): 01-04 Batch: WG605221-1									
Cyanide, Total	ND	mg/kg	0.85	0.20	1	05/01/13 14:00	05/06/13 12:29	1,9010C/9012A	JO
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG605223-1									
Chromium, Hexavalent	ND	mg/kg	0.80	0.18	1	05/01/13 10:30	05/02/13 10:57	1,7196A	ST

Serial_No:05071316:50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG605221-2 WG605221-3								
Cyanide, Total	90		100		80-120	11		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG605223-2								
Chromium, Hexavalent	86		-		80-120	-		20



Serial_No:05071316:50

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605221-4 WG605221-5 QC Sample: L1307603-06 Client ID: MS Sample												
Cyanide, Total	ND	11	12	100		12	110		65-135	0		35
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605223-4 QC Sample: L1307639-03 Client ID: B7_0-2												
Chromium, Hexavalent	ND	1090	870	80		-	-		75-125	-		20



Serial_No:05071316:50

Lab Duplicate Analysis
Batch Quality Control

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605223-6 QC Sample: L1307639-03 Client ID: B7_0-2						
Chromium, Hexavalent	ND	0.22J	mg/kg	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG605227-1 QC Sample: L1307623-01 Client ID: DUP Sample						
Solids, Total	87.8	88.8	%	1		20



Project Name: 170229701

Lab Number: L1307639

Project Number: 170229701

Report Date: 05/07/13

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 05/01/2013 02:12

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307639-01A	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-01B	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-01C	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-01D	Vial MeOH preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-01E	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-01F	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-01G	Plastic 2oz unpreserved for TS	A	N/A	2.4	Y	Absent	TS(7)
L1307639-01H	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-01I	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-02A	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-02B	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)

*Values in parentheses indicate holding time in days



Project Name: 170229701

Project Number: 170229701

Lab Number: L1307639

Report Date: 05/07/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307639-02C	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-02D	Vial MeOH preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-02E	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-02F	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-02G	Plastic 2oz unpreserved for TS	A	N/A	2.4	Y	Absent	TS(7)
L1307639-02H	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-02I	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-03A	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-03B	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-03C	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-03D	Vial MeOH preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-03E	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-03F	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-03G	Plastic 2oz unpreserved for TS	A	N/A	2.4	Y	Absent	TS(7)

*Values in parentheses indicate holding time in days



Project Name: 170229701

Project Number: 170229701

Lab Number: L1307639

Report Date: 05/07/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307639-03H	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-03I	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)
L1307639-04A	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-04B	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-04C	5 gram Encore Sampler	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(2)
L1307639-04D	Vial MeOH preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-04E	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-04F	Vial Water preserved split	A	N/A	2.4	Y	Absent	NYTCL-8260HLW(14)
L1307639-04G	Plastic 2oz unpreserved for TS	A	N/A	2.4	Y	Absent	TS(7)
L1307639-04H	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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: 170229701

Project Number: 170229701

Lab Number: L1307639

Report Date: 05/07/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1307639-04I	Amber 250ml unpreserved	A	N/A	2.4	Y	Absent	BE-TI(180),NYTCL-8270(14),TCN-9010(14),AS-TI(180),BA-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),TRICR-CALC(30),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)

Container Comments

L1307639-01H

L1307639-02H

L1307639-03I

L1307639-04D

L1307639-04I

*Values in parentheses indicate holding time in days

Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

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 five times (5x) 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 RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers



Project Name: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

Data Qualifiers

due to obvious interference.

- 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.
- 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: 170229701
Project Number: 170229701

Lab Number: L1307639
Report Date: 05/07/13

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 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.



C **A** **r** **S**
 Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
 For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

C **D** **r** **S** **Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

M **D** **r** **S** **Certificate/Lab ID: 2009024.**

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

M **D** **r** **E** **r** **Certificate/Lab ID: M-MA086.**

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; Colilert, QT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. *Microbiology Parameters:* (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

N **o** **r** **D** **o** **E** **S** **Certificate/Lab ID:** 200307. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. *Organic Parameters:* 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. *Organic Parameters:* SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. *Organic Parameters:* SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

N **o** **r** **D** **o** **E** **S** **Certificate/Lab ID:** MA935. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. *Organic Parameters:* EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. *Organic Parameters:* SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. *Organic Parameters:* SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

N **o** **r** **D** **o** **E** **S** **Certificate/Lab ID:** 11148. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. *Organic Parameters:* EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. *Organic Parameters:* EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. *Organic Parameters:* EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

Norfolk County Department of Environmental Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Department of Environmental Resources Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rockland County Department of Environmental Resources Certificate/Lab ID: LAO00065. **NELAP Accredited via NJ-DEP.**
Refer to MA-DEP Certificate for Potable and Non-Potable Water.
Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Tarrant County Department of Environmental Resources Certificate/Lab ID: T104704476. **NELAP Accredited.**
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Franklin County Department of Environmental Resources Certificate/Lab ID: 460195. **NELAP Accredited.**
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Environmental Resources **LAB** Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

T **o** **o** **r** **NELA** **TNI S** **o** **A**
E **A** **B** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **E** **A** **A** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **E** **A** **C** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **E** **A** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **E** **A** Total Petroleum Hydrocarbons, Oil & Grease.



CHAIN OF CUSTODY

PAGE 1 OF 1

Serial No: 05071316:50

ALPHA Job #: L1307639

Client Information

Client: Langan
 Address: 360 W 31st St 8th Fl
New York, NY 10001
 Phone: 212-479-5400
 Fax: 212-479-5474

Email: pdiggs@langan.com
 These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: 170229701
 Project Location: 546 W 44th St
 Project #: 170229701
 Project Manager: Elohil Bourban
 ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
 Date Due: 5/17/13 Time:

Report Information - Data Deliverables

Date Rec'd in Lab: 5/1/13
 FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: NYSDEC Criteria: Part 375 Unrestricted

ANALYSIS	SAMPLE HANDLING						TOTAL # BOTTLES
	Filtration	Done	Not needed	Lab to do Preservation	Lab to do	Sample Specific Comments	
VOCs							
SVOCs							
PCBS/Cs							
Polychlorinated Biphenyls							
Metals							
Cr+6							
10 Solids							

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Specific Comments	TOTAL # BOTTLES	
		Date	Time			VOCs	SVOCs	PCBS/Cs	Polychlorinated Biphenyls	Metals	Cr+6			10 Solids
07639-01	B12-0-2	4/30/13	0845	S	JPD	3	X	X	X	X	1		3 encore, 2 amber, 1 Photo	6
-02	B12-11-13	4/30/13	0960	S	JPD	3	X	X	X	X	1		3 encore, 2 amber, 1 Photo	6
-03	B17-0-2	4/30/13	1055	S	JPD	3	X	X	X	X	1		3 encore, 2 amber, 1 Photo	6
-04	B13-0-2	4/30/13	1100	S	JPD	3	X	X	X	X	1		3 encore, 2 amber, 1 Photo	6

Container Type	E	A	A	A	A	P
Preservative	A	A	A	A	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	4/30/13 1345	<i>[Signature]</i>	4/30/13 1345
	4/30/13 1400	<i>[Signature]</i>	4/30/13 1400
	5/1/13 0030	<i>[Signature]</i>	5/1/13 0030

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L1307771
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Elodie Bourbon
Phone:	(212) 479-5400
Project Name:	546 W 44TH ST
Project Number:	170229701
Report Date:	05/08/13

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.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1307771-01	SV3_20130501	NEW YORK, NY	05/01/13 13:45
L1307771-02	SV4_20130501	NEW YORK, NY	05/01/13 12:35
L1307771-03	SV5_20130501	NEW YORK, NY	05/01/13 13:45
L1307771-04	SV6_20130501	NEW YORK, NY	05/01/13 12:25
L1307771-05	SV7_20130501	NEW YORK, NY	05/01/13 13:25
L1307771-06	AMBIENT	NEW YORK, NY	05/01/13 13:55

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

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 free of charge for 30 days from the date the project is completed. After 30 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.

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

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on May 1, 2013. The canister certification results are provided as an addendum.

L1307771-02 The RPD of the pre- and post-flow controller calibration check (28% RPD) was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 40 mL/minute; the final flow rate was 53 mL/minute. The final pressure recorded by the laboratory of the associated canister was -8.0 inches of mercury.

L1307771-03 The RPD of the pre- and post-flow controller calibration check (4% RPD) was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 40 mL/minute; the final flow rate was 51 mL/minute. The final pressure recorded by the laboratory of the associated canister was -6.4 inches of mercury.

The canister ID listed on the chain of custody form for the L1307771-02 sample is 8059 which is actually the asset number, the canister ID number is 1702. The canister ID listed on the chain of custody form for the L1307771-06 sample is 1559 but it should be 1550.

Samples L1307771-01 and WG605908-5 Duplicate have elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the samples.

Samples L1307771-01 and WG605908-5 Duplicate results for Propylene and Acetone should be considered estimated due to co-elution with a non-target peaks.

Samples L1307771-01 and WG605908-5 Duplicate The presence of 2,2,4-Trimethylpentane could not be determined in these samples due to a non-target compound interfering with the identification and quantification of this compound.

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Case Narrative (continued)

Sample L1307771-02 results for Propylene, 1,3-Butadiene, and 4-Methyl-2-Pentanone should be considered estimated due to co-elution with a non-target peaks.

Sample L1307771-02 The presence of 2,2,4-Trimethylpentane could not be determined in this sample due to a non-target compound interfering with the identification and quantification of this compound.

Sample L1307771-03 has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Sample L1307771-03 results for 4-Methyl-2-Pentanone should be considered estimated due to co-elution with a non-target peak.

Samples L1307771-04 and -06 results for Propylene and 1,3-Butadiene should be considered estimated due to co-elution with a non-target peaks.

Sample L1307771-04 The presence of 2,2,4-Trimethylpentane and 4-Methyl-2-pentanone could not be determined in this sample due to a non-target compounds interfering with the identification and quantification of these compounds.

Sample L1307771-05 results for Propylene should be considered estimated due to co-elution with a non-target peak.

Sample L1307771-05 The presence of 2,2,4-Trimethylpentane could not be determined in this sample due to a non-target compound interfering with the identification and quantification of this compound.

Sample L1307771-06 The presence of 4-Methyl-2-pentanone could not be determined in this sample due to a non-target compound interfering with the identification and quantification of this compound.

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Case Narrative (continued)

The WG605908-3 LCS recovery for Hexachlorobutadiene (134%) is above the upper 130% acceptance limit. None of the samples associated with this LCS have reportable amounts of these analytes.

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: 05/08/13

AIR

Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-01 D
 Client ID: SV3_20130501
 Sample Location: NEW YORK, NY
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 05/04/13 17:41
 Analyst: RY

Date Collected: 05/01/13 13:45
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	10.0	1.00	--	17.2	1.72	--		2
Dichlorodifluoromethane	0.610	0.400	--	3.02	1.98	--		2
Chloromethane	ND	0.400	--	ND	0.826	--		2
Freon-114	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	ND	0.400	--	ND	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethanol	ND	5.00	--	ND	9.42	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	65.6	2.00	--	156	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
Isopropanol	ND	1.00	--	ND	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Methylene chloride	ND	2.00	--	ND	6.95	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	11.2	0.400	--	34.9	1.25	--		2
Freon-113	ND	0.400	--	ND	3.07	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
1,1-Dichloroethane	ND	0.400	--	ND	1.62	--		2
Methyl tert butyl ether	ND	0.400	--	ND	1.44	--		2
Vinyl acetate	ND	0.400	--	ND	1.41	--		2
2-Butanone	3.30	0.400	--	9.73	1.18	--		2
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-01 D

Date Collected: 05/01/13 13:45

Client ID: SV3_20130501

Date Received: 05/01/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2
Chloroform	6.29	0.400	--	30.7	1.95	--		2
Tetrahydrofuran	ND	0.400	--	ND	1.18	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	7.19	0.400	--	25.3	1.41	--		2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Benzene	1.90	0.400	--	6.07	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	0.438	0.400	--	1.51	1.38	--		2
1,2-Dichloropropane	ND	0.400	--	ND	1.85	--		2
Bromodichloromethane	ND	0.400	--	ND	2.68	--		2
1,4-Dioxane	ND	0.400	--	ND	1.44	--		2
Trichloroethene	ND	0.400	--	ND	2.15	--		2
2,2,4-Trimethylpentane	ND	0.400	--	ND	1.87	--		2
Heptane	6.44	0.400	--	26.4	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	2.22	0.400	--	9.10	1.64	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Toluene	4.95	0.400	--	18.7	1.51	--		2
2-Hexanone	ND	0.400	--	ND	1.64	--		2
Dibromochloromethane	ND	0.400	--	ND	3.41	--		2
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	6.97	0.400	--	47.3	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	4.87	0.400	--	21.2	1.74	--		2
p/m-Xylene	14.3	0.800	--	62.1	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-01 D

Date Collected: 05/01/13 13:45

Client ID: SV3_20130501

Date Received: 05/01/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	0.400	--	ND	1.70	--		2
1,1,2,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	8.44	0.400	--	36.7	1.74	--		2
4-Ethyltoluene	1.54	0.400	--	7.57	1.97	--		2
1,3,5-Trimethylbenzene	2.51	0.400	--	12.3	1.97	--		2
1,2,4-Trimethylbenzene	5.18	0.400	--	25.5	1.97	--		2
Benzyl chloride	ND	0.400	--	ND	2.07	--		2
1,3-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,4-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2,4-Trichlorobenzene	ND	0.400	--	ND	2.97	--		2
Hexachlorobutadiene	ND	0.400	--	ND	4.27	--		2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	84		60-140
Bromochloromethane	85		60-140
chlorobenzene-d5	98		60-140



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-02
Client ID: SV4_20130501
Sample Location: NEW YORK, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 05/04/13 18:44
Analyst: RY

Date Collected: 05/01/13 12:35
Date Received: 05/01/13
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	5.39	0.500	--	9.28	0.861	--		1
Dichlorodifluoromethane	0.586	0.200	--	2.90	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	0.344	0.200	--	0.761	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	47.2	1.00	--	112	2.38	--		1
Trichlorofluoromethane	0.265	0.200	--	1.49	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	3.37	1.00	--	11.7	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	10.1	0.200	--	31.5	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	1.71	0.200	--	5.04	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-02
 Client ID: SV4_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 12:35
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.208	0.200	--	1.02	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.680	0.200	--	2.40	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.747	0.200	--	2.39	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	0.276	0.200	--	0.950	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	0.567	0.200	--	2.32	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	0.302	0.200	--	1.24	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	3.71	0.200	--	14.0	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	0.718	0.200	--	4.87	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	1.74	0.200	--	7.56	0.869	--		1
p/m-Xylene	6.58	0.400	--	28.6	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-02
 Client ID: SV4_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 12:35
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	3.20	0.200	--	13.9	0.869	--		1
4-Ethyltoluene	1.13	0.200	--	5.56	0.983	--		1
1,3,5-Trimethylbenzene	1.59	0.200	--	7.82	0.983	--		1
1,2,4-Trimethylbenzene	3.87	0.200	--	19.0	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	89		60-140
Bromochloromethane	90		60-140
chlorobenzene-d5	103		60-140



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

SAMPLE RESULTS

Lab ID: L1307771-03 D
 Client ID: SV5_20130501
 Sample Location: NEW YORK, NY
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 05/04/13 19:15
 Analyst: RY

Date Collected: 05/01/13 13:45
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	ND	1.00	--	ND	1.72	--		2
Dichlorodifluoromethane	0.676	0.400	--	3.34	1.98	--		2
Chloromethane	ND	0.400	--	ND	0.826	--		2
Freon-114	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	ND	0.400	--	ND	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethanol	ND	5.00	--	ND	9.42	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	25.3	2.00	--	60.1	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
Isopropanol	ND	1.00	--	ND	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Methylene chloride	ND	2.00	--	ND	6.95	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	7.52	0.400	--	23.4	1.25	--		2
Freon-113	ND	0.400	--	ND	3.07	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
1,1-Dichloroethane	ND	0.400	--	ND	1.62	--		2
Methyl tert butyl ether	ND	0.400	--	ND	1.44	--		2
Vinyl acetate	ND	0.400	--	ND	1.41	--		2
2-Butanone	1.66	0.400	--	4.90	1.18	--		2
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-03 D

Date Collected: 05/01/13 13:45

Client ID: SV5_20130501

Date Received: 05/01/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2
Chloroform	9.02	0.400	--	44.0	1.95	--		2
Tetrahydrofuran	ND	0.400	--	ND	1.18	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	0.636	0.400	--	2.24	1.41	--		2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Benzene	0.524	0.400	--	1.67	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	ND	0.400	--	ND	1.38	--		2
1,2-Dichloropropane	ND	0.400	--	ND	1.85	--		2
Bromodichloromethane	ND	0.400	--	ND	2.68	--		2
1,4-Dioxane	ND	0.400	--	ND	1.44	--		2
Trichloroethene	1.14	0.400	--	6.13	2.15	--		2
2,2,4-Trimethylpentane	0.460	0.400	--	2.15	1.87	--		2
Heptane	0.682	0.400	--	2.79	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	0.436	0.400	--	1.79	1.64	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Toluene	3.27	0.400	--	12.3	1.51	--		2
2-Hexanone	ND	0.400	--	ND	1.64	--		2
Dibromochloromethane	ND	0.400	--	ND	3.41	--		2
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	139	0.400	--	943	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	6.82	0.400	--	29.6	1.74	--		2
p/m-Xylene	22.9	0.800	--	99.5	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-03 D

Date Collected: 05/01/13 13:45

Client ID: SV5_20130501

Date Received: 05/01/13

Sample Location: NEW YORK, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	0.400	--	ND	1.70	--		2
1,1,2,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	12.1	0.400	--	52.6	1.74	--		2
4-Ethyltoluene	1.55	0.400	--	7.62	1.97	--		2
1,3,5-Trimethylbenzene	2.50	0.400	--	12.3	1.97	--		2
1,2,4-Trimethylbenzene	6.23	0.400	--	30.6	1.97	--		2
Benzyl chloride	ND	0.400	--	ND	2.07	--		2
1,3-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,4-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2,4-Trichlorobenzene	ND	0.400	--	ND	2.97	--		2
Hexachlorobutadiene	ND	0.400	--	ND	4.27	--		2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	99		60-140



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

SAMPLE RESULTS

Lab ID: L1307771-04
 Client ID: SV6_20130501
 Sample Location: NEW YORK, NY
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 05/04/13 19:48
 Analyst: RY

Date Collected: 05/01/13 12:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	10.7	0.500	--	18.4	0.861	--		1
Dichlorodifluoromethane	0.641	0.200	--	3.17	0.989	--		1
Chloromethane	0.557	0.200	--	1.15	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.883	0.200	--	1.95	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	116	1.00	--	276	2.38	--		1
Trichlorofluoromethane	0.306	0.200	--	1.72	1.12	--		1
Isopropanol	0.521	0.500	--	1.28	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	4.84	1.00	--	16.8	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	3.99	0.200	--	12.4	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	2.54	0.200	--	7.49	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

SAMPLE RESULTS

Lab ID: L1307771-04
 Client ID: SV6_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 12:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.705	0.200	--	3.44	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	4.38	0.200	--	15.4	0.705	--		1
1,1,1-Trichloroethane	0.847	0.200	--	4.62	1.09	--		1
Benzene	2.67	0.200	--	8.53	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	1.59	0.200	--	5.47	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	2.40	0.200	--	9.84	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	5.11	0.200	--	19.3	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	2.17	0.200	--	14.7	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	5.82	0.200	--	25.3	0.869	--		1
p/m-Xylene	20.7	0.400	--	89.9	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-04
 Client ID: SV6_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 12:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	9.53	0.200	--	41.4	0.869	--		1
4-Ethyltoluene	1.76	0.200	--	8.65	0.983	--		1
1,3,5-Trimethylbenzene	2.60	0.200	--	12.8	0.983	--		1
1,2,4-Trimethylbenzene	6.06	0.200	--	29.8	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	92		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	110		60-140



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-05
 Client ID: SV7_20130501
 Sample Location: NEW YORK, NY
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 05/04/13 20:20
 Analyst: RY

Date Collected: 05/01/13 13:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	1.60	0.500	--	2.75	0.861	--		1
Dichlorodifluoromethane	0.533	0.200	--	2.64	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	2.77	2.50	--	5.22	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	169	1.00	--	401	2.38	--		1
Trichlorofluoromethane	0.336	0.200	--	1.89	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	1.00	--	ND	3.47	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.625	0.200	--	1.95	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	2.94	0.200	--	8.67	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-05
 Client ID: SV7_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 13:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	97.1	0.200	--	474	0.977	--		1
Tetrahydrofuran	ND	0.200	--	ND	0.590	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.604	0.200	--	2.13	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	4.85	0.200	--	15.5	0.639	--		1
Carbon tetrachloride	0.242	0.200	--	1.52	1.26	--		1
Cyclohexane	0.302	0.200	--	1.04	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	2.74	0.200	--	18.4	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	0.904	0.200	--	4.86	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	1.75	0.200	--	7.17	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	9.07	0.200	--	34.2	0.754	--		1
2-Hexanone	0.550	0.200	--	2.25	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	3.03	0.200	--	20.5	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	4.34	0.200	--	18.9	0.869	--		1
p/m-Xylene	13.4	0.400	--	58.2	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-05
 Client ID: SV7_20130501
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 13:25
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	0.326	0.200	--	1.39	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	7.28	0.200	--	31.6	0.869	--		1
4-Ethyltoluene	3.52	0.200	--	17.3	0.983	--		1
1,3,5-Trimethylbenzene	5.12	0.200	--	25.2	0.983	--		1
1,2,4-Trimethylbenzene	11.6	0.200	--	57.0	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	74		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	99		60-140



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-06
 Client ID: AMBIENT
 Sample Location: NEW YORK, NY
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 05/04/13 17:10
 Analyst: RY

Date Collected: 05/01/13 13:55
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	4.58	0.500	--	7.88	0.861	--		1
Dichlorodifluoromethane	0.560	0.200	--	2.77	0.989	--		1
Chloromethane	0.600	0.200	--	1.24	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.486	0.200	--	1.08	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	54.1	2.50	--	102	4.71	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	1.21	1.00	--	2.87	2.38	--		1
Trichlorofluoromethane	0.256	0.200	--	1.44	1.12	--		1
Isopropanol	0.717	0.500	--	1.76	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	1.01	1.00	--	3.51	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	0.606	0.200	--	1.79	0.590	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

SAMPLE RESULTS

Lab ID: L1307771-06
 Client ID: AMBIENT
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 13:55
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
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	7.04	0.200	--	24.8	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	3.16	0.200	--	10.1	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	2.90	0.200	--	9.98	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	11.6	0.200	--	54.2	0.934	--		1
Heptane	3.96	0.200	--	16.2	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	12.0	0.200	--	45.2	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	1.87	0.200	--	8.12	0.869	--		1
p/m-Xylene	6.74	0.400	--	29.3	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1



Project Name: 546 W 44TH ST**Lab Number:** L1307771**Project Number:** 170229701**Report Date:** 05/08/13**SAMPLE RESULTS**

Lab ID: L1307771-06
 Client ID: AMBIENT
 Sample Location: NEW YORK, NY

Date Collected: 05/01/13 13:55
 Date Received: 05/01/13
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	2.47	0.200	--	10.7	0.869	--		1
4-Ethyltoluene	0.652	0.200	--	3.21	0.983	--		1
1,3,5-Trimethylbenzene	0.706	0.200	--	3.47	0.983	--		1
1,2,4-Trimethylbenzene	2.37	0.200	--	11.7	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	87		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	98		60-140



Project Name: 546 W 44TH ST

Lab Number: L1307771

Project Number: 170229701

Report Date: 05/08/13

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/04/13 15:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG605908-4								
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
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



Project Name: 546 W 44TH ST

Lab Number: L1307771

Project Number: 170229701

Report Date: 05/08/13

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/04/13 15:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG605908-4								
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
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: 546 W 44TH ST

Lab Number: L1307771

Project Number: 170229701

Report Date: 05/08/13

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 05/04/13 15:10

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-06 Batch: WG605908-4								
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

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



Serial_No:05081314:43

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG605908-3								
Chlorodifluoromethane	98		-		70-130	-		
Propylene	116		-		70-130	-		
Propane	79		-		70-130	-		
Dichlorodifluoromethane	111		-		70-130	-		
Chloromethane	101		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	110		-		70-130	-		
Methanol	98		-		70-130	-		
Vinyl chloride	105		-		70-130	-		
1,3-Butadiene	104		-		70-130	-		
Butane	93		-		70-130	-		
Bromomethane	108		-		70-130	-		
Chloroethane	102		-		70-130	-		
Ethyl Alcohol	99		-		70-130	-		
Dichlorofluoromethane	97		-		70-130	-		
Vinyl bromide	108		-		70-130	-		
Acrolein	83		-		70-130	-		
Acetone	112		-		70-130	-		
Acetonitrile	100		-		70-130	-		
Trichlorofluoromethane	118		-		70-130	-		
iso-Propyl Alcohol	107		-		70-130	-		
Acrylonitrile	96		-		70-130	-		



Serial_No:05081314:43

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG605908-3								
Pentane	95		-		70-130	-		
Ethyl ether	92		-		70-130	-		
1,1-Dichloroethene	108		-		70-130	-		
tert-Butyl Alcohol	97		-		70-130	-		
Methylene chloride	106		-		70-130	-		
3-Chloropropene	117		-		70-130	-		
Carbon disulfide	102		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	115		-		70-130	-		
trans-1,2-Dichloroethene	95		-		70-130	-		
1,1-Dichloroethane	106		-		70-130	-		
Methyl tert butyl ether	96		-		70-130	-		
Vinyl acetate	108		-		70-130	-		
2-Butanone	98		-		70-130	-		
cis-1,2-Dichloroethene	119		-		70-130	-		
Ethyl Acetate	98		-		70-130	-		
Chloroform	114		-		70-130	-		
Tetrahydrofuran	90		-		70-130	-		
2,2-Dichloropropane	98		-		70-130	-		
1,2-Dichloroethane	103		-		70-130	-		
n-Hexane	102		-		70-130	-		
Isopropyl Ether	96		-		70-130	-		



Serial_No:05081314:43

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG605908-3								
Ethyl-Tert-Butyl-Ether	94		-		70-130	-		
1,1,1-Trichloroethane	101		-		70-130	-		
1,1-Dichloropropene	107		-		70-130	-		
Benzene	103		-		70-130	-		
Carbon tetrachloride	114		-		70-130	-		
Cyclohexane	99		-		70-130	-		
Tertiary-Amyl Methyl Ether	94		-		70-130	-		
Dibromomethane	109		-		70-130	-		
1,2-Dichloropropane	107		-		70-130	-		
Bromodichloromethane	106		-		70-130	-		
1,4-Dioxane	102		-		70-130	-		
Trichloroethene	115		-		70-130	-		
2,2,4-Trimethylpentane	104		-		70-130	-		
Methyl methacrylate	135	Q	-		70-130	-		
Heptane	114		-		70-130	-		
cis-1,3-Dichloropropene	112		-		70-130	-		
4-Methyl-2-pentanone	103		-		70-130	-		
trans-1,3-Dichloropropene	96		-		70-130	-		
1,1,2-Trichloroethane	113		-		70-130	-		
Toluene	109		-		70-130	-		
1,3-Dichloropropane	106		-		70-130	-		



Serial_No:05081314:43

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG605908-3								
2-Hexanone	110		-		70-130	-		
Dibromochloromethane	109		-		70-130	-		
1,2-Dibromoethane	122		-		70-130	-		
Butyl Acetate	93		-		70-130	-		
Octane	102		-		70-130	-		
Tetrachloroethene	120		-		70-130	-		
1,1,1,2-Tetrachloroethane	112		-		70-130	-		
Chlorobenzene	120		-		70-130	-		
Ethylbenzene	114		-		70-130	-		
p/m-Xylene	114		-		70-130	-		
Bromoform	108		-		70-130	-		
Styrene	112		-		70-130	-		
1,1,2,2-Tetrachloroethane	121		-		70-130	-		
o-Xylene	117		-		70-130	-		
1,2,3-Trichloropropane	106		-		70-130	-		
Nonane (C9)	106		-		70-130	-		
Isopropylbenzene	114		-		70-130	-		
Bromobenzene	110		-		70-130	-		
o-Chlorotoluene	114		-		70-130	-		
n-Propylbenzene	112		-		70-130	-		
p-Chlorotoluene	112		-		70-130	-		



Serial_No:05081314:43

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 Batch: WG605908-3								
4-Ethyltoluene	101		-		70-130	-		
1,3,5-Trimethylbenzene	117		-		70-130	-		
tert-Butylbenzene	113		-		70-130	-		
1,2,4-Trimethylbenzene	121		-		70-130	-		
Decane (C10)	106		-		70-130	-		
Benzyl chloride	88		-		70-130	-		
1,3-Dichlorobenzene	123		-		70-130	-		
1,4-Dichlorobenzene	122		-		70-130	-		
sec-Butylbenzene	113		-		70-130	-		
p-Isopropyltoluene	108		-		70-130	-		
1,2-Dichlorobenzene	123		-		70-130	-		
n-Butylbenzene	116		-		70-130	-		
1,2-Dibromo-3-chloropropane	129		-		70-130	-		
Undecane	113		-		70-130	-		
Dodecane (C12)	186	Q	-		70-130	-		
1,2,4-Trichlorobenzene	130		-		70-130	-		
Naphthalene	121		-		70-130	-		
1,2,3-Trichlorobenzene	128		-		70-130	-		
Hexachlorobutadiene	134	Q	-		70-130	-		



Serial_No:05081314:43

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG605908-5 QC Sample: L1307771-01 Client ID: SV3_20130501						
Propylene	10.0	9.33	ppbV	7		25
Dichlorodifluoromethane	0.610	0.598	ppbV	2		25
Chloromethane	ND	ND	ppbV	NC		25
Freon-114	ND	ND	ppbV	NC		25
Vinyl chloride	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
Ethanol	ND	ND	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	65.6	64.4	ppbV	2		25
Trichlorofluoromethane	ND	ND	ppbV	NC		25
Isopropanol	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	11.2	11.1	ppbV	1		25
Freon-113	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25



Serial_No:05081314:43

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG605908-5 QC Sample: L1307771-01 Client ID: SV3_20130501					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
Vinyl acetate	ND	5.32	ppbV	NC	25
2-Butanone	3.30	3.39	ppbV	3	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
Ethyl Acetate	ND	ND	ppbV	NC	25
Chloroform	6.29	6.12	ppbV	3	25
Tetrahydrofuran	ND	ND	ppbV	NC	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	7.19	7.43	ppbV	3	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	1.90	1.73	ppbV	9	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	0.438	0.430	ppbV	2	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	ND	ND	ppbV	NC	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25



Serial_No:05081314:43

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG605908-5 QC Sample: L1307771-01 Client ID: SV3_20130501					
Heptane	6.44	6.07	ppbV	6	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	2.22	2.18	ppbV	2	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	4.95	5.33	ppbV	7	25
2-Hexanone	ND	ND	ppbV	NC	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	6.97	7.07	ppbV	1	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	4.87	4.97	ppbV	2	25
p/m-Xylene	14.3	14.7	ppbV	3	25
Bromoform	ND	ND	ppbV	NC	25
Styrene	ND	ND	ppbV	NC	25
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	8.44	8.60	ppbV	2	25
4-Ethyltoluene	1.54	1.62	ppbV	5	25
1,3,5-Trimethylbenzene	2.51	2.53	ppbV	1	25



Serial_No:05081314:43

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG605908-5 QC Sample: L1307771-01 Client ID: SV3_20130501					
1,2,4-Trimethylbenzene	5.18	5.21	ppbV	1	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: 546 W 44TH ST
Project Number: 170229701

Serial_No: 05081314:43
Lab Number: L1307771
Report Date: 05/08/13

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
L1307771-01	SV3_20130501	1559	6.0L Can	05/01/13	88009	L1307191-02	-	-29.8	-8.5	-	-	-	-
L1307771-02	SV4_20130501	1702	6.0L Can	05/01/13	88009	L1307191-02	-	-29.2	-8.0	-	-	-	-
L1307771-03	SV5_20130501	958	6.0L Can	05/01/13	88009	L1307191-02	-	-29.8	-6.4	-	-	-	-
L1307771-04	SV6_20130501	634	6.0L Can	05/01/13	88009	L1307191-02	-	-29.0	-7.0	-	-	-	-
L1307771-05	SV7_20130501	1812	6.0L Can	05/01/13	88009	L1307191-02	-	-29.8	-10.2	-	-	-	-
L1307771-06	AMBIENT	1550	6.0L Can	05/01/13	88009	L1307191-02	-	-29.8	-5.2	-	-	-	-



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1307191
Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 04/24/13 14:41
 Analyst: RY

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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	0.200	--	ND	0.361	--		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: L1307191
Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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: L1307191
Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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: L1307191
Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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**Lab Number:** L1307191**Project Number:** CANISTER QC BAT**Report Date:** 05/08/13**Air Canister Certification Results**

Lab ID: L1307191-02

Date Collected: 04/22/13 14:10

Client ID: CAN 1625 SHELF 42

Date Received: 04/23/13

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	91		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	95		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1307191
Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15-SIM
 Analytical Date: 04/24/13 14:41
 Analyst: RY

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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: L1307191

Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02
 Client ID: CAN 1625 SHELF 42
 Sample Location:

Date Collected: 04/22/13 14:10
 Date Received: 04/23/13
 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
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
n-Butylbenzene	ND	0.500	--	ND	2.74	--		1



Project Name: BATCH CANISTER CERTIFICATION

Lab Number: L1307191

Project Number: CANISTER QC BAT

Report Date: 05/08/13

Air Canister Certification Results

Lab ID: L1307191-02

Date Collected: 04/22/13 14:10

Client ID: CAN 1625 SHELF 42

Date Received: 04/23/13

Sample Location:

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								
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	91		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	91		60-140



Project Name: 546 W 44TH ST

Lab Number: L1307771

Project Number: 170229701

Report Date: 05/08/13

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(*)
L1307771-01A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1307771-02A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1307771-03A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1307771-04A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1307771-05A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)
L1307771-06A	Canister - 6 Liter	N/A	N/A		Y	Present/Intact	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

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 five times (5x) 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 RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: Data Usability Report



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

Data Qualifiers

due to obvious interference.

- 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.
- 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: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1307771
Report Date: 05/08/13

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

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.



Certificate/Approval Program Summary

Last revised August 3, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B, 3020A, . Organic Parameters: EPA 3510C, 3630C, 3640A, 3660B, 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 6020A, 7471B, 9040B, 9045C. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9045D, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15, TO-10A, TO-13A-SIM.)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474, 9040C, 9045D. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15, TO-10A.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Non-Potable Water (Inorganic Parameters: 1312, 1631E, 180.1, 3020A, 6020A, 7470A, 9040B, 9050A, 2320B, 2540D, 2540G, SM4500H+-B. Organic Parameters: 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D .)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3051A, 6020A, 7471B, 7474 9040B, 9045C, 9060. Organic Parameters: EPA3050B, 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8270D, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via NJ-DEP.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID:460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters:EPA 3020A, 6020A, 245.7, 9040B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A,7470A,7471B,9040B,9045C,3050B,3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **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, 2-Methylnaphthalene, 1-Methylnaphthalene.

Serial_No:05081314:43



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: Langan
 Address: 360 W 31st St 8th Fl
New York NY 10001
 Phone: 212-479-8400
 Fax: 212-479-5444
 Email: pd@langan.com

Project Information

Project Name: 546 W 44th St
 Project Location: New York, NY
 Project #: 170229701
 Project Manager: Elodie Bourbon
 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)

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Criteria
<u>NYSDCL</u>		

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	I D Can	I D - 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		TO-13A
- 1	SV3-20130501	5/1/13	1155	1345	-30.19	-9.23	SU	SM	6L	1559	-	X						
- 2	SV4-20130501	5/1/13	1100	1235	-29.60	-8.94	SU	SM	6L	8059	-	X						
- 3	SV5-20130501	5/1/13	1230	1345	-30.05	-7.54	SU	SM	6L	9588	-	X						
- 4	SV6-20130501	5/1/13	1120	1225	-29.48	-6.94	SU	SM	6L	634	-	X						
- 5	SV7-20130501	5/1/13	1114	1325	-30.37	-9.98	SU	SM	6L	112	-	X						
- 6	AMBIANT	5/1/13	1355	1355	-30	-5.17	AA	SM	6L	1559	-	X						

***SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)
 SV = Soil Vapor/Landfill Gas/SVE
 Other = Please Specify

Container Type

5

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	5/1/13 14:00	<u>[Signature]</u>	5-1-13 14:00
<u>[Signature]</u>	5/1/13 18:00	<u>[Signature]</u>	5/1/13 18:00
<u>[Signature]</u>	5/1/13 22:30	<u>[Signature]</u>	5/1/13 22:30
<u>[Signature]</u>	5/2/13 05:00	<u>[Signature]</u>	5/2/13 05:00



ANALYTICAL REPORT

Lab Number:	L1308234
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Elodie Bourbon
Phone:	(212) 479-5400
Project Name:	546 W 44TH ST
Project Number:	170229701
Report Date:	05/15/13

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.

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



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1308234-01	GEOTECH2_20130508	NYC	05/08/13 11:15

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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 free of charge for 30 days from the date the project is completed. After 30 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.

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

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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.

Semivolatile Organics

The WG607030-2/-3 LCS/LCSD recoveries, associated with L1308234-01, are below the acceptance criteria for Benzoic Acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Total Metals

The WG606846-4 MS recovery for Calcium (30%) and Sodium (50%), performed on L1308234-01, do not apply because the sample concentration is greater than four times the spike amount added.

The WG606846-3 Laboratory Duplicate RPD, performed on L1308234-01, is above the acceptance criteria for Antimony (34%); however, the sample and duplicate results are less than five times the reporting limit.

Therefore, the RPD is valid.

The WG606846-3 Laboratory Duplicate RPD, performed on L1308234-01, is outside the acceptance criteria for Iron (109%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the Laboratory Duplicate.

Dissolved Metals

The WG607352-4 MS recoveries for Calcium (220%), Magnesium (181%), and Sodium (300%), performed on L1308234-01, do not apply because the sample concentration is greater than four times the spike amount added.

The WG607352-4 MS recovery, performed on L1308234-01, is above the acceptance criteria for Potassium (130%). A post digestion spike was performed with an unacceptable recovery of 128%. This has been attributed to sample matrix.

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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 05/15/13

ORGANICS

VOLATILES

Project Name: 546 W 44TH ST**Lab Number:** L1308234**Project Number:** 170229701**Report Date:** 05/15/13**SAMPLE RESULTS**

Lab ID: L1308234-01
Client ID: GEOTECH2_20130508
Sample Location: NYC
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/10/13 15:49
Analyst: PD

Date Collected: 05/08/13 11:15
Date Received: 05/08/13
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	0.79	J	ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.16	1
1,2-Dichloropropane	ND		ug/l	1.0	0.30	1
Dibromochloromethane	ND		ug/l	0.50	0.19	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.50		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	ND		ug/l	0.50	0.16	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	0.19	1
Benzene	ND		ug/l	0.50	0.19	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	0.18	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		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: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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	ND		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
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.1	J	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	ND		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
1,4-Dioxane	ND		ug/l	250	76.	1
1,4-Diethylbenzene	ND		ug/l	2.0	0.70	1
4-Ethyltoluene	ND		ug/l	2.0	0.70	1

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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	104		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	111		70-130

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/10/13 09:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG607199-3					
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	0.16
1,2-Dichloropropane	ND		ug/l	1.0	0.30
Dibromochloromethane	ND		ug/l	0.50	0.19
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	0.16
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	0.19
Benzene	ND		ug/l	0.50	0.19
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	0.18
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: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/10/13 09:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG607199-3					
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
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
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
Analytical Date: 05/10/13 09:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG607199-3					
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
1,4-Dioxane	ND		ug/l	250	76.
1,4-Diethylbenzene	ND		ug/l	2.0	0.70
4-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

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	111		70-130

Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607199-1 WG607199-2								
Methylene chloride	86		85		70-130	1		20
1,1-Dichloroethane	86		88		70-130	2		20
Chloroform	98		99		70-130	1		20
Carbon tetrachloride	106		109		63-132	3		20
1,2-Dichloropropane	83		83		70-130	0		20
Dibromochloromethane	107		104		63-130	3		20
1,1,2-Trichloroethane	93		93		70-130	0		20
Tetrachloroethene	114		118		70-130	3		20
Chlorobenzene	105		106		75-130	1		20
Trichlorofluoromethane	104		106		62-150	2		20
1,2-Dichloroethane	97		95		70-130	2		20
1,1,1-Trichloroethane	103		104		67-130	1		20
Bromodichloromethane	96		97		67-130	1		20
trans-1,3-Dichloropropene	91		89		70-130	2		20
cis-1,3-Dichloropropene	87		86		70-130	1		20
1,1-Dichloropropene	90		92		70-130	2		20
Bromoform	102		98		54-136	4		20
1,1,2,2-Tetrachloroethane	90		89		67-130	1		20
Benzene	90		90		70-130	0		20
Toluene	100		101		70-130	1		20
Ethylbenzene	101		102		70-130	1		20



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607199-1 WG607199-2								
Chloromethane	62	Q	59	Q	64-130	5		20
Bromomethane	81		78		39-139	4		20
Vinyl chloride	75		76		55-140	1		20
Chloroethane	96		96		55-138	0		20
1,1-Dichloroethene	98		97		61-145	1		20
trans-1,2-Dichloroethene	95		95		70-130	0		20
Trichloroethene	93		94		70-130	1		20
1,2-Dichlorobenzene	108		107		70-130	1		20
1,3-Dichlorobenzene	109		112		70-130	3		20
1,4-Dichlorobenzene	107		111		70-130	4		20
Methyl tert butyl ether	82		81		63-130	1		20
p/m-Xylene	106		107		70-130	1		20
o-Xylene	106		107		70-130	1		20
cis-1,2-Dichloroethene	95		94		70-130	1		20
Dibromomethane	96		92		70-130	4		20
1,2,3-Trichloropropane	97		94		64-130	3		20
Acrylonitrile	71		70		70-130	1		20
Styrene	106		107		70-130	1		20
Dichlorodifluoromethane	83		86		36-147	4		20
Acetone	77		78		58-148	1		20
Carbon disulfide	84		86		51-130	2		20



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607199-1 WG607199-2								
2-Butanone	62	Q	58	Q	63-138	7		20
Vinyl acetate	71		70		70-130	1		20
4-Methyl-2-pentanone	70		68		59-130	3		20
2-Hexanone	67		63		57-130	6		20
Bromochloromethane	104		102		70-130	2		20
2,2-Dichloropropane	101		102		63-133	1		20
1,2-Dibromoethane	100		96		70-130	4		20
1,3-Dichloropropane	92		91		70-130	1		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	108		110		70-130	2		20
n-Butylbenzene	97		103		53-136	6		20
sec-Butylbenzene	103		107		70-130	4		20
tert-Butylbenzene	105		108		70-130	3		20
o-Chlorotoluene	104		118		70-130	13		20
p-Chlorotoluene	100		103		70-130	3		20
1,2-Dibromo-3-chloropropane	89		89		41-144	0		20
Hexachlorobutadiene	110		111		63-130	1		20
Isopropylbenzene	103		106		70-130	3		20
p-Isopropyltoluene	105		108		70-130	3		20
Naphthalene	76		72		70-130	5		20
n-Propylbenzene	100		102		69-130	2		20



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607199-1 WG607199-2								
1,2,3-Trichlorobenzene	87		86		70-130	1		20
1,2,4-Trichlorobenzene	95		96		70-130	1		20
1,3,5-Trimethylbenzene	105		110		64-130	5		20
1,2,4-Trimethylbenzene	105		106		70-130	1		20
1,4-Dioxane	68		61		56-162	11		20
1,4-Diethylbenzene	100		104		70-130	4		20
4-Ethyltoluene	102		104		70-130	2		20
1,2,4,5-Tetramethylbenzene	97		101		70-130	4		20
Ethyl ether	80		79		59-134	1		20
trans-1,4-Dichloro-2-butene	60	Q	60	Q	70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		105		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	111		111		70-130



SEMIVOLATILES

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC
 Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 05/13/13 02:13
 Analyst: RC

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/09/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40	1
Hexachlorocyclopentadiene	ND		ug/l	20	2.1	1
Isophorone	ND		ug/l	5.0	0.35	1
Nitrobenzene	ND		ug/l	2.0	0.50	1
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39	1
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Butyl benzyl phthalate	ND		ug/l	5.0	0.46	1
Di-n-butylphthalate	ND		ug/l	5.0	0.54	1
Di-n-octylphthalate	ND		ug/l	5.0	0.53	1
Diethyl phthalate	ND		ug/l	5.0	0.45	1
Dimethyl phthalate	ND		ug/l	5.0	0.45	1
Biphenyl	ND		ug/l	2.0	0.50	1
4-Chloroaniline	ND		ug/l	5.0	0.83	1
2-Nitroaniline	ND		ug/l	5.0	0.40	1
3-Nitroaniline	ND		ug/l	5.0	0.59	1
4-Nitroaniline	ND		ug/l	5.0	0.55	1
Dibenzofuran	ND		ug/l	2.0	0.47	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65	1
Acetophenone	ND		ug/l	5.0	0.55	1

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 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	0.45	1
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50	1
2-Chlorophenol	ND		ug/l	2.0	0.34	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.43	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.2	1
2-Nitrophenol	ND		ug/l	10	0.48	1
4-Nitrophenol	ND		ug/l	10	1.2	1
2,4-Dinitrophenol	ND		ug/l	20	1.4	1
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59	1
Phenol	ND		ug/l	5.0	0.26	1
2-Methylphenol	ND		ug/l	5.0	0.53	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45	1
Benzoic Acid	ND		ug/l	50	1.0	1
Benzyl Alcohol	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.53	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	83		10-120
4-Terphenyl-d14	71		41-149

Project Name: 546 W 44TH ST**Lab Number:** L1308234**Project Number:** 170229701**Report Date:** 05/15/13**SAMPLE RESULTS**

Lab ID: L1308234-01
Client ID: GEOTECH2_20130508
Sample Location: NYC
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 05/13/13 17:48
Analyst: AS

Date Collected: 05/08/13 11:15
Date Received: 05/08/13
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 05/09/13 17:38

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	ND		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	ND		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	37		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	68		41-149

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/12/13 23:54
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 05/09/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG607030-1					
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.67
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
1,2-Dichlorobenzene	ND		ug/l	2.0	0.55
1,3-Dichlorobenzene	ND		ug/l	2.0	0.55
1,4-Dichlorobenzene	ND		ug/l	2.0	0.55
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.85
2,4-Dinitrotoluene	ND		ug/l	5.0	0.45
2,6-Dinitrotoluene	ND		ug/l	5.0	0.46
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.61
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.67
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.50
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.40
Hexachlorocyclopentadiene	ND		ug/l	20	2.1
Isophorone	ND		ug/l	5.0	0.35
Nitrobenzene	ND		ug/l	2.0	0.50
NitrosoDiPhenylAmine(NDPA)/DPA	ND		ug/l	2.0	0.70
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.39
Bis(2-Ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Butyl benzyl phthalate	ND		ug/l	5.0	0.46
Di-n-butylphthalate	ND		ug/l	5.0	0.54
Di-n-octylphthalate	ND		ug/l	5.0	0.53
Diethyl phthalate	ND		ug/l	5.0	0.45
Dimethyl phthalate	ND		ug/l	5.0	0.45
Biphenyl	ND		ug/l	2.0	0.50
4-Chloroaniline	ND		ug/l	5.0	0.83
2-Nitroaniline	ND		ug/l	5.0	0.40
3-Nitroaniline	ND		ug/l	5.0	0.59
4-Nitroaniline	ND		ug/l	5.0	0.55
Dibenzofuran	ND		ug/l	2.0	0.47
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.65
Acetophenone	ND		ug/l	5.0	0.55



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D
Analytical Date: 05/12/13 23:54
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 05/09/13 17:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG607030-1					
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.45
P-Chloro-M-Cresol	ND		ug/l	2.0	0.50
2-Chlorophenol	ND		ug/l	2.0	0.34
2,4-Dichlorophenol	ND		ug/l	5.0	0.43
2,4-Dimethylphenol	ND		ug/l	5.0	1.2
2-Nitrophenol	ND		ug/l	10	0.48
4-Nitrophenol	ND		ug/l	10	1.2
2,4-Dinitrophenol	ND		ug/l	20	1.4
4,6-Dinitro-o-cresol	ND		ug/l	10	0.59
Phenol	ND		ug/l	5.0	0.26
2-Methylphenol	ND		ug/l	5.0	0.53
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.47
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.45
Benzoic Acid	ND		ug/l	50	1.0
Benzyl Alcohol	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.53

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	44		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	64		41-149

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 05/13/13 12:25
Analyst: AS

Extraction Method: EPA 3510C
Extraction Date: 05/09/13 17:38

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG607032-1					
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	0.14	J	ug/l	0.50	0.07
Naphthalene	0.07	J	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	0.07	J	ug/l	0.20	0.06
Pentachlorophenol	ND		ug/l	0.80	0.19
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	0.14	J	ug/l	0.80	0.07

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 05/13/13 12:25

Extraction Date: 05/09/13 17:38

Analyst: AS

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG607032-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	53		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	65		41-149

Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607030-2 WG607030-3								
1,2,4-Trichlorobenzene	53		51		39-98	4		30
Bis(2-chloroethyl)ether	62		60		40-140	3		30
1,2-Dichlorobenzene	51		50		40-140	2		30
1,3-Dichlorobenzene	47		48		40-140	2		30
1,4-Dichlorobenzene	48		48		36-97	0		30
3,3'-Dichlorobenzidine	71		71		40-140	0		30
2,4-Dinitrotoluene	80		80		24-96	0		30
2,6-Dinitrotoluene	87		90		40-140	3		30
4-Chlorophenyl phenyl ether	72		73		40-140	1		30
4-Bromophenyl phenyl ether	79		81		40-140	3		30
Bis(2-chloroisopropyl)ether	61		60		40-140	2		30
Bis(2-chloroethoxy)methane	65		65		40-140	0		30
Hexachlorocyclopentadiene	21	Q	21	Q	40-140	0		30
Isophorone	67		66		40-140	2		30
Nitrobenzene	75		72		40-140	4		30
NitrosoDiPhenylAmine(NDPA)/DPA	73		75		40-140	3		30
n-Nitrosodi-n-propylamine	66		65		29-132	2		30
Bis(2-Ethylhexyl)phthalate	91		92		40-140	1		30
Butyl benzyl phthalate	92		94		40-140	2		30
Di-n-butylphthalate	93		96		40-140	3		30
Di-n-octylphthalate	92		94		40-140	2		30



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607030-2 WG607030-3								
Diethyl phthalate	85		86		40-140	1		30
Dimethyl phthalate	80		80		40-140	0		30
Biphenyl	65		61			6		30
4-Chloroaniline	52		61		40-140	16		30
2-Nitroaniline	76		78		52-143	3		30
3-Nitroaniline	65		65		25-145	0		30
4-Nitroaniline	76		77		51-143	1		30
Dibenzofuran	71		70		40-140	1		30
1,2,4,5-Tetrachlorobenzene	56		53		2-134	6		30
Acetophenone	68		66		39-129	3		30
2,4,6-Trichlorophenol	81		81		30-130	0		30
P-Chloro-M-Cresol	82		83		23-97	1		30
2-Chlorophenol	63		62		27-123	2		30
2,4-Dichlorophenol	73		71		30-130	3		30
2,4-Dimethylphenol	73		73		30-130	0		30
2-Nitrophenol	73		71		30-130	3		30
4-Nitrophenol	44		46		10-80	4		30
2,4-Dinitrophenol	86		89		20-130	3		30
4,6-Dinitro-o-cresol	85		85		20-164	0		30
Phenol	30		30		12-110	0		30
2-Methylphenol	56		56		30-130	0		30



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG607030-2 WG607030-3								
3-Methylphenol/4-Methylphenol	54		54		30-130	0		30
2,4,5-Trichlorophenol	85		86		30-130	1		30
Benzoic Acid	0		0			NC		30
Benzyl Alcohol	58		56			4		30
Carbazole	84		86		55-144	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	40		40		21-120
Phenol-d6	30		30		10-120
Nitrobenzene-d5	79		79		23-120
2-Fluorobiphenyl	69		68		15-120
2,4,6-Tribromophenol	83		83		10-120
4-Terphenyl-d14	74		75		41-149



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG607032-2 WG607032-3								
Acenaphthene	56		60		37-111	7		40
2-Chloronaphthalene	56		59		40-140	5		40
Fluoranthene	82		86		40-140	5		40
Hexachlorobutadiene	47		50		40-140	6		40
Naphthalene	56		58		40-140	4		40
Benzo(a)anthracene	85		82		40-140	4		40
Benzo(a)pyrene	74		73		40-140	1		40
Benzo(b)fluoranthene	80		80		40-140	0		40
Benzo(k)fluoranthene	77		76		40-140	1		40
Chrysene	78		77		40-140	1		40
Acenaphthylene	71		74		40-140	4		40
Anthracene	66		71		40-140	7		40
Benzo(ghi)perylene	70		63		40-140	11		40
Fluorene	68		71		40-140	4		40
Phenanthrene	71		75		40-140	5		40
Dibenzo(a,h)anthracene	72		69		40-140	4		40
Indeno(1,2,3-cd)Pyrene	73		68		40-140	7		40
Pyrene	78		80		26-127	3		40
2-Methylnaphthalene	54		57		40-140	5		40
Pentachlorophenol	83		87		9-103	5		40
Hexachlorobenzene	70		72		40-140	3		40



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatiles Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG607032-2 WG607032-3								
Hexachloroethane	50		55		40-140	10		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	36		37		21-120
Phenol-d6	26		28		10-120
Nitrobenzene-d5	69		72		23-120
2-Fluorobiphenyl	58		61		15-120
2,4,6-Tribromophenol	72		74		10-120
4-Terphenyl-d14	68		70		41-149



PCBS

Project Name: 546 W 44TH ST**Lab Number:** L1308234**Project Number:** 170229701**Report Date:** 05/15/13**SAMPLE RESULTS**

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC
 Matrix: Water
 Analytical Method: 1,8082A
 Analytical Date: 05/14/13 11:52
 Analyst: TQ

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/10/13 10:26
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/10/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/10/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Polychlorinated Biphenyls by GC - Westborough Lab						
Aroclor 1016	ND		ug/l	0.083	0.055	1
Aroclor 1221	ND		ug/l	0.083	0.053	1
Aroclor 1232	ND		ug/l	0.083	0.031	1
Aroclor 1242	ND		ug/l	0.083	0.060	1
Aroclor 1248	ND		ug/l	0.083	0.051	1
Aroclor 1254	ND		ug/l	0.083	0.034	1
Aroclor 1260	ND		ug/l	0.083	0.032	1
Aroclor 1262	ND		ug/l	0.083	0.029	1
Aroclor 1268	ND		ug/l	0.083	0.038	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	76		30-150
Decachlorobiphenyl	73		30-150
2,4,5,6-Tetrachloro-m-xylene	76		30-150
Decachlorobiphenyl	74		30-150

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

**Method Blank Analysis
 Batch Quality Control**

Analytical Method: 1,8082A
 Analytical Date: 05/14/13 12:18
 Analyst: TQ

Extraction Method: EPA 3510C
 Extraction Date: 05/10/13 10:26
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 05/10/13
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 05/10/13

Parameter	Result	Qualifier	Units	RL	MDL
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG607190-1					
Aroclor 1016	ND		ug/l	0.083	0.055
Aroclor 1221	ND		ug/l	0.083	0.053
Aroclor 1232	ND		ug/l	0.083	0.031
Aroclor 1242	ND		ug/l	0.083	0.060
Aroclor 1248	ND		ug/l	0.083	0.051
Aroclor 1254	ND		ug/l	0.083	0.034
Aroclor 1260	ND		ug/l	0.083	0.032
Aroclor 1262	ND		ug/l	0.083	0.029
Aroclor 1268	ND		ug/l	0.083	0.038

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	83		30-150
2,4,5,6-Tetrachloro-m-xylene	66		30-150
Decachlorobiphenyl	81		30-150



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG607190-2 WG607190-3								
Aroclor 1016	78		81		40-140	4		50
Aroclor 1260	77		79		40-140	2		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	69		67		30-150
Decachlorobiphenyl	81		81		30-150
2,4,5,6-Tetrachloro-m-xylene	67		66		30-150
Decachlorobiphenyl	78		78		30-150



PESTICIDES

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC
 Matrix: Water
 Analytical Method: 1,8081B
 Analytical Date: 05/15/13 01:16
 Analyst: JC

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 05/10/13 10:23
 Cleanup Method1: EPA 3620B
 Cleanup Date1: 05/11/13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Organochlorine Pesticides by GC - Westborough Lab						
Delta-BHC	ND		ug/l	0.020	0.005	1
Lindane	ND		ug/l	0.020	0.004	1
Alpha-BHC	ND		ug/l	0.020	0.004	1
Beta-BHC	ND		ug/l	0.020	0.006	1
Heptachlor	ND		ug/l	0.020	0.003	1
Aldrin	ND		ug/l	0.020	0.002	1
Heptachlor epoxide	ND		ug/l	0.020	0.004	1
Endrin	ND		ug/l	0.040	0.004	1
Endrin ketone	ND		ug/l	0.040	0.005	1
Dieldrin	ND		ug/l	0.040	0.004	1
4,4'-DDE	ND		ug/l	0.040	0.004	1
4,4'-DDD	ND		ug/l	0.040	0.005	1
4,4'-DDT	ND		ug/l	0.040	0.004	1
Endosulfan I	ND		ug/l	0.020	0.003	1
Endosulfan II	ND		ug/l	0.040	0.005	1
Endosulfan sulfate	ND		ug/l	0.040	0.005	1
Methoxychlor	ND		ug/l	0.200	0.007	1
Toxaphene	ND		ug/l	0.200	0.063	1
cis-Chlordane	ND		ug/l	0.020	0.007	1
trans-Chlordane	ND		ug/l	0.020	0.006	1
Chlordane	ND		ug/l	0.200	0.046	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	49		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	33		30-150	B
Decachlorobiphenyl	47		30-150	B

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 05/14/13 16:46
Analyst: JC

Extraction Method: EPA 3510C
Extraction Date: 05/10/13 10:23
Cleanup Method1: EPA 3620B
Cleanup Date1: 05/11/13

Parameter	Result	Qualifier	Units	RL	MDL
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG607188-1					
Delta-BHC	ND		ug/l	0.020	0.005
Lindane	ND		ug/l	0.020	0.004
Alpha-BHC	ND		ug/l	0.020	0.004
Beta-BHC	ND		ug/l	0.020	0.006
Heptachlor	ND		ug/l	0.020	0.003
Aldrin	ND		ug/l	0.020	0.002
Heptachlor epoxide	ND		ug/l	0.020	0.004
Endrin	ND		ug/l	0.040	0.004
Endrin ketone	ND		ug/l	0.040	0.005
Dieldrin	ND		ug/l	0.040	0.004
4,4'-DDE	ND		ug/l	0.040	0.004
4,4'-DDD	ND		ug/l	0.040	0.005
4,4'-DDT	ND		ug/l	0.040	0.004
Endosulfan I	ND		ug/l	0.020	0.003
Endosulfan II	ND		ug/l	0.040	0.005
Endosulfan sulfate	ND		ug/l	0.040	0.005
Methoxychlor	ND		ug/l	0.200	0.007
Toxaphene	ND		ug/l	0.200	0.063
cis-Chlordane	ND		ug/l	0.020	0.007
trans-Chlordane	ND		ug/l	0.020	0.006
Chlordane	ND		ug/l	0.200	0.046

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	86		30-150	B

Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG607188-2 WG607188-3								
Delta-BHC	78		77		30-150	1		20
Lindane	83		81		30-150	2		20
Alpha-BHC	84		83		30-150	2		20
Beta-BHC	83		80		30-150	3		20
Heptachlor	73		72		30-150	1		20
Aldrin	74		72		30-150	3		20
Heptachlor epoxide	88		86		30-150	3		20
Endrin	118		115		30-150	3		20
Endrin ketone	85		79		30-150	7		20
Dieldrin	96		93		30-150	4		20
4,4'-DDE	98		86		30-150	13		20
4,4'-DDD	96		93		30-150	4		20
4,4'-DDT	99		96		30-150	3		20
Endosulfan I	92		90		30-150	2		20
Endosulfan II	90		86		30-150	5		20
Endosulfan sulfate	81		77		30-150	5		20
Methoxychlor	91		86		30-150	5		20
cis-Chlordane	93		90		30-150	4		20
trans-Chlordane	90		87		30-150	3		20



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG607188-2 WG607188-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		71		30-150	A
Decachlorobiphenyl	93		82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		55		30-150	B
Decachlorobiphenyl	92		95		30-150	B



METALS

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
Client ID: GEOTECH2_20130508
Sample Location: NYC
Matrix: Water

Date Collected: 05/08/13 11:15
Date Received: 05/08/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Aluminum, Total	0.0499		mg/l	0.0100	0.00200	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Antimony, Total	0.00088		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Arsenic, Total	0.00076		mg/l	0.00050	0.00020	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Barium, Total	0.08213		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Cadmium, Total	0.00012	J	mg/l	0.00050	0.00005	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Chromium, Total	0.00054	J	mg/l	0.00100	0.00020	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Cobalt, Total	0.00238		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Copper, Total	0.00285		mg/l	0.00100	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Iron, Total	0.116		mg/l	0.0500	0.0130	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Lead, Total	0.02185		mg/l	0.00100	0.00020	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/14/13 10:14	05/14/13 13:12	EPA 7470A	1,7470A	JH
Nickel, Total	0.00256		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Potassium, Total	38.8		mg/l	0.100	0.0270	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Selenium, Total	0.0186		mg/l	0.00500	0.00030	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Silver, Total	0.00037	J	mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Thallium, Total	ND		mg/l	0.00050	0.00003	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Vanadium, Total	0.00071	J	mg/l	0.00500	0.00010	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Zinc, Total	0.00251	J	mg/l	0.01000	0.00120	1	05/09/13 08:08	05/09/13 14:27	EPA 3005A	1,6020A	AK
Dissolved Metals - Westborough Lab											
Aluminum, Dissolved	0.0163		mg/l	0.0100	0.00200	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Antimony, Dissolved	0.00094	J	mg/l	0.00100	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Arsenic, Dissolved	0.00074		mg/l	0.00050	0.00020	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Barium, Dissolved	0.07776		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Cadmium, Dissolved	0.00012	J	mg/l	0.00050	0.00005	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Chromium, Dissolved	0.00024	J	mg/l	0.00100	0.00020	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Cobalt, Dissolved	0.00210		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Copper, Dissolved	0.00263		mg/l	0.00100	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Iron, Dissolved	0.0406	J	mg/l	0.0500	0.0130	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK



Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01

Date Collected: 05/08/13 11:15

Client ID: GEOTECH2_20130508

Date Received: 05/08/13

Sample Location: NYC

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Lead, Dissolved	0.01609		mg/l	0.00100	0.00020	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	05/13/13 13:12	05/14/13 11:52	EPA 7470A	1,7470A	JH
Nickel, Dissolved	0.00231		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Potassium, Dissolved	35.5		mg/l	0.100	0.0270	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Selenium, Dissolved	0.0165		mg/l	0.00500	0.00030	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Silver, Dissolved	0.00027	J	mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Thallium, Dissolved	ND		mg/l	0.00100	0.00003	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Vanadium, Dissolved	0.00041	J	mg/l	0.00500	0.00010	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK
Zinc, Dissolved	0.01224	J	mg/l	0.01500	0.00120	1	05/09/13 13:50	05/11/13 13:49	NA	1,6020A	AK



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01 D
 Client ID: GEOTECH2_20130508
 Sample Location: NYC
 Matrix: Water

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Calcium, Total	248.		mg/l	1.00	0.320	10	05/09/13 08:08	05/09/13 14:30	EPA 3005A	1,6020A	AK
Magnesium, Total	64.6		mg/l	1.00	0.230	10	05/09/13 08:08	05/09/13 14:30	EPA 3005A	1,6020A	AK
Manganese, Total	1.687		mg/l	0.00500	0.00100	10	05/09/13 08:08	05/09/13 14:30	EPA 3005A	1,6020A	AK
Sodium, Total	167.		mg/l	2.00	0.150	10	05/09/13 08:08	05/09/13 14:30	EPA 3005A	1,6020A	AK
Dissolved Metals - Westborough Lab											
Calcium, Dissolved	232.		mg/l	1.00	0.320	10	05/09/13 13:50	05/11/13 13:42	NA	1,6020A	AK
Magnesium, Dissolved	62.6		mg/l	1.00	0.230	10	05/09/13 13:50	05/11/13 13:42	NA	1,6020A	AK
Manganese, Dissolved	1.647		mg/l	0.00500	0.00100	10	05/09/13 13:50	05/11/13 13:42	NA	1,6020A	AK
Sodium, Dissolved	160.		mg/l	1.00	0.150	10	05/09/13 13:50	05/11/13 13:42	NA	1,6020A	AK



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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 Batch: WG606846-1										
Aluminum, Total	ND		mg/l	0.0100	0.00200	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Antimony, Total	0.00032	J	mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Arsenic, Total	ND		mg/l	0.00050	0.00020	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Barium, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Cadmium, Total	ND		mg/l	0.00050	0.00005	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Calcium, Total	ND		mg/l	0.100	0.0320	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Chromium, Total	ND		mg/l	0.00100	0.00020	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Cobalt, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Copper, Total	ND		mg/l	0.00100	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Iron, Total	ND		mg/l	0.0500	0.0130	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Lead, Total	ND		mg/l	0.00100	0.00020	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Magnesium, Total	ND		mg/l	0.100	0.0230	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Manganese, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Nickel, Total	ND		mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Potassium, Total	ND		mg/l	0.100	0.0270	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Selenium, Total	ND		mg/l	0.00500	0.00030	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Silver, Total	0.00017	J	mg/l	0.00050	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Sodium, Total	0.154	J	mg/l	0.200	0.0150	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Thallium, Total	0.00003	J	mg/l	0.00050	0.00003	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Vanadium, Total	ND		mg/l	0.00500	0.00010	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK
Zinc, Total	ND		mg/l	0.01000	0.00120	1	05/09/13 08:08	05/09/13 15:06	1,6020A	AK

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG607352-1										
Aluminum, Dissolved	ND		mg/l	0.0100	0.00200	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Antimony, Dissolved	0.00070	J	mg/l	0.00100	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Arsenic, Dissolved	ND		mg/l	0.00050	0.00020	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Barium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Method Blank Analysis Batch Quality Control

Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Cadmium, Dissolved	ND		mg/l	0.00050	0.00005	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Calcium, Dissolved	ND		mg/l	0.100	0.0320	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Chromium, Dissolved	ND		mg/l	0.00100	0.00020	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Cobalt, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Copper, Dissolved	ND		mg/l	0.00100	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Iron, Dissolved	ND		mg/l	0.0500	0.0130	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Lead, Dissolved	ND		mg/l	0.00100	0.00020	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Magnesium, Dissolved	ND		mg/l	0.100	0.0230	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Manganese, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Nickel, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Potassium, Dissolved	0.0456	J	mg/l	0.100	0.0270	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Selenium, Dissolved	ND		mg/l	0.00500	0.00030	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Silver, Dissolved	ND		mg/l	0.00050	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Sodium, Dissolved	0.0289	J	mg/l	0.100	0.0150	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Thallium, Dissolved	ND		mg/l	0.00100	0.00003	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Vanadium, Dissolved	ND		mg/l	0.00500	0.00010	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK
Zinc, Dissolved	0.01220	J	mg/l	0.01500	0.00120	1	05/09/13 13:50	05/11/13 13:32	1,6020A	AK

Prep Information

Digestion Method: NA

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG607599-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00006	1	05/13/13 13:12	05/14/13 11:48	1,7470A	JH

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): 01 Batch: WG607826-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/14/13 10:14	05/14/13 13:09	1,7470A	JH



Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG606846-2								
Aluminum, Total	102		-		80-120	-		
Antimony, Total	89		-		80-120	-		
Arsenic, Total	111		-		80-120	-		
Barium, Total	95		-		80-120	-		
Beryllium, Total	101		-		80-120	-		
Cadmium, Total	111		-		80-120	-		
Calcium, Total	100		-		80-120	-		
Chromium, Total	98		-		80-120	-		
Cobalt, Total	101		-		80-120	-		
Copper, Total	105		-		80-120	-		
Iron, Total	98		-		80-120	-		
Lead, Total	107		-		80-120	-		
Magnesium, Total	107		-		80-120	-		
Manganese, Total	96		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	102		-		80-120	-		
Selenium, Total	109		-		80-120	-		
Silver, Total	92		-		80-120	-		
Sodium, Total	109		-		80-120	-		
Thallium, Total	108		-		80-120	-		
Vanadium, Total	102		-		80-120	-		



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG606846-2					
Zinc, Total	104	-	80-120	-	



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG607352-2					
Aluminum, Dissolved	102	-	80-120	-	
Antimony, Dissolved	90	-	80-120	-	
Arsenic, Dissolved	109	-	80-120	-	
Barium, Dissolved	96	-	80-120	-	
Beryllium, Dissolved	108	-	80-120	-	
Cadmium, Dissolved	104	-	80-120	-	
Calcium, Dissolved	107	-	80-120	-	
Chromium, Dissolved	98	-	80-120	-	
Cobalt, Dissolved	100	-	80-120	-	
Copper, Dissolved	103	-	80-120	-	
Iron, Dissolved	93	-	80-120	-	
Lead, Dissolved	101	-	80-120	-	
Magnesium, Dissolved	116	-	80-120	-	
Manganese, Dissolved	96	-	80-120	-	
Nickel, Dissolved	101	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Selenium, Dissolved	102	-	80-120	-	
Silver, Dissolved	90	-	80-120	-	
Sodium, Dissolved	116	-	80-120	-	
Thallium, Dissolved	97	-	80-120	-	
Vanadium, Dissolved	99	-	80-120	-	



Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG607352-2					
Zinc, Dissolved	105	-	80-120	-	
Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG607599-2					
Mercury, Dissolved	112	-	70-130	-	
Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG607826-2					
Mercury, Total	102	-	80-120	-	



Serial_No:05151315:49

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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): 01			QC Batch ID: WG606846-4			QC Sample: L1308234-01			Client ID: GEOTECH2_20130508			
Aluminum, Total	0.0499	2	2.03	99		-	-		80-120	-		20
Antimony, Total	0.00088	0.5	0.4564	91		-	-		80-120	-		20
Arsenic, Total	0.00076	0.12	0.1367	113		-	-		80-120	-		20
Barium, Total	0.08213	2	1.987	95		-	-		80-120	-		20
Beryllium, Total	ND	0.05	0.04950	99		-	-		80-120	-		20
Cadmium, Total	0.00012J	0.051	0.05652	111		-	-		80-120	-		20
Calcium, Total	248.	10	251	30	Q	-	-		80-120	-		20
Chromium, Total	0.00054J	0.2	0.1936	97		-	-		80-120	-		20
Cobalt, Total	0.00238	0.5	0.4979	99		-	-		80-120	-		20
Copper, Total	0.00285	0.25	0.2561	101		-	-		80-120	-		20
Iron, Total	0.116	1	1.08	96		-	-		80-120	-		20
Lead, Total	0.02185	0.51	0.5797	109		-	-		80-120	-		20
Magnesium, Total	64.6	10	72.9	83		-	-		80-120	-		20
Manganese, Total	1.687	0.5	2.131	89		-	-		80-120	-		20
Nickel, Total	0.00256	0.5	0.4960	99		-	-		80-120	-		20
Potassium, Total	38.8	10	47.4	86		-	-		80-120	-		20
Selenium, Total	0.0186	0.12	0.148	108		-	-		80-120	-		20
Silver, Total	0.00037J	0.05	0.04543	91		-	-		80-120	-		20
Sodium, Total	167.	10	172	50	Q	-	-		80-120	-		20
Thallium, Total	ND	0.12	0.1308	109		-	-		80-120	-		20
Vanadium, Total	0.00071J	0.5	0.5052	101		-	-		80-120	-		20



Serial_No:05151315:49

Matrix Spike Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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 QC Batch ID: WG606846-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508									
Zinc, Total	0.00251J	0.5	0.5050	101	-	-	80-120	-	20



Serial_No:05151315:49

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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): 01 QC Batch ID: WG607352-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508									
Aluminum, Dissolved	0.0163	2	2.26	112	-	-	80-120	-	20
Antimony, Dissolved	0.00094J	0.5	0.4531	91	-	-	80-120	-	20
Arsenic, Dissolved	0.00074	0.12	0.1298	108	-	-	80-120	-	20
Barium, Dissolved	0.07776	2	1.994	96	-	-	80-120	-	20
Beryllium, Dissolved	ND	0.05	0.05320	106	-	-	80-120	-	20
Cadmium, Dissolved	0.00012J	0.051	0.05424	106	-	-	80-120	-	20
Calcium, Dissolved	232.	10	254	220	Q	-	80-120	-	20
Chromium, Dissolved	0.00024J	0.2	0.1910	96	-	-	80-120	-	20
Cobalt, Dissolved	0.00210	0.5	0.4889	97	-	-	80-120	-	20
Copper, Dissolved	0.00263	0.25	0.2573	102	-	-	80-120	-	20
Iron, Dissolved	0.0406J	1	0.931	93	-	-	80-120	-	20
Lead, Dissolved	0.01609	0.51	0.5312	101	-	-	80-120	-	20
Magnesium, Dissolved	62.6	10	80.7	181	Q	-	80-120	-	20
Manganese, Dissolved	1.647	0.5	2.072	85	-	-	80-120	-	20
Nickel, Dissolved	0.00231	0.5	0.4931	98	-	-	80-120	-	20
Potassium, Dissolved	35.5	10	48.5	130	Q	-	80-120	-	20
Selenium, Dissolved	0.0165	0.12	0.136	100	-	-	80-120	-	20
Silver, Dissolved	0.00027J	0.05	0.04524	90	-	-	80-120	-	20
Sodium, Dissolved	160.	10	190	300	Q	-	80-120	-	20
Thallium, Dissolved	ND	0.12	0.1198	100	-	-	80-120	-	20
Vanadium, Dissolved	0.00041J	0.5	0.4984	100	-	-	80-120	-	20



Serial_No:05151315:49

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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): 01 QC Batch ID: WG607352-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508									
Zinc, Dissolved	0.01224J	0.5	0.5086	102	-	-	80-120	-	20
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607599-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508									
Mercury, Dissolved	ND	0.001	0.00119	119	-	-	70-130	-	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607826-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508									
Mercury, Total	ND	0.001	0.00122	123	-	-	70-130	-	20



Serial_No:05151315:49

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG606846-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508						
Calcium, Total	248.	238.	mg/l	4		20
Magnesium, Total	64.6	61.9	mg/l	4		20
Manganese, Total	1.687	1.676	mg/l	1		20
Sodium, Total	167.	160.	mg/l	4		20



Serial_No:05151315:49

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG606846-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508					
Aluminum, Total	0.0499	0.0505	mg/l	1	20
Antimony, Total	0.00088	0.00062	mg/l	34	Q 20
Arsenic, Total	0.00076	0.00084	mg/l	11	20
Barium, Total	0.08213	0.08509	mg/l	4	20
Beryllium, Total	ND	ND	mg/l	NC	20
Cadmium, Total	0.00012J	0.00014J	mg/l	NC	20
Chromium, Total	0.00054J	0.00072J	mg/l	NC	20
Cobalt, Total	0.00238	0.00247	mg/l	4	20
Copper, Total	0.00285	0.00313	mg/l	9	20
Iron, Total	0.116	0.392	mg/l	109	Q 20
Lead, Total	0.02185	0.02215	mg/l	1	20
Nickel, Total	0.00256	0.00280	mg/l	9	20
Potassium, Total	38.8	39.7	mg/l	2	20
Selenium, Total	0.0186	0.0190	mg/l	2	20
Silver, Total	0.00037J	0.00027J	mg/l	NC	20
Thallium, Total	ND	ND	mg/l	NC	20
Vanadium, Total	0.00071J	0.00063J	mg/l	NC	20
Zinc, Total	0.00251J	0.00251J	mg/l	NC	20



Serial_No:05151315:49

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607352-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508					
Calcium, Dissolved	232.	223.	mg/l	4	20
Magnesium, Dissolved	62.6	61.4	mg/l	2	20
Manganese, Dissolved	1.647	1.644	mg/l	0	20
Sodium, Dissolved	160.	158.	mg/l	1	20



Serial_No:05151315:49

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607352-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508					
Aluminum, Dissolved	0.0163	0.0168	mg/l	3	20
Antimony, Dissolved	0.00094J	0.00082J	mg/l	NC	20
Arsenic, Dissolved	0.00074	0.00068	mg/l	9	20
Barium, Dissolved	0.07776	0.07884	mg/l	1	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	0.00012J	0.00012J	mg/l	NC	20
Chromium, Dissolved	0.00024J	0.00026J	mg/l	NC	20
Cobalt, Dissolved	0.00210	0.00213	mg/l	1	20
Copper, Dissolved	0.00263	0.00271	mg/l	3	20
Iron, Dissolved	0.0406J	0.0432J	mg/l	NC	20
Lead, Dissolved	0.01609	0.01618	mg/l	1	20
Nickel, Dissolved	0.00231	0.00221	mg/l	4	20
Potassium, Dissolved	35.5	36.7	mg/l	3	20
Selenium, Dissolved	0.0165	0.0167	mg/l	1	20
Silver, Dissolved	0.00027J	0.00028J	mg/l	NC	20
Thallium, Dissolved	ND	ND	mg/l	NC	20
Vanadium, Dissolved	0.00041J	0.00045J	mg/l	NC	20
Zinc, Dissolved	0.01224J	0.01222J	mg/l	NC	20



Serial_No:05151315:49

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607599-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508					
Mercury, Dissolved	ND	ND	mg/l	NC	20
Total Metals - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607826-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508					
Mercury, Total	ND	ND	mg/l	NC	20



INORGANICS & MISCELLANEOUS

Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

SAMPLE RESULTS

Lab ID: L1308234-01
 Client ID: GEOTECH2_20130508
 Sample Location: NYC
 Matrix: Water

Date Collected: 05/08/13 11:15
 Date Received: 05/08/13
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.013		mg/l	0.005	0.001	1	05/12/13 13:35	05/13/13 13:06	1,9010C/9012A	JO
Chromium, Hexavalent	ND		mg/l	0.010	0.001	1	05/09/13 01:00	05/09/13 01:12	1,7196A	EL



Project Name: 546 W 44TH ST

Lab Number: L1308234

Project Number: 170229701

Report Date: 05/15/13

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 Batch: WG606819-1									
Chromium, Hexavalent	ND	mg/l	0.010	0.001	1	05/09/13 01:00	05/09/13 01:11	1,7196A	EL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG607458-1									
Cyanide, Total	ND	mg/l	0.005	0.001	1	05/12/13 13:35	05/13/13 13:03	1,9010C/9012A	JO

Serial_No:05151315:49

Lab Control Sample Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG606819-2								
Chromium, Hexavalent	100		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG607458-4 WG607458-5								
Cyanide, Total	112		112		80-120	0		20



Serial_No:05151315:49

**Matrix Spike Analysis
Batch Quality Control**

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG606819-4 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508												
Chromium, Hexavalent	ND	0.1	0.091	91		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG607458-3 WG607458-2 QC Sample: L1308450-13 Client ID: MS Sample												
Cyanide, Total	0.002J	0.2	0.220	110		0.205	102		80-120	7		20



Serial_No:05151315:49

Lab Duplicate Analysis
Batch Quality Control

Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG606819-3 QC Sample: L1308234-01 Client ID: GEOTECH2_20130508						
Chromium, Hexavalent	ND	ND	mg/l	NC		20



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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(*)
L1308234-01A	Vial HCl preserved	A	N/A	2.8	Y	Absent	NYTCL-8260(14)
L1308234-01B	Vial HCl preserved	A	N/A	2.8	Y	Absent	NYTCL-8260(14)
L1308234-01C	Vial HCl preserved	A	N/A	2.8	Y	Absent	NYTCL-8260(14)
L1308234-01D	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1308234-01E	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8270(7),NYTCL-8270-SIM(7)
L1308234-01F	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8081(7)
L1308234-01G	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8081(7)
L1308234-01H	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8082-1200ML(7)
L1308234-01I	Amber 1000ml unpreserved	A	7	2.8	Y	Absent	NYTCL-8082-1200ML(7)
L1308234-01J	Plastic 500ml unpreserved	A	7	2.8	Y	Absent	HEXCR-7196(1)
L1308234-01K	Plastic 250ml NaOH preserved	A	>12	2.8	Y	Absent	TCN-9010(14)
L1308234-01L	Plastic 500ml HNO3 preserved	A	<2	2.8	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)
L1308234-01M	Plastic 500ml unpreserved	A	7	2.8	Y	Absent	-

*Values in parentheses indicate holding time in days



Project Name: 546 W 44TH ST

Project Number: 170229701

Lab Number: L1308234

Report Date: 05/15/13

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1308234-01X	Plastic 500ml HNO3 preserved spl	A	<2	2.8	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: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

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 five times (5x) 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 RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported

Report Format: DU Report with "J" Qualifiers



Project Name: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

Data Qualifiers

- due to obvious interference.
- 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.
 - 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: 546 W 44TH ST
Project Number: 170229701

Lab Number: L1308234
Report Date: 05/15/13

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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.



C **A** **r** **S**
Last revised December 19, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

C **D** **r** **S** **Certificate/Lab ID: PH-0574. NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Selenium, Silver, Sodium, Thallium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223, Enumeration and P/A), E. Coli. – Colilert (SM9223, Enumeration and P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform-EC Medium (SM 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), E. Coli – Colilert (SM9223 Enumeration), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterococcus - Enterolert.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, CT-Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Dalapon, Volatile Organics (SW 8260), Acid Extractables (Phenols) (SW 8270), Benzidines (SW 8270), Phthalates (SW 8270), Nitrosamines (SW 8270), Nitroaromatics & Cyclic Ketones (SW 8270), PAHs (SW 8270), Haloethers (SW 8270), Chlorinated Hydrocarbons (SW 8270).)

M **D** **r** **S** **Certificate/Lab ID: 2009024.**

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 6010C, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223B, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8330, 8151A, 8260B, 8260C, 8270C, 8270D, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014, 9030B, 9040B, 9045C, 6010B, 6010C, 6020, 6020A, 7471A, 7471B, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8270D, 8330, 8151A, 8081A, 8081B, 8082, 8082A, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

M **D** **r** **E** **r** **Certificate/Lab ID: M-MA086.**

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; Colilert QT SM9223B; MF-SM9222D.)

Non-Potable Water (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: 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-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. *Microbiology Parameters:* (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

N **o** **r** **D** **o** **E** **r** **S** **Certificate/Lab ID:** 200307. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. *Organic Parameters:* 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, SW-846 6010C, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9010C, 9030, 9040B, 9040C, SM2120B, 2310B, 2320B, 2340B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 4500SO3-B, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D, 3060A. *Organic Parameters:* SW-846 3510C, 3630C, 5030B, 8260C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082A, 8081B, 8015C, 8151A, 8330, 8270D-SIM.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010C, 6020A, 7196A, 7471B, 1010, 1010A, 1030, 9010C, 9012B, 9014, 9030B, 9040C, 9045C, 9045D, 9050, 9065, 9251, 1311, 1312, 3005A, 3050B, 3060A. *Organic Parameters:* SW-846 3540C, 3546, 3050B, 3580A, 3620D, 3630C, 5030B, 5035, 8260C, 8270D, 8270D-SIM, 8330, 8151A, 8015B, 8015C, 8082A, 8081B.)

N **o** **r** **D** **o** **E** **r** **S** **Certificate/Lab ID:** MA935. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.1, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. *Organic Parameters:* EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM2520B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, SW-846 9040B, 9040C, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010C, 9030B. *Organic Parameters:* SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8011, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9030B, 1010, 1010A, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9010C, 9012B, 9014, 9038, 9040B, 9040C, 9045C, 9045D, 9050A, 9065, 9251. *Organic Parameters:* SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3620C, 3630C, 5030B, 5035L, 5035H, NJ EPH.)

N **o** **r** **D** **o** **E** **r** **S** **Certificate/Lab ID:** 11148. **NELAP Accredited.**

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. *Organic Parameters:* EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010C, 9030B. *Organic Parameters:* EPA 624, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012B, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010C, 9030B, 9040C, 9045D. *Organic Parameters:* EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C,

3546, 3580A, 5030B, 5035A-H, 5035A-L.)

Norfolk County Department of Environmental and Natural Resources Certificate/Lab ID : 666. (Inorganic Parameters: SM2310B, 2320B, 4500Cl-E, 4500Cn-E, 9014, Lachat 10-204-00-1-X, 1010A, 1030, 4500NO3-F, 353.2, 4500P-E, 4500SO4-E, 300.0, 4500S-D, 5310B, 5310C, 6010C, 6020A, 200.7, 200.8, 3500Cr-B, 7196A, 245.1, 7470A, 7471B, 1311,1312. Organic Parameters: 608, 8081B, 8082A, 624, 8260B, 625, 8270D, 8151A, 8015C, 504.1, MA-EPH, MA-VPH.)

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Department of Environmental Resources Certificate/Lab ID : 68-03671. NELAP Accredited.
Drinking Water (Inorganic Parameters: 200.7, 200.8, 300.0, 332.0, 2120B, 2320B, 2510B, 2540C, 4500-CN-CE, 4500F-C, 4500H+-B, 4500NO3-F, 5310C. Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1312, 3005A,3015, 3060A, 200.7, 200.8, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P,BE, 245.1, 300.0, 350.1, 350.2, 351.1, 353.2, 420.1, 6010C, 6020A, 7196A, 7470A, 9030B, 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500CN-CE, 4500Cl-E, 4500F-B, 4500F-C, 4500H+-B, 4500NH3-H, 4500NO2-B, 4500NO3-F, 4500S-D, 4500SO3-B, 5310BCD, 5540C, 9010C, 9040C. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, 8015C, NJ-EPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3005A, 3050B, 3060A, 6010C, 6020A, 7196A, 7471B, 9010C, 9012B, 9014, 9040B, 9045D, 9050A, 9065, SM 4500NH3-BH, 9030B, 9038, 9251. Organic Parameters: 3540C, 3546, 3580A, 3620C, 3630C, 5035, 8015C, 8081B, 8082A, 8151A, 8260C, 8270D, 8270D-SIM, 8330, NJ-EPH.)

Rockingham County Department of Environmental Resources Certificate/Lab ID: LAO00065. NELAP Accredited via NJ-DEP.
 Refer to MA-DEP Certificate for Potable and Non-Potable Water.
 Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Tarrant County Department of Environmental Resources Certificate/Lab ID: T104704476. NELAP Accredited.
Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S²⁻D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Franklin County Department of Environmental Resources Laboratory Services Certificate/Lab ID: 460195. NELAP Accredited.
Drinking Water (Inorganic Parameters: EPA 200.7, 200.8, 300.0, 2510B, 2120B, 2540C, 4500CN-CE, 245.2, 2320B, 4500F-C, 4500NO3-F, 5310C. Organic Parameters: EPA 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 200.7, 200.8, 245.1, 300.0, 3005A, 3015, 1312, 6010B, 6010C, 3060A, 353.2, 420.1, 6020, 6020A, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X, 7196A, 7470A, 9010B, 9040B, 2310B, 2320B, 2510B, 2540B, 2540C, 3500Cr-D, 426C, 4500Cl-E, 4500F-B, 4500F-C, 4500PE, 510AC, 5210B, 5310B 5310C, 5540C. Organic Parameters: EPA 3510C, 3630C, 5030B, 8260B, 608, 624, 625, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330,)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010A, 1030, 3060A, 3050B, 1311, 1312, 6010B, 6010C, 6020, , 7196A, 7471A, 7471B, 6020A, 9030B, 9010B, 9012A, 9014 9040B, 9045C, 9050A, 9065. Organic Parameters: EPA 5030B, 5035, 3540C, 3546, 355B0, 3580A, 3630C, 6020A, 8260B, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330.)

Department of Environmental Resources Laboratory Certificate/Lab ID: L2217.
Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO3-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056, 7196A, 3500-Cr-D. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

T **o** **o** **r** **NELA** **TNI S** **o** **A**
E **A** **B** Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **E** **A** **A** PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **E** **A** **C** Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **E** **A** 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO2 in a soil matrix, NO3 in a soil matrix. **E** **A** Total Petroleum Hydrocarbons, Oil & Grease.



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

Serial_No:05151315:49

Date Rec'd in Lab: 5/9/13

ALPHA Job #: L1306234

Client Information

Client: Langan

Address: 360 W 31st St 8th Floor
New York, New York 10001

Phone: (212) 479-5400

Fax: (212) 479-5444

Email: Pjiggles@langan.com

These samples have been previously analyzed by Alpha

Project Information

Project Name: ~~170229701~~ NYC 5

Project Location: 546 W 44th St

Project #: 170229701

Project Manager: Elodie Beaubien

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: 5/15/13 Time:

Report Information - Data Deliverables

FAX EMAIL

DEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: NYSDEC Criteria: TOGS

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS		TOTAL # BOTTLES
VOCs	3	
Total Metals	1	
TAL Metals (distilled)	1	
Cyanide	1	
Hexachlor	1	
Pest	2	
SUOCs	2	
PCBs	2	
Sample Specific Comments		

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS								TOTAL # BOTTLES	
		Date	Time			VOCs	Total Metals	TAL Metals (distilled)	Cyanide	Hexachlor	Pest	SUOCs	PCBs		
09234	Geotech 2-20130508	5/8/13	11:55	GW	JED	3	1	1	1	1	2	2	2	2	13
<div style="position: absolute; top: 50px; left: 50px; font-size: 2em; opacity: 0.5;">JED</div>															

Container Type	V P P P P A A A
Preservative	B C A E A A A A

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time
<u>[Signature]</u>	<u>5/8/13 15:20</u>	<u>[Signature]</u>	<u>5/8/13 15:20</u>
<u>[Signature]</u>	<u>5/8/13 1900</u>	<u>[Signature]</u>	<u>5/8/13 1900</u>
<u>[Signature]</u>	<u>5/9/13 0010</u>	<u>[Signature]</u>	<u>5/9/13 0010</u>

APPENDIX G

WELL CONSTRUCTION SUMMARY

Well No. **MW-2**

PROJECT 546 W 44th St			PROJECT NO. 170229701		
LOCATION New York, NY			ELEVATION AND DATUM ⁽¹⁾ 18.84 ft BPMD		
DRILLING AGENCY Laurel			DATE STARTED 4/29/2013		DATE FINISHED 4/29/2013
DRILLING EQUIPMENT Geoprobe 7822			DRILLER Steve Bitetto		
SIZE AND TYPE OF BIT 2" Direct Push			INSPECTORS JP Diggins		
METHOD OF INSTALLATION Geoprobe was advanced through the fill layer to refusal (top of bedrock) to a depth of approximately 12 feet below grade surface (ft bgs). A 2-inch diameter PVC screen and riser were then installed. Well screen was installed from approximately 4 to 12 ft bgs. Clean sand was packed around the well to approximately 1 foot above the screen interval. A bentonite seal was placed above the sand pack to ground surface. A flush mount, steel well cover was installed and set into concrete over the monitoring well.					
METHOD OF WELL DEVELOPMENT The well was developed with a submersible monsoon pump and purged until the water was clear.					
TYPE OF RISER PVC		DIAMETER 2"	TYPE OF BACKFILL MATERIAL #2 Sand		
TYPE OF SCREEN 0.020" Slotted PVC		DIAMETER 2"	TYPE OF SEAL MATERIAL Bentonite		
BOREHOLE DIAMETER 3"			TYPE OF FILTER MATERIAL #2 Sand		
TOP OF CASING	ELEVATION (ft) ⁽¹⁾ 18.84	DEPTH (ft) ⁽²⁾ 0		SUMMARY SOIL CLASSIFICATION ⁽⁴⁾, NOTES refer to soil boring for soil classification info	DEPTH (FT) ⁽²⁾ ground surface
TOP OF SEAL	ELEVATION (ft) ⁽¹⁾ 0	DEPTH (ft) ⁽²⁾ ground surface			
TOP OF FILTER	ELEVATION (ft) ⁽¹⁾ 15.84	DEPTH (ft) ⁽²⁾ 3			
TOP OF SCREEN	ELEVATION (ft) ⁽¹⁾ 14.84	DEPTH (ft) ⁽²⁾ 4			
BOTTOM OF SCREEN	ELEVATION (ft) ⁽¹⁾ 6.84	DEPTH (ft) ⁽²⁾ 12			
SCREEN LENGTH	8				
SLOT SIZE	0.02"				
GROUNDWATER ELEVATIONS					
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
10.54	5/1/2013	8.30			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
10.84	5/8/2013	8			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
		12			
	EOB	12			

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001

- (1) BPMD = Borough President Manhattan Datum
- (2) Measured from Top of Grade Surface (TOGS).
- (3) Measured from Top of Casing (TOC).
- (4) See soil boring logs for details.

WELL CONSTRUCTION SUMMARY

Well No. **MW-3**

PROJECT 546 W 44th St		PROJECT NO. 170229701																																																					
LOCATION New York, NY		ELEVATION AND DATUM ⁽¹⁾ 17.66 ft BPMD																																																					
DRILLING AGENCY Laurel		DATE STARTED 4/29/2013	DATE FINISHED 4/29/2013																																																				
DRILLING EQUIPMENT Geoprobe 7822		DRILLER Steve Bitetto																																																					
SIZE AND TYPE OF BIT 2" Direct Push		INSPECTORS JP Diggins																																																					
METHOD OF INSTALLATION Geoprobe was advanced through the fill layer to refusal (top of bedrock) to a depth of approximately 4 feet below grade surface (ft bgs). A 2-inch diameter PVC screen and riser were then installed. Well screen was installed from approximately 2 to 4 ft bgs. Clean sand was packed around the well screen to approximately 1 foot above the screen interval. A bentonite seal was placed above the sand pack to ground surface. A flush mount, steel well cover was installed and set into concrete over the monitoring well.																																																							
METHOD OF WELL DEVELOPMENT The well was dry.																																																							
TYPE OF RISER PVC		DIAMETER 2"																																																					
TYPE OF SCREEN 0.020" Slotted		DIAMETER 2"																																																					
BOREHOLE DIAMETER 3"		TYPE OF BACKFILL MATERIAL #2 Sand																																																					
TYPE OF SEAL MATERIAL Bentonite		TYPE OF FILTER MATERIAL #2 Sand																																																					
TOP OF CASING	ELEVATION (ft) ⁽¹⁾ 17.66	DEPTH (ft) ⁽²⁾ 0	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 30%; text-align: center;">WELL DETAILS</th> <th style="width: 30%; text-align: center;">SUMMARY SOIL CLASSIFICATION ⁽⁴⁾, NOTES</th> <th style="width: 10%; text-align: center;">DEPTH (FT) ⁽²⁾</th> </tr> </thead> <tbody> <tr> <td>TOP OF SEAL</td> <td>ELEVATION (ft) ⁽¹⁾ 0</td> <td>DEPTH (ft) ⁽²⁾ ground surface</td> <td rowspan="6" style="vertical-align: middle; text-align: center;">ground surface</td> </tr> <tr> <td>TOP OF FILTER</td> <td>ELEVATION (ft) ⁽¹⁾ 16.66</td> <td>DEPTH (ft) ⁽²⁾ 1</td> </tr> <tr> <td>TOP OF SCREEN</td> <td>ELEVATION (ft) ⁽¹⁾ 15.66</td> <td>DEPTH (ft) ⁽²⁾ 2</td> </tr> <tr> <td>BOTTOM OF SCREEN</td> <td>ELEVATION (ft) ⁽¹⁾ 13.66</td> <td>DEPTH (ft) ⁽²⁾ 4</td> </tr> <tr> <td>SCREEN LENGTH</td> <td colspan="2">2'</td> </tr> <tr> <td>SLOT SIZE</td> <td colspan="2">0.02"</td> </tr> <tr> <td colspan="3" style="text-align: center;">GROUNDWATER ELEVATIONS</td> </tr> <tr> <td>ELEVATION</td> <td>DATE</td> <td>DEPTH TO WATER (ft) ⁽³⁾</td> <td rowspan="7" style="vertical-align: middle; text-align: center;">refer to soil boring for soil classification info</td> </tr> <tr> <td>NA</td> <td>5/1/2013</td> <td>dry</td> </tr> <tr> <td>NA</td> <td>5/8/2013</td> <td>dry</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td colspan="3" style="text-align: right;">EOB</td> <td style="text-align: center;">4</td> </tr> </tbody> </table>		WELL DETAILS	SUMMARY SOIL CLASSIFICATION ⁽⁴⁾ , NOTES	DEPTH (FT) ⁽²⁾	TOP OF SEAL	ELEVATION (ft) ⁽¹⁾ 0	DEPTH (ft) ⁽²⁾ ground surface	ground surface	TOP OF FILTER	ELEVATION (ft) ⁽¹⁾ 16.66	DEPTH (ft) ⁽²⁾ 1	TOP OF SCREEN	ELEVATION (ft) ⁽¹⁾ 15.66	DEPTH (ft) ⁽²⁾ 2	BOTTOM OF SCREEN	ELEVATION (ft) ⁽¹⁾ 13.66	DEPTH (ft) ⁽²⁾ 4	SCREEN LENGTH	2'		SLOT SIZE	0.02"		GROUNDWATER ELEVATIONS			ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾	refer to soil boring for soil classification info	NA	5/1/2013	dry	NA	5/8/2013	dry													EOB			4
	WELL DETAILS	SUMMARY SOIL CLASSIFICATION ⁽⁴⁾ , NOTES		DEPTH (FT) ⁽²⁾																																																			
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<p>Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001</p>																																																							

(1) BPMD = Borough President Manhattan Datum

(2) Measured from Top of Grade Surface (TOGS).

(3) Measured from Top of Casing (TOC).

(4) See soil boring logs for details.

WELL CONSTRUCTION SUMMARY

Well No. **MW-4**

PROJECT 546 W 44th St			PROJECT NO. 170229701		
LOCATION New York, NY			ELEVATION AND DATUM ⁽¹⁾ 17.4 ft BMPD		
DRILLING AGENCY Laurel			DATE STARTED 4/30/2013		DATE FINISHED 4/30/2013
DRILLING EQUIPMENT Geoprobe 7822			DRILLER Steve Bitetto		
SIZE AND TYPE OF BIT 3" Direct Push			INSPECTORS JP Diggins		
METHOD OF INSTALLATION Geoprobe was advanced through the fill layer to a depth of approximately 17 feet below grade surface (ft bgs). A 3-inch diameter PVC screen and riser were then installed. Well screen was installed from approximately 12 to 17 ft bgs. Clean sand was packed around the well to approximately 1 foot above the screen. A bentonite seal was placed above the sand pack to ground surface. A flush mount, steel well cover was installed and set into concrete over the monitoring well.					
METHOD OF WELL DEVELOPMENT The well was developed with a submersible monsoon pump until the water was clear.					
TYPE OF RISER		DIAMETER	TYPE OF BACKFILL MATERIAL #2 Sand		
TYPE OF SCREEN		DIAMETER	TYPE OF SEAL MATERIAL Bentonite		
0.020" Slotted		2"			
BOREHOLE DIAMETER 3"			TYPE OF FILTER MATERIAL #2 Sand		
TOP OF CASING	ELEVATION (ft) ⁽¹⁾	DEPTH (ft) ⁽²⁾			DEPTH (FT) ⁽²⁾
TOP OF SEAL	ELEVATION (ft) ⁽¹⁾	DEPTH (ft) ⁽²⁾			ground surface
TOP OF FILTER	ELEVATION (ft) ⁽¹⁾	DEPTH (ft) ⁽²⁾			11
TOP OF SCREEN	ELEVATION (ft) ⁽¹⁾	DEPTH (ft) ⁽²⁾			12
BOTTOM OF SCREEN	ELEVATION (ft) ⁽¹⁾	DEPTH (ft) ⁽²⁾			17
SCREEN LENGTH					11
SLOT SIZE					12
0.02"					
GROUNDWATER ELEVATIONS					
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
2.39	5/1/2013	15.01			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
2.4	5/8/2013	15.01			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾		17	
			EOB	23	

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- (1) BPMD = Borough President Manhattan Datum
- (2) Measured from Top of Grade Surface (TOGS).
- (3) Measured from Top of Casing (TOC).
- (4) See soil boring logs for details.

WELL CONSTRUCTION SUMMARY

Well No. **MW-5**

PROJECT 546 W 44th St			PROJECT NO. 170229701		
LOCATION New York, NY			ELEVATION AND DATUM ⁽¹⁾ 18.84 ft BPMD		
DRILLING AGENCY Laurel			DATE STARTED 4/30/2013		DATE FINISHED 4/30/2013
DRILLING EQUIPMENT Geoprobe 7822			DRILLER Steve Bitetto		
SIZE AND TYPE OF BIT 3" Direct Push			INSPECTORS JP Diggins		
METHOD OF INSTALLATION Geoprobe was advanced through the fill layer to refusal (top of bedrock) a depth of approximately 2.5 feet below grade surface (ft bgs). A 3-inch diameter PVC screen and riser were then installed. Well screen was installed from approximately 1.5 to 2.5 ft bgs. Clean sand was packed around the well. A bentonite seal was placed above the sand at the ground surface. A flush mount, steel well cover was installed and set into concrete over the monitoring well.					
METHOD OF WELL DEVELOPMENT The well was dry.					
TYPE OF RISER PVC		DIAMETER 2"	TYPE OF BACKFILL MATERIAL #2 Sand		
TYPE OF SCREEN 0.020" Slotted PVC		DIAMETER 2"	TYPE OF SEAL MATERIAL Bentonite		
BOREHOLE DIAMETER 3"			TYPE OF FILTER MATERIAL #2 Sand		
TOP OF CASING	ELEVATION (ft) ⁽¹⁾ 18.84	DEPTH (ft) ⁽²⁾ 0		SUMMARY SOIL CLASSIFICATION ⁽⁴⁾, NOTES refer to soil boring for soil classification info	DEPTH (FT) ⁽²⁾ ground surface
TOP OF SEAL	ELEVATION (ft) ⁽¹⁾ 18.34	DEPTH (ft) ⁽²⁾ 0.5			
TOP OF FILTER	ELEVATION (ft) ⁽¹⁾ 17.34	DEPTH (ft) ⁽²⁾ 1.5			
TOP OF SCREEN	ELEVATION (ft) ⁽¹⁾ 17.34	DEPTH (ft) ⁽²⁾ 1.5			
BOTTOM OF SCREEN	ELEVATION (ft) ⁽¹⁾ 16.34	DEPTH (ft) ⁽²⁾ 2.5			
SCREEN LENGTH	1.5'				
SLOT SIZE	0.02"				
GROUNDWATER ELEVATIONS					
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
NA	5/1/2013	dry			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
NA	5/8/2013	dry			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
ELEVATION	DATE	DEPTH TO WATER (ft) ⁽³⁾			
				EOB	2.5
<p align="center">Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001</p>					

- (1) BPMD = Borough President Manhattan Datum
- (2) Measured from Top of Grade Surface (TOGS).
- (3) Measured from Top of Casing (TOC).
- (4) See soil boring logs for details.

APPENDIX H

GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 546 W44th St.	Well#/Location: MW-1	Job No. 170229701
Date: May 8, 2013	Weather: Rainy, 50 °F	Sampling Personnel: John Patrick Diggins

Well Information

Sample ID	MW-1
Well Depth (ft)	17
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	-
Depth to Water (ft)	14.8
Water Elevation (msl)	-
Casing Volume (gal)	0.3586
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	low flow - peristaltic pump
Purging Rate (mL/min)	150-180
Start Purge Time	14:35
End Purge Time	15:00
Volume Purged (gal)	14:25

Sampling Information

Sampling Method	~
Start Sampling Time	~
End Sampling Time	~
Depth Before Sampling (ft)	~
Number Bottles Collected	~

Sample Time	Parameters							
	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (-C)	ORP (mV)	Depth to Water (ft)	Purge Rate (mL/min)
14:35	7.25	6.39	55.4	6.38	14.4	245	15.8	180.00
14:40	6.93	6.29	52.1	6.44	14.1	245	16	150.00
14:45	-	-	-	-	-	-	-	-
14:50	6.88	6.49	54.8	5.85	14.4	237	16.5	150.00
14:55	6.85	6.49	56.3	5.83	14.4	231	17.2	150.00
15:00	6.83	6.45	52.4	5.62	14.6	220	17.35	150.00
15:05	6.85	6.45	51.8	5.51	14.6	221	17.9	150.00
15:10	6.85	6.46	48.7	5.48	14.7	220	18.5	150.00
15:15	6.91	6.5	94.1	6.2	14.1	224	19.5	150.00
15:20	6.82	6.49	56.9	5.66	13.9	214	20.4	200.00
15:25	-	-	-	-	-	-	22.4	Well dry at 24'

NO SAMPLE COLLECTED
(Well did not recharge)

Depth to water is given in feet below top of casing (TOC).



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GROUND WATER SAMPLE FIELD INFORMATION FORM

Site: 546 W44th St.	Well#/Location: Geotech 2/ LB-4 (OW)	Job No. 170229701
Date: May 8, 2013	Weather: Rainy, 50 °F	Sampling Personnel: John Patrick Diggins

Well Information

Sample ID	MW-1
Well Depth (ft)	8
Screened Interval (ft)	-
Casing Elevation (msl)	-
Casing Diameter (in)	1.5
Depth to Water (ft)	5.61
Water Elevation (msl)	-
Casing Volume (gal)	0.38957
PID/FID Reading (ppm)	0.0

Purging Information

Purging Method	low flow - peristaltic pump
Purging Rate (mL/min)	150-250
Start Purge Time	9:50
End Purge Time	9:55
Volume Purged (gal)	3.5

Sampling Information

Sampling Method	low flow - peristaltic pump
Start Sampling Time	11:15
End Sampling Time	11:20
Depth Before Sampling (ft)	12.3
Number Bottles Collected	13

Sample Time	Parameters							
	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	ORP (mV)	Depth to Water (ft)	Purge Rate (mL/min)
10:10	6.08	2.36	20.7	1.1	16.8	336	6.25	250.00
10:15	6.77	2.53	8.8	1.21	16.4	317	7	150.00
10:20	6.91	2.51	4.9	0.69	16.3	301	7.75	200.00
10:25	6.94	2.5	15.5	0.66	16.3	280	8.8	180.00
10:30	6.95	2.49	3.7	0.63	16.3	268	9.4	180.00
10:35	6.99	2.5	1.5	0.61	16.3	249	10.1	180.00
10:40	6.98	2.49	1.3	0.6	16.5	240	10.7	150.00
10:45	6.96	2.49	1.5	0.65	16.4	228	11.1	150.00
10:50	6.97	2.49	5.6	0.66	16.4	224	11.3	150.00
10:55	~	~	~	~	~	~	~	~
11:00	6.99	2.49	3.9	0.6	16.5	210	11.85	150.00
11:05	6.99	2.48	4.2	0.58	16.5	205	12.3	150.00
11:10	6.99	2.48	5.1	0.58	16.5	200	12.3	150.00
11:15	6.98	2.48	5.1	0.59	16.6	201	12.3	150.00

SAMPLE COLLECTED AT 11:15

Depth to water is given in feet below top of casing (TOC).



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APPENDIX I

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: **SV-3**

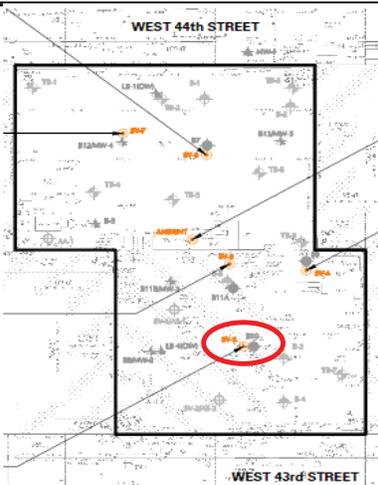
PROJECT: 546 W44th St	PROJECT NO.: 170229701
LOCATION: New York, NY	SURFACE ELEVATION AND DATUM: NA
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental	INSTALLATION DATE STARTED: 4/29/2013
	DATE FINISHED: 4/29/2013
INSTALLATION FOREMAN: Steve Bitetto	SAMPLE DATE STARTED: 5/1/2013
	DATE FINISHED: 5/1/2013
INSTALLATION EQUIPMENT: Geoprobe 7822	TYPE OF SAMPLING DEVICE: 6L Summa Canister
INSPECTOR: JP Diggins	SAMPLER: JP Diggins
POTENTIAL SAMPLE INTERFERENCES: Car Exhaust	WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): @ INSTALLATION: Sunny, 65 @ SAMPLING: Sunny, 65

METHOD OF INSTALLATION AND PURGING:
Installed in a Geoprobe boring and purged with a MultiRae for 5 min at at flow rate of 0.2 ml/min.
Sample Type = Soil Vapor 2 hr

TUBING TYPE/DIAMETER: teflon (3/8" OD)	TYPE OF MATERIAL ABOVE SEAL: Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: teflon (3/8" OD)	SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite
BOREHOLE DIAMETER: 2"	FILTER PACK MATERIAL (Sand or Glass Beads): #2 Sand

	IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FROM SURFACE)	NOTES
PURGE VOLUME (L): 2.00			grade surface
PURGE FLOW RATE (ML/MIN): 200.000			
PID AFTER PURGE (PPM): 0			
HELIUM TEST IN BUCKET(%): 20.90%			
HELIUM TEST IN TUBE (PPM): 0 ppm			
SAMPLE START DATE/TIME: 5/1/2013 at 1155			
SAMPLE STOP DATE/TIME: 5/1/2013 at 1345			
TOTAL SAMPLE TIME (MIN): 110			
FLOW RATE (L/MIN): 0.05			
VOLUME OF SAMPLE (LITERS): 6			
PID AFTER SAMPLE (PPM): 0			
SAMPLE MOISTURE CONTENT: -			
CAN SERIAL NUMBER: 1559			
REGULATOR SERIAL NUMBER: -			
CAN START VACUUM PRESS. (" HG): 30.3			
CAN STOP VACUUM PRESS. (" HG): 9.23		2	

SAMPLE LOCATION SKETCH



NOTES

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: **SV-4**

PROJECT: 546 W44th St	PROJECT NO.: 170229701	
LOCATION: New York, NY	SURFACE ELEVATION AND DATUM: NA	
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental	INSTALLATION DATE STARTED: 4/30/2013	DATE FINISHED: 4/30/2013
INSTALLATION FOREMAN: Steve Bitetto	SAMPLE DATE STARTED: 5/1/2013	DATE FINISHED: 5/1/2013
INSTALLATION EQUIPMENT: Geoprobe 7822	TYPE OF SAMPLING DEVICE: 6L Summa Canister	
INSPECTOR: JP Diggins	SAMPLER: JP Diggins	
POTENTIAL SAMPLE INTERFERENCES: Car Exhaust	WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): @ INSTALLATION: Sunny, 50's @ SAMPLING: Sunny, mid-40's	

METHOD OF INSTALLATION AND PURGING:
 Installed in a Geoprobe boring and purged with a MultiRae.
 Purge with a MultiRae for 5 min at at flow rate of 0.2 ml/min.
 Sample Type = Soil Vapor 2 hr

TUBING TYPE/DIAMETER: teflon (3/8" OD)	TYPE OF MATERIAL ABOVE SEAL: Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: teflon (3/8" OD)	SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite
BOREHOLE DIAMETER: 6"	FILTER PACK MATERIAL (Sand or Glass Beads): #2 Sand

	IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FROM SURFACE)	NOTES
PURGE VOLUME (L): 2.00			grade surface
PURGE FLOW RATE (ML/MIN):			
PID AFTER PURGE (PPM): 0			
HELIUM TEST IN BUCKET(%): 17.00%			
HELIUM TEST IN TUBE (PPM): 0 ppm			
SAMPLE START DATE/TIME: 5/1/2013 at 1100			
SAMPLE STOP DATE/TIME: 5/1/2013 at 1235			
TOTAL SAMPLE TIME (MIN): 95			
FLOW RATE (L/MIN): 0.06			
VOLUME OF SAMPLE (LITERS): 6			
PID AFTER SAMPLE (PPM): 0			
SAMPLE MOISTURE CONTENT: -			
CAN SERIAL NUMBER: 8059			7.5
REGULATOR SERIAL NUMBER: -			8.5
CAN START VACUUM PRESS. (" HG): 29.66			9
CAN STOP VACUUM PRESS. (" HG): 8.94			

SAMPLE LOCATION SKETCH



NOTES

* The vaccum of the canister was at 0" HG before the 8 hours sampling. Langan stopped sampling at 14:43.

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: **SV-5**

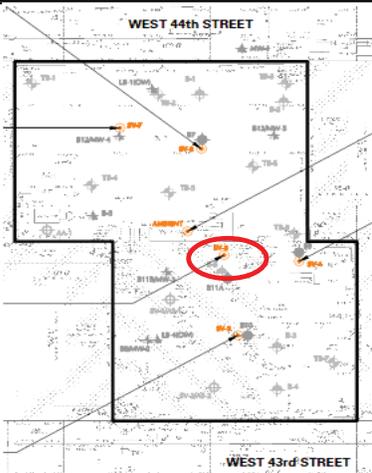
PROJECT: 546 W44th St	PROJECT NO.: 170229701	
LOCATION: New York, NY	SURFACE ELEVATION AND DATUM: NA	
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental	INSTALLATION DATE STARTED: 4/29/2013	DATE FINISHED: 4/30/2013
INSTALLATION FOREMAN: Steve Bitetto	SAMPLE DATE STARTED: 5/1/2013	DATE FINISHED: 5/1/2013
INSTALLATION EQUIPMENT: Geoprobe 7822	TYPE OF SAMPLING DEVICE: 6L Summa Canister	
INSPECTOR: JP Diggins	SAMPLER: JP Diggins	
POTENTIAL SAMPLE INTERFERENCES: Car Exhaust	WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): @ INSTALLATION: Sunny, 65 @ SAMPLING: Sunny, 65	

METHOD OF INSTALLATION AND PURGING:
 Installed in a Geoprobe boring and purged with a MultiRae.
 Purge with a MultiRae for 5 min at at flow rate of 0.2 ml/min.
 Sample Type = Soil Vapor 2 hr

TUBING TYPE/DIAMETER: teflon (3/8" OD)	TYPE OF MATERIAL ABOVE SEAL: Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: teflon (3/8" OD)	SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite
BOREHOLE DIAMETER: 2"	FILTER PACK MATERIAL (Sand or Glass Beads): #2 Sand

	PURGE VOLUME (L):	3.00	IMPLANT/PROBE DETAILS	DEPTH	NOTES
	PURGE FLOW RATE (ML/MIN):	200	(SEAL, FILTER, ETC.)	(FROM SURFACE)	
	PID AFTER PURGE (PPM):	0	SURFACE		
	HELIUM TEST IN BUCKET(%):	20.00%			grade surface
	HELIUM TEST IN TUBE (PPM):	0 ppm			
	SAMPLE START DATE/TIME:	5/1/2013 at 1230			
	SAMPLE STOP DATE/TIME:	5/1/2013 at 1345			
	TOTAL SAMPLE TIME (MIN):	75			
	FLOW RATE (L/MIN):	0.08			
	VOLUME OF SAMPLE (LITERS):	-			
	PID AFTER SAMPLE (PPM):	0			
	SAMPLE MOISTURE CONTENT:	-			
	CAN SERIAL NUMBER:	958			
	REGULATOR SERIAL NUMBER:	-			
	CAN START VACUUM PRESS. (" HG):	30.05		2.5	
	CAN STOP VACUUM PRESS. (" HG):	7.54		3	
			Tubing →		
			Probe →		
			← Bentonite		
			← Sand		

SAMPLE LOCATION SKETCH



NOTES

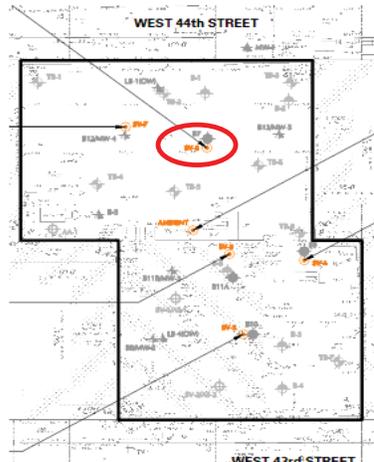
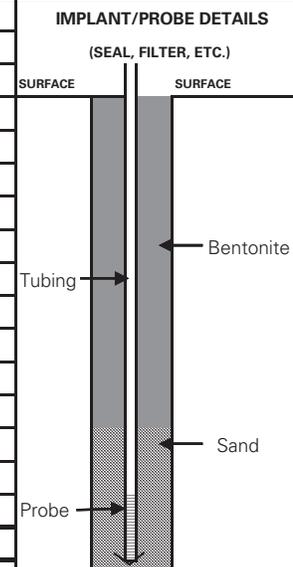
SOIL VAPOR SAMPLING LOG SHEET

Sample Number: **SV-6**

PROJECT: 546 W44th St	PROJECT NO.: 170229701	
LOCATION: New York, NY	SURFACE ELEVATION AND DATUM: NA	
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental	INSTALLATION DATE STARTED: 4/30/2013	DATE FINISHED: 4/30/2013
INSTALLATION FOREMAN: Steve Bitetto	SAMPLE DATE STARTED: 5/1/2013	DATE FINISHED: 5/1/2013
INSTALLATION EQUIPMENT: Geoprobe 7822	TYPE OF SAMPLING DEVICE: 6L Summa Canister	
INSPECTOR: JP Diggins	SAMPLER: JP Diggins	
POTENTIAL SAMPLE INTERFERENCES: Car Exhaust	WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): @ INSTALLATION: Sunny, 65 @ SAMPLING: Sunny, 65	

METHOD OF INSTALLATION AND PURGING:
 Installed in Geoprobe boring.
 Purge with a MultiRae for 5 min at at flow rate of 0.2 ml/min.
 Sample Type = Soil Vapor 2 hr

TUBING TYPE/DIAMETER: teflon (3/8" OD)	TYPE OF MATERIAL ABOVE SEAL: Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: teflon (3/8" OD)	SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite
BOREHOLE DIAMETER: 2"	FILTER PACK MATERIAL (Sand or Glass Beads): #2 Sand

	PURGE VOLUME (L):	2 L	IMPLANT/PROBE DETAILS	DEPTH	NOTES	
	PURGE FLOW RATE (ML/MIN):	200.000	(SEAL, FILTER, ETC.)	(FROM SURFACE)		
	PID AFTER PURGE (PPM):	2.9	SURFACE			
	HELIUM TEST IN BUCKET(%):	16.10%			grade surface	
	HELIUM TEST IN TUBE (PPM):	0 ppm				
	SAMPLE START DATE/TIME:	5/1/2013 at 1120				
	SAMPLE STOP DATE/TIME:	5/1/2013 at 1235				
	TOTAL SAMPLE TIME (MIN):	65				
	FLOW RATE (L/MIN):	0.1				
	VOLUME OF SAMPLE (LITERS):	6				
	PID AFTER SAMPLE (PPM):	0				
	SAMPLE MOISTURE CONTENT:	-				
	CAN SERIAL NUMBER:	634				
	REGULATOR SERIAL NUMBER:	-				
	CAN START VACUUM PRESS. (" HG):	29.48		5.5		
	CAN STOP VACUUM PRESS. (" HG):	29.48		6		
SAMPLE LOCATION SKETCH			NOTES			
						

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: **SV-7**

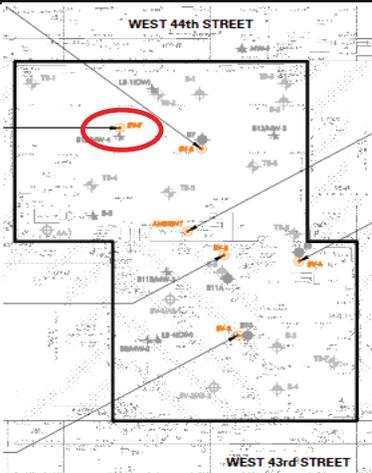
PROJECT: 546 W44th St	PROJECT NO.: 170229701	
LOCATION: New York, NY	SURFACE ELEVATION AND DATUM: NA	
DRILLING FIRM OR LANGAN INSTALLER: Laurel Environmental	INSTALLATION DATE STARTED: 4/30/2013	DATE FINISHED: 4/30/2013
INSTALLATION FOREMAN: Steve Bitetto	SAMPLE DATE STARTED: 5/1/2013	DATE FINISHED: 5/1/2013
INSTALLATION EQUIPMENT: Geoprobe 7822	TYPE OF SAMPLING DEVICE: 6L Summa Canister	
INSPECTOR: JP Diggins	SAMPLER: JP Diggins	
POTENTIAL SAMPLE INTERFERENCES: Car Exhaust	WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.): @ INSTALLATION: Sunny, 65 @ SAMPLING: Sunny, 65	

METHOD OF INSTALLATION AND PURGING:
 Installed in Geoprobe boring.
 Purge with a MultiRae for 5 min at at flow rate of .2 ml/min.
 Sample Type = Soil Vapor 2 hr

TUBING TYPE/DIAMETER: teflon (3/8" OD)	TYPE OF MATERIAL ABOVE SEAL: Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: teflon (3/8" OD)	SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.): Bentonite
BOREHOLE DIAMETER: 2"	FILTER PACK MATERIAL (Sand or Glass Beads): #2 Sand

	IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	DEPTH (FROM SURFACE)	NOTES	
PURGE VOLUME (L): 2 L				
PURGE FLOW RATE (ML/MIN): 2.000				
PID AFTER PURGE (PPM): 0				
HELIUM TEST IN BUCKET(%): 15.00%				
HELIUM TEST IN TUBE (PPM): 2				
SAMPLE START DATE/TIME: 5/1/2013 at 1114				
SAMPLE STOP DATE/TIME: 5/1/2013 at 1325			1	
TOTAL SAMPLE TIME (MIN): 131				
FLOW RATE (L/MIN): 0.046				
VOLUME OF SAMPLE (LITERS): 6				
PID AFTER SAMPLE (PPM): 0				
SAMPLE MOISTURE CONTENT: -				
CAN SERIAL NUMBER: 1812			3	
REGULATOR SERIAL NUMBER:			8	
CAN START VACUUM PRESS. (" HG): 30.37			8.5	
CAN STOP VACUUM PRESS. (" HG): 9.98				

SAMPLE LOCATION SKETCH



NOTES