APRIL 2017 - PHASE II REPORT

AEI Consultants
Environmental & Engineering Services

April 24, 2017

LIMITED PHASE II SUBSURFACE INVESTIGATION REPORT

Property Identification:
4778 Broadway
Manhattan, New York County, New York 10034

AEI Project No. 344060

Prepared for:
The Estate of Andres Vazquez and Donald F. Conway in his capacity as Chapter 11 Trustee for the Bankruptcy Estate of Jose L. Vazquez
3625 Quakerbridge Road
Hamilton, NJ 08619

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Environmental & Engineering Due Diligence

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April 24, 2017

The Estate of Andres Vazquez and Donald F. Conway in his capacity
as Chapter 11 Trustee for the Bankruptcy Estate of Jose L. Vazquez
3625 Quakerbridge Road
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Subject: **Limited Phase II Subsurface Investigation**
4778 Broadway
Manhattan, New York County, New York 10034
AEI Project No. 344060

AEI Consultants (AEI) is pleased to provide this report which describes the activities and results of the Limited Phase II Subsurface Investigation (Phase II) performed at the above referenced property (hereinafter referred to as the "Site"). This investigation was completed in general accordance with the authorized scope of services outlined in our proposal number 42047.

1.0 SITE DESCRIPTION

The Site consists of a single-story commercial car wash facility, located on the southeast side of Broadway between Dyckman Street and Academy Street in a commercial and residential area of the Manhattan, New York. The Site location is shown on Figure 1.

The Site totals approximately 0.28 acre and is improved with a single-story 2,550 square foot commercial building. The Site is currently vacant; however, the most recent occupant was Soft Touch Car Wash, whose operations included interior and exterior automobile cleaning. In addition to the building, the Site is improved with an asphalt paved parking area on the western portion of the Site. A site map is presented as Figure 2.

The Site slopes gradually to the southeast from an elevation of approximately 27 feet above mean sea level (AMSL) to 21 feet AMSL. The regional topographic gradient direction slopes toward the southeast and, therefore, the direction of groundwater flow beneath the Site is inferred to be to the southeast. The Hudson River is located approximately 0.38 miles to the west.

Based on a review of the United States Geological Survey (USGS) Harlem, New York quadrangle Geologic Map, the area surrounding the Site is underlain by peltic schist and gneiss deposits of the Manhattan Formation of the Ordovician-era. Based on a review of the United States Department of Agriculture (USDA) Soil Survey for the area, the soils in the vicinity of the Site are classified as the Urban land series. Urban Land describes soils that have been excavated, disturbed, and/or developed upon to the extent that the original soil profile is undistinguishable where at least 85 percent of the surface is covered with asphalt, concrete, or other impervious

building materials. Typically, soils classified as Urban Land contain fill materials such as brick and concrete, and characteristics of Urban Land soils can only be determined direct investigation.

Refer to Section 4.1 below for additional information on the site geology and groundwater conditions.

2.0 BACKGROUND

A Phase I Environmental Site Assessment (ESA) was performed by AEI as detailed in our report dated June 11, 2015 (AEI Project Number 344060). According to the ESA, the following Recognized Environmental Condition (REC) warranted further investigation:

- Based on a review of historical sources, the Site was developed with a gasoline filling and/or service station from as early as 1921 until 1988. During this time span, multiple generations of tanks were likely installed on the Site. Three (3) gasoline tanks were labeled on Sanborn maps from 1935 and 1951 and according to state agency and regulatory records, additional tanks were installed in 1951 during the redevelopment of the Site. The Site was reported on the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database and in the regulatory database as being equipped with a total of seven (7) underground storage tanks (USTs) that were all installed in 1952 and closed in place in 1996; however, no further information was provided. No documentation was made available to AEI during the Phase I assessment that indicated typical tank closure activities (including proper tank closure/removal, soil and/or groundwater sampling, and summary closure reports) were performed. Based on the absence of data to confirm whether contamination was identified at the time of the tank closures and the undocumented storage of gasoline prior to 1951, the possibility exists that the tanks may remain on the Site. Due to the long term use and storage of gasoline on-site, there is a potential that the soil and/or groundwater at the Site has been adversely impacted and thus the potential for vapor phase migration also exists on-site. The historical use and storage of gasoline on the Site since at least 1921 represents a REC.

- Based on the historical use of the Site as a gasoline filling station, and the unresolved information regarding the underground storage tanks of petroleum at the site, the Site poses a potential concern for vapor-phase migration.

The purpose of this Phase II was to evaluate if the long-term use and storage of gasoline at the Site has resulted in adverse impacts to the subsurface including soil, groundwater, and vapor migration.

3.0 INVESTIGATION EFFORTS

AEI performed an investigation that included the collection of soil, groundwater, exterior soil gas, sub-slab soil vapor, and indoor air samples, to evaluate if the onsite REC has resulted in impacts to the subsurface of the Site.

3.1 Health and Safety Plan

A site-specific health and safety plan was prepared, reviewed by onsite personnel, and kept onsite for the duration of the fieldwork.

3.2 Permitting and Utility Clearance

Drilling permits were not required for this investigation. The public underground utility locating service was notified to identify public utilities in the work area. Private utility locating was conducted by Ground Penetrating Radar Service (GPRS) of Toledo, Ohio, to identify underground utilities on the Site.

3.3 Geophysical Survey

On March 30, 2017, a geophysical survey was conducted by GPRS. The purpose of the survey was to evaluate the potential presence of current or former USTs and clear boring locations prior to drilling. The geophysical survey was conducted using ground penetrating radar (GPR). GPR survey lines were run in perpendicular directions at a 3-foot line spacing. The results from the geophysical survey identified two areas of disturbed soil on the northern portion of the Site. The area of disturbed soil located near the car wash along the northeastern portion of the asphalt parking lot, also suggested an anomaly consistent with that of an UST. The geophysical survey report prepared by GPRS is attached to this report as Appendix A.

The client should be aware of the inherent limitations of geophysical surveying methods and that above and underground utilities and other man-made or natural features (i.e. automobiles, debris piles, tree roots, reinforced concrete, certain soil conditions, etc.), if in the area of the survey, may decrease the effectiveness of the survey. The client should be aware that the lack of a detection of a feature from a geophysical survey does not mean that the feature does not exist, only that it was not detected.

3.4 Drilling and Soil Sample Collection

On March 30, 2017, a total of four (4) soil borings (AEI-SB1 through AEI-SB4) were advanced on the Site by Enviroprobe Service, Inc. (Enviroprobe) at the locations shown on Figure 2. The borings were advanced by Enviroprobe using a portable direct-push drilling rig. The borings were advanced to depths between 15 to 20 feet below ground surface (bgs). The location and purpose of each boring are listed below and illustrated on Figure 2:

- AEI-SB1 was advanced at the southern portion of the Site, in the asphalt paved area. This soil boring was also converted to a temporary well point for the purpose of groundwater sampling.
- AEI-SB2 was advanced in the central portion of the Site, in the asphalt paved area.
- AEI-SB3 was advanced on the northeastern portion of the Site, in the asphalt paved area near the UST anomaly identified by GPR. This soil boring was also converted to a temporary well point for the purpose of groundwater sampling.
- AEI-SB4 was advanced on the northern portion of the Site, in the concrete paved area.

The borings were advanced using 2.25-inch outer diameter rods and samples were collected by advancing the rods with acetate sample liners in approximately five foot intervals. After each interval, the core was retrieved, core barrel disassembled, and the sample liner was removed and transferred to the onsite geologist.

The soil borings were logged using the Unified Soil Classification System. A photo ionization detector (PID) was used to screen soil samples in the field and the PID readings for each sample

are included on the boring logs (Appendix B). Soil samples were collected at select intervals for analyses based on PID readings and sensory perception.; Soil samples were collected from varying depths as follows: soil sample AEI-SB2 was collected from a depth of 19.5-20 feet bgs, the terminus of the boring and location of the highest PID reading in the boring; soil sample AEI-SB3 was collected from a depth of 19.5-20 feet bgs, the terminus of the boring and location of the highest PID reading in the boring; and soil sample AEI-SB4 was collected from a depth of 11.5-12 feet bgs, the location of the highest PID reading in the boring.

Down-hole equipment was decontaminated using a triple rinse system containing detergent and dedicated acetate liners used in each macro-core sampler.

3.5 Temporary Well Point Groundwater Sample Collection

Groundwater samples were collected at borings AEI-SB1 and AEI-SB3 from temporary PVC well points inserted into the boreholes. Groundwater samples were collected using disposable bailers and placed into laboratory supplied containers.

3.6 Indoor Air Sample Collection

On March 30, 2017, one indoor air sample (IA-1) was collected. The air sampling was conducted in accordance with the guidelines outlined in the New York State Department of Health (NYSDOH) – Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. The location of the indoor air sample is listed below:

- Indoor air sample IA-1 was collected in the eastern mechanical room of the Site building.

The air sample was collected from within the breathing zone; approximately 3 to 5 feet above the ground surface. The air sampling equipment was provided by a state-certified laboratory. The air sample was collected using a 2.7-liter capacity Summa® canister equipped with a flow controller. The canister was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. The flow controller was calibrated by the laboratory to allow for air samples to be collected over an 8-hour period.

The initial vacuum for the Summa canister was checked and recorded prior to beginning sampling activities. After the vacuum was recorded, the air sample collection began and the air sample was drawn into the Summa canister and through a dedicated flow controller. Following the designated time period of sample collection (approximately 8-hours), the Summa canister was sealed with a slight vacuum remaining. Once the final vacuum was recorded, the sample collection ceased and the valve to the Summa canister was closed. The end of the Summa canister was sealed with an air-tight cap. Please note, the indoor sample was placed on hold at the laboratory pending the results of the sub-slab soil vapor and soil gas sampling described in Section 3.7.

3.7 Sub-slab Soil Vapor and Exterior Soil Gas Sample Collection

On March 30, 2017, sub-slab soil vapor and exterior soil gas sampling was conducted at the Site (Figure 2). This sampling was conducted in accordance with the guidelines outlined in the NYSDOH – Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. The locations of the samples are listed below:

- Probe SV-01 (sub-slab soil vapor) was advanced inside the building in the eastern mechanical room of the car wash.
- Probe SG-01 (exterior soil gas) was advanced on the northern portion of the Site and to the west of the building, in the asphalt paved area near the UST anomaly identified by GPR.

The sub-slab soil vapor sample was collected just beneath the concrete slab. The concrete slab was cored using a rotary hammer drill to create an approximate ½-inch diameter hole. A temporary vapor probe consisting of an implant connected to 0.25-inch polyethylene tubing was inserted into the core space just beneath the slab. The annular space surrounding the tubing and the surface was sealed with bee's wax. The sampling tubing was connected to a laboratory prepared 2.7-liter Summa canister equipped with a laboratory supplied flow controller set at 200 milliliters per minute (mL/min) for the collection of a soil vapor sample.

The exterior soil gas sample was advanced by drilling a borehole to approximately 5 feet bgs using a direct-push drilling rig. The bottom two feet of the borehole were backfilled with sand, and a temporary vapor probe consisting of an implant connected to 0.25-inch polyethylene tubing was inserted into the boring at a depth of 3 feet bgs. The annular space surrounding the tubing was filled with sand to approximately 2 feet bgs and the remainder of the borehole up to the surface was sealed with bentonite. The sampling tubing was connected to a laboratory prepared 2.7-liter Summa canister equipped with a laboratory supplied flow controller set at 200 mL/min for the collection of an exterior soil gas sample.

Each Summa canister was individually checked, tested and certified by the laboratory for air tightness and proper vacuum prior to shipping. Prior to sampling, a vacuum gauge was used to measure and record the initial Summa canister vacuum pressure. Once sampling was completed, each Summa canister was sealed with a slight vacuum prior to sealing.

3.8 Boring Abandonment

Following completion of sample collection and removal of tooling, the borings were backfilled with drill cuttings and hydrated bentonite chips and completed at the surface with asphalt patch or concrete to match the surrounding conditions.

3.9 Laboratory Analyses

The soil and groundwater samples were labeled and placed into a cooler with ice following sampling. The samples were transferred under appropriate chain-of-custody documentation to Alpha Analytical of Mahwah, New Jersey. Additionally, the indoor air, soil vapor, and soil gas sample Summa canisters were labeled and transferred under appropriate chain-of-custody documentation to Alpha Analytical. Laboratory analytical documentation is provided in Appendix C.

Laboratory analysis of soil sample AEI-SB2 consisted of the following:

- Volatile Organic Compounds (VOCs) by EPA Method 8260
- Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method 8270

Laboratory analysis of soil samples AEI-SB3 and AEI-SB4 consisted of the following:

- VOCs by EPA Method 8260
- PAHs by EPA Method 8270
- Lead by EPA Method 6010

Laboratory analysis of groundwater sample TWP-SB1 consisted of the following:

- VOCs by EPA Method 8260
- PAHs by EPA Method 8270

Laboratory analysis of groundwater sample TWP-SB3 consisted of the following:

- VOCs by EPA Method 8260
- PAHs by EPA Method 8270
- Lead by EPA Method 6010 (unfiltered sample)

Laboratory analysis of the sub-slab soil vapor sample (SV-01) and exterior soil gas sample (SG-01) consisted of the following:

- VOCs by EPA Method TO-15

3.10 Investigation Derived Wastes

No investigation derived waste was created during this investigation.

4.0 FINDINGS

For the purpose of providing context to the data obtained during this investigation, analytical results are compared to available regulatory screening levels. The NYSDEC has the responsibility for overseeing soil and groundwater cleanups which are managed under a variety of different regulatory programs. The soil results of this investigation were reviewed along with the applicable NYSDEC Restricted Commercial Soil Cleanup Objectives (SCOs), NYSDEC Restricted Residential Use SCOs, and NYSDEC Unrestricted Use SCOs. The groundwater results of this investigation were reviewed along with the applicable NYSDEC Groundwater Quality Standards (GQSs)

With respect to the sub-slab soil vapor and exterior soil gas samples, New York State does not have any standards, criteria or guidance values for concentrations of volatile compounds in sub-surface vapors or soil gas. However, the NYSDOH has developed two matrices to use as tools in making decisions when soil vapor associated with chlorinated VOCs may be entering buildings. Depending upon the reported sub-slab concentration, recommended actions could include: 1) No Further Action; 2) take reasonable and practical actions to identify source(s) and reduce exposure; 3) Monitor; and 4) Mitigate. Accordingly, these data were compared to the sub-slab vapor concentrations outlined in the Matrix Tables 1 and 2 of the NYSDOH – Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. The United States Environmental Protection Agency (EPA) has published Vapor Intrusion Screening Levels (VISLs) for contaminants in soil gas/sub-slab vapor that can be used to evaluate if contaminant levels pose a potential threat to indoor air quality. Comparison of the data to the US EPA VISL levels for

a commercial scenario and NYSDOH criteria have been made, where appropriate. Additionally, as the future development of the Site may include residential use, comparison of the data to the US EPA VISL levels for a residential scenario have also been made.

4.1 Geology and Hydrogeology

Sediment encountered in each of the borings generally consisted of light brown silt and silty clay with weathered schist (Appendix B).

Groundwater was encountered at a depth of approximately 14 feet bgs in the two temporary wells installed.

4.2 Soil Sample Analytical Results

The following information is a summary of the soil sample analytical test results (Appendix C). This information has also been summarized on Table 1.

VOCs

- A number of VOCs including benzene, toluene, ethylbenzene, xylene, n-butylbenzene, sec-butylbenzene, naphthalene, n-propylbenzene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene were detected at concentrations above their respective NYSDEC Restricted Commercial SCOs, NYSDEC Restricted Residential SCOs, and/or NYSDEC Unrestricted Use SCOs in soil samples collected at the Site. The above noted compounds are also commonly associated with gasoline.

PAHs

- No PAHs were detected above NYSDEC Restricted Commercial SCOs, NYSDEC Restricted Residential SCOs, or NYSDEC Unrestricted Use SCOs in soil samples collected at the Site.

Lead

- No lead concentrations were detected above NYSDEC Restricted Commercial SCOs, NYSDEC Restricted Residential SCOs, or NYSDEC Unrestricted Use SCOs in soil samples collected at the Site.

4.3 Groundwater Sample Analytical Results

The following information is a summary of the groundwater sample analytical test results (Appendix C). This information has also been summarized on Table 2.

VOCs

- A number of VOCs including benzene, toluene, ethylbenzene, xylene, n-butylbenzene, isopropylbenzene, naphthalene, n-propylbenzene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene were detected at concentrations above their respective NYSDEC GQS in groundwater sample TWP-SB3 collected at the Site. No VOC exceedances were detected in groundwater sample TWP-SB1.

PAHs

- PAHs including naphthalene, benzo(a)anthracene, and/or benzo(b)fluoranthene were detected at concentrations above their respective NYSDEC GQS in the two groundwater samples collected at the Site.

Lead
- No lead concentrations were detected above NYSDEC GQS in the two groundwater samples collected at the Site.

4.4 Sub-slab Soil Vapor and Exterior Soil Gas Sample Analytical Results

The following information is a summary of the sub-slab soil vapor and exterior soil gas sample analytical test results (Appendix C). This information has also been summarized on Table 3.

VOCs
- 1,3-Butadiene was detected in exterior soil gas sample SG-01 at a concentration of 23.9 micrograms per cubic meter (µg/m^3). This concentration exceeds the EPA VISL for 1,3-butadiene of 14 µg/m^3 for a commercial scenario and 3.1 µg/m^3 for a residential scenario.
- Benzene was detected in exterior soil gas sample SG-01 at a concentration of 13.3 micrograms µg/m^3. This concentration exceeds the EPA VISL for benzene of 12 µg/m^3 for a residential scenario.
- Ethylbenzene was detected in exterior soil gas sample SG-01 at a concentration of 75.1 µg/m^3 and in sub-slab soil vapor sample SV-01 at 621 µg/m^3. The ethylbenzene concentration reported in sample SV-01 exceeds the EPA VISL of 160 µg/m^3 for a commercial scenario and 37 µg/m^3 for a residential scenario. The ethylbenzene concentrations reported in sample SG-01 exceed only the EPA VISL of 37 µg/m^3 for a residential scenario

NYSDOH does not have published vapor intrusion screening levels for either 1,2-butadiene or ethylbenzene. The ethylbenzene concentration detected in sub-slab vapor sample SV-01 exceeds the NYSDOH Matrix 1 recommended concentration for vapor mitigation of 250 ug/m^3 but is below the Matrix 2 recommended concentration of 1,000 ug/m^3 for vapor mitigation. Based on the limited data and the fact that only one compound (ethylbenzene) was detected above either NYSDOH Soil Vapor to Indoor Air Matrix in the two soil gas sample collected, analysis of the indoor sample was not performed.

5.0 SUMMARY AND CONCLUSIONS

AEI has completed a Phase II at the Site. The purpose of the Phase II was to evaluate if the long term use and storage of gasoline at the Site has resulted in adverse impacts to the subsurface including soil, groundwater, and vapor migration.

The results from the geophysical survey identified two areas of disturbed soil on the northern portion of the Site. The area of disturbed soil located near the car wash along the northeastern portion of the asphalt parking lot, suggested an anomaly consistent with that of an UST.

The sampling results of this investigation were compared to NYSDEC Restricted Commercial SCOs, NYSDEC Restricted Residential SCOs, and NYSDEC Unrestricted Use SCOs for soil, NYSDEC GQS

for groundwater, and the EPA VISL levels and NYSDOH criteria and decision matrices for sub-slab soil vapor and soil gas.

Analysis of soil samples AEI-SB3 and AEI-SB4, collected in the area of the former historic gasoline filling station USTs, identified various VOCs at concentrations which exceed their respective NYSDEC Restricted Commercial SCOs, NYSDEC Restricted Residential SCOs, and/or NYSDEC Unrestricted Use SCOs. Analysis of soil sample AEI-SB2, collected in the central portion of the Site, did not identify any exceedances of NYSDEC Restricted Commercial or Restricted Residential SCOs.

Analysis of groundwater sample TWP-SB3, collected in the area of the former historic gasoline filling station USTs, identified various VOCs and PAHs at concentrations which exceed their respective NYSDEC GQSs. Groundwater sample TWP-SB1, collected from the southern portion of Site, revealed concentrations of PAHs in exceedance of NYSDEC GQSs, however, the presence of these compounds is likely the result of fill material present in the subsurface.

With respect to the soil gas and soil vapor samples collected, ethylbenzene was detected in sub-slab soil vapor sample SV-01 at a concentration above the EPA VISL for a commercial scenario and benzene was detected in soil gas sample SG-01 at a concentration above the EPA VISL for a residential scenario. Furthermore, the ethylbenzene concentration detected in sub-slab vapor sample SV-01 exceeds the NYSDOH Matrix 1 recommended concentration for vapor mitigation of 250 ug/m^3, but is below the Matrix 2 recommended concentration of 1,000 ug/m^3 for vapor mitigation. The NYSDOH does not currently have a published vapor intrusion screening level for ethylbenzene.

Based on the VOC concentrations detected in soil above their respective NYSDEC Restricted Commercial or Restricted Residential SCOs, the VOC and PAH concentrations detected in groundwater in exceedance of NYS GQSs, and the ethylbenzene concentrations detected in the sub-slab soil vapor sample, it appears that residual contamination related to the former historic gasoline filling station USTs is present at the Site. AEI recommends further evaluation of the anomalous area identified by the GPR survey to assess if a UST is still present in the ground, and if present, perform the necessary closure / removal activities. AEI further recommends that remediation of impacted soil and a groundwater investigation be conducted in the location of the former USTs and possible UST remaining at the Site. Finally, based on the detection of a number of petroleum related compounds detected in the soil and groundwater above NYSDEC standards, the NYSDEC Spill Hotline was called and the release reported. Spill Number #1700751 was issued by inspector 37 at the NYSDEC notification hotline.

6.0 REPORT LIMITATIONS AND RELIANCE

This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples were chosen to provide the requested information, subject to scope of work for which AEI was retained and limitations inherent in this type of work, but it cannot be assumed that they are representative of areas not sampled. This report should not be regarded as a guarantee that no further contamination beyond that which could have been detected within the scope of this investigation is present beneath the Site. Undocumented, unauthorized releases of

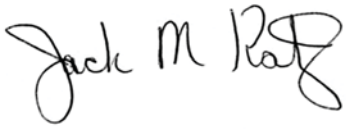
hazardous material, the remains of which are not readily identifiable by visual inspection and are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation.

Any conclusions and/or recommendations are based on these analyses and observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document. These services were performed in accordance with generally accepted practices, in the environmental engineering and construction field, which existed at the time and location of the work. No other warranty, either expressed or implied, has been made.

This investigation was prepared for the sole use and benefit of The Estate of Andres Vazquez and Donald F. Conway in his capacity as Chapter 11 Trustee for the Bankruptcy Estate of Jose L. Vazquez. All reports, both verbal and written, whether in draft or final, are for the benefit of The Estate of Andres Vazquez and Donald F. Conway in his capacity as Chapter 11 Trustee for the Bankruptcy Estate of Jose L. Vazquez. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors or assigns. Reliance is provided in accordance with AEI's Proposal and Standard Terms & Conditions executed by The Estate of Andres Vazquez and Donald F. Conway in his capacity as Chapter 11 Trustee for the Bankruptcy Estate of Jose L. Vazquez. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

If there are any questions regarding our investigation, please do not hesitate to contact AEI at (732) 414-2720.

Sincerely,
AEI Consultants



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FIGURES

LEGEND

Source: USGS

N

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TOPOGRAPHIC MAP

4778 BROADWAY MANHATTAN, NEW YORK 10034

FIGURE 1

Project No. 344060

Legend

Soil Boring Location
Soil Boring/Temporary Well Point Location
Exterior Soil Gas Probe Location
Sub-slab Soil Vapor Probe Location

Approximate Property Boundary
Geophysical Survey identified UST

N

Figure 2: SITE MAP

4778 Broadway, Manhattan, New York 10034
Project Number: 344060

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TABLES

TABLE 1: SOIL SAMPLE DATA SUMMARY
4778 Broadway, New York, NY 10034

Analysis	Units	AEI-SB2 3/30/2017 19.5-20 (feet bgs)	AEI-SB3 3/30/2017 19.5-20 (feet bgs)	AEI-SB4 3/30/2017 11.5-12 (feet bgs)	NYSDEC Restricted Commercial SCO	NYSDEC Restricted Residential SCO	NYSDEC Unrestricted SCO
PAHs via 8270:							
Acenaphthene	mg/kg	ND	0.045	ND	500	100	20
Naphthalene	mg/kg	ND	10	1.4	500	100	12
Fluorene	mg/kg	ND	0.13	ND	500	100	30
Phenanthrene	mg/kg	ND	0.11	ND	500	100	100
2-Methylnaphthalene	mg/kg	ND	10	0.64	-	-	-
All other PAHs	mg/kg	ND	ND	ND	-	-	-
VOCs via 8260:							
Benzene	mg/kg	**0.089**	**3.1**	**12**	44	4.8	0.06
Toluene	mg/kg	0.04	***680***	**300**	500	100	0.7
Ethylbenzene	mg/kg	0.31	**270**	***490***	390	41	1
Bromomethane	mg/kg	0.015	ND	ND	-	-	-
p/m-Xylene	mg/kg	0.65	980	1600	-	-	-
o-Xylene	mg/kg	0.27	380	570	-	-	-
Xylenes, Total	mg/kg	**0.92**	***1400***	***2200***	500	100	0.26
1,2,3-Trichloropropane	mg/kg	ND	7.4	ND	-	-	-
n-Butylbenzene	mg/kg	ND	**17**	**25**	500	100	12
sec-Butylbenzene	mg/kg	ND	7.3	**11**	500	100	11
Isopropylbenzene	mg/kg	0.014	18	32	-	-	-
p-Isopropyltoluene	mg/kg	ND	3.4	5.2	-	-	-
Naphthalene	mg/kg	0.054	**51**	**72**	500	100	12
n-Propylbenzene	mg/kg	0.037	**68**	**120**	500	100	3.9
1,3,5-Trimethylbenzene	mg/kg	0.071	**120**	***210***	190	52	8.4
1,2,4-Trimethylbenzene	mg/kg	0.23	***400***	***690***	190	52	3.6
p-Diethylbenzene	mg/kg	ND	120	180	-	-	-
p-Ethyltoluene	mg/kg	0.15	370	620	-	-	-
1,2,4,5-Tetramethylbenzene	mg/kg	0.02	32	51	-	-	-
All other VOCs	mg/kg	ND	ND	ND	-	-	-
Lead via 6010:							
Lead	mg/kg	NA	2.9	6.2	1000	400	63

Notes:

mg/kg	milligrams per kilogram
bgs	below ground surface
-	no standard
NA	not analyzed
Bold	Result exceeds applicable NYSDEC Unrestricted SCO
Boxed	Result exceeds applicable NYSDEC Restricted Residential SCO
Italicized/ Red	Result exceeds applicable NYSDEC Restricted Commercial SCO

Comparision Values:

NYSDEC Unrestricted SCO	New York State Department of Environmental Conservation - Unrestricted Soil Cleanup Objective
NYSDEC Restricted Commercial SCO	New York State Department of Environmental Conservation - Restricted Commercial Soil Cleanup Objective
NYSDEC Restricted Residential SCO	New York State Department of Environmental Conservation - Restricted Residential Soil Cleanup Objective

TABLE 2: GROUNDWATER SAMPLE DATA SUMMARY
4778 Broadway, New York, NY 10034

Analysis	Units	TWP-SB1 3/30/2017	TWP-SB3 3/30/2017	NYSDEC GQS
PAHs via 8270:				
Fluoranthene	ug/l	0.06	ND	50
Naphthalene	ug/l	0.28	350	10
Benzo(a)anthracene	ug/l	0.04	ND	0.002
Benzo(b)fluoranthene	ug/l	0.04	ND	0.002
Fluorene	ug/l	ND	0.71	50
Phenanthrene	ug/l	0.05	0.71	50
Pyrene	ug/l	0.06	ND	50
2-Methylnaphthalene	ug/l	0.08	120	-
All other PAHs	ug/l	ND	ND	-
VOCs via 8260:				
Benzene	ug/l	ND	340	1
Toluene	ug/l	ND	8600	5
Ethylbenzene	ug/l	ND	5100	5
p/m-Xylene	ug/l	1	17000	5
o-Xylene	ug/l	ND	6100	5
Xylenes, Total	ug/l	1	23000	-
Acetone	ug/l	3.2	ND	50
n-Butylbenzene	ug/l	ND	91	5
Isopropylbenzene	ug/l	ND	190	5
Naphthalene	ug/l	1.4	440	10
n-Propylbenzene	ug/l	ND	550	5
1,3,5-Trimethylbenzene	ug/l	ND	1100	5
1,2,4-Trimethylbenzene	ug/l	0.99	3900	5
p-Diethylbenzene	ug/l	ND	120	-
p-Ethyltoluene	ug/l	ND	3100	-
All other VOCs	ug/l	ND	ND	-
Lead via 6010:				
Lead	ug/l	NA	5.49	-

Notes:

ug/l	Micrograms per liter
-	no standard
NA	not analyzed
Boxed	Result exceeds applicable NYSDEC Groundwater Quality Standards

Comparision Values:

NYSDEC GQS	New York State Department of Environmental Conservation - Groundwater Quality Standards

TABLE 3: SOIL VAPOR AND SOIL GAS SAMPLE DATA SUMMARY
4778 Broadway, New York, NY 10034

Analysis	Units	SG-01 3/30/2017	SV-01 3/30/2017	EPA-VISL SSV Residential Criteria	EPA-VISL SSV Commercial Criteria
VOCs via TO-15:					
Chloromethane	ug/m3	1.83	ND	3100	13000
1,3-Butadiene	ug/m3	**23.9**	ND	3.1	14
Ethanol	ug/m3	23.2	ND	-	-
Acetone	ug/m3	92.4	219	1100000	95000000
Isopropanol	ug/m3	136	ND	7000	29000
Carbon disulfide	ug/m3	19.7	4.58	24000	100000
Methyl tert butyl ether	ug/m3	6.53	ND	360	1600
2-Butanone	ug/m3	8.82	6.84	170000	730000
n-Hexane	ug/m3	23.8	4.3	24000	100000
Benzene	ug/m3	13.3	ND	12	52
Cyclohexane	ug/m3	9.36	2.75	210000	880000
2,2,4-Trimethylpentane	ug/m3	490	13.9	-	-
Heptane	ug/m3	12.3	5.25	-	-
Toluene	ug/m3	18.5	5.88	170000	730000
Ethylbenzene	ug/m3	75.1	**621**	37	160
p/m-Xylene	ug/m3	16.9	1900	3500	15000
o-Xylene	ug/m3	8.12	782	3500	15000
4-Ethyltoluene	ug/m3	2.21	6.24	-	-
1,3,5-Trimethylbenzene	ug/m3	2.06	13.9	-	-
1,2,4-Trimethylbenzene	ug/m3	3.94	21.3	240	1000
All Other VOCs	ug/m3	ND	ND	-	-

Notes:

ug/m3	micrograms per cubic meter
-	no standard
Boxed	Result exceeds applicable EPA VISL Residential Criteria
Bold	Result exceeds applicable EPA VISL Commercial Criteria

Comparision Values:
EPA VISL SSV Residential Criteria - Environmental Protection Agency Vapor Intrusion Screening Level for Sub-Slab Vapor in a Residential Scenario
EPA VISL SSV Commercial Criteria - Environmental Protection Agency Vapor Intrusion Screening Level for Sub-Slab Vapor in a Commercial Scenario

APPENDIX A

GEOPHYSICAL SURVEY REPORT

GROUND PENETRATING RADAR SYSTEMS, INC.

EXPERTS IN GPR

Friday, March 31, 2017

AEI Consultants
Attn: Anthony Cauterucci
Site: 4778 Broadway, New York, NY

Re: GPR Investigation for Underground Utilities and USTs

We appreciate the opportunity to provide this report for our work completed on 3/30/17 at the above address in New York, NY.

PURPOSE

The purpose of this project was to search for underground utilities within a 10' x 10' area around 4 proposed soil borings, locations provided by the client. The client also requested approximately 6000 square feet be scanned for any USTs or areas of disturbed soil. The client was planning on drilling to a depth of approximately 20' at the 4 locations based on our findings to collect soil samples.

EQUIPMENT

- **Ground Penetrating Radar (GPR), Manufacturer: GSSI, Model: SIR-3000 processing unit with 400 MHz antenna.** GPR works by sending pulses of energy into a material and recording the strength and the time required for the return of the reflected signal. Reflections are produced when the energy pulses enter into a material with different electrical properties from the material it left. The strength of the reflection is determined by the contrast in signal speed between the two materials. The total depth achieved can be as much as 8' or more with this antenna but can vary widely depending on the conductivity of the materials. For more information, please visit: http://www.geophysical.com/Documentation/Brochures/GSSI-UtilityScanBrochure.pdf

- **RD7000 pipe locator, Manufacturer: Radiodetection.** The RD7000 can detect the electromagnetic fields from live power or radio frequency signals. It can also be used in conjunction with a trasmitter to connect directly to accessible, metallic pipes, risers, or tracer wires. A tone is sent through the pipe or tracer wire at a specific frequency which can then be detected by the receiver. For more information, please visit: http://www.spx.com/en/radiodetection/pd-rd7000/

PROCESS

Our process began with using the RD7000 to locate pipes or utilities throughout the scan area. We first sweep all areas with the receiver to detect live power or radio frequency signals followed by connecting to any visible risers or tracer wires that may be in the area provided that there is an exposed metallic surface. Locations and depths are painted or flagged on the surface. Depths cannot always be provided depending on the location method and can be prone to error.

Initial GPR scans were then collected in order to evaluate the data and calibrate the equipment. Based on these findings, a survey strategy is formed, typically consisting of scanning the entire area in a grid with 5'-10' scan spacing in order to locate any potential utilities that were not found with RD. The GPR data is interpreted in real time and anomalies in the data are located and marked on the surface along with their depths using spray paint, pin flags, etc. Depths are dependent on the dielectric of the materials being scanned so depth accuracy can vary throughout a site. Relevant scan examples can be saved and then provided in a report.

LIMITATIONS

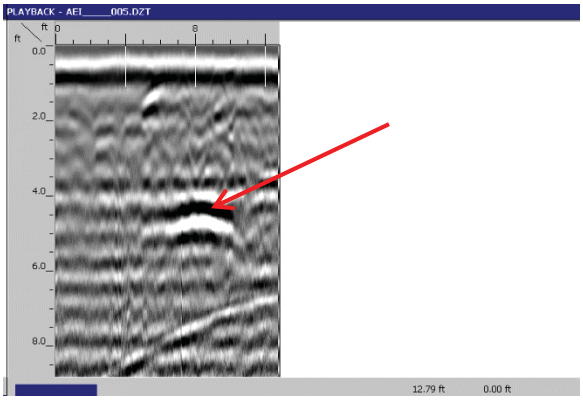
Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above ground features, and utilization of services such as Dig Alert/Underground Service Alert.

At this site, our scans were limited by uneven terrain due to recent excavations and saturated soil due to recent snow melting in the area. The site conditions can be seen in the photos on page 4.

FINDINGS

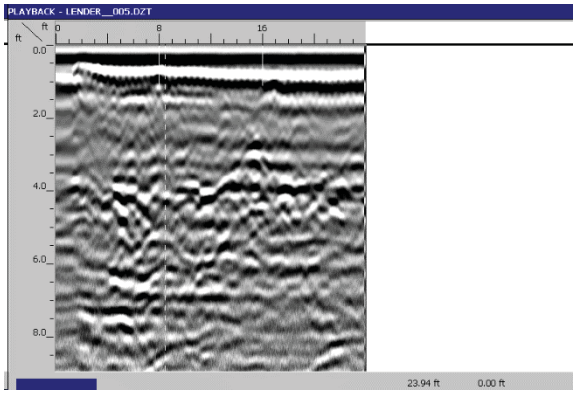
We found that the soil allowed for maximum GPR depth penetration of 6' in most areas. We were able to locate 2 disturbed soil areas and multiple unknown utilities using either the GPR or RD. The disturbed soil area near the car wash also showed data consistent with metal, meaning an UST is potentially still in that location. All findings were marked with spray paint at this site. All findings were explained to the site contact.

The following pages will further explain the findings.

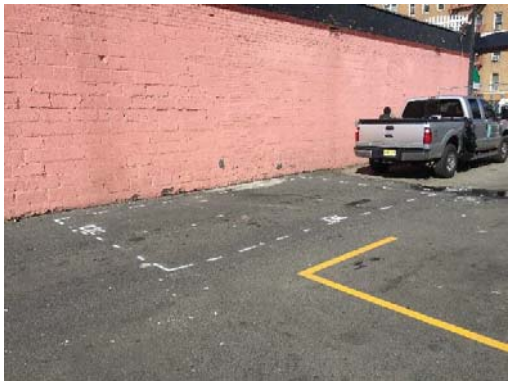


GPR data screenshot. The depth scale is on the left and the distance of the scan is across the top, forming a cross section view of the subsurface. The arrow is pointing to the metal reaction within the disturbed soil located.

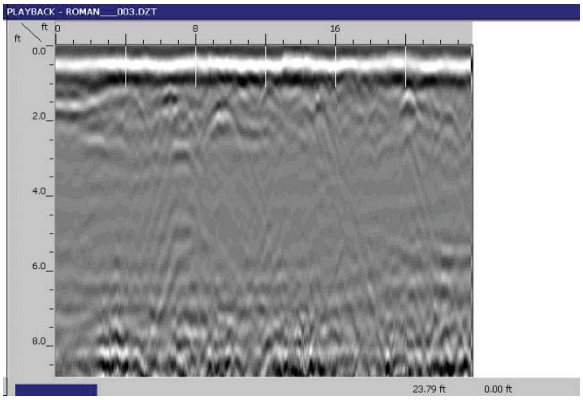
The above photo was taken facing north and shows the location where the data to the left was taken from.



The above GPR data screenshot shows the disturbed soil near the current entrance.



The above photo was taken facing west and shows the location where the data to the left was taken from.



The above GPR data screenshot shows the general data found at this site.

The above photo was taken facing south and shows one of the proposed boring locations.

CLOSING

Ground Penetrating Radar Systems, Inc. has been in business for over 15 years, specializing in underground storage tank location, concrete scanning, utility locating, as well as shallow void detection throughout the US and Canada. I encourage you to visit our website (www.gp-radar.com) and contact any of the numerous references listed.

GPRS appreciates the opportunity to offer our services, and we look forward to continuing to work with you on future projects. Please feel free to contact us for additional information or with any questions you may have regarding this GPR Investigation.

Signed,

Joe Bernarducci
Project Manager—Northern New Jersey
GPRS GROUND PENETRATING RADAR SYSTEMS, INC.
EXPERTS IN GPR
Direct: 848-223-5084
joe.bernarducci@gp-radar.com
www.gp-radar.com

APPENDIX B

BORING LOGS

AEI Consultants
2500 Camino Diablo
Walnut Creek
Telephone: 925.746.6000

BORING NUMBER AEI-SB1

CLIENT The Mercadien Group
PROJECT NAME
PROJECT NUMBER 344060
PROJECT LOCATION 4778 Broadway, Manhattan,
DATE STARTED 3/30/17 **COMPLETED** 3/30/17
GROUND ELEVATION **HOLE SIZE** 2 inches
DRILLING CONTRACTOR Enviroprobe
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 14.50 ft
LOGGED BY Anthony Cauterucci **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0			0		Asphalt and gravel fill	
			0		1.3	
					Light brown silt and rock fill	
			0			
			0			
			0			
5			0		5.0	PVC Riser
			0		Light brown silt	
			0			
			0		7.5	
					Light brown silt subrounded gravel	
			0			
			0			
10			0			
			0			
			0			
			0			
			0			
			0		14.0	PVC Screen
			0		Brown silty clay - saturated	
15			0			
			0			
			0		16.5	
			0		Brown silty sand - saturated	
			6.7		18.0	

Bottom of borehole at 18.0 feet.

AEI Consultants
2500 Camino Diablo
Walnut Creek
Telephone: 925.746.6000

BORING NUMBER AEI-SB2

CLIENT The Mercadien Group
PROJECT NAME
PROJECT NUMBER 344060
PROJECT LOCATION 4778 Broadway, Manhattan,
DATE STARTED 3/30/17 **COMPLETED** 3/30/17
GROUND ELEVATION **HOLE SIZE** 2 inches
DRILLING CONTRACTOR Enviroprobe
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Anthony Cauterucci **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0			2.2		Asphalt and gravel fill	
			1.9		0.8 Light brown silt and rock fill	
			2.6			
			1.7			
			2.1			
5			5.7		5.0 Orange-brown silt	
			2.2			
			2.6			
			2.8			
			3.5		9.0 Gray silty clay - moist	
10			3.5		10.0 Gray-brown clayey silt	
			3.1			
			2.7			
			5.6			
			4.8		14.0 Reddish brown sandy clay with weathered rock - saturated	
15			14.6			
			10.2			
			5.1			
			10.2			
			25.3			
20	AEI-SB2		79.7		20.0	

Bottom of borehole at 20.0 feet.

AEI Consultants
2500 Camino Diablo
Walnut Creek
Telephone: 925.746.6000

BORING NUMBER AEI-SB3

CLIENT The Mercadien Group
PROJECT NAME
PROJECT NUMBER 344060
PROJECT LOCATION 4778 Broadway, Manhattan,
DATE STARTED 3/30/17 **COMPLETED** 3/30/17
GROUND ELEVATION **HOLE SIZE** 2 inches
DRILLING CONTRACTOR Enviroprobe
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 14.50 ft
LOGGED BY Anthony Cauterucci **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0			0		Asphalt and gravel fill	
			0		1.0 Gray silt - minor petroleum odors	
			3.4			
			2.8			
			2.4			
5			5.8			PVC Riser
			8.9		6.0 Gray silt with weathered rock - petroleum odors	
			18.9			
			12			
			8.4			
10			5.4			
			3		11.0 Brown-red silty clay - moist - petroleum odors	
			2.1			
			5.4			
			7.6		14.3 Brown-red silty clay with weathered rock - saturated - petroleum odors	
15			8.1			PVC Screen
			9.7		16.5	
			11.3		17.0 Reddish brown sandy clay with weathered rock - saturated - petroleum odors	
			1045		Medium sand and subrounded gravel with weathered rock - saturated - petroleum odors	
			1726			
20	AEI-SB3		1542		20.0	

Bottom of borehole at 20.0 feet.

AEI Consultants
2500 Camino Diablo
Walnut Creek
Telephone: 925.746.6000

BORING NUMBER AEI-SB4

CLIENT The Mercadien Group
PROJECT NAME
PROJECT NUMBER 344060
PROJECT LOCATION 4778 Broadway, Manhattan,
DATE STARTED 3/30/17 **COMPLETED** 3/30/17
GROUND ELEVATION **HOLE SIZE** 2 inches
DRILLING CONTRACTOR Enviroprobe
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING ---
LOGGED BY Anthony Cauterucci **CHECKED BY**
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS	PID DATA (ppm)	GRAPHIC LOG	MATERIAL DESCRIPTION	COMPLETION
0.0					Concrete	
			0		0.5 Black silt fill - petroleum odors	
			6.1			
			11.6			
2.5						
			101.7			
			427.2			
5.0					5.0 Stained gray-brown silt - petroleum odors	
			1944			
			2325			
			1774			
7.5						
			527			
			1568			
10.0						
			753			
					11.0	
			2215		Red-brown silty clay - moist - petroleum odors	
	AEI-SB4					
			492			
12.5						
			1741			
			1686			
15.0			1242		15.0	

Bottom of borehole at 15.0 feet.

APPENDIX C

LABORATORY ANALYTICAL DOCUMENTATION

ANALYTICAL REPORT

Lab Number:	L1709919
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Anthony Cauterucci
Phone:	(732) 414-2720
Project Name:	4778 BROADWAY
Project Number:	344060
Report Date:	04/07/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1709919-01	TWP-SB1	WATER	4788 BROADWAY, NYC, NY	03/30/17 12:20	03/31/17
L1709919-02	AEI-SB2	SOIL	4788 BROADWAY, NYC, NY	03/30/17 11:45	03/31/17
L1709919-03	AEI-SB3	SOIL	4788 BROADWAY, NYC, NY	03/30/17 09:43	03/31/17
L1709919-04	TWP-SB3	WATER	4788 BROADWAY, NYC, NY	03/30/17 10:00	03/31/17
L1709919-05	AEI-SB4	SOIL	4788 BROADWAY, NYC, NY	03/30/17 11:15	03/31/17

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. All specific QC 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. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

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

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

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

Project Name: 4788 BROADWAY **Lab Number:** L1709919
Project Number: 344060 **Report Date:** 04/07/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L1709919-04: The sample was received without the container for the Total Metals analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

Semivolatile Organics by SIM

L1709919-04: The surrogate recoveries are below the acceptance criteria for nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

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: Michelle M. Morris

Title: Technical Director/Representative Date: 04/07/17

ORGANICS

VOLATILES

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-01
Client ID: TWP-SB1
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/06/17 15:21
Analyst: BD

Date Collected: 03/30/17 12:20
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	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	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-01 Date Collected: 03/30/17 12:20

Client ID: TWP-SB1 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	1.0	J	ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	1.0	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	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	3.2	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	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	1.4	J	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

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-01
Client ID: TWP-SB1
Sample Location: 4788 BROADWAY, NYC, NY
Date Collected: 03/30/17 12:20
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	0.99	J	ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	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	98		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-02
Client ID: AEI-SB2
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/06/17 11:44
Analyst: JC
Percent Solids: 89%

Date Collected: 03/30/17 11:45
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	410	68.	1
1,1-Dichloroethane	ND		ug/kg	62	11.	1
Chloroform	ND		ug/kg	62	15.	1
Carbon tetrachloride	ND		ug/kg	41	14.	1
1,2-Dichloropropane	ND		ug/kg	140	9.4	1
Dibromochloromethane	ND		ug/kg	41	7.3	1
1,1,2-Trichloroethane	ND		ug/kg	62	13.	1
Tetrachloroethene	ND		ug/kg	41	12.	1
Chlorobenzene	ND		ug/kg	41	14.	1
Trichlorofluoromethane	ND		ug/kg	210	17.	1
1,2-Dichloroethane	ND		ug/kg	41	10.	1
1,1,1-Trichloroethane	ND		ug/kg	41	14.	1
Bromodichloromethane	ND		ug/kg	41	13.	1
trans-1,3-Dichloropropene	ND		ug/kg	41	8.6	1
cis-1,3-Dichloropropene	ND		ug/kg	41	9.5	1
1,3-Dichloropropene, Total	ND		ug/kg	41	8.6	1
1,1-Dichloropropene	ND		ug/kg	210	14.	1
Bromoform	ND		ug/kg	160	9.8	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	41	12.	1
Benzene	89		ug/kg	41	8.0	1
Toluene	40	J	ug/kg	62	8.0	1
Ethylbenzene	310		ug/kg	41	7.0	1
Chloromethane	ND		ug/kg	210	18.	1
Bromomethane	15	J	ug/kg	83	14.	1
Vinyl chloride	ND		ug/kg	83	13.	1
Chloroethane	ND		ug/kg	83	13.	1
1,1-Dichloroethene	ND		ug/kg	41	15.	1
trans-1,2-Dichloroethene	ND		ug/kg	62	10.	1
Trichloroethene	ND		ug/kg	41	12.	1
1,2-Dichlorobenzene	ND		ug/kg	210	7.5	1

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-02 Date Collected: 03/30/17 11:45

Client ID: AEI-SB2 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	210	9.0	1
1,4-Dichlorobenzene	ND		ug/kg	210	7.5	1
Methyl tert butyl ether	ND		ug/kg	83	6.3	1
p/m-Xylene	650		ug/kg	83	14.	1
o-Xylene	270		ug/kg	83	14.	1
Xylenes, Total	920		ug/kg	83	14.	1
cis-1,2-Dichloroethene	ND		ug/kg	41	14.	1
1,2-Dichloroethene, Total	ND		ug/kg	41	10.	1
Dibromomethane	ND		ug/kg	410	9.9	1
Styrene	ND		ug/kg	83	16.	1
Dichlorodifluoromethane	ND		ug/kg	410	21.	1
Acetone	ND		ug/kg	410	95.	1
Carbon disulfide	ND		ug/kg	410	45.	1
2-Butanone	ND		ug/kg	410	28.	1
Vinyl acetate	ND		ug/kg	410	6.3	1
4-Methyl-2-pentanone	ND		ug/kg	410	10.	1
1,2,3-Trichloropropane	ND		ug/kg	410	7.3	1
2-Hexanone	ND		ug/kg	410	28.	1
Bromochloromethane	ND		ug/kg	210	15.	1
2,2-Dichloropropane	ND		ug/kg	210	18.	1
1,2-Dibromoethane	ND		ug/kg	160	8.2	1
1,3-Dichloropropane	ND		ug/kg	210	7.6	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	41	13.	1
Bromobenzene	ND		ug/kg	210	9.0	1
n-Butylbenzene	ND		ug/kg	41	9.4	1
sec-Butylbenzene	ND		ug/kg	41	9.0	1
tert-Butylbenzene	ND		ug/kg	210	10.	1
o-Chlorotoluene	ND		ug/kg	210	9.1	1
p-Chlorotoluene	ND		ug/kg	210	7.6	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	210	16.	1
Hexachlorobutadiene	ND		ug/kg	210	14.	1
Isopropylbenzene	14	J	ug/kg	41	8.0	1
p-Isopropyltoluene	ND		ug/kg	41	8.3	1
Naphthalene	54	J	ug/kg	210	5.7	1
Acrylonitrile	ND		ug/kg	410	21.	1
n-Propylbenzene	37	J	ug/kg	41	8.9	1
1,2,3-Trichlorobenzene	ND		ug/kg	210	10.	1
1,2,4-Trichlorobenzene	ND		ug/kg	210	8.9	1
1,3,5-Trimethylbenzene	71	J	ug/kg	210	6.6	1

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-02
Client ID: AEI-SB2
Sample Location: 4788 BROADWAY, NYC, NY
Date Collected: 03/30/17 11:45
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	230		ug/kg	210	7.7	1
1,4-Dioxane	ND		ug/kg	1600	600	1
p-Diethylbenzene	ND		ug/kg	160	160	1
p-Ethyltoluene	150	J	ug/kg	160	9.7	1
1,2,4,5-Tetramethylbenzene	20	J	ug/kg	160	6.4	1
Ethyl ether	ND		ug/kg	210	11.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	210	16.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03 D
Client ID: AEI-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/07/17 10:21
Analyst: JC
Percent Solids: 91%

Date Collected: 03/30/17 09:43
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	36000	5900	100
1,1-Dichloroethane	ND		ug/kg	5400	970	100
Chloroform	ND		ug/kg	5400	1300	100
Carbon tetrachloride	ND		ug/kg	3600	1200	100
1,2-Dichloropropane	ND		ug/kg	12000	820	100
Dibromochloromethane	ND		ug/kg	3600	630	100
1,1,2-Trichloroethane	ND		ug/kg	5400	1100	100
Tetrachloroethene	ND		ug/kg	3600	1100	100
Chlorobenzene	ND		ug/kg	3600	1200	100
Trichlorofluoromethane	ND		ug/kg	18000	1500	100
1,2-Dichloroethane	ND		ug/kg	3600	880	100
1,1,1-Trichloroethane	ND		ug/kg	3600	1200	100
Bromodichloromethane	ND		ug/kg	3600	1100	100
trans-1,3-Dichloropropene	ND		ug/kg	3600	740	100
cis-1,3-Dichloropropene	ND		ug/kg	3600	830	100
1,3-Dichloropropene, Total	ND		ug/kg	3600	740	100
1,1-Dichloropropene	ND		ug/kg	18000	1200	100
Bromoform	ND		ug/kg	14000	850	100
1,1,2,2-Tetrachloroethane	ND		ug/kg	3600	1100	100
Benzene	3100	J	ug/kg	3600	690	100
Toluene	680000		ug/kg	5400	700	100
Ethylbenzene	270000		ug/kg	3600	610	100
Chloromethane	ND		ug/kg	18000	1600	100
Bromomethane	ND		ug/kg	7200	1200	100
Vinyl chloride	ND		ug/kg	7200	1100	100
Chloroethane	ND		ug/kg	7200	1100	100
1,1-Dichloroethene	ND		ug/kg	3600	1300	100
trans-1,2-Dichloroethene	ND		ug/kg	5400	860	100
Trichloroethene	ND		ug/kg	3600	1100	100
1,2-Dichlorobenzene	ND		ug/kg	18000	650	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03 D Date Collected: 03/30/17 09:43

Client ID: AEI-SB3 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	18000	780	100
1,4-Dichlorobenzene	ND		ug/kg	18000	650	100
Methyl tert butyl ether	ND		ug/kg	7200	550	100
p/m-Xylene	980000		ug/kg	7200	1200	100
o-Xylene	380000		ug/kg	7200	1200	100
Xylenes, Total	1400000		ug/kg	7200	1200	100
cis-1,2-Dichloroethene	ND		ug/kg	3600	1200	100
1,2-Dichloroethene, Total	ND		ug/kg	3600	860	100
Dibromomethane	ND		ug/kg	36000	860	100
Styrene	ND		ug/kg	7200	1400	100
Dichlorodifluoromethane	ND		ug/kg	36000	1800	100
Acetone	ND		ug/kg	36000	8200	100
Carbon disulfide	ND		ug/kg	36000	3900	100
2-Butanone	ND		ug/kg	36000	2500	100
Vinyl acetate	ND		ug/kg	36000	550	100
4-Methyl-2-pentanone	ND		ug/kg	36000	870	100
1,2,3-Trichloropropane	7400	J	ug/kg	36000	630	100
2-Hexanone	ND		ug/kg	36000	2400	100
Bromochloromethane	ND		ug/kg	18000	1300	100
2,2-Dichloropropane	ND		ug/kg	18000	1600	100
1,2-Dibromoethane	ND		ug/kg	14000	710	100
1,3-Dichloropropane	ND		ug/kg	18000	660	100
1,1,1,2-Tetrachloroethane	ND		ug/kg	3600	1100	100
Bromobenzene	ND		ug/kg	18000	780	100
n-Butylbenzene	17000		ug/kg	3600	820	100
sec-Butylbenzene	7300		ug/kg	3600	780	100
tert-Butylbenzene	ND		ug/kg	18000	880	100
o-Chlorotoluene	ND		ug/kg	18000	790	100
p-Chlorotoluene	ND		ug/kg	18000	660	100
1,2-Dibromo-3-chloropropane	ND		ug/kg	18000	1400	100
Hexachlorobutadiene	ND		ug/kg	18000	1200	100
Isopropylbenzene	18000		ug/kg	3600	700	100
p-Isopropyltoluene	3400	J	ug/kg	3600	720	100
Naphthalene	51000		ug/kg	18000	490	100
Acrylonitrile	ND		ug/kg	36000	1800	100
n-Propylbenzene	68000		ug/kg	3600	770	100
1,2,3-Trichlorobenzene	ND		ug/kg	18000	900	100
1,2,4-Trichlorobenzene	ND		ug/kg	18000	770	100
1,3,5-Trimethylbenzene	120000		ug/kg	18000	580	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03 D Date Collected: 03/30/17 09:43

Client ID: AEI-SB3 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	400000		ug/kg	18000	670	100
1,4-Dioxane	ND		ug/kg	140000	52000	100
p-Diethylbenzene	120000		ug/kg	14000	14000	100
p-Ethyltoluene	370000		ug/kg	14000	840	100
1,2,4,5-Tetramethylbenzene	32000		ug/kg	14000	560	100
Ethyl ether	ND		ug/kg	18000	930	100
trans-1,4-Dichloro-2-butene	ND		ug/kg	18000	1400	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-04 D
Client ID: TWP-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/06/17 15:52
Analyst: BD

Date Collected: 03/30/17 10:00
Date Received: 03/31/17
Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	ND		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
1,3-Dichloropropene, Total	ND		ug/l	50	14.	100
1,1-Dichloropropene	ND		ug/l	250	70.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	340		ug/l	50	16.	100
Toluene	8600		ug/l	250	70.	100
Ethylbenzene	5100		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-04 D Date Collected: 03/30/17 10:00

Client ID: TWP-SB3 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	17000		ug/l	250	70.	100
o-Xylene	6100		ug/l	250	70.	100
Xylenes, Total	23000		ug/l	250	70.	100
cis-1,2-Dichloroethene	ND		ug/l	250	70.	100
1,2-Dichloroethene, Total	ND		ug/l	250	70.	100
Dibromomethane	ND		ug/l	500	100	100
1,2,3-Trichloropropane	ND		ug/l	250	70.	100
Acrylonitrile	ND		ug/l	500	150	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
Vinyl acetate	ND		ug/l	500	100	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
2,2-Dichloropropane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,3-Dichloropropane	ND		ug/l	250	70.	100
1,1,1,2-Tetrachloroethane	ND		ug/l	250	70.	100
Bromobenzene	ND		ug/l	250	70.	100
n-Butylbenzene	91	J	ug/l	250	70.	100
sec-Butylbenzene	ND		ug/l	250	70.	100
tert-Butylbenzene	ND		ug/l	250	70.	100
o-Chlorotoluene	ND		ug/l	250	70.	100
p-Chlorotoluene	ND		ug/l	250	70.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Hexachlorobutadiene	ND		ug/l	250	70.	100
Isopropylbenzene	190	J	ug/l	250	70.	100
p-Isopropyltoluene	ND		ug/l	250	70.	100
Naphthalene	440		ug/l	250	70.	100
n-Propylbenzene	550		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
1,3,5-Trimethylbenzene	1100		ug/l	250	70.	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-04 D Date Collected: 03/30/17 10:00

Client ID: TWP-SB3 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	3900		ug/l	250	70.	100
1,4-Dioxane	ND		ug/l	25000	6100	100
p-Diethylbenzene	120	J	ug/l	200	70.	100
p-Ethyltoluene	3100		ug/l	200	70.	100
1,2,4,5-Tetramethylbenzene	ND		ug/l	200	54.	100
Ethyl ether	ND		ug/l	250	70.	100
trans-1,4-Dichloro-2-butene	ND		ug/l	250	70.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	98		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05 D
Client ID: AEI-SB4
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/06/17 12:36
Analyst: JC
Percent Solids: 92%

Date Collected: 03/30/17 11:15
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	36000	6000	100
1,1-Dichloroethane	ND		ug/kg	5400	980	100
Chloroform	ND		ug/kg	5400	1300	100
Carbon tetrachloride	ND		ug/kg	3600	1200	100
1,2-Dichloropropane	ND		ug/kg	13000	820	100
Dibromochloromethane	ND		ug/kg	3600	640	100
1,1,2-Trichloroethane	ND		ug/kg	5400	1100	100
Tetrachloroethene	ND		ug/kg	3600	1100	100
Chlorobenzene	ND		ug/kg	3600	1300	100
Trichlorofluoromethane	ND		ug/kg	18000	1500	100
1,2-Dichloroethane	ND		ug/kg	3600	890	100
1,1,1-Trichloroethane	ND		ug/kg	3600	1300	100
Bromodichloromethane	ND		ug/kg	3600	1100	100
trans-1,3-Dichloropropene	ND		ug/kg	3600	750	100
cis-1,3-Dichloropropene	ND		ug/kg	3600	840	100
1,3-Dichloropropene, Total	ND		ug/kg	3600	750	100
1,1-Dichloropropene	ND		ug/kg	18000	1200	100
Bromoform	ND		ug/kg	14000	860	100
1,1,2,2-Tetrachloroethane	ND		ug/kg	3600	1100	100
Benzene	12000		ug/kg	3600	700	100
Toluene	300000		ug/kg	5400	710	100
Ethylbenzene	490000		ug/kg	3600	620	100
Chloromethane	ND		ug/kg	18000	1600	100
Bromomethane	ND		ug/kg	7200	1200	100
Vinyl chloride	ND		ug/kg	7200	1100	100
Chloroethane	ND		ug/kg	7200	1100	100
1,1-Dichloroethene	ND		ug/kg	3600	1300	100
trans-1,2-Dichloroethene	ND		ug/kg	5400	870	100
Trichloroethene	ND		ug/kg	3600	1100	100
1,2-Dichlorobenzene	ND		ug/kg	18000	660	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05 D Date Collected: 03/30/17 11:15

Client ID: AEI-SB4 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	18000	790	100
1,4-Dichlorobenzene	ND		ug/kg	18000	660	100
Methyl tert butyl ether	ND		ug/kg	7200	550	100
p/m-Xylene	1600000		ug/kg	7200	1300	100
o-Xylene	570000		ug/kg	7200	1200	100
Xylenes, Total	2200000		ug/kg	7200	1200	100
cis-1,2-Dichloroethene	ND		ug/kg	3600	1200	100
1,2-Dichloroethene, Total	ND		ug/kg	3600	870	100
Dibromomethane	ND		ug/kg	36000	860	100
Styrene	ND		ug/kg	7200	1400	100
Dichlorodifluoromethane	ND		ug/kg	36000	1800	100
Acetone	ND		ug/kg	36000	8300	100
Carbon disulfide	ND		ug/kg	36000	4000	100
2-Butanone	ND		ug/kg	36000	2500	100
Vinyl acetate	ND		ug/kg	36000	550	100
4-Methyl-2-pentanone	ND		ug/kg	36000	880	100
1,2,3-Trichloropropane	ND		ug/kg	36000	640	100
2-Hexanone	ND		ug/kg	36000	2400	100
Bromochloromethane	ND		ug/kg	18000	1300	100
2,2-Dichloropropane	ND		ug/kg	18000	1600	100
1,2-Dibromoethane	ND		ug/kg	14000	720	100
1,3-Dichloropropane	ND		ug/kg	18000	660	100
1,1,1,2-Tetrachloroethane	ND		ug/kg	3600	1200	100
Bromobenzene	ND		ug/kg	18000	790	100
n-Butylbenzene	25000		ug/kg	3600	820	100
sec-Butylbenzene	11000		ug/kg	3600	790	100
tert-Butylbenzene	ND		ug/kg	18000	890	100
o-Chlorotoluene	ND		ug/kg	18000	800	100
p-Chlorotoluene	ND		ug/kg	18000	660	100
1,2-Dibromo-3-chloropropane	ND		ug/kg	18000	1400	100
Hexachlorobutadiene	ND		ug/kg	18000	1300	100
Isopropylbenzene	32000		ug/kg	3600	700	100
p-Isopropyltoluene	5200		ug/kg	3600	730	100
Naphthalene	72000		ug/kg	18000	500	100
Acrylonitrile	ND		ug/kg	36000	1900	100
n-Propylbenzene	120000		ug/kg	3600	780	100
1,2,3-Trichlorobenzene	ND		ug/kg	18000	910	100
1,2,4-Trichlorobenzene	ND		ug/kg	18000	780	100
1,3,5-Trimethylbenzene	210000		ug/kg	18000	580	100

Project Name: 4788 BROADWAY **Lab Number:** L1709919

Project Number: 344060 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05 D Date Collected: 03/30/17 11:15

Client ID: AEI-SB4 Date Received: 03/31/17

Sample Location: 4788 BROADWAY, NYC, NY Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	690000		ug/kg	18000	670	100
1,4-Dioxane	ND		ug/kg	140000	52000	100
p-Diethylbenzene	180000		ug/kg	14000	14000	100
p-Ethyltoluene	620000		ug/kg	14000	850	100
1,2,4,5-Tetramethylbenzene	51000		ug/kg	14000	560	100
Ethyl ether	ND		ug/kg	18000	940	100
trans-1,4-Dichloro-2-butene	ND		ug/kg	18000	1400	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	98		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 08:40
Analyst: CBN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,05 Batch: WG991884-5					
Methylene chloride	ND		ug/kg	500	82.
1,1-Dichloroethane	ND		ug/kg	75	14.
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	17.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	8.8
1,1,2-Trichloroethane	ND		ug/kg	75	16.
Tetrachloroethene	ND		ug/kg	50	15.
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	21.
1,2-Dichloroethane	ND		ug/kg	50	12.
1,1,1-Trichloroethane	ND		ug/kg	50	18.
Bromodichloromethane	ND		ug/kg	50	15.
trans-1,3-Dichloropropene	ND		ug/kg	50	10.
cis-1,3-Dichloropropene	ND		ug/kg	50	12.
1,3-Dichloropropene, Total	ND		ug/kg	50	10.
1,1-Dichloropropene	ND		ug/kg	250	16.
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	15.
Benzene	ND		ug/kg	50	9.6
Toluene	ND		ug/kg	75	9.8
Ethylbenzene	ND		ug/kg	50	8.5
Chloromethane	ND		ug/kg	250	22.
Bromomethane	35	J	ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	16.
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	19.
trans-1,2-Dichloroethene	ND		ug/kg	75	12.
Trichloroethene	ND		ug/kg	50	15.

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 08:40
Analyst: CBN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,05 Batch: WG991884-5					
1,2-Dichlorobenzene	ND		ug/kg	250	9.1
1,3-Dichlorobenzene	ND		ug/kg	250	11.
1,4-Dichlorobenzene	ND		ug/kg	250	9.1
Methyl tert butyl ether	ND		ug/kg	100	7.6
p/m-Xylene	ND		ug/kg	100	18.
o-Xylene	ND		ug/kg	100	17.
Xylenes, Total	ND		ug/kg	100	17.
cis-1,2-Dichloroethene	ND		ug/kg	50	17.
1,2-Dichloroethene, Total	ND		ug/kg	50	12.
Dibromomethane	ND		ug/kg	500	12.
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	25.
Acetone	ND		ug/kg	500	110
Carbon disulfide	200	J	ug/kg	500	55.
2-Butanone	ND		ug/kg	500	34.
Vinyl acetate	ND		ug/kg	500	7.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.8
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	18.
2,2-Dichloropropane	ND		ug/kg	250	22.
1,2-Dibromoethane	ND		ug/kg	200	10.
1,3-Dichloropropane	ND		ug/kg	250	9.2
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	11.
n-Butylbenzene	ND		ug/kg	50	11.
sec-Butylbenzene	ND		ug/kg	50	11.
tert-Butylbenzene	ND		ug/kg	250	12.
o-Chlorotoluene	ND		ug/kg	250	11.

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 08:40
Analyst: CBN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,05 Batch: WG991884-5					
p-Chlorotoluene	ND		ug/kg	250	9.2
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	17.
Isopropylbenzene	ND		ug/kg	50	9.7
p-Isopropyltoluene	ND		ug/kg	50	10.
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	11.
1,2,3-Trichlorobenzene	ND		ug/kg	250	12.
1,2,4-Trichlorobenzene	ND		ug/kg	250	11.
1,3,5-Trimethylbenzene	ND		ug/kg	250	8.0
1,2,4-Trimethylbenzene	ND		ug/kg	250	9.3
1,4-Dioxane	ND		ug/kg	2000	720
p-Diethylbenzene	ND		ug/kg	200	200
p-Ethyltoluene	ND		ug/kg	200	12.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	7.8
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	100		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 10:32
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG991894-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	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	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 10:32
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG991894-5					
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
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
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	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	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
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

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/06/17 10:32
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG991894-5					
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
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	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	107		70-130

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/07/17 08:36
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG992092-5					
Methylene chloride	ND		ug/kg	500	82.
1,1-Dichloroethane	ND		ug/kg	75	14.
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	17.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	8.8
1,1,2-Trichloroethane	ND		ug/kg	75	16.
Tetrachloroethene	ND		ug/kg	50	15.
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	21.
1,2-Dichloroethane	ND		ug/kg	50	12.
1,1,1-Trichloroethane	ND		ug/kg	50	18.
Bromodichloromethane	ND		ug/kg	50	15.
trans-1,3-Dichloropropene	ND		ug/kg	50	10.
cis-1,3-Dichloropropene	ND		ug/kg	50	12.
1,3-Dichloropropene, Total	ND		ug/kg	50	10.
1,1-Dichloropropene	ND		ug/kg	250	16.
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	15.
Benzene	10	J	ug/kg	50	9.6
Toluene	ND		ug/kg	75	9.8
Ethylbenzene	ND		ug/kg	50	8.5
Chloromethane	ND		ug/kg	250	22.
Bromomethane	25	J	ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	16.
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	19.
trans-1,2-Dichloroethene	ND		ug/kg	75	12.
Trichloroethene	ND		ug/kg	50	15.

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/07/17 08:36
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG992092-5					
1,2-Dichlorobenzene	ND		ug/kg	250	9.1
1,3-Dichlorobenzene	ND		ug/kg	250	11.
1,4-Dichlorobenzene	ND		ug/kg	250	9.1
Methyl tert butyl ether	ND		ug/kg	100	7.6
p/m-Xylene	ND		ug/kg	100	18.
o-Xylene	ND		ug/kg	100	17.
Xylenes, Total	ND		ug/kg	100	17.
cis-1,2-Dichloroethene	ND		ug/kg	50	17.
1,2-Dichloroethene, Total	ND		ug/kg	50	12.
Dibromomethane	ND		ug/kg	500	12.
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	25.
Acetone	ND		ug/kg	500	110
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	34.
Vinyl acetate	ND		ug/kg	500	7.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.8
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	18.
2,2-Dichloropropane	ND		ug/kg	250	22.
1,2-Dibromoethane	ND		ug/kg	200	10.
1,3-Dichloropropane	ND		ug/kg	250	9.2
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	11.
n-Butylbenzene	ND		ug/kg	50	11.
sec-Butylbenzene	ND		ug/kg	50	11.
tert-Butylbenzene	ND		ug/kg	250	12.
o-Chlorotoluene	ND		ug/kg	250	11.

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/07/17 08:36
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 03 Batch: WG992092-5					
p-Chlorotoluene	ND		ug/kg	250	9.2
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	17.
Isopropylbenzene	ND		ug/kg	50	9.7
p-Isopropyltoluene	ND		ug/kg	50	10.
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	11.
1,2,3-Trichlorobenzene	ND		ug/kg	250	12.
1,2,4-Trichlorobenzene	ND		ug/kg	250	11.
1,3,5-Trimethylbenzene	ND		ug/kg	250	8.0
1,2,4-Trimethylbenzene	ND		ug/kg	250	9.3
1,4-Dioxane	ND		ug/kg	2000	720
p-Diethylbenzene	ND		ug/kg	200	200
p-Ethyltoluene	ND		ug/kg	200	12.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	7.8
Ethyl ether	ND		ug/kg	250	13.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,05 Batch: WG991884-3 WG991884-4								
Methylene chloride	103		101		70-130	2		30
1,1-Dichloroethane	109		108		70-130	1		30
Chloroform	108		106		70-130	2		30
Carbon tetrachloride	108		109		70-130	1		30
1,2-Dichloropropane	108		108		70-130	0		30
Dibromochloromethane	117		116		70-130	1		30
1,1,2-Trichloroethane	108		109		70-130	1		30
Tetrachloroethene	107		104		70-130	3		30
Chlorobenzene	105		104		70-130	1		30
Trichlorofluoromethane	82		82		70-139	0		30
1,2-Dichloroethane	102		103		70-130	1		30
1,1,1-Trichloroethane	113		110		70-130	3		30
Bromodichloromethane	110		111		70-130	1		30
trans-1,3-Dichloropropene	117		116		70-130	1		30
cis-1,3-Dichloropropene	114		114		70-130	0		30
1,1-Dichloropropene	109		108		70-130	1		30
Bromoform	108		110		70-130	2		30
1,1,2,2-Tetrachloroethane	110		113		70-130	3		30
Benzene	107		105		70-130	2		30
Toluene	105		102		70-130	3		30
Ethylbenzene	103		101		70-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,05 Batch: WG991884-3 WG991884-4								
Chloromethane	106		103		52-130	3		30
Bromomethane	86		85		57-147	1		30
Vinyl chloride	89		86		67-130	3		30
Chloroethane	81		80		50-151	1		30
1,1-Dichloroethene	109		108		65-135	1		30
trans-1,2-Dichloroethene	110		108		70-130	2		30
Trichloroethene	106		105		70-130	1		30
1,2-Dichlorobenzene	104		104		70-130	0		30
1,3-Dichlorobenzene	103		103		70-130	0		30
1,4-Dichlorobenzene	103		103		70-130	0		30
Methyl tert butyl ether	115		118		66-130	3		30
p/m-Xylene	104		100		70-130	4		30
o-Xylene	103		101		70-130	2		30
cis-1,2-Dichloroethene	107		106		70-130	1		30
Dibromomethane	108		108		70-130	0		30
Styrene	102		101		70-130	1		30
Dichlorodifluoromethane	94		94		30-146	0		30
Acetone	104		108		54-140	4		30
Carbon disulfide	**252**	Q	**276**	Q	59-130	9		30
2-Butanone	114		120		70-130	5		30
Vinyl acetate	110		112		70-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,05 Batch: WG991884-3 WG991884-4								
4-Methyl-2-pentanone	114		116		70-130	2		30
1,2,3-Trichloropropane	107		110		68-130	3		30
2-Hexanone	106		111		70-130	5		30
Bromochloromethane	110		109		70-130	1		30
2,2-Dichloropropane	120		117		70-130	3		30
1,2-Dibromoethane	111		111		70-130	0		30
1,3-Dichloropropane	108		108		69-130	0		30
1,1,1,2-Tetrachloroethane	110		109		70-130	1		30
Bromobenzene	103		103		70-130	0		30
n-Butylbenzene	107		104		70-130	3		30
sec-Butylbenzene	105		104		70-130	1		30
tert-Butylbenzene	104		102		70-130	2		30
o-Chlorotoluene	106		104		70-130	2		30
p-Chlorotoluene	106		104		70-130	2		30
1,2-Dibromo-3-chloropropane	109		115		68-130	5		30
Hexachlorobutadiene	113		106		67-130	6		30
Isopropylbenzene	104		103		70-130	1		30
p-Isopropyltoluene	105		103		70-130	2		30
Naphthalene	111		113		70-130	2		30
Acrylonitrile	123		124		70-130	1		30
n-Propylbenzene	104		102		70-130	2		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,05 Batch: WG991884-3 WG991884-4								
1,2,3-Trichlorobenzene	110		110		70-130	0		30
1,2,4-Trichlorobenzene	109		107		70-130	2		30
1,3,5-Trimethylbenzene	104		103		70-130	1		30
1,2,4-Trimethylbenzene	104		103		70-130	1		30
1,4-Dioxane	119		127		65-136	7		30
p-Diethylbenzene	105		104		70-130	1		30
p-Ethyltoluene	105		104		70-130	1		30
1,2,4,5-Tetramethylbenzene	105		104		70-130	1		30
Ethyl ether	109		112		67-130	3		30
trans-1,4-Dichloro-2-butene	114		116		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		102		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	102		105		70-130
Dibromofluoromethane	102		103		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG991894-3 WG991894-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	120		120		63-132	0		20
1,2-Dichloropropane	92		94		70-130	2		20
Dibromochloromethane	110		110		63-130	0		20
1,1,2-Trichloroethane	100		99		70-130	1		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	130		130		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	110		100		67-130	10		20
trans-1,3-Dichloropropene	98		100		70-130	2		20
cis-1,3-Dichloropropene	95		99		70-130	4		20
1,1-Dichloropropene	100		110		70-130	10		20
Bromoform	110		110		54-136	0		20
1,1,2,2-Tetrachloroethane	98		95		67-130	3		20
Benzene	94		99		70-130	5		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG991894-3 WG991894-4								
Chloromethane	130		130		64-130	0		20
Bromomethane	**150**	Q	**150**	Q	39-139	0		20
Vinyl chloride	120		130		55-140	8		20
Chloroethane	**140**	Q	**140**	Q	55-138	0		20
1,1-Dichloroethene	100		110		61-145	10		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	98		99		70-130	1		20
1,3-Dichlorobenzene	99		100		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	100		105		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	99		95		64-130	4		20
Acrylonitrile	110		100		70-130	10		20
Styrene	95		100		70-130	5		20
Dichlorodifluoromethane	130		140		36-147	7		20
Acetone	91		99		58-148	8		20
Carbon disulfide	110		130		51-130	17		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG991894-3 WG991894-4								
2-Butanone	93		89		63-138	4		20
Vinyl acetate	88		81		70-130	8		20
4-Methyl-2-pentanone	83		82		59-130	1		20
2-Hexanone	84		79		57-130	6		20
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	100		110		63-133	10		20
1,2-Dibromoethane	100		98		70-130	2		20
1,3-Dichloropropane	100		97		70-130	3		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	100		110		70-130	10		20
n-Butylbenzene	100		100		53-136	0		20
sec-Butylbenzene	98		100		70-130	2		20
tert-Butylbenzene	99		100		70-130	1		20
o-Chlorotoluene	100		110		70-130	10		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	80		80		41-144	0		20
Hexachlorobutadiene	92		96		63-130	4		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	99		100		70-130	1		20
Naphthalene	70		**69**	Q	70-130	1		20
n-Propylbenzene	100		110		69-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG991894-3 WG991894-4								
1,2,3-Trichlorobenzene	75		76		70-130	1		20
1,2,4-Trichlorobenzene	79		82		70-130	4		20
1,3,5-Trimethylbenzene	100		110		64-130	10		20
1,2,4-Trimethylbenzene	100		110		70-130	10		20
1,4-Dioxane	92		98		56-162	6		20
p-Diethylbenzene	94		98		70-130	4		20
p-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	100		110		70-130	10		20
Ethyl ether	120		120		59-134	0		20
trans-1,4-Dichloro-2-butene	96		90		70-130	6		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	109		106		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	104		104		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG992092-3 WG992092-4								
Methylene chloride	95		96		70-130	1		30
1,1-Dichloroethane	98		99		70-130	1		30
Chloroform	98		98		70-130	0		30
Carbon tetrachloride	89		91		70-130	2		30
1,2-Dichloropropane	102		103		70-130	1		30
Dibromochloromethane	114		114		70-130	0		30
1,1,2-Trichloroethane	108		109		70-130	1		30
Tetrachloroethene	88		90		70-130	2		30
Chlorobenzene	97		96		70-130	1		30
Trichlorofluoromethane	**67**	Q	**68**	Q	70-139	1		30
1,2-Dichloroethane	102		101		70-130	1		30
1,1,1-Trichloroethane	93		95		70-130	2		30
Bromodichloromethane	106		107		70-130	1		30
trans-1,3-Dichloropropene	115		114		70-130	1		30
cis-1,3-Dichloropropene	108		109		70-130	1		30
1,1-Dichloropropene	89		91		70-130	2		30
Bromoform	104		108		70-130	4		30
1,1,2,2-Tetrachloroethane	111		112		70-130	1		30
Benzene	96		96		70-130	0		30
Toluene	92		93		70-130	1		30
Ethylbenzene	90		90		70-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG992092-3 WG992092-4								
Chloromethane	97		96		52-130	1		30
Bromomethane	76		76		57-147	0		30
Vinyl chloride	72		73		67-130	1		30
Chloroethane	70		69		50-151	1		30
1,1-Dichloroethene	89		91		65-135	2		30
trans-1,2-Dichloroethene	94		94		70-130	0		30
Trichloroethene	91		92		70-130	1		30
1,2-Dichlorobenzene	100		98		70-130	2		30
1,3-Dichlorobenzene	96		96		70-130	0		30
1,4-Dichlorobenzene	98		96		70-130	2		30
Methyl tert butyl ether	115		115		66-130	0		30
p/m-Xylene	90		90		70-130	0		30
o-Xylene	92		92		70-130	0		30
cis-1,2-Dichloroethene	98		98		70-130	0		30
Dibromomethane	106		109		70-130	3		30
Styrene	94		95		70-130	1		30
Dichlorodifluoromethane	76		77		30-146	1		30
Acetone	118		112		54-140	5		30
Carbon disulfide	**185**	Q	**358**	Q	59-130	**64**	Q	30
2-Butanone	117		118		70-130	1		30
Vinyl acetate	112		112		70-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG992092-3 WG992092-4								
4-Methyl-2-pentanone	114		116		70-130	2		30
1,2,3-Trichloropropane	108		107		68-130	1		30
2-Hexanone	109		112		70-130	3		30
Bromochloromethane	105		107		70-130	2		30
2,2-Dichloropropane	100		102		70-130	2		30
1,2-Dibromoethane	109		110		70-130	1		30
1,3-Dichloropropane	106		108		69-130	2		30
1,1,1,2-Tetrachloroethane	104		101		70-130	3		30
Bromobenzene	97		97		70-130	0		30
n-Butylbenzene	89		89		70-130	0		30
sec-Butylbenzene	87		88		70-130	1		30
tert-Butylbenzene	87		88		70-130	1		30
o-Chlorotoluene	94		94		70-130	0		30
p-Chlorotoluene	96		95		70-130	1		30
1,2-Dibromo-3-chloropropane	112		114		68-130	2		30
Hexachlorobutadiene	89		90		67-130	1		30
Isopropylbenzene	89		88		70-130	1		30
p-Isopropyltoluene	88		88		70-130	0		30
Naphthalene	108		109		70-130	1		30
Acrylonitrile	122		126		70-130	3		30
n-Propylbenzene	89		89		70-130	0		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 03 Batch: WG992092-3 WG992092-4								
1,2,3-Trichlorobenzene	106		103		70-130	3		30
1,2,4-Trichlorobenzene	102		101		70-130	1		30
1,3,5-Trimethylbenzene	92		92		70-130	0		30
1,2,4-Trimethylbenzene	94		92		70-130	2		30
1,4-Dioxane	116		119		65-136	3		30
p-Diethylbenzene	90		89		70-130	1		30
p-Ethyltoluene	91		91		70-130	0		30
1,2,4,5-Tetramethylbenzene	95		92		70-130	3		30
Ethyl ether	108		108		67-130	0		30
trans-1,4-Dichloro-2-butene	117		118		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	99		97		70-130
4-Bromofluorobenzene	104		101		70-130
Dibromofluoromethane	103		103		70-130

SEMIVOLATILES

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-01
Client ID: TWP-SB1
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 04/06/17 09:47
Analyst: DV

Date Collected: 03/30/17 12:20
Date Received: 03/31/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 04/04/17 23:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.03	1
2-Chloronaphthalene	ND		ug/l	0.19	0.03	1
Fluoranthene	0.06	J	ug/l	0.19	0.04	1
Naphthalene	0.28		ug/l	0.19	0.04	1
Benzo(a)anthracene	0.04	J	ug/l	0.19	0.02	1
Benzo(a)pyrene	ND		ug/l	0.19	0.04	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.19	0.02	1
Benzo(k)fluoranthene	ND		ug/l	0.19	0.04	1
Chrysene	ND		ug/l	0.19	0.04	1
Acenaphthylene	ND		ug/l	0.19	0.03	1
Anthracene	ND		ug/l	0.19	0.03	1
Benzo(ghi)perylene	ND		ug/l	0.19	0.04	1
Fluorene	ND		ug/l	0.19	0.04	1
Phenanthrene	0.05	J	ug/l	0.19	0.01	1
Dibenzo(a,h)anthracene	ND		ug/l	0.19	0.04	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.19	0.04	1
Pyrene	0.06	J	ug/l	0.19	0.04	1
2-Methylnaphthalene	0.08	J	ug/l	0.19	0.04	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	83		15-120
4-Terphenyl-d14	76		41-149

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-02
Client ID: AEI-SB2
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 04/05/17 05:35
Analyst: KV
Percent Solids: 89%

Date Collected: 03/30/17 11:45
Date Received: 03/31/17
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/02/17 19:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	150	19.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
Fluoranthene	ND		ug/kg	110	21.	1
Naphthalene	ND		ug/kg	180	22.	1
Benzo(a)anthracene	ND		ug/kg	110	21.	1
Benzo(a)pyrene	ND		ug/kg	150	45.	1
Benzo(b)fluoranthene	ND		ug/kg	110	31.	1
Benzo(k)fluoranthene	ND		ug/kg	110	30.	1
Chrysene	ND		ug/kg	110	19.	1
Acenaphthylene	ND		ug/kg	150	28.	1
Anthracene	ND		ug/kg	110	36.	1
Benzo(ghi)perylene	ND		ug/kg	150	22.	1
Fluorene	ND		ug/kg	180	18.	1
Phenanthrene	ND		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	150	26.	1
Pyrene	ND		ug/kg	110	18.	1
2-Methylnaphthalene	ND		ug/kg	220	22.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	79		30-120
4-Terphenyl-d14	62		18-120

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03 D
Client ID: AEI-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 04/05/17 20:00
Analyst: CB
Percent Solids: 91%

Date Collected: 03/30/17 09:43
Date Received: 03/31/17
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/02/17 19:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	45	J	ug/kg	290	37.	2
2-Chloronaphthalene	ND		ug/kg	360	36.	2
Fluoranthene	ND		ug/kg	220	41.	2
Naphthalene	10000		ug/kg	360	44.	2
Benzo(a)anthracene	ND		ug/kg	220	41.	2
Benzo(a)pyrene	ND		ug/kg	290	88.	2
Benzo(b)fluoranthene	ND		ug/kg	220	61.	2
Benzo(k)fluoranthene	ND		ug/kg	220	58.	2
Chrysene	ND		ug/kg	220	38.	2
Acenaphthylene	ND		ug/kg	290	56.	2
Anthracene	ND		ug/kg	220	70.	2
Benzo(ghi)perylene	ND		ug/kg	290	42.	2
Fluorene	130	J	ug/kg	360	35.	2
Phenanthrene	110	J	ug/kg	220	44.	2
Dibenzo(a,h)anthracene	ND		ug/kg	220	42.	2
Indeno(1,2,3-cd)pyrene	ND		ug/kg	290	50.	2
Pyrene	ND		ug/kg	220	36.	2
2-Methylnaphthalene	10000		ug/kg	430	44.	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	68		30-120
4-Terphenyl-d14	59		18-120

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-04 D
Client ID: TWP-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 04/07/17 10:32
Analyst: DV

Date Collected: 03/30/17 10:00
Date Received: 03/31/17
Field Prep: None
Extraction Method: EPA 3510C
Extraction Date: 04/04/17 23:31

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	1.9	0.67	20
2-Chloronaphthalene	ND		ug/l	3.8	0.67	20
Fluoranthene	ND		ug/l	3.8	0.73	20
Naphthalene	350		ug/l	3.8	0.82	20
Benzo(a)anthracene	ND		ug/l	3.8	0.34	20
Benzo(a)pyrene	ND		ug/l	3.8	0.75	20
Benzo(b)fluoranthene	ND		ug/l	3.8	0.31	20
Benzo(k)fluoranthene	ND		ug/l	3.8	0.80	20
Chrysene	ND		ug/l	3.8	0.73	20
Acenaphthylene	ND		ug/l	3.8	0.67	20
Anthracene	ND		ug/l	3.8	0.67	20
Benzo(ghi)perylene	ND		ug/l	3.8	0.80	20
Fluorene	0.71	J	ug/l	3.8	0.71	20
Phenanthrene	0.71	J	ug/l	3.8	0.29	20
Dibenzo(a,h)anthracene	ND		ug/l	3.8	0.75	20
Indeno(1,2,3-cd)pyrene	ND		ug/l	3.8	0.76	20
Pyrene	ND		ug/l	3.8	0.76	20
2-Methylnaphthalene	120		ug/l	3.8	0.86	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	**0**	Q	23-120
2-Fluorobiphenyl	**0**	Q	15-120
4-Terphenyl-d14	**0**	Q	41-149

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05
Client ID: AEI-SB4
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 04/05/17 01:47
Analyst: KV
Percent Solids: 92%

Date Collected: 03/30/17 11:15
Date Received: 03/31/17
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 04/02/17 19:07

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	19.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
Fluoranthene	ND		ug/kg	110	21.	1
Naphthalene	1400		ug/kg	180	22.	1
Benzo(a)anthracene	ND		ug/kg	110	20.	1
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	ND		ug/kg	110	30.	1
Benzo(k)fluoranthene	ND		ug/kg	110	29.	1
Chrysene	ND		ug/kg	110	19.	1
Acenaphthylene	ND		ug/kg	140	28.	1
Anthracene	ND		ug/kg	110	35.	1
Benzo(ghi)perylene	ND		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	17.	1
Phenanthrene	ND		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	25.	1
Pyrene	ND		ug/kg	110	18.	1
2-Methylnaphthalene	640		ug/kg	220	22.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	40		23-120
2-Fluorobiphenyl	39		30-120
4-Terphenyl-d14	34		18-120

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/03/17 22:16
Analyst: CB

Extraction Method: EPA 3546
Extraction Date: 04/02/17 19:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02-03,05 Batch: WG990374-1					
Acenaphthene	ND		ug/kg	130	17.
2-Chloronaphthalene	ND		ug/kg	160	16.
Fluoranthene	ND		ug/kg	99	19.
Naphthalene	ND		ug/kg	160	20.
Benzo(a)anthracene	ND		ug/kg	99	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	28.
Benzo(k)fluoranthene	ND		ug/kg	99	26.
Chrysene	ND		ug/kg	99	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	99	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	99	20.
Dibenzo(a,h)anthracene	ND		ug/kg	99	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	99	16.
2-Methylnaphthalene	ND		ug/kg	200	20.

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/kg

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 04/03/17 22:16
Analyst: CB

Extraction Method: EPA 3546
Extraction Date: 04/02/17 19:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02-03,05 Batch: WG990374-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	91		25-120
Phenol-d6	96		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	88		30-120
2,4,6-Tribromophenol	93		10-136
4-Terphenyl-d14	86		18-120

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 04/05/17 09:58
Analyst: KL

Extraction Method: EPA 3510C
Extraction Date: 04/04/17 06:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,04 Batch: WG990730-1					
Acenaphthene	ND		ug/l	0.10	0.04
2-Chloronaphthalene	ND		ug/l	0.20	0.04
Fluoranthene	ND		ug/l	0.20	0.04
Naphthalene	ND		ug/l	0.20	0.04
Benzo(a)anthracene	ND		ug/l	0.20	0.02
Benzo(a)pyrene	ND		ug/l	0.20	0.04
Benzo(b)fluoranthene	ND		ug/l	0.20	0.02
Benzo(k)fluoranthene	ND		ug/l	0.20	0.04
Chrysene	ND		ug/l	0.20	0.04
Acenaphthylene	ND		ug/l	0.20	0.04
Anthracene	ND		ug/l	0.20	0.04
Benzo(ghi)perylene	ND		ug/l	0.20	0.04
Fluorene	ND		ug/l	0.20	0.04
Phenanthrene	ND		ug/l	0.20	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.20	0.04
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	0.04
Pyrene	ND		ug/l	0.20	0.04
2-Methylnaphthalene	ND		ug/l	0.20	0.05

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	32		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	67		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03,05 Batch: WG990374-2 WG990374-3								
Acenaphthene	59		69		31-137	16		50
2-Chloronaphthalene	66		79		40-140	18		50
Fluoranthene	65		73		40-140	12		50
Naphthalene	62		77		40-140	22		50
Benzo(a)anthracene	61		67		40-140	9		50
Benzo(a)pyrene	68		76		40-140	11		50
Benzo(b)fluoranthene	66		74		40-140	11		50
Benzo(k)fluoranthene	68		76		40-140	11		50
Chrysene	62		70		40-140	12		50
Acenaphthylene	68		78		40-140	14		50
Anthracene	66		74		40-140	11		50
Benzo(ghi)perylene	62		72		40-140	15		50
Fluorene	66		73		40-140	10		50
Phenanthrene	66		74		40-140	11		50
Dibenzo(a,h)anthracene	63		72		40-140	13		50
Indeno(1,2,3-cd)pyrene	64		71		40-140	10		50
Pyrene	65		74		35-142	13		50
2-Methylnaphthalene	66		78		40-140	17		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03,05 Batch: WG990374-2 WG990374-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	65		85		25-120
Phenol-d6	72		87		10-120
Nitrobenzene-d5	66		84		23-120
2-Fluorobiphenyl	67		80		30-120
2,4,6-Tribromophenol	76		85		10-136
4-Terphenyl-d14	68		76		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,04 Batch: WG990730-2 WG990730-3								
Acenaphthene	76		72		37-111	5		40
2-Chloronaphthalene	80		76		40-140	5		40
Fluoranthene	83		69		40-140	18		40
Naphthalene	73		72		40-140	1		40
Benzo(a)anthracene	92		77		40-140	18		40
Benzo(a)pyrene	92		77		40-140	18		40
Benzo(b)fluoranthene	93		78		40-140	18		40
Benzo(k)fluoranthene	84		70		40-140	18		40
Chrysene	90		78		40-140	14		40
Acenaphthylene	82		77		40-140	6		40
Anthracene	86		74		40-140	15		40
Benzo(ghi)perylene	90		76		40-140	17		40
Fluorene	64		58		40-140	10		40
Phenanthrene	84		74		40-140	13		40
Dibenzo(a,h)anthracene	96		81		40-140	17		40
Indeno(1,2,3-cd)pyrene	98		82		40-140	18		40
Pyrene	83		68		26-127	20		40
2-Methylnaphthalene	80		75		40-140	6		40

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,04 Batch: WG990730-2 WG990730-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	48		49		21-120
Phenol-d6	36		36		10-120
Nitrobenzene-d5	76		75		23-120
2-Fluorobiphenyl	81		76		15-120
2,4,6-Tribromophenol	102		91		10-120
4-Terphenyl-d14	98		73		41-149

METALS

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03
Client ID: AEI-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Percent Solids: 91%

Date Collected: 03/30/17 09:43
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	2.9		mg/kg	2.2	0.12	1	04/03/17 19:00	04/06/17 20:24	EPA 3050B	1,6010C	AB

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-04
Client ID: TWP-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Water
Date Collected: 03/30/17 10:00
Date Received: 03/31/17
Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	0.00549		mg/l	0.00100	0.00034	1	04/04/17 14:00	04/07/17 12:45	EPA 3005A	1,6020A	AM

Project Name: 4788 BROADWAY
Lab Number: L1709919
Project Number: 344060
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05
Client ID: AEI-SB4
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil
Percent Solids: 92%

Date Collected: 03/30/17 11:15
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	6.2		mg/kg	2.1	0.11	1	04/03/17 19:00	04/06/17 20:29	EPA 3050B	1,6010C	AB

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709919
Report Date: 04/07/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03,05 Batch: WG990625-1										
Lead, Total	ND		mg/kg	2.0	0.11	1	04/03/17 19:00	04/06/17 19:18	1,6010C	AB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 04 Batch: WG990899-1										
Lead, Total	ND		mg/l	0.00100	0.00034	1	04/04/17 14:00	04/07/17 12:21	1,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03,05 Batch: WG990625-2 SRM Lot Number: D091-540								
Lead, Total	96		-		82-118	-		
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG990899-2								
Lead, Total	98		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03,05 QC Batch ID: WG990625-3 QC Sample: L1709895-01 Client ID: MS Sample												
Lead, Total	0.90J	42.5	35	82		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG990899-3 QC Sample: L1709265-40 Client ID: MS Sample												
Lead, Total	ND	0.51	0.4993	98		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03,05 QC Batch ID: WG990625-4 QC Sample: L1709895-01 Client ID: DUP Sample						
Lead, Total	0.90J	1.1J	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG990899-4 QC Sample: L1709265-40 Client ID: DUP Sample						
Lead, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-02
Client ID: AEI-SB2
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil

Date Collected: 03/30/17 11:45
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.4		%	0.100	NA	1	-	04/01/17 12:31	121,2540G	RI

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-03
Client ID: AEI-SB3
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil

Date Collected: 03/30/17 09:43
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.6		%	0.100	NA	1	-	04/01/17 12:31	121,2540G	RI

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

SAMPLE RESULTS

Lab ID: L1709919-05
Client ID: AEI-SB4
Sample Location: 4788 BROADWAY, NYC, NY
Matrix: Soil

Date Collected: 03/30/17 11:15
Date Received: 03/31/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.1		%	0.100	NA	1	-	04/01/17 12:31	121,2540G	RI

Lab Duplicate Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02-03,05 QC Batch ID: WG990243-1 QC Sample: L1709956-01 Client ID: DUP Sample						
Solids, Total	85.8	85.4	%	0		20

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 04/01/2017 02:12

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1709919-01A	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-01B	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-01C	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-01D	Amber 1000ml unpreserved	A	7	2.3	Y	Absent	NYTCL-8270-SIM(7)
L1709919-01E	Amber 1000ml unpreserved	A	7	2.3	Y	Absent	NYTCL-8270-SIM(7)
L1709919-02A	Vial MeOH preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-02B	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-02C	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-02D	Plastic 2oz unpreserved for TS	A	N/A	2.3	Y	Absent	TS(7)
L1709919-02E	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	NYTCL-8270(14)
L1709919-03A	Vial MeOH preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-03B	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-03C	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-03D	Plastic 2oz unpreserved for TS	A	N/A	2.3	Y	Absent	TS(7)
L1709919-03E	Plastic 120ml unpreserved	A	N/A	2.3	Y	Absent	PB-TI(180)
L1709919-03F	Glass 60mL/2oz unpreserved	A	N/A	2.3	Y	Absent	NYTCL-8270(14)
L1709919-03G	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	NYTCL-8270(14)
L1709919-04A	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-04B	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-04C	Vial HCl preserved	A	N/A	2.3	Y	Absent	NYTCL-8260(14)
L1709919-04D	Amber 1000ml unpreserved	A	7	2.3	Y	Absent	NYTCL-8270-SIM(7)
L1709919-04E	Amber 1000ml unpreserved	A	7	2.3	Y	Absent	NYTCL-8270-SIM(7)
L1709919-04F	Plastic 250ml unpreserved	A	7	2.3	Y	Absent	HOLD-METAL-DISSOLVED(180)
L1709919-04Q	Plastic 250ml HNO3 preserved spl	A	<2	2.3	Y	Absent	PB-6020T(180)
L1709919-04X	Plastic 250ml HNO3 preserved Fil	A	<2	2.3	Y	Absent	HOLD-METAL-DISSOLVED(180)
L1709919-05A	Vial MeOH preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709919
Report Date: 04/07/17

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1709919-05B	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-05C	Vial water preserved	A	N/A	2.3	Y	Absent	NYTCL-8260HLW(14)
L1709919-05D	Plastic 2oz unpreserved for TS	A	N/A	2.3	Y	Absent	TS(7)
L1709919-05E	Plastic 120ml unpreserved	A	N/A	2.3	Y	Absent	PB-TI(180)
L1709919-05F	Glass 60mL/2oz unpreserved	A	N/A	2.3	Y	Absent	NYTCL-8270(14)
L1709919-05G	Glass 120ml/4oz unpreserved	A	N/A	2.3	Y	Absent	NYTCL-8270(14)

*Values in parentheses indicate holding time in days

Project Name:	4788 BROADWAY	**Lab Number:**	L1709919
Project Number:	344060	**Report Date:**	04/07/17

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.
LCSD	- 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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: DU Report with 'J' Qualifiers

Project Name:	4788 BROADWAY	**Lab Number:**	L1709919
Project Number:	344060	**Report Date:**	04/07/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	4788 BROADWAY	**Lab Number:**	L1709919
Project Number:	344060	**Report Date:**	04/07/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW JERSEY CHAIN OF CUSTODY

ALPHA ANALYTICAL
Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/31/17

ALPHA Job #: L1709919

Project Information
Project Name: 4788 Broadway
Project Location: 4788 Broadway, NYC, NY
Project #: 344060
(Use Project name as Project #) ☐
Project Manager: A Costerni
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: AEI
Address: 20 Gibson Pl, Ste 310, Freehold, NJ
Phone: 732-275-4719
Fax:
Email: acosterna@aeiconsultants.com

Deliverables
☐ NJ Full / Reduced
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☒ Other NYSDEC

Regulatory Requirement
☐ SRS Residential/Non Residential
☐ SRS Impact to Groundwater
☐ NJ Ground Water Quality Standards
☐ NJ IGW SPLP Leachate Criteria
☐ Other

Billing Information
☒ Same as Client Info
PO # 127413

Site Information
Is this site impacted by Petroleum? Yes ☒
Petroleum Product: gasoline

These samples have been previously analyzed by Alpha ☐

For EPH, selection is REQUIRED: ☐ Category 1 ☐ Category 2

For VOC, selection is REQUIRED: ☐ 1,4-Dioxane ☐ 8011

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration: ☒ Done ☐ Lab to do
Preservation: ☒ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs - 8260	PAHs - 8270	Lead - 6010	Sample Specific Comments	Total Bottles
09919-01	TWP-SB1	3/30/17	12:20	GW	AVC	X	X			5
02	AEI-SB2	3/30/17	11:45	S	AVC	X	X			5
03	AEI-SB3	3/30/17	9:43	S	AVC	X	X	X		7
04	TWP-SB3	3/30/17	10:00	GW	AVC	X	X	X		6
05	AEI-SB4	3/30/17	11:15	S	AVC	X	X	X		7

	VOCs - 8260	PAHs - 8270	Lead - 6010
Container Type	V	A	A/P
Preservative	B/F	A	A

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Anthony Costerni	3/31/17 10:35	Scott [illegible] / Alpha	3/31/17 10:35
Scott [illegible] / Alpha	3/31/17 14:00	Tom Tobin	3-31-17 1800
Tom Tobin	3-31-17 2340	[illegible]	3/31/17 2340

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-14 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1709844
Client:	AEI Consultants 20 Gibson Place Suite 310 Freehold, NJ 07728
ATTN:	Anthony Cauterucci
Phone:	(732) 414-2720
Project Name:	4788 BROADWAY
Project Number:	344060
Report Date:	04/18/17

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), NJ NELAP (MA015), CT (PH-0141), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-13-00067), USFWS (Permit #LE2069641).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1709844-01	IA-01	AIR	4788 BROADWAY NYC, NY	03/30/17 15:20	03/31/17
L1709844-02	SG-01	SOIL_VAPOR	4788 BROADWAY NYC, NY	03/30/17 08:10	03/31/17
L1709844-03	SV-01	SOIL_VAPOR	4788 BROADWAY NYC, NY	03/30/17 13:06	03/31/17

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. 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. All specific QC 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. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

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

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

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

Project Name:	4788 BROADWAY	**Lab Number:**	L1709844
Project Number:	344060	**Report Date:**	04/18/17

Case Narrative (continued)

Report Submission

This is a final report including the final results for all samples submitted for analysis. This report replaces the one issued on April 6, 2017. The analysis of the indoor air sample that was on hold has been cancelled by the client.

Volatile Organics in Air

Canisters were released from the laboratory on March 30, 2017. The canister certification results are provided as an addendum.

Sample L1709844-02 results for Acetone should be considered estimated due to co-elution with a non-target peak.

Sample L1709844-02 and -03: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 04/18/17

AIR

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-02 D
Client ID: SG-01
Sample Location: 4788 BROADWAY NYC, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/05/17 23:19
Analyst: MB

Date Collected: 03/30/17 08:10
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	0.400	--	ND	1.98	--		2
Chloromethane	0.884	0.400	--	1.83	0.826	--		2
Freon-114	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	10.8	0.400	--	23.9	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethanol	12.3	10.0	--	23.2	18.8	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	38.9	2.00	--	92.4	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
Isopropanol	55.4	1.00	--	136	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Tertiary butyl Alcohol	ND	1.00	--	ND	3.03	--		2
Methylene chloride	ND	1.00	--	ND	3.47	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	6.32	0.400	--	19.7	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	1.81	0.400	--	6.53	1.44	--		2
2-Butanone	2.99	1.00	--	8.82	2.95	--		2
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-02 D
Client ID: SG-01
Sample Location: 4788 BROADWAY NYC, NY
Date Collected: 03/30/17 08:10
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.400	--	ND	1.95	--		2
Tetrahydrofuran	ND	1.00	--	ND	2.95	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	6.75	0.400	--	23.8	1.41	--		2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Benzene	4.16	0.400	--	13.3	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	2.72	0.400	--	9.36	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	105	0.400	--	490	1.87	--		2
Heptane	3.00	0.400	--	12.3	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	ND	1.00	--	ND	4.10	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Toluene	4.92	0.400	--	18.5	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	ND	0.400	--	ND	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	17.3	0.400	--	75.1	1.74	--		2
p/m-Xylene	3.88	0.800	--	16.9	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2
Styrene	ND	0.400	--	ND	1.70	--		2

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-02 D
Client ID: SG-01
Sample Location: 4788 BROADWAY NYC, NY
Date Collected: 03/30/17 08:10
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	1.87	0.400	--	8.12	1.74	--		2
4-Ethyltoluene	0.450	0.400	--	2.21	1.97	--		2
1,3,5-Trimethylbenzene	0.420	0.400	--	2.06	1.97	--		2
1,2,4-Trimethylbenzene	0.802	0.400	--	3.94	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	107		60-140
Bromochloromethane	100		60-140
chlorobenzene-d5	112		60-140

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-03 D
Client ID: SV-01
Sample Location: 4788 BROADWAY NYC, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/06/17 10:45
Analyst: MB

Date Collected: 03/30/17 13:06
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	0.667	--	ND	3.30	--		3.333
Chloromethane	ND	0.667	--	ND	1.38	--		3.333
Freon-114	ND	0.667	--	ND	4.66	--		3.333
Vinyl chloride	ND	0.667	--	ND	1.71	--		3.333
1,3-Butadiene	ND	0.667	--	ND	1.48	--		3.333
Bromomethane	ND	0.667	--	ND	2.59	--		3.333
Chloroethane	ND	0.667	--	ND	1.76	--		3.333
Ethanol	ND	16.7	--	ND	31.5	--		3.333
Vinyl bromide	ND	0.667	--	ND	2.92	--		3.333
Acetone	92.2	3.33	--	219	7.91	--		3.333
Trichlorofluoromethane	ND	0.667	--	ND	3.75	--		3.333
Isopropanol	ND	1.67	--	ND	4.10	--		3.333
1,1-Dichloroethene	ND	0.667	--	ND	2.64	--		3.333
Tertiary butyl Alcohol	ND	1.67	--	ND	5.06	--		3.333
Methylene chloride	ND	1.67	--	ND	5.80	--		3.333
3-Chloropropene	ND	0.667	--	ND	2.09	--		3.333
Carbon disulfide	1.47	0.667	--	4.58	2.08	--		3.333
Freon-113	ND	0.667	--	ND	5.11	--		3.333
trans-1,2-Dichloroethene	ND	0.667	--	ND	2.64	--		3.333
1,1-Dichloroethane	ND	0.667	--	ND	2.70	--		3.333
Methyl tert butyl ether	ND	0.667	--	ND	2.40	--		3.333
2-Butanone	2.32	1.67	--	6.84	4.93	--		3.333
cis-1,2-Dichloroethene	ND	0.667	--	ND	2.64	--		3.333
Ethyl Acetate	ND	1.67	--	ND	6.02	--		3.333

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-03 D
Client ID: SV-01
Sample Location: 4788 BROADWAY NYC, NY
Date Collected: 03/30/17 13:06
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.667	--	ND	3.26	--		3.333
Tetrahydrofuran	ND	1.67	--	ND	4.93	--		3.333
1,2-Dichloroethane	ND	0.667	--	ND	2.70	--		3.333
n-Hexane	1.22	0.667	--	4.30	2.35	--		3.333
1,1,1-Trichloroethane	ND	0.667	--	ND	3.64	--		3.333
Benzene	ND	0.667	--	ND	2.13	--		3.333
Carbon tetrachloride	ND	0.667	--	ND	4.20	--		3.333
Cyclohexane	0.800	0.667	--	2.75	2.30	--		3.333
1,2-Dichloropropane	ND	0.667	--	ND	3.08	--		3.333
Bromodichloromethane	ND	0.667	--	ND	4.47	--		3.333
1,4-Dioxane	ND	0.667	--	ND	2.40	--		3.333
Trichloroethene	ND	0.667	--	ND	3.58	--		3.333
2,2,4-Trimethylpentane	2.98	0.667	--	13.9	3.12	--		3.333
Heptane	1.28	0.667	--	5.25	2.73	--		3.333
cis-1,3-Dichloropropene	ND	0.667	--	ND	3.03	--		3.333
4-Methyl-2-pentanone	ND	1.67	--	ND	6.84	--		3.333
trans-1,3-Dichloropropene	ND	0.667	--	ND	3.03	--		3.333
1,1,2-Trichloroethane	ND	0.667	--	ND	3.64	--		3.333
Toluene	1.56	0.667	--	5.88	2.51	--		3.333
2-Hexanone	ND	0.667	--	ND	2.73	--		3.333
Dibromochloromethane	ND	0.667	--	ND	5.68	--		3.333
1,2-Dibromoethane	ND	0.667	--	ND	5.13	--		3.333
Tetrachloroethene	ND	0.667	--	ND	4.52	--		3.333
Chlorobenzene	ND	0.667	--	ND	3.07	--		3.333
Ethylbenzene	143	0.667	--	621	2.90	--		3.333
p/m-Xylene	437	1.33	--	1900	5.78	--		3.333
Bromoform	ND	0.667	--	ND	6.90	--		3.333
Styrene	ND	0.667	--	ND	2.84	--		3.333

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

SAMPLE RESULTS

Lab ID: L1709844-03 D
Client ID: SV-01
Sample Location: 4788 BROADWAY NYC, NY
Date Collected: 03/30/17 13:06
Date Received: 03/31/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.667	--	ND	4.58	--		3.333
o-Xylene	180	0.667	--	782	2.90	--		3.333
4-Ethyltoluene	1.27	0.667	--	6.24	3.28	--		3.333
1,3,5-Trimethylbenzene	2.83	0.667	--	13.9	3.28	--		3.333
1,2,4-Trimethylbenzene	4.33	0.667	--	21.3	3.28	--		3.333
Benzyl chloride	ND	0.667	--	ND	3.45	--		3.333
1,3-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,4-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,2-Dichlorobenzene	ND	0.667	--	ND	4.01	--		3.333
1,2,4-Trichlorobenzene	ND	0.667	--	ND	4.95	--		3.333
Hexachlorobutadiene	ND	0.667	--	ND	7.11	--		3.333

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	106		60-140
Bromochloromethane	100		60-140
chlorobenzene-d5	135		60-140

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/17 14:28

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02-03 Batch: WG991407-4								
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	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		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	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/17 14:28

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02-03 Batch: WG991407-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		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	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1

Project Name: 4788 BROADWAY
Project Number: 344060
Lab Number: L1709844
Report Date: 04/18/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/05/17 14:28

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02-03 Batch: WG991407-4								
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 Batch: WG991407-3								
Chlorodifluoromethane	90		-		70-130	-		
Propylene	103		-		70-130	-		
Propane	77		-		70-130	-		
Dichlorodifluoromethane	80		-		70-130	-		
Chloromethane	100		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	101		-		70-130	-		
Methanol	82		-		70-130	-		
Vinyl chloride	98		-		70-130	-		
1,3-Butadiene	100		-		70-130	-		
Butane	80		-		70-130	-		
Bromomethane	102		-		70-130	-		
Chloroethane	98		-		70-130	-		
Ethyl Alcohol	85		-		70-130	-		
Dichlorofluoromethane	93		-		70-130	-		
Vinyl bromide	99		-		70-130	-		
Acrolein	85		-		70-130	-		
Acetone	106		-		70-130	-		
Acetonitrile	79		-		70-130	-		
Trichlorofluoromethane	106		-		70-130	-		
iso-Propyl Alcohol	87		-		70-130	-		
Acrylonitrile	88		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 Batch: WG991407-3								
Pentane	77		-		70-130	-		
Ethyl ether	72		-		70-130	-		
1,1-Dichloroethene	90		-		70-130	-		
tert-Butyl Alcohol	77		-		70-130	-		
Methylene chloride	95		-		70-130	-		
3-Chloropropene	88		-		70-130	-		
Carbon disulfide	95		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	103		-		70-130	-		
trans-1,2-Dichloroethene	93		-		70-130	-		
1,1-Dichloroethane	98		-		70-130	-		
Methyl tert butyl ether	87		-		70-130	-		
Vinyl acetate	94		-		70-130	-		
2-Butanone	86		-		70-130	-		
cis-1,2-Dichloroethene	96		-		70-130	-		
Ethyl Acetate	101		-		70-130	-		
Chloroform	100		-		70-130	-		
Tetrahydrofuran	90		-		70-130	-		
2,2-Dichloropropane	83		-		70-130	-		
1,2-Dichloroethane	95		-		70-130	-		
n-Hexane	95		-		70-130	-		
Isopropyl Ether	87		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 Batch: WG991407-3								
Ethyl-Tert-Butyl-Ether	80		-		70-130	-		
1,1,1-Trichloroethane	95		-		70-130	-		
1,1-Dichloropropene	92		-		70-130	-		
Benzene	93		-		70-130	-		
Carbon tetrachloride	97		-		70-130	-		
Cyclohexane	92		-		70-130	-		
Tertiary-Amyl Methyl Ether	77		-		70-130	-		
Dibromomethane	96		-		70-130	-		
1,2-Dichloropropane	97		-		70-130	-		
Bromodichloromethane	99		-		70-130	-		
1,4-Dioxane	96		-		70-130	-		
Trichloroethene	107		-		70-130	-		
2,2,4-Trimethylpentane	95		-		70-130	-		
Methyl Methacrylate	113		-		70-130	-		
Heptane	91		-		70-130	-		
cis-1,3-Dichloropropene	98		-		70-130	-		
4-Methyl-2-pentanone	93		-		70-130	-		
trans-1,3-Dichloropropene	84		-		70-130	-		
1,1,2-Trichloroethane	100		-		70-130	-		
Toluene	102		-		70-130	-		
1,3-Dichloropropane	100		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 Batch: WG991407-3								
2-Hexanone	100		-		70-130	-		
Dibromochloromethane	114		-		70-130	-		
1,2-Dibromoethane	109		-		70-130	-		
Butyl Acetate	94		-		70-130	-		
Octane	94		-		70-130	-		
Tetrachloroethene	110		-		70-130	-		
1,1,1,2-Tetrachloroethane	101		-		70-130	-		
Chlorobenzene	110		-		70-130	-		
Ethylbenzene	104		-		70-130	-		
p/m-Xylene	104		-		70-130	-		
Bromoform	114		-		70-130	-		
Styrene	105		-		70-130	-		
1,1,2,2-Tetrachloroethane	108		-		70-130	-		
o-Xylene	108		-		70-130	-		
1,2,3-Trichloropropane	99		-		70-130	-		
Nonane (C9)	94		-		70-130	-		
Isopropylbenzene	104		-		70-130	-		
Bromobenzene	96		-		70-130	-		
o-Chlorotoluene	100		-		70-130	-		
n-Propylbenzene	99		-		70-130	-		
p-Chlorotoluene	99		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 Batch: WG991407-3								
4-Ethyltoluene	108		-		70-130	-		
1,3,5-Trimethylbenzene	107		-		70-130	-		
tert-Butylbenzene	106		-		70-130	-		
1,2,4-Trimethylbenzene	115		-		70-130	-		
Decane (C10)	99		-		70-130	-		
Benzyl chloride	99		-		70-130	-		
1,3-Dichlorobenzene	112		-		70-130	-		
1,4-Dichlorobenzene	112		-		70-130	-		
sec-Butylbenzene	105		-		70-130	-		
p-Isopropyltoluene	99		-		70-130	-		
1,2-Dichlorobenzene	113		-		70-130	-		
n-Butylbenzene	108		-		70-130	-		
1,2-Dibromo-3-chloropropane	101		-		70-130	-		
Undecane	105		-		70-130	-		
Dodecane (C12)	112		-		70-130	-		
1,2,4-Trichlorobenzene	118		-		70-130	-		
Naphthalene	97		-		70-130	-		
1,2,3-Trichlorobenzene	105		-		70-130	-		
Hexachlorobutadiene	120		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG991407-5 QC Sample: L1708579-08 Client ID: DUP Sample						
Dichlorodifluoromethane	0.283	0.238	ppbV	17		25
Chloromethane	0.587	0.518	ppbV	12		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	299	293	ppbV	2		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	331	324	ppbV	2		25
Trichlorofluoromethane	0.268	0.253	ppbV	6		25
iso-Propyl Alcohol	98.4	95.8	ppbV	3		25
tert-Butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG991407-5 QC Sample: L1708579-08 Client ID: DUP Sample						
2-Butanone	ND	ND	ppbV	NC		25
Ethyl Acetate	25.6	25.7	ppbV	0		25
Chloroform	ND	ND	ppbV	NC		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
Benzene	0.221	0.220	ppbV	0		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	2.76	2.78	ppbV	1		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	1.93	1.85	ppbV	4		25
2-Hexanone	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02-03 QC Batch ID: WG991407-5 QC Sample: L1708579-08 Client ID: DUP Sample						
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: 4788 BROADWAY

Project Number: 344060

Lab Number: L1709844

Report Date: 04/18/17

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 Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1709844-01	IA-01	0928	Flow 4	03/30/17	239032		-	-	-	Pass	4.1	2.2	60
L1709844-01	IA-01	473	2.7L Can	03/30/17	239032	L1709271-02	Pass	-29.5	-3.5	-	-	-	-
L1709844-02	SG-01	0067	Flow 1	03/30/17	239032		-	-	-	Pass	144	160	11
L1709844-02	SG-01	366	2.7L Can	03/30/17	239032	L1709271-02	Pass	-29.6	-1.7	-	-	-	-
L1709844-03	SV-01	0807	Flow 1	03/30/17	239032		-	-	-	Pass	144	161	11
L1709844-03	SV-01	500	2.7L Can	03/30/17	239032	L1709271-02	Pass	-29.6	-2.5	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 03/28/17 16:11
Analyst: MB

Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		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	0.500	--	ND	1.09	--		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: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	0.500	--	ND	1.74	--		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	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		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	0.500	--	ND	1.47	--		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: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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	0.500	--	ND	2.05	--		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: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

	Results	**Qualifier**	**Units**	**RDL**	**Dilution Factor**
Tentatively Identified Compounds					
No Tentatively Identified Compounds					

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	91		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 03/28/17 16:11
Analyst: MB

Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		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	1.00	--	ND	2.38	--		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	0.500	--	ND	1.74	--		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	0.200	--	ND	0.721	--		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: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:

Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
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	0.100	--	ND	0.461	--		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	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1709271
Report Date: 04/18/17

Air Canister Certification Results

Lab ID: L1709271-02
Client ID: CAN 450 SHELF 3
Sample Location:
Date Collected: 03/27/17 16:00
Date Received: 03/28/17
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	94		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	91		60-140

Project Name: 4788 BROADWAY
Project Number: 344060

Lab Number: L1709844
Report Date: 04/18/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information **Custody Seal**

Cooler
N/A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1709844-01A	Canister - 2.7 Liter	N/A	N/A	N/A	Y	Absent	CANCELLED()
L1709844-02A	Canister - 2.7 Liter	N/A	N/A	N/A	Y	Absent	TO15-LL(30)
L1709844-03A	Canister - 2.7 Liter	N/A	N/A	N/A	Y	Absent	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	4788 BROADWAY	**Lab Number:**	L1709844
Project Number:	344060	**Report Date:**	04/18/17

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.
LCSD	- 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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report

Project Name:	4788 BROADWAY	**Lab Number:**	L1709844
Project Number:	344060	**Report Date:**	04/18/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report

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.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/1/17

ALPHA Job #: L1709844

Client Information

Client: AEI
Address: 20 Gibson Pl., Ste 310, Freehold, NJ 07728
Phone: 732-275-4719
Fax:
Email: acastevnaci@aeiconsultants.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 4788 Broadway
Project Location: 4788 Broadway NYC, NY
Project #: 344060
Project Manager: A Castevnaci
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: Time:

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 #: 127413

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NYSDEC		Comm.

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH Subtract Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
9444-01	IA-01	3/30/17	07:26	15:20	-30.32	-4.88	AA	AVC	2.7	473	0928	H					Hold sample analysis
-02	SG-01	3/30/17	07:55	8:10	-29.72	-3.51	SV	AVC	2.7	366	0061	X					
-03	SV-01	3/30/17	12:50	13:06	-29.21	-3.82	SV	AVC	2.7	500	0807	X					

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type: S

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:
	3/30/17	3/31/17	3/31/17 10:30
	3/31/17 14:00		3-31-17 2725
	4-1-17 0815		4/1/17 08:45

Form No: 101-02 Rev: (25-Sep-15)