



Property Solutions INC.
Environmental & Engineering Consulting

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LIMITED PHASE II SUBSURFACE INVESTIGATION

of

1500 Astor Avenue Property
1500 Astor Avenue & 2302-2314 Eastchester Road
Bronx, Bronx County, New York 10469

Prepared for:

Kazmarek Mowrey Cloud Laseter LLP
On behalf of LNR Partners, LLC
1230 Peachtree Street N.E., Suite 3600
Atlanta, Georgia 30309

Prepared by:

Property Solutions Incorporated
31A Northfield Avenue
Edison, New Jersey 08837

Final: July 22, 2016

Property Solutions Project No. 20152118.201 & 202



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Burton Turner
Technical Manager

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Regional Director

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EXECUTIVE SUMMARY

Property Solutions Incorporated (Property Solutions) has conducted a Limited Phase II Subsurface Investigation (SI) at the 1500 Astor Avenue Property located at 1500 Astor Avenue in Bronx, Bronx County, New York (subject property) at the request of Kazmarek Mowrey Cloud Laseter LLP.

The Limited Phase II SI was performed based on the findings and recommendations presented in the Final Phase I Environmental Assessment (EA) prepared by Property Solutions and dated February 4, 2016 (Property Solutions project number 20152118). The potential environmental concerns identified in the Phase I EA included the following:

- **Former Dry Cleaners (Unit 2312)**

The Phase I EA identified that one of the tenant spaces (2312 Eastchester Road) within the onsite building was previously occupied by a drycleaner identified as MC Cleaners from approximately 1961 to 1993. The tenant space of 2312 Eastchester Road is now occupied by Dr. Donald Wallerson's medical office.

During the time period that the dry-cleaners operated, chlorinated solvents would have been typically used, particularly tetrachloroethylene, in the dry-cleaning process. A RCRA-Large Quantity Generator regulatory database listing for the location indicates spent halogenated (chlorinated) solvents (F002) as the generated waste type. Chlorinated solvents are highly mobile chemicals that can be released from dry cleaning operations in small but frequent releases. In addition, these chemicals can accumulate in the soil and migrate to the groundwater at the property.

No information was readily available pertaining to the former dry-cleaners and whether former subsurface investigations have been performed at the subject property to evaluate whether the former dry-cleaner had adversely impacted the subject property. In addition, there was no information available in regards to the chemicals and waste disposal process utilized at the former dry-cleaner tenant space. Due to the potential of a historical release in connection to the former drycleaner, the historical drycleaners at the subject property is considered to be a recognized environmental condition (REC).

Property Solutions was contracted by Kazmarek Mowrey Cloud Laseter LLP to evaluate the potential presence/absence of subsurface contamination as it relates to the Former Dry Cleaners located at 2312 Eastchester Road.

On April 7, 2016, Property Solutions advanced a total of four soil borings (SB-01 through SB-04) at the subject property. Soil borings SB-01, SB-02, and SB-03 were advanced at the rear (east) side of the building near the former dry cleaner's unit. Soil boring SB-04 was advanced at the front/street (west) side of the building near the former dry cleaner's unit. The soil borings were advanced to a depth of approximately nine to twelve feet below ground surface (bgs), where refusal was encountered. Groundwater was encountered in the soil borings at a depth of eight to ten feet bgs.

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Two soil samples were collected from each “SB” soil boring for a total of eight soil samples [2118-SB-01(1.0-1.5) through 2118-SB-04(7.0-7.5)]. The soil samples were collected in laboratory supplied glassware, stored on ice, and submitted under chain of custody to a New York certified laboratory for analysis. The soil samples were analyzed for volatile organic compounds by USEPA Method 8260.

Grab groundwater samples were collected from two of the soil borings for a total of two grab groundwater samples (TW-03 and TW-04). The groundwater samples were collected in laboratory-supplied glassware, stored on ice, and submitted under chain-of-custody to a New York-certified laboratory. The groundwater samples were analyzed for volatile organic compounds by USEPA Method 8260.

Soil-gas samples were collected from two locations in the basement, through small borings advanced through the floor slab with a power drill. Teflon lined tubing was inserted into the boring, and the boring was sealed with non-toxic modeling clay. Helium gas was used as a tracer to check tubing connection and the seal with the concrete floor. The boring was purged through the tubing, removing approximately three volumes of air prior to collecting a sample. A grab soil gas sample was collected into laboratory-supplied vacuum canisters (Summa[®] canister) and submitted under chain of custody to a New York State-certified laboratory for analysis by USEPA Method TO-15.

Based on a review of the analytical laboratory data reported for the April 7, 2016 sampling event, concentrations of tetrachloroethylene (PCE), a constituent associated with dry cleaning operations, was found in groundwater sample 2118-TW-03(7.6), in soil samples 2118-SB-02(0.5-1.0) and 2118-SB-03(0.5-1.0), and in soil vapor samples 2118-SV-01(0.5) and 2118-SV-02(0.5), at concentrations exceeding New York State Department Health (NYSDOH) guidance values for further evaluation.

Based on the April 2016 Limited SI results, Property Solutions recommended additional investigation to further evaluate the soil and groundwater conditions, and potential of vapor encroachment impact to indoor air at the subject property, including additional soil and groundwater investigation to delineate the lateral extent of the impact to soil and groundwater, and collection of indoor air samples in the basement area and the first floor unit of the former dry cleaner operation.

On June 15 through June 17, 2016, Property Solutions installed six monitoring wells at the subject property, including five shallow / overburden wells, and one deep / bedrock well. Soil borings (SB-08 through SB-10) were advanced at the three well locations that were not sampled during the April 2016 investigation (MW-4 through MW-6). The soil borings were advanced to depths of refusal on weathered bedrock ranging from approximately 11.0 to 13.5 feet below ground surface (bgs). Groundwater was encountered in the soil borings at depths of 6.5 to 8.5 feet bgs. Two soil samples were collected from each “SB” soil boring for a total of six soil samples [2118-SB-08(4.0-4.5) through 2118-SB-10(10.0-10.5)]. The soil samples were collected in laboratory supplied glassware, stored on ice, and submitted under chain of custody to a New York certified laboratory for analysis. The soil samples were analyzed for volatile organic compounds by USEPA Method 8260.

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Following completion of the monitoring well installations, sampling of the six wells was completed on June 17, 2016. The six wells were purged and sampled, and water quality parameters measured with a Horiba U-52 Multi-parameter Water Quality Meter immediately following sample collection at each well (monitored for pH, ORP, conductivity, turbidity, dissolved oxygen, and TDS). Static groundwater levels were measured prior to the purging of each well, which ranged from 5.8 feet depth bgs at MW-3 to 26.1 feet depth bgs at MW-1D. The wells were purged using a whale pump, and the groundwater samples were collected with Teflon bailers, and decanted into the laboratory-supplied glassware. A total of six groundwater samples were collected during this phase of the investigation.

Indoor air samples were collected from two locations in the subject building on June 16-17, 2016. Sample 2118-SV-01 was collected in the basement area of the former dry cleaner building unit (2312). Sample 2118-SV-02 was collected in the first floor area of the former dry cleaner unit, which is currently a combined space with building unit 2310. The 24-hour air samples were collected into laboratory-supplied vacuum canisters (Summa[®] canister) and submitted under chain of custody to a New York State-certified laboratory for analysis by USEPA Method TO-15.

Based on a review of the analytical laboratory data for the April 2016 sampling event, concentrations of PCE were found in groundwater sample 2118-TW-03(7.6), in soil samples 2118-SB-02(0.5-1.0) and 2118-SB-03(0.5-1.0) at concentrations exceeding their applicable New York State Department of Environmental Conservation (NYSDEC) criteria. Trichloroethylene (TCE) was also detected in groundwater sample 2118-TW-03(7.6) at a concentration slightly exceeding the applicable NYSDEC criterion for TCE. Concentrations of PCE were detected in soil vapor samples 2118-SV-01(0.5) and 2118-SV-02(0.5) at a concentration exceeding the concentrations exceeding NYSDOH guidance values for further evaluation

Based on the April 2016 results, Property Solutions recommended additional investigation to further evaluate the soil and groundwater conditions, and potential of vapor encroachment impact to indoor air at the subject property. The Limited Phase II SI activities completed in June 2016, included additional soil and groundwater investigation to delineate the lateral extent of the impact to soil and groundwater, and collection of indoor air samples in the basement area and the first floor unit of the former dry cleaner operation.

Based on a review of the analytical laboratory data reported for the June 2016 sampling event, concentrations of chlorinated VOCs including PCE, TCE, and cis-1,2-dichloroethene, constituents associated with dry cleaning operations, were found in groundwater samples 2118-MW1S(7.4), 2118-MW1D(26.5), and/or 2118-MW5(8.4) at concentrations exceeding their applicable NYSDEC criteria. The soil analytical results indicated a concentration of cis-1,2-dichloroethene was found in soil sample 2118-SB-08(4.0-4.5) at a concentration exceeding the applicable NYSDEC criteria. The indoor air analytical results indicated concentrations of PCE and 1,2-dichloroethane was found in samples 2118-IA-01 and/or 2118-IA-02 at a concentration exceeding the concentrations exceeding NYSDOH guidance values for further evaluation.

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At this time, an additional groundwater sampling event has been recommended at the subject property, for collection of groundwater samples at monitoring wells MW-1D and MW-5. Following receipt and review of the data generated from the additional sampling event, a summary of the results will be provided with further recommendations, as appropriate.

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1.0 INTRODUCTION

1.1 Purpose

Property Solutions Incorporated (Property Solutions) has conducted a Limited Phase II Subsurface Investigation (SI) at the 1500 Astor Avenue Property located at 1500 Astor Avenue in Bronx, Bronx County, New York (subject property) at the request of Kazmarek Mowrey Cloud Laseter LLP.

The Limited Phase II SI was performed based on the findings and recommendations presented in the Final Phase I Environmental Assessment (EA) prepared by Property Solutions and dated February 4, 2016 (Property Solutions project number 20152118). The potential environmental concerns identified in the Phase I EA included the following:

- **Former Dry Cleaners (Unit 2312)**

The Phase I EA identified that one of the tenant spaces (2312 Eastchester Road) within the onsite building was previously occupied by a drycleaner identified as MC Cleaners from approximately 1961 to 1993. The tenant space of 2312 Eastchester Road is now occupied by Dr. Donald Wallerson's medical office.

During the time period that the dry-cleaners operated, chlorinated solvents would have been typically used, particularly tetrachloroethylene, in the dry-cleaning process. A RCRA-Large Quantity Generator regulatory database listing for the location indicates spent halogenated (chlorinated) solvents (F002) as the generated waste type. Chlorinated solvents are highly mobile chemicals that can be released from dry cleaning operations in small but frequent releases. In addition, these chemicals can accumulate in the soil and migrate to the groundwater at the property.

No information was readily available pertaining to the former dry-cleaners and whether former subsurface investigations have been performed at the subject property to evaluate whether the former dry-cleaner had adversely impacted the subject property. In addition, there was no information available in regards to the chemicals and waste disposal process utilized at the former dry-cleaner tenant space. Due to the potential of a historical release in connection to the former drycleaner, the historical drycleaners at the subject property is considered to be a recognized environmental condition (REC).

Property Solutions was contracted by Kazmarek Mowrey Cloud Laseter LLP to evaluate the potential presence/absence of subsurface contamination as it relates to the Former Dry Cleaners located at 2312 Eastchester Road.

Field sampling activities for the initial phase of this Limited SI was conducted at the subject property on April 7, 2016, which included soil borings and temporary monitoring wells for the collection of soil and groundwater samples in the vicinity of the former dry cleaners unit, and collection of sub-slab soil vapor samples from the basement area of the former dry cleaners unit. Based on the results of the initial phase of the Limited SI, additional field sampling activities were

conducted at the subject property on June 15 through June 17, 2016, including the installation and sampling of five shallow / overburden monitoring wells and one deep / bedrock well, and collection of two indoor air samples within the former dry cleaners unit (basement and first floor sample locations).

1.2 Scope of Work

April 7, 2016 Sampling Event:

1. Property Solutions coordinated with a New York State-certified driller to contact the utility mark-out.
2. Property Solutions prepared a Health and Safety Plan for the subject property for use by Property Solutions' personnel.
3. Coordinated with a certified consultant to perform a geophysical survey at the subject property for utility clearance purposes.
4. Coordinated with a New York State-certified analytical laboratory for analysis of the environmental samples collected during this subsurface investigation.
5. Coordinated with the certified driller to advance soil borings at the subject property in the vicinity of the areas of concern. Three soil borings were advanced inside the basement beneath the former drycleaners unit (MC Cleaners) tenant space. Bedrock was encountered within two-inches beneath the floor slab; consequently, no soil samples were obtained from the interior borings (soil-gas samples were collected at two locations). Three soil borings were performed at the rear (east) exterior side of the tenant space. One soil boring was performed at the front (west) exterior side of the tenant space. The soil borings were advanced utilizing hydraulic push technology (Geoprobe). All environmental sampling equipment was decontaminated prior to the advancement of each boring. Temporary wells were installed in two soil borings, one on each side of the building.
6. Soil-gas samples were collected from select borings employing the following procedures:
 - Teflon lined tubing was inserted into the floor slab boring and the boring was sealed with non-toxic modeling clay.
 - Helium gas was used as a tracer to check tubing connection and the seal with the concrete floor.
 - The boring was purged through the tubing, removing approximately three volumes of air prior to collecting a sample.
 - A grab soil gas sample was collected into laboratory-supplied vacuum canisters (Summa® canister) and submitted under chain of custody to a New York State-certified laboratory for analysis by USEPA Method TO-15.

- Property Solutions compared the sub-slab soil gas analytical results to applicable screening levels.

Subsequent to collecting the soil-gas samples, the soil borings could not be advanced due to the presence of bedrock immediately below the floor slab.

7. During advancement of the soil borings, continuous soil evaluation was performed. The samples were logged and field screened with a photoionization detector (PID) for the presence of organic vapors. The PID was calibrated to a known isobutylene standard prior to the sampling event.
8. Soil samples were collected from each of the four exterior soil borings. The samples were collected in laboratory-supplied containers, stored on ice, and submitted under chain-of-custody to a New York State-certified laboratory for analysis. As the depth to bedrock at the subject property is within 10-feet of ground surface, procurement of soil samples from the basement sub-slab borings were not obtained.
9. Groundwater samples were collected from two temporary well installed in two borings utilizing Teflon bailers, and decanted to laboratory-supplied containers, stored on ice, and submitted under chain-of-custody to a New York State certified laboratory for analysis.
10. No laboratory-prepared trip blanks, field blanks, or duplicate samples were analyzed.
11. Property Solutions compared the soil and groundwater analytical results to applicable New York State Department of Environmental Conservation (NYSDEC) soil and groundwater cleanup standards [New York State regulations at NYCRR Part 375 (soil) and NYCRR Part 703.5 (groundwater)]. The soil vapor sample results were compared to the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006
12. Property Solutions prepared a plan identifying the locations of the soil borings and temporary wells, and the sub-slab soil vapor sample locations, based upon field measurements taken during the subsurface investigation. The location plan is included in Appendix A.

June 15 through June 17, 2016 Sampling Event:

1. Property Solutions coordinated with a New York State-certified driller to contact the utility mark-out.
2. Property Solutions prepared a Health and Safety Plan for the subject property for use by Property Solutions' personnel.
3. Coordinated with a certified consultant to perform a geophysical survey at the subject property for utility clearance purposes.

4. Coordinated with a New York State-certified analytical laboratory for analysis of the environmental samples collected during this subsurface investigation.
5. Coordinated with the certified driller to advance soil borings at the subject property in the vicinity of the area of concern. Three soil borings were performed at the locations of proposed monitoring wells where soils have not been previously sampled, to observe soil conditions and collect samples. The soil borings were advanced utilizing hydraulic push technology (Geoprobe). All environmental sampling equipment was decontaminated prior to the advancement of each boring.
6. During advancement of the soil borings, continuous soil evaluation was performed. The samples were logged and field screened with a photoionization detector (PID) for the presence of organic vapors. The PID was calibrated to a known isobutylene standard prior to the sampling event.
7. Two soil samples were collected from each soil boring. The samples were collected in laboratory-supplied containers, stored on ice, and submitted under chain-of-custody to a New York State-certified laboratory for analysis.
8. Groundwater monitoring wells were installed at five locations at the subject property, as shown on the location plan included in Appendix A. One of the five locations consisted of an overburden / bedrock well grouping, in the parking lot area immediately east of the former dry cleaner unit.
9. Following installation, the wells were purged and sampled. Groundwater samples were collected in laboratory-supplied containers, stored on ice, and submitted under chain-of-custody to a New York State certified laboratory for analysis. The samples were analyzed for chlorinated volatile organic compounds (CVOCs), including PCE.
10. Two indoor air samples were collected over a 24-hour period between June 16 and June 17, 2016. One sample was collected from the basement area of the former dry cleaners unit, and one sample was collected from the first floor area of the former dry cleaner unit. Indoor air samples were collected in laboratory-supplied Summa canisters, and submitted under chain-of-custody to a New York State certified laboratory for analysis. The samples were analyzed for CVOCs, including PCE, by USEPA Method TO-15. The property owner coordinated the indoor air sampling event with the tenant.
11. No laboratory-prepared trip blanks, field blanks, or duplicate samples were collected or analyzed.
12. Property Solutions compared the soil and groundwater analytical results to applicable NYSDEC soil and groundwater cleanup standards [New York State regulations at NYCRR Part 375 (soil) and NYCRR Part 703.5 (groundwater)]. The indoor air sample results were

compared to the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October, 2006

13. Property Solutions prepared a plan identifying the locations of the soil borings, the installed monitoring wells, and the indoor air sample collection, based upon field measurements taken during the subsurface investigation. The location plan is included in Appendix A.

Property Solutions has prepared this Limited Phase II Site Investigation Report to summarize the activities and findings of this investigation, and document the soil, groundwater, sub-slab soil vapor, and indoor air sampling events completed in April 2016 and June 2016.

1.3 Special Terms and Conditions

This Limited Phase II SI was performed in accordance with the above Scope of Work. No special terms and conditions apply

1.4 Reliance

This report is intended for the sole use of Kazmarek Mowrey Cloud Laseter LLP, LNR Partners, LLC, and all trustees, servicers or other parties affiliated with any REMIC Trust holding an interest in the Subject Property at the time of this Phase I report, or any special purpose entity owned by such a REMIC Trust that may become a holder in due course of a loan secured by the Subject Property or that may become the fee owner of the Subject Property. The contents should not be relied upon by any other parties without the express written consent of Property Solutions Inc.

2.0 FIELD INVESTIGATION ACTIVITIES

2.1 Field Activities

April 7, 2016 Sampling Event

Prior to the start of the field investigation, Property Solutions coordinated Zebra Technical Services, LLC of Lynbrook, New York to contact the New York 811 underground utility mark out service, and ticket number 160850823 was assigned.

Field activities commenced on April 7, 2016, when Burton Turner, Technical Manager of Property Solutions, arrived at the subject property at 8:00 AM to begin subsurface investigation activities. Weather conditions at the time of the field activities consisted of cloudy skies and intermittent rain with an approximate outside air temperature of 50 degrees Fahrenheit.

Prior to the start of the field investigation, Property Solutions coordinated Greenstar Environmental Solutions of Wappingers Falls, New York to perform a geophysical survey to check for the presence of and provide locations of subsurface utilities, tanks, or other potential obstructions to the

subsurface explorations. The geophysical survey was completed using ground penetrating radar (GPR) equipment. The device radiates a polarized electromagnetic wave from a transmitter antenna into the earth and receives the reflected transmission via a receiving antenna. Radar reflections occur when the radio waves encounter a change in velocity or attenuation. The collection of GPR data was performed by pulling the antenna along grid lines while the positions of each radar reading were recorded with an odometer. The GPR data was recorded digitally in a portable computer for instant display and subsequent processing. Greenstar Environmental Solutions informed Property Solutions an electrical line was identified and marked on the sidewalk at the front (west) side of the building, and a sewer line was identified and marked on the rear (east) side of the building.

Soil borings for this Phase II Limited Subsurface Investigation were placed over the extent of the area of concern. A total of four soil borings were advanced exterior to the building (SB-01 through SB-04), and three borings in the basement of the building (SB-05 through SB-07), in the vicinity of the area of concern by the certified driller.

A sampling location map is included in Appendix A.

June 15 through June 17, 2016 Sampling Event:

Prior to the start of the field investigation, Property Solutions coordinated Zebra Technical Services, LLC of Lynbrook, New York to contact the New York 811 underground utility mark out service, and ticket numbers 161592094 and 161592089 were assigned.

Field activities commenced on June 15, 2016, when Burton Turner, Technical Manager of Property Solutions, arrived at the subject property at 7:20 AM to begin subsurface investigation activities. Weather conditions at the time of the field activities consisted of mostly clear skies with an approximate outside air temperature of 70 degrees Fahrenheit.

Prior to the start of the field investigation, Property Solutions coordinated Greenstar Environmental Solutions of Wappingers Falls, New York to perform a geophysical survey to check for the presence of and provide locations of subsurface utilities, tanks, or other potential obstructions to the subsurface explorations. The geophysical survey was completed using ground penetrating radar (GPR) equipment. The device radiates a polarized electromagnetic wave from a transmitter antenna into the earth and receives the reflected transmission via a receiving antenna. Radar reflections occur when the radio waves encounter a change in velocity or attenuation. The collection of GPR data was performed by pulling the antenna along grid lines while the positions of each radar reading were recorded with an odometer. The GPR data was recorded digitally in a portable computer for instant display and subsequent processing. Greenstar Environmental Solutions surveyed locations of the planned monitoring wells, and cleared a minimum five by five feet area for each of the intended drilling locations.

The soil borings conducted and monitoring wells installed for this Limited Phase II Subsurface Investigation were placed over the extent of the area of concern, to attempt to delineate the extent of soil and groundwater impact. A total of three soil borings were advanced exterior to the building, and six monitoring wells installed, in the vicinity of the area of concern by the certified driller.

A sampling location map depicting the locations of the three soil borings, six monitoring wells, and two indoor air sample collection locations is provided in Appendix A.

2.2 Sampling Methods

Property Solutions contracted Zebra Technical Services, LLC of Lynbrook, New York, a certified Geoprobe operator, to advance the soil borings for the collection of the representative subsurface samples. Zebra Technical Services, LLC utilizes a truck-mounted hydraulic push probe (Geoprobe), which advances a four-foot long stainless steel “Macro-Core” sampler. For each four-foot or five-foot advancement, a dedicated, disposable polybutyl acetate liner is used in which the samples are held for field assessment. Prior to advancement of each boring, the Geoprobe operator decontaminated the cutting shoe using a mixture of liquinox and water. The Geoprobe operator also inserted a dedicated disposable macro-core liner in each stainless steel sampling tube to prevent cross contamination of the soils encountered. The equipment utilized by Property Solutions to transfer the soil to the sampling jar was disposed of upon completion of each sampling event and Property Solutions field personnel utilized disposable latex gloves during sample collection and whenever they were in contact with the soils.

The following table is a summary of the soil borings advanced during this investigation (borings completed during April 2016 and June 2016 sampling events).

Soil Boring	Depth (ft.)	Boring Advanced To	Area of Concern Addressed
SB-01	9	Refusal	Former dry cleaner tenant space
SB-02	10	Refusal	Former dry cleaner tenant space
SB-03 / TW-03	12	Refusal	Former dry cleaner tenant space
SB-04 / TW-04	12	Refusal	Former dry cleaner tenant space
SV-01 / SB-05	< 1.0	Refusal immediately beneath floor slab / stone base (soil vapor sample only)	Former dry cleaner tenant space
SV-02 / SB-06	< 1.0	Refusal immediately beneath floor slab / stone base (soil vapor sample only)	Former dry cleaner tenant space
SB-07	< 1.0	Refusal (no samples)	Former dry cleaner tenant space
SB-08 / MW-3	11	Refusal	Former dry cleaner tenant space and impacted groundwater
SB-09 / MW-4	13.5	Refusal	Former dry cleaner tenant space and impacted groundwater
SB-10 / MW-5	11.5	Refusal	Former dry cleaner tenant space and impacted groundwater

April 7, 2016 Sampling Event

Two soil samples were collected from each “SB” soil boring for a total of eight soil samples [2118-SB-01(1.0-1.5) through 2118-SB-04(7.0-7.5)]. The soil samples were collected in laboratory supplied glassware, stored on ice, and submitted under chain of custody to a New York certified laboratory for analysis.

The soil-groundwater interface was encountered in borings SB-01 through SB-04 at a depth of 8 to 10 feet bgs. All borings encountered refusal at depths of nine to twelve feet bgs. Temporary monitoring wells were installed in soil borings SB-03 and SB-04. Groundwater samples were collected with dedicated disposable Teflon bailers. A total of two grab groundwater samples were collected during this investigation.

Soil-gas samples were collected from two locations in the basement, through small borings advanced through the floor slab with a power drill. Teflon lined tubing was inserted into the boring, and the boring was sealed with non-toxic modeling clay. Helium gas was used as a tracer to check tubing connection and the seal with the concrete floor. The boring was purged through the tubing, removing approximately three volumes of air prior to collecting a sample. A grab soil gas sample was collected into laboratory-supplied vacuum canisters (Summa® canister) and submitted under chain of custody to a New York State-certified laboratory for analysis by USEPA Method TO-15. Following collection of the soil-gas samples, the small-diameter borings were sealed with a concrete quick-mix.

June 15 through June 17, 2016 Sampling Event:

On June 15 through June 17, 2016, Property Solutions installed six monitoring wells at the subject property, including five shallow / overburden wells, and one deep / bedrock well. Soil borings (SB-08 through SB-10) were advanced at the three well locations that were not sampled during the April 2016 investigation (MW-4 through MW-6). The soil borings were advanced to depths of refusal on weathered bedrock ranging from approximately 11.0 to 13.5 feet below ground surface (bgs). Groundwater was encountered in the soil borings at depths of 6.5 to 8.5 feet bgs. Two soil samples were collected from each “SB” soil boring for a total of six soil samples [2118-SB-08(4.0-4.5) through 2118-SB-10(10.0-10.5)]. The soil samples were collected in laboratory supplied glassware, stored on ice, and submitted under chain of custody to a New York certified laboratory for analysis. The soil samples were analyzed for volatile organic compounds by USEPA Method 8260.

Property Solutions coordinated the installation of six permanent two-inch diameter monitoring wells at the subject property. These monitoring wells are identified as MW-1S, MW1D, MW-2, MS-3, MW-4, and MW-5. These monitoring wells were installed by Zebra Technical Services, LLC of Lynbrook, New York. The five shallow / overburden monitoring wells were installed by advancing eight-inch diameter well bores with 8-inch diameter hollow-stem auger equipment to refusal on bedrock, which occurred at depths ranging from 9 feet bgs at MW-1S to 17 feet bgs at MW-2. The

wellbore for the one deep / bedrock monitoring well (MW-1D) was advanced to a completion depth of 29.5 feet bgs utilizing a down-hole air hammer.

The well screen was constructed of 0.010 slot Schedule 40 PVC and the well casing was also Schedule 40 PVC. Each shallow well was finished with approximately five to ten feet of well screen and approximately three to five feet of casing. The void surrounding the screens was filled with No. 1 Morie sand and the well was grouted with neat cement and bentonite. The wells were developed for a minimum of 30 minutes utilizing a submersible whale pump with a pump rate of one gallon per minute.

Following completion of the monitoring well installations, sampling of the six wells was completed on June 17, 2016. The six wells were purged and sampled, and water quality parameters measured with a Horiba U-52 Multi-parameter Water Quality Meter immediately following sample collection at each well (monitored for pH, ORP, conductivity, turbidity, dissolved oxygen, and TDS). Static groundwater levels were measured prior to the purging of each well, which ranged from 5.8 feet depth bgs at MW-3 to 26.1 feet depth bgs at MW-1D. The wells were purged using a whale pump, and the groundwater samples were collected with Teflon bailers, and decanted into the laboratory-supplied glassware. A total of six groundwater samples were collected during this phase of the investigation.

Indoor air samples were collected from two locations in the subject building. Sample 2118-SV-01 was collected in the basement area of the former dry cleaner building unit (2312). Sample 2118-SV-02 was collected in the first floor area of the former dry cleaner unit, which is currently a combined space with building unit 2310. The 24-hour air samples were collected into laboratory-supplied vacuum canisters (Summa[®] canister) and submitted under chain of custody to a New York State-certified laboratory for analysis by USEPA Method TO-15.

Photographs documenting the sampling events are provided in Appendix B.

A field log was maintained for each boring which details the observed soil conditions and drilling procedures. Copies of the soil boring logs are provided in Appendix C.

2.3 Analytical Laboratory Information

The soil and groundwater samples and the indoor air samples were submitted under chain of custody to Alpha Analytical, Inc. located in Westborough, Massachusetts (Alpha Analytical). Alpha Analytical is certified by the State of New York to analyze samples collected in the State of New York (Lab No. 11148).

The soil and groundwater samples were collected in laboratory-cleaned and supplied containers and stored on ice prior to delivery to Alpha Analytical. As each sample was collected, the sampling containers were labeled. The label denoted the name of the subject property, the sample location, the time and date the sample was collected, any preservatives added to the sample, and the analysis required for each sample. The information from each label was transferred onto the chain of custody

form provided by Alpha Analytical. Upon completion of the fieldwork, the soil samples were delivered under chain of custody to Alpha Analytical, for analysis. The soil vapor and indoor air samples were collected in laboratory-cleaned and supplied vacuum (Summa[®]) canisters.

The soil samples collected from the former dry cleaner area of concern were analyzed for volatile organic compounds (VOCs) by USEPA Method 8260. The groundwater samples collected from the temporary wells and permanent monitoring wells for the former dry cleaner area of concern were analyzed for VOCs by USEPA Method 8260. The soil gas samples and indoor air samples collected from the former dry cleaner area of concern were analyzed for VOCs by USEPA Method TO-15.

Analytical results were provided to Property Solutions by Alpha Analytical in electronic format for submittal to the Kazmarek Mowrey Cloud Laseter LLP.

Per the agreed upon scope of work, no laboratory-prepared trip blanks or field blanks were collected or analyzed as part of this investigation.

2.4 Field Data Collection

Property Solutions field logged the soil borings continuously to determine property specific lithology. A field log was maintained for each boring detailing the observed soil conditions and drilling procedures. Copies of the soil boring logs are provided in Appendix C.

Property Solutions field screened each soil boring for the presence of total volatile organic compounds (VOCs) using a RAE Systems MiniRAE 3000 photo-ionization detector (PID) with a 10.6 electron-volt (eV) lamp. The PID is a trace gas analyzer calibrated to an isobutylene standard, which is capable of detecting total volatile organic vapor concentrations to a lower limit of approximately one part per million (ppm) isobutylene equivalence units.

During the field screening with the PID, no organic vapors were detected in the soils from borings SB-01, SB-04, SB-09, and SB-10, which were screened throughout the depth of each boring at six-inch intervals. In addition, throughout the depth of the borings, there was no visual or olfactory indication of impact to soils. Organic vapors were detected in soils from borings SB-02, SB-03, and SB-08. The boring with the highest PID readings was SB-03. The organic vapors were detected in this sample beginning at a depth of 0.5 feet bgs and continuing to 4.5 feet bgs, and low PID readings were observed at the groundwater interface between 9.0 and 10.0 feet bgs. PID readings screened throughout the depth of recovered soils are included in the boring logs provided in Appendix C.

Prior to collection of the grab groundwater sample from temporary well TW-03, an elevated PID reading of 90 to 100 meter units was observed at the top of the well casing. At TW-04, the PID reading prior to collection of the groundwater sample was zero. Prior to collection of samples from the six monitoring wells on June 17, 2016, PID screening was conducted two-inches below top of casing, with the following results:

Monitoring Well	PID value
MW-1S	9.4
MW-1D	0.0
MW-2	0.0
MW-3	0.5
MW-4	0.0
MW-5	1.8

3.0 REGULATORY STANDARDS

Property Solutions used the following NYSDEC and NYSDOH standards for comparison with contaminant levels identified in the soil and groundwater samples.

- NYSDEC regulations at NYCRR Part 375-6.8; Remedial Program Soil Cleanup Objectives
- NYSDEC regulations at NYCRR Part 703.5; Water Quality Standards for Taste, Color-and Odor-producing, Toxic and Other Deleterious Substances.
- NYSDOH – Guidance for Evaluating Soil Vapor Intrusion in the State of New York; dated October 2006.

4.0 EXPLORATION RESULTS

4.1 Former Dry Cleaners (Unit 2312)

April 7, 2016 Sampling Event

Property Solutions installed a total of four soil borings in the vicinity of the Former Dry Cleaners (Unit 2312) to a depth of nine to twelve feet bgs. Two soil samples were collected from each of the borings, and were analyzed for volatile organic compounds.

Based on the results of four soil borings installed in the vicinity of the Former Dry Cleaners (Unit 2312), the subsurface conditions can be generally described as follows:

Based on the four completed borings, the soils encountered at the subject property beneath the asphalt pavement and concrete sidewalk consisted of a gravel base of four to eight inches thickness, underlain by apparent native soils consisting of silt with varying fractions of fine to coarse sand and fine gravel, generally grading coarser with depth. At depths ranging from 7.5 to 11.0 feet bgs, decomposed schist bedrock was encountered. Refusal to further penetration was encountered at depths ranging from 9.0 to 12.0 feet bgs.

Soil borings were attempted at three locations in the basement of Unit 2312. At each of the three locations, bedrock was encountered within three-inches (gravel base) beneath the concrete floor slab.

Consequently, no soil samples were collected. Soil vapor samples (SV-01 and SV-02) were collected at two of the drilled locations.

Based on the conditions encountered during this investigation, the soil-groundwater interface appears to occur at depths of approximately seven to ten feet below ground surface (bgs). Soil borings SB-03 and SB-04 were advanced to a depth of 12 feet bgs to facilitate in the collection of groundwater samples via a temporary monitoring well. A total of two grab groundwater samples were collected during this investigation.

Analytical results, as reported by Alpha Analytical, are provided in the analytical summary tables and the laboratory deliverable reports provided in Appendix E.

- Table 1A: Soil Analytical Results
- Table 1B: Groundwater Analytical Results
- Table 1C: Sub-Slab Soil Vapor Analytical Results
- Lab Deliverables (Report L1610441): Soil and Groundwater Analyses
- Lab Deliverables (Report L1610339): Sub-Slab Soil Vapor Analyses

The soil analytical results, summarized in Table 1A, confirm that concentrations of PCE were detected in soil samples ranging from non-detect to 380 milligrams per kilogram (mg/kg). The applicable NYSDEC soil criteria for the subject property are the Restricted-use Commercial Criteria. The criterion for PCE is 150 mg/kg, which was exceeded in sample SB-03 (0.5-1.0), collected from the soil sample core immediately beneath the surface asphalt and gravel base. Results for a second soil sample collected from the same boring, at 6.5 to 7.0 feet bgs, did not exceed the applicable criteria, providing vertical delineation. No other soil sample results exceeded their applicable criteria. A summary of detected compounds, i.e. with results exceeding the laboratory method detection limit (MDL), is provided in the following table:

LOCATION				2118-SB-01 (1.0-1.5)	2118-SB-01 (7.5-8.0)	2118-SB-02 (0.5-1.0)	2118-SB-02 (4.0-4.5)
SAMPLING DATE				4/7/2016	4/7/2016	4/7/2016	4/7/2016
LAB SAMPLE ID				L1610441-01	L1610441-02	L1610441-03	L1610441-04
Units: mg/kg	NY-CP51	NY-RESC	NY-RESGW	Results	Results	Results	Results
General Chemistry							
Solids, Total				84.9	91.4	92.9	89.4
Volatiles Organics by 8260/5035							
2-Butanone		500	0.12	0.16	0.0088	1.2	0.0087
Acetone		500	0.05	0.54	0.0011	1.2	0.0049
Tetrachloroethene		150	1.3	1.2	0.00088	13	0.072
Toluene	0.7	500	0.7	0.058	0.0018	0.19	0.001
Trichloroethene		200	0.47	0.054	0.00088	0.19	0.0017

LOCATION				2118-SB-03 (0.5-1.0)	2118-SB-03 (6.5-7.0)	2118-SB-04 (1.0-1.5)	2118-SB-04 (7.0-7.5)
SAMPLING DATE				4/7/2016	4/7/2016	4/7/2016	4/7/2016
LAB SAMPLE ID				L1610441-05	L1610441-06	L1610441-07	L1610441-08
Units: mg/kg	NY-CP51	NY-RES C	NY-RES GW	Results	Results	Results	Results
General Chemistry							
Solids, Total				85.9	91.2	88.8	90.3
Volatile Organics by 8260/5035							
2-Butanone		500	0.12	54	0.009	0.0078	0.0077
Acetone		500	0.05	54	0.009	0.0078	0.0077
Tetrachloroethene		150	1.3	380	0.034	0.00078	0.00077
Toluene	0.7	500	0.7	8.2	0.0014	0.0013	0.00069
Trichloroethene		200	0.47	5.4	0.001	0.00078	0.00077
	= Exceeds applicable criterion						
	= Non-detect result that exceeds applicable criterion due to sample dilution						
*NY-CP51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels dated October 21, 2010.							
*NY-RESC: Commercial Criteria, New York Restricted use current as of 5/2007							
*NY-RESGW: Groundwater Criteria, New York Restricted use current as of 5/2007							

The groundwater analytical results, summarized in Table 1B, confirm that PCE was detected in groundwater sample TW-03 (7.6) at a concentration of 2,100 micrograms per liter (ug/L), and that trichloroethene (TCE) was detected at a concentration of 5.2 ug/L, exceeding the applicable NYSDEC criteria of 5 ug/L for each of these CVOCs. No analytes were detected in groundwater sample TW-04 (9.0) exceeding their applicable criteria. A summary of detected compounds, i.e. with results exceeding the laboratory MDL, is provided in the following table:

LOCATION		2118-TW-03 (7.6)	2118-TW-04 (9.0)
SAMPLING DATE		4/7/2016	4/7/2016
LAB SAMPLE ID		L1610441-09	L1610441-10
Units: ug/L	NY-AWQS	Results	Results
Volatile Organics by GC/MS			
Acetone	50	120	3.7
Tetrachloroethene	5	2100	0.87
Trichloroethene	5	5.2	0.5
	= Exceeds applicable criterion		
	= Non-detect result that exceeds applicable criterion due to sample dilution		
*NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.			

The soil-vapor analytical results, summarized in Table 1C, confirm that concentrations of PCE are present in vapors immediately beneath the concrete floor slab in the subject building's basement, detected ranging from 1,950 micrograms per cubic meter (ug/m³) to 5,210 ug/m³. The NYSDOH guidance evaluates concentrations detected in soil-vapor along with concentrations detected in indoor air, to determine the recommended action. No indoor air results are available for the subject property to evaluate according to the NYSDOH's applicable "matrix;" however, the recommended action for any soil vapor concentration greater than 1,000 ug/m³ is mitigation of the sub-slab vapor conditions, regardless of the concentrations detected in a correlated indoor air sample. A summary of detected compounds, i.e. with results exceeding the laboratory MDL, is provided in the following table (acetone is a common lab-induced contaminant):

LOCATION		2118-SV-01 (0.5)	2118-SV-02 (0.5)
SAMPLING DATE		4/7/2016	4/7/2016
LAB SAMPLE ID		L1610339-01	L1610339-02
Units: ug/m ³	NY-SSC	Results	Results
Volatile Organics			
Acetone	5	7.91	28.7
Tetrachloroethene	5	1950	5210
Toluene	5	2.55	7.54
	= Exceeds applicable criterion		
	= Non-detect result that exceeds applicable criterion due to sample dilution		
*NY-SSC: New York DOH Matrix 1 Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion dated October 2006. Matrix requires indoor air values for evaluation.			

June 15 through June 17, 2016 Sampling Event:

Property Solutions completed a total of three soil borings and installed six monitoring wells to investigate the extent of groundwater impact identified in the grab groundwater sample collected from temporary well TW-03 on April 7, 2016 in the vicinity of the Former Dry Cleaners (Unit 2312). Soil borings were conducted at the three new well location that had not been previously sampled. The three soil borings were advanced to refusal depths which ranged from 11 to 11.5 feet bgs. Two soil samples were collected from each of the borings, and were analyzed for CVOCs.

Based on the results of three soil borings installed in the vicinity of the Former Dry Cleaners (Unit 2312), the subsurface conditions can be generally described as consistent with the findings of the April 2016 investigation, with exception of location SB-08, where depth of fill extended to a depth of approximately eight feet bgs, suggesting the former presence of a structure at this location. PID screening and visual/olfactory observations identified soils apparently impacted with VOCs, though likely not associated with the CVOC-impacted soils at boring SB-03 completed in April 2016.

Two indoor air samples were collected in building unit 2312, the former dry cleaner location. Sample IA-01 was collected in the basement area of unit 2312 over a 24-hour period, and sample IA-02 was collected in the first floor area of unit 2312 over a 24-hour period.

The static groundwater level was measured at depths of approximately six to eight feet bgs at monitoring wells MW-1S, MW-3, MW-4, and MW-5. Groundwater levels at MW-1D and MW-5 were measured at depths of approximately 13-feet and 26-feet bgs, respectively; however, these depths measured prior to sampling may be due to slow recovery at these wells subsequent to the well development purging. A total of six groundwater samples were collected during this investigation, as the initial round of sampling of the new monitoring wells.

Analytical results, as reported by Alpha Analytical, are provided in the analytical summary tables and the laboratory deliverable reports provided in Appendix E.

- Table 2A: Soil Analytical Results
- Table 2B: Groundwater Analytical Results
- Table 2C: Sub-Slab Soil Vapor Analytical Results
- Lab Deliverables (Report L1618618): Soil Analyses
- Lab Deliverables (Report L1618805): Groundwater Analyses
- Lab Deliverables (Report L1618699): Indoor Air Analyses

The soil analytical results, summarized in Table 2A, confirm that a concentration of cis-1,2-dichloroethene was detected in the shallow-depth soil sample at boring SB-08 [2118-SB8 (4.0-4.5)], at a concentration of 4.7 mg/kg. The applicable NYSDEC soil criteria for the subject property are the Restricted-use Commercial Criteria. The criterion for cis-1,2-dichloroethene is 500 mg/kg. However, the result does exceed the applicable criterion for potential impact to groundwater (NYSDEC Groundwater Criteria, Restricted Use), of 0.25 mg/kg. No other soil sample results exceeded their applicable criteria. A summary of detected compounds, i.e. with results exceeding the laboratory MDL, is provided in the following table:

LOCATION					2118-SB8 (4.0-4.5)	2118-SB8 (8.0-8.5)	2118-SB9 (4.0-4.5)
SAMPLING DATE					6/15/2016	6/15/2016	6/15/2016
LAB SAMPLE ID					L1618618-01	L1618618-02	L1618618-03
	NY-CP51	NY-RES C	NY-RESER	NY-RES GW	Results	Results	Results
General Chemistry							
Solids, Total					87.7	91.9	88.5
Volatile Organics by 8260/5035							
cis-1,2-Dichloroethene		500		0.25	4.7	0.0008	0.00086
Tetrachloroethene		150	2	1.3	1	0.0008	0.00086
trans-1,2-Dichloroethene		500		0.19	0.14	0.0012	0.0013
Trichloroethene		200	2	0.47	0.19	0.0008	0.00086
LOCATION					2118-SB9 (8.0-8.5)	2118-SB10 (4.5-5.0)	2118-SB10 (10.0-10.5)
SAMPLING DATE					6/15/2016	6/16/2016	6/16/2016
LAB SAMPLE ID					L1618618-04	L1618618-05	L1618618-06
	NY-CP51	NY-RES C	NY-RESER	NY-RES GW	Results	Results	Results
General Chemistry							
Solids, Total					90	88.6	88.3
Volatile Organics by 8260/5035							
cis-1,2-Dichloroethene		500		0.25	0.00084	0.00081	0.0062
Tetrachloroethene		150	2	1.3	0.00084	0.00081	0.001
trans-1,2-Dichloroethene		500		0.19	0.0013	0.0012	0.0012
Trichloroethene		200	2	0.47	0.00084	0.00081	0.0018
	= Exceeds applicable criterion						
*NY-CP51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels dated October 21, 2010.							
*NY-RESC: Commercial Criteria, New York Restricted use current as of 5/2007							
*NY-RESGW: Groundwater Criteria, New York Restricted use current as of 5/2007							

The groundwater analytical results, summarized in Table 2B, confirm that PCE was detected in the groundwater sample collected at MW-1S [(2118-MW-1S(7.4) at a concentration of 180 micrograms per liter (ug/L), and the groundwater sample collected at MW-1D [(2118-MW-1D(26.5) at a concentration of 8.3 ug/L. In the downgradient well MW-5, PCE was detected at a concentration of 24 ug/L, trichloroethene (TCE) was detected at a concentration of 30 ug/L, and cis-1,2-dichloroethene was detected at a concentration of 59 ug/L. These results exceed the applicable NYSDEC criteria of 5 ug/L for each of these chlorinated compounds. No analytes were detected in

groundwater sample collected at MW-2, MW-3, and MW-4 exceeding their applicable criteria. A summary of detected compounds, i.e. with results exceeding the laboratory MDL, is provided in the following table:

LOCATION		2118-MW1S (7.4)	2118-MW1D (26.5)	2118-MW2 (13.2)
SAMPLING DATE		6/17/2016	6/17/2016	6/17/2016
LAB SAMPLE ID		L1618805-01	L1618805-02	L1618805-03
Units: ug/L	NY-AWQS	Results	Results	Results
Volatile Organics by GC/MS				
cis-1,2-Dichloroethene	5	2.5	2.5	2.5
Tetrachloroethene	5	180	8.3	0.79
Trichloroethene	5	1.9	0.18	0.5
LOCATION		2118-MW3 (6.1)	2118-MW4 (6.8)	2118-MW5 (8.4)
SAMPLING DATE		6/17/2016	6/17/2016	6/17/2016
LAB SAMPLE ID		L1618805-04	L1618805-05	L1618805-06
Units: ug/L	NY-AWQS	Results	Results	Results
Volatile Organics by GC/MS				
cis-1,2-Dichloroethene	5	2.5	3.4	59
Tetrachloroethene	5	0.5	0.37	34
Trichloroethene	5	0.5	0.5	30
= Exceeds applicable criterion				
*NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.				

The indoor air analytical results, summarized in Table 2C, confirm that concentrations of PCE were detected in both samples, IA-01 (basement) and IA-02 (first floor), at 10.2 ug/m³ and 7.32 ug/m³ respectively. The NYSDOH guidance document (NYSDOH Guidance for Evaluating Soil Vapor Intrusion, October 2006) for indoor air provides Air Guideline Values in Table 3.1 of the guidance, which are currently set at 30 ug/m³ for PCE and 2 ug/m³ for TCE. The guidance does recommend that “reasonable and practical actions should be taken to reduce exposures when indoor air levels are above background, even when they are below the guideline.” However, background samples were not collected during the sampling event for comparison to the indoor air sample results. The NYSDOH Guidance also recommends taking “reasonable and practical actions to identify source(s) and reduce exposures” where TCE exceeds 0.25 ug/m³ or PCE exceeds 3 ug/m³.

A summary of detected compounds, i.e. with results exceeding the laboratory MDL, is provided in the following table:

LOCATION		2118-IA-01	2118-IA-02
SAMPLING DATE		6/17/2016	6/17/2016
LAB SAMPLE ID		L1618699-01	L1618699-02
Units: ug/m ³	NY-IAC	Results	Results
Volatile Organics in Air by SIM			
1,2-Dichloroethane		0.206	0.275
cis-1,2-Dichloroethene		0.091	0.079
Tetrachloroethene	30	10.2	7.32
Trichloroethene	2	0.21	0.15
	= Exceeds applicable criterion		
*NY-IAC: New York DOH Matrix 1 Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion dated October 2006.			

5.0 CONCLUSIONS

The Limited Phase II SI activities completed in April 2016 was performed to determine the potential presence/absence of subsurface contamination at the subject property as it relates to the environmental concerns identified below:

Based on a review of the analytical laboratory data for the April 2016 sampling event, concentrations of PCE, a constituent associated with dry cleaning operations, was found in groundwater sample 2118-TW-03(7.6), in soil samples 2118-SB-02(0.5-1.0) and 2118-SB-03(0.5-1.0) at concentrations exceeding their applicable New York State Department of Environmental Conservation (NYSDEC) criteria. Trichloroethylene (TCE) was also detected in groundwater sample 2118-TW-03(7.6) at a concentration slightly exceeding the applicable NYSDEC criterion for TCE. Concentrations of PCE were detected in soil vapor samples 2118-SV-01(0.5) and 2118-SV-02(0.5) at a concentration exceeding the concentrations exceeding NYSDOH guidance values for further evaluation

Based on the April 2016 results, Property Solutions recommended additional investigation to further evaluate the soil and groundwater conditions, and potential of vapor encroachment impact to indoor air at the subject property. The Limited Phase II SI activities completed in June 2016, included additional soil and groundwater investigation to delineate the lateral extent of the impact to soil and groundwater, and collection of indoor air samples in the basement area and the first floor unit of the former dry cleaner operation.

Based on a review of the analytical laboratory data reported for the June 2016 sampling event, concentrations of chlorinated VOCs including PCE, TCE, and cis-1,2-dichloroethene, constituents associated with dry cleaning operations, were found in groundwater samples 2118-MW1S(7.4), 2118-MW1D(26.5), and/or 2118-MW5(8.4) at concentrations exceeding their applicable NYSDEC criteria. The soil analytical results indicated a concentration of cis-1,2-dichloroethene was found in soil sample 2118-SB-08(4.0-4.5) at a concentration exceeding the applicable NYSDEC criteria. The indoor air analytical results indicated concentrations of PCE and 1,2-dichloroethane was found in

samples 2118-IA-01 and/or 2118-IA-02 at a concentration exceeding the concentrations exceeding NYSDOH guidance values for further evaluation.

6.0 RECOMMENDATIONS

At this time, an additional groundwater sampling event has been recommended at the subject property, for collection of groundwater samples at monitoring wells MW-1D and MW-5. Following receipt and review of the data generated from the additional sampling event, a summary of the results will be provided with further recommendations, as appropriate.

7.0 REFERENCES

1. United States Geological Survey's 7.5-minute topographic quadrangle map of Flushing, New York.
2. United States Department of Agriculture, Soil Conservation Services' Soil Survey of Bronx County, New York.
3. Geologic Map of State/Area produced by the New York Geological Survey.
4. New York State Department of Environmental Conservation regulations at NYCRR Part 375-6.8; Remedial Program Soil Cleanup Objectives
5. NYSDEC regulations at NYCRR Part 703.5, Water Quality Standards for Taste, Color- and Odor-producing, Toxic and Other Deleterious Substances.
6. NY State Department of Health (NYSDOH) – Guidance for Evaluating Soil Vapor Intrusion in the State of New York; dated October 2006.

APPENDIX A

MAPS AND PLANS



US DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY 7.5' TOPOGRAPHIC QUADRANGLE



Property Solutions Inc.

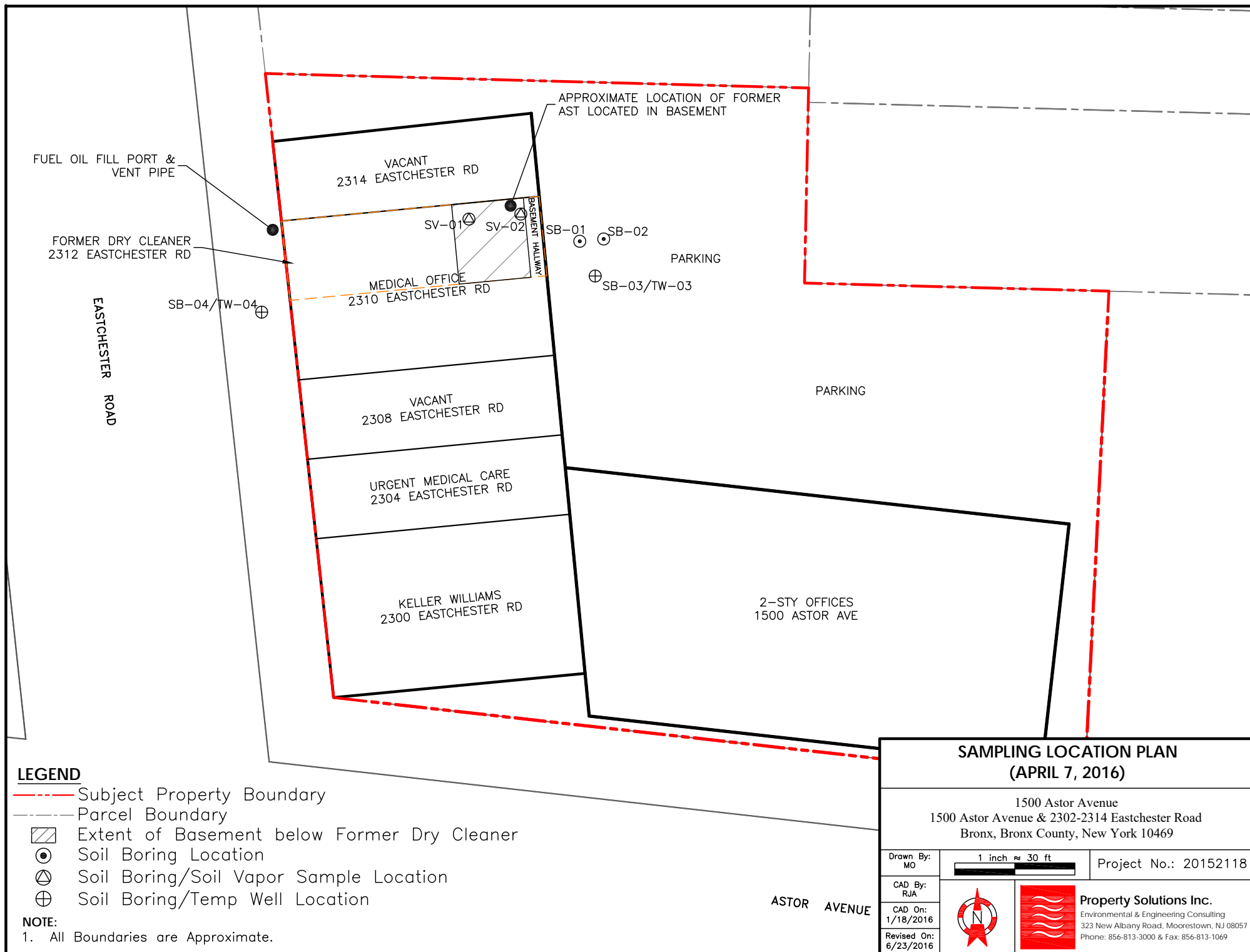
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Bronx, New York

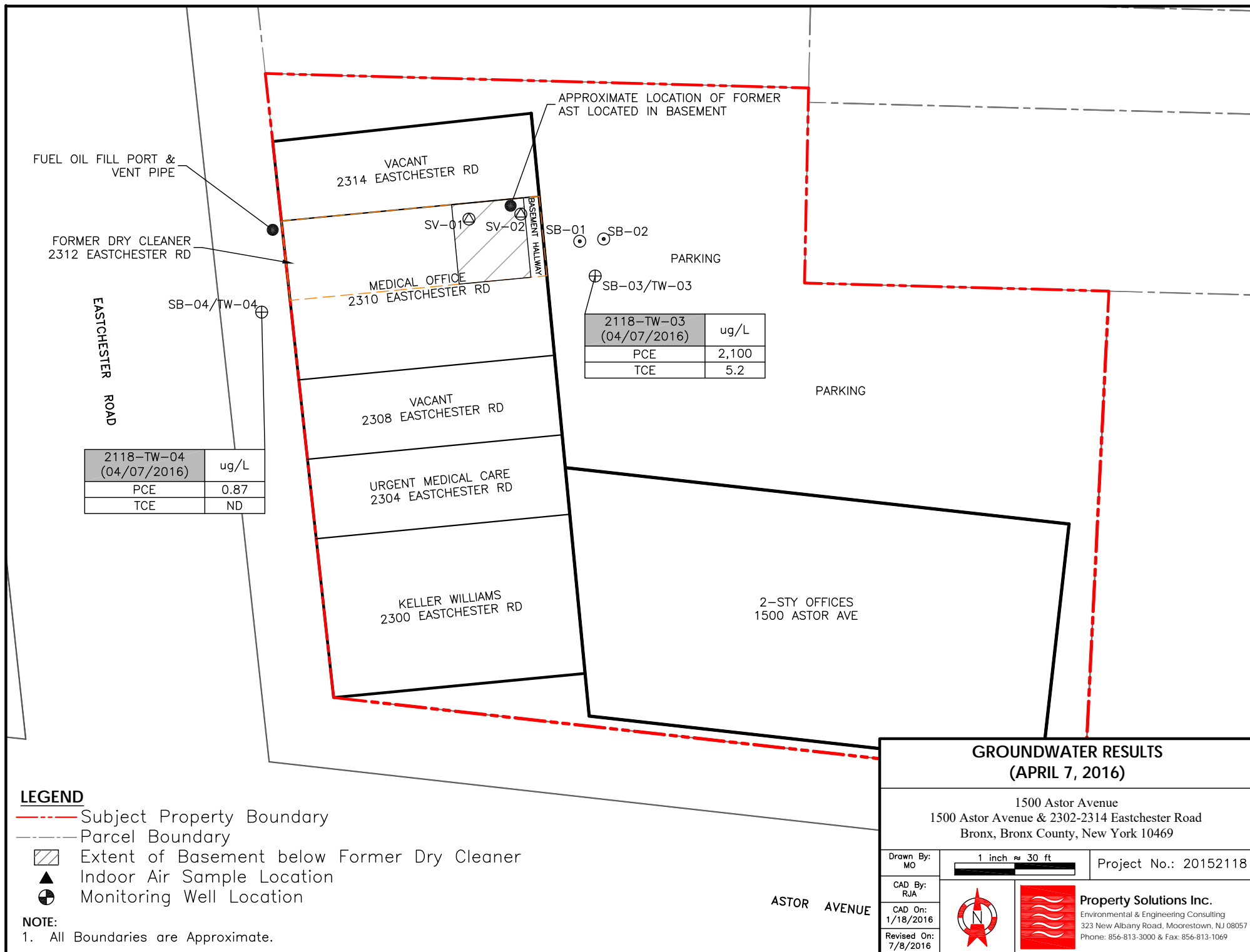
Project No.: 20152118



Topo Quad Name: Flushing, New York

Property Boundaries are Approximate





2118-SV-01 (04/07/2016)	ug/m ³
PCE	1,950
Toluene	2.55

FUEL OIL FILL PORT &
VENT PIPE

FORMER DRY CLEANER
2312 EASTCHESTER RD

EASTCHESTER ROAD

SB-04/TW-04

VACANT
2314 EASTCHESTER RD

SV-01

SV-02

MEDICAL OFFICE
2310 EASTCHESTER RD

APPROXIMATE LOCATION OF FORMER
AST LOCATED IN BASEMENT

2118-SV-02 (04/07/2016)	ug/m ³
Acetone	28.7
PCE	5,210

SB-01

SB-02

PARKING

SB-03/TW-03

VACANT
2308 EASTCHESTER RD

URGENT MEDICAL CARE
2304 EASTCHESTER RD

KELLER WILLIAMS
2300 EASTCHESTER RD

PARKING

2-STY OFFICES
1500 ASTOR AVE

LEGEND

--- Subject Property Boundary

--- Parcel Boundary

▨ Extent of Basement below Former Dry Cleaner

▲ Indoor Air Sample Location

⊕ Monitoring Well Location

NOTE:

1. All Boundaries are Approximate.

SUB-SLAB SOIL VAPOR RESULTS (APRIL 7, 2016)

1500 Astor Avenue
1500 Astor Avenue & 2302-2314 Eastchester Road
Bronx, Bronx County, New York 10469

Drawn By:
MO

1 inch ≈ 30 ft

Project No.: 20152118

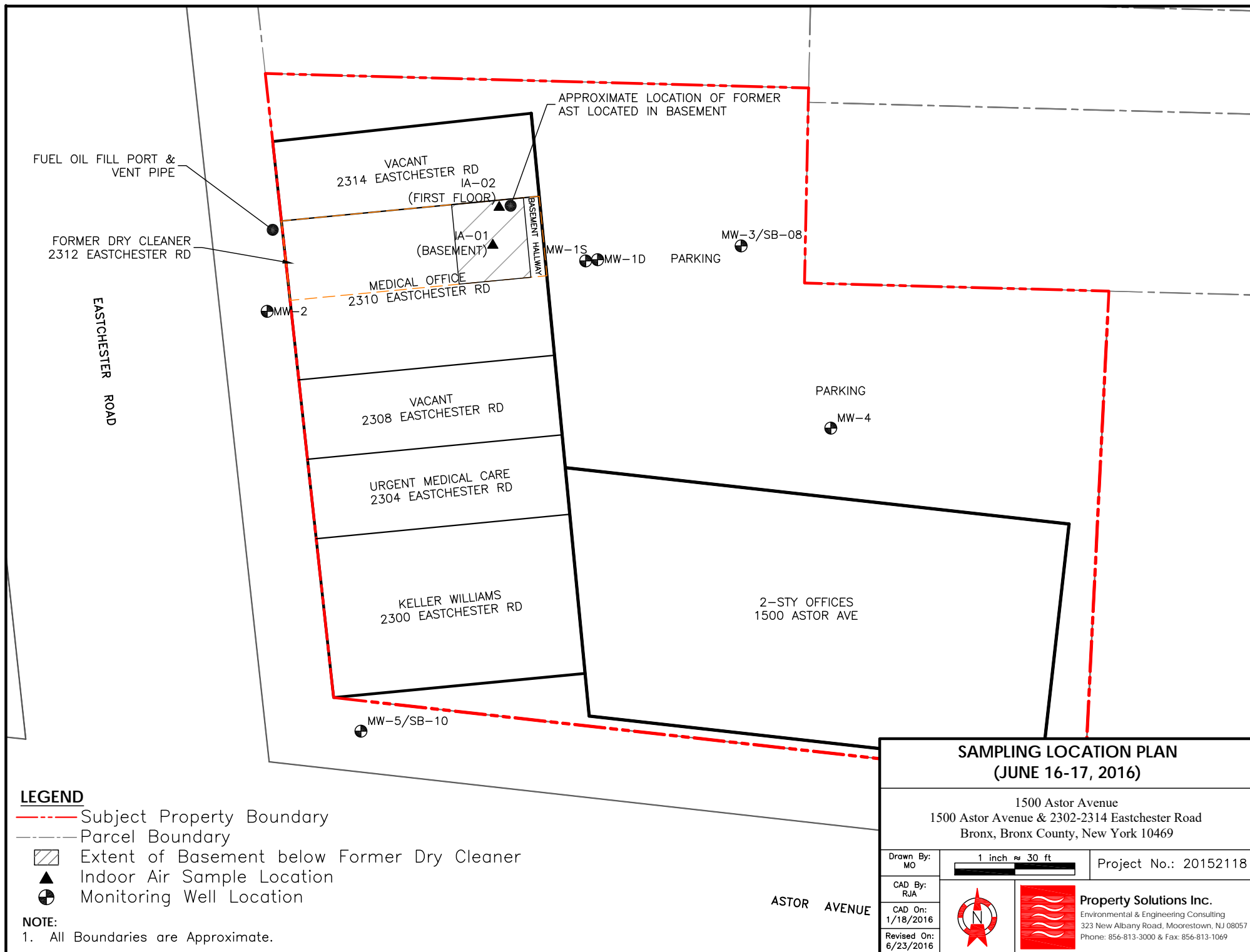
CAD By:
RJA

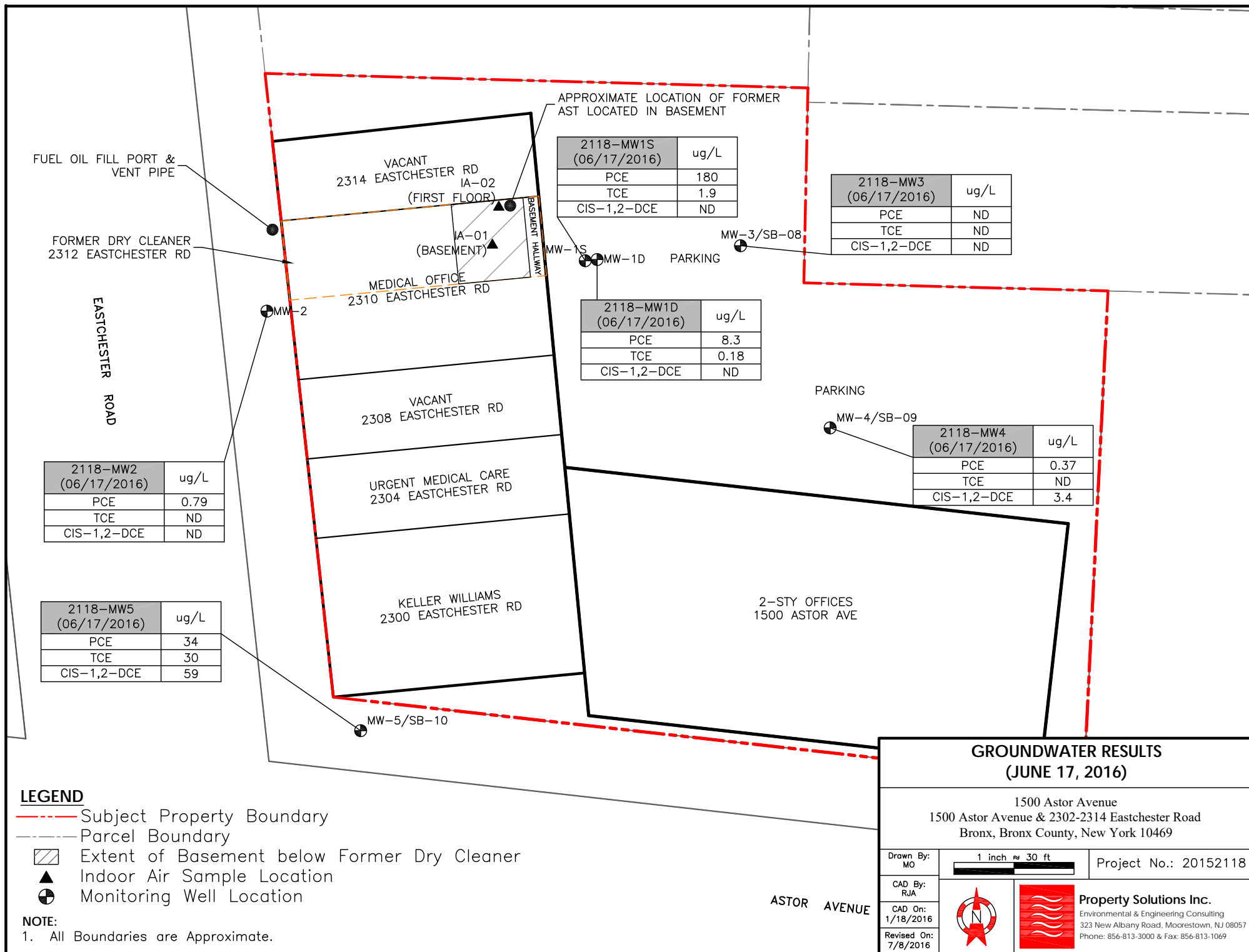
CAD On:
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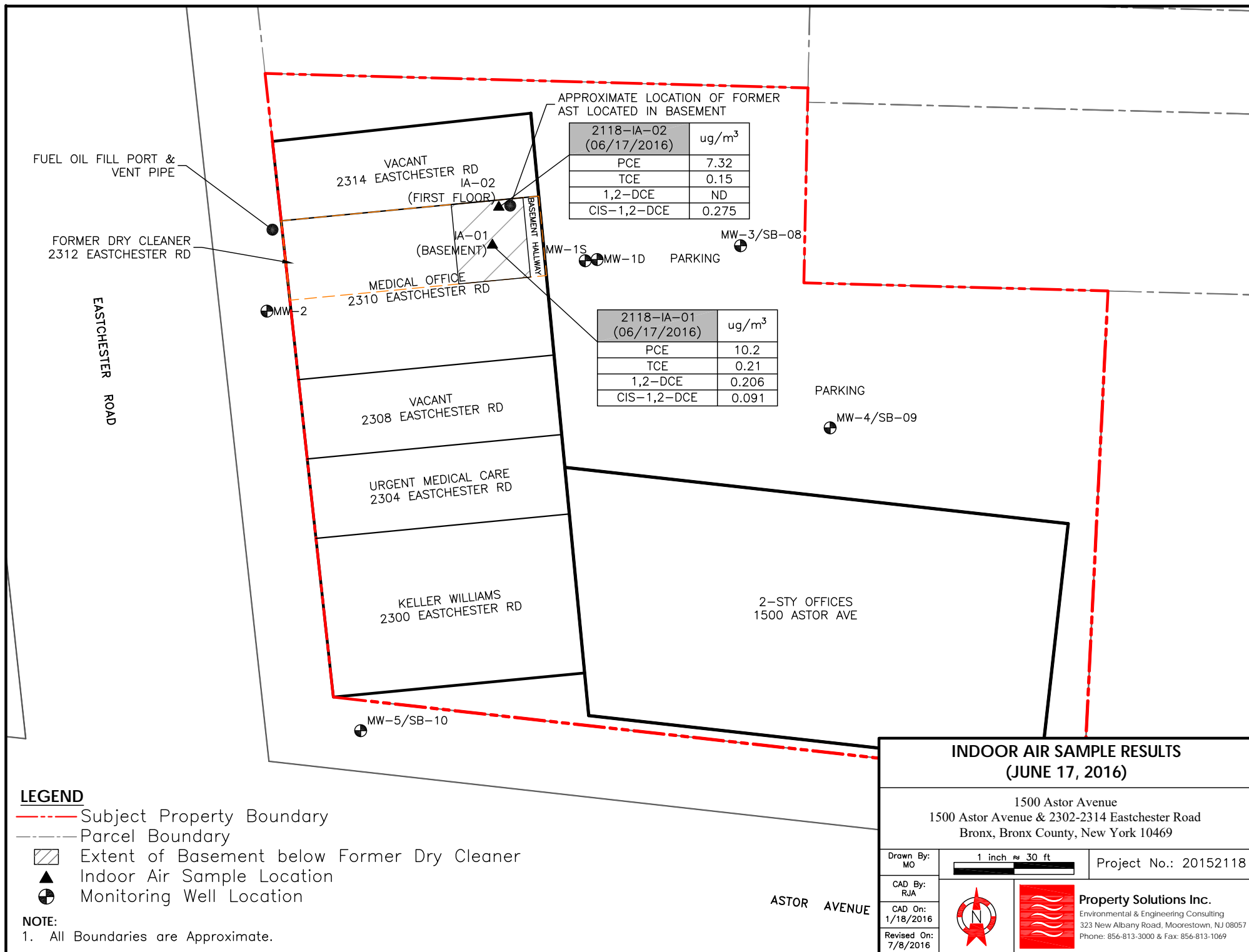
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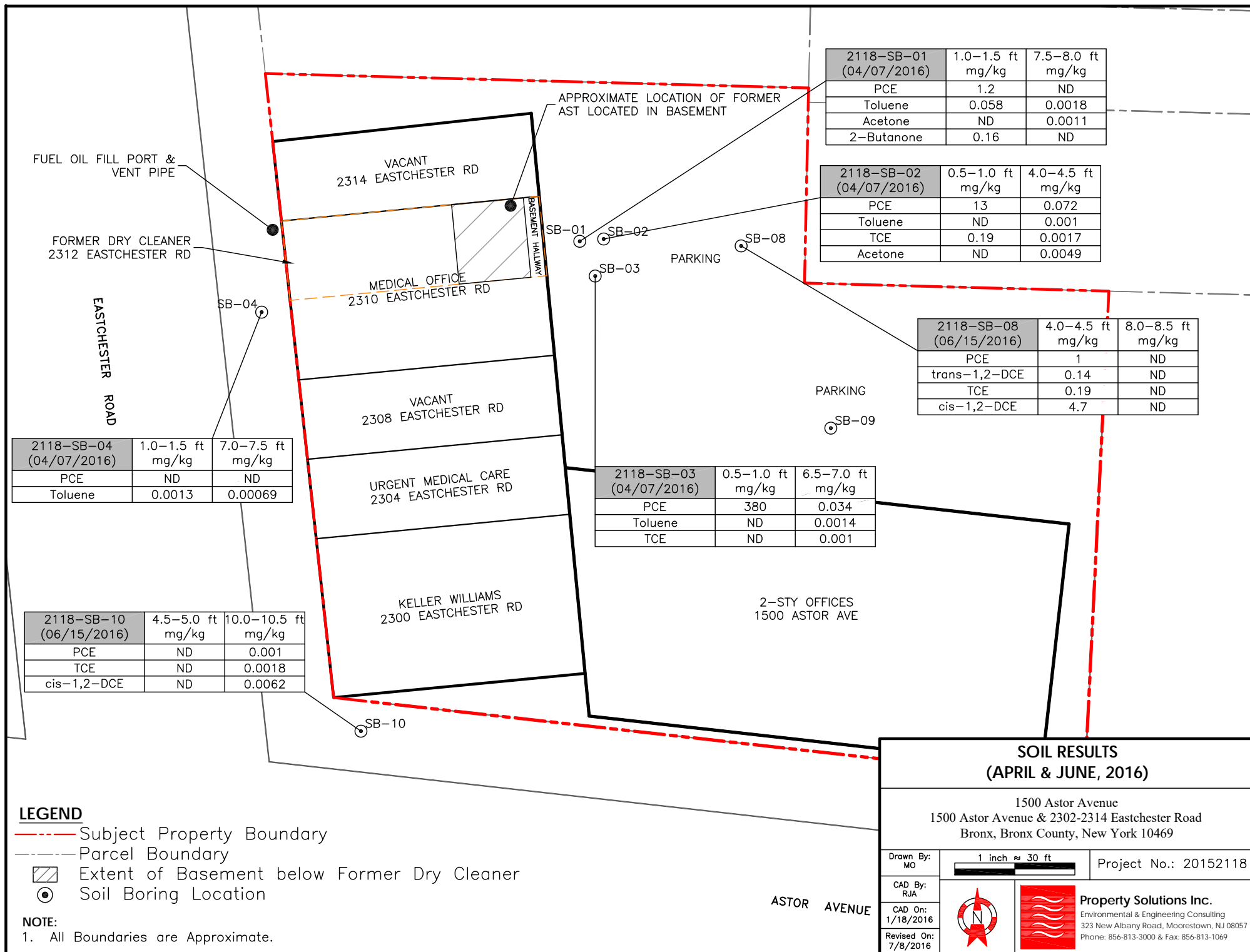


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APPENDIX B

PROPERTY PHOTOGRAPHS

PHOTO 1.

April 7, 2016:
Area of planned borings on rear (east) side of
Unit 2312 (former dry cleaners at 2312
Eastchester Road),



PHOTO 2.

April 7, 2016:
Area of planned borings on front (west) side of
Unit 2312.



PHOTO 3.

April 7, 2016:
Soil cores from boring SB-01.



PHOTO 4.

April 7, 2016:
Soil cores from boring SB-02.



PHOTO 5.

April 7, 2016:
Soil cores from boring SB-03.



PHOTO 6.

April 7, 2016:
Start of boring SB-04



PHOTO 7.

April 7, 2016:
Location of boring SB-04 with temporary well
TW-04 installed.



PHOTO 8.

April 7, 2016:
Location of soil-gas boring SV-01.



PHOTO 9.

April 7, 2016:
Helium tracer test being performed at soil-gas
boring SV-02



PHOTO 10.

May 15, 2016:
Planned location of monitoring wells MW-1S
and MW-1D.



PHOTO 11.

May 15, 2016:
Planned location of monitoring well MW-2.



PHOTO 12.

May 15, 2016:
Planned location of monitoring well MW-4.



PHOTO 13.

May 15, 2016:
Planned location of monitoring well MW-5.



PHOTO 14.

May 15, 2016:
Well bore for installation of monitoring well MW-3.



PHOTO 15.

May 15, 2016:
Well bore for installation of monitoring well MW-1S.

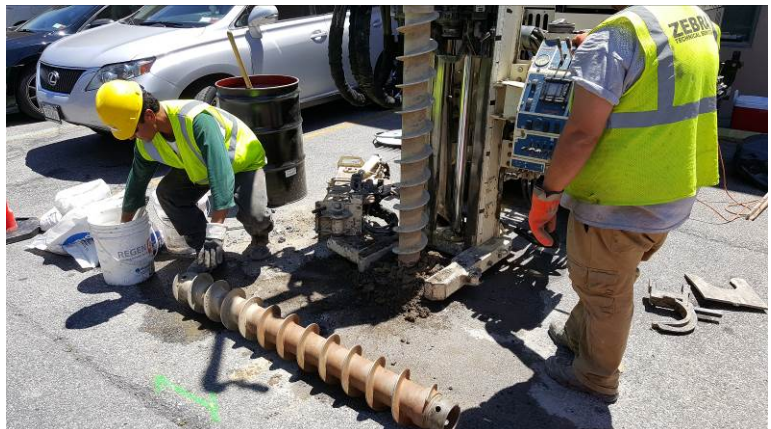


PHOTO 16.

May 16, 2016:
Well bore for installation of monitoring well
MW-1D (air hammer in bedrock).



PHOTO 17.

May 16, 2016:
Installation of monitoring well MW-5.



PHOTO 18.

May 17, 2016:
Completed monitoring wells MW-1S and
MW-1D.



PHOTO 19.

May 17, 2016:

Completed monitoring well MW-2.



PHOTO 20.

May 17, 2016:

Completed monitoring well MW-3.



PHOTO 21.

May 17, 2016:

Completed monitoring well MW-4.



PHOTO 22.

May 17, 2016:

Completed monitoring well MW-5.



PHOTO 23.

Soil cores: SB-08 at MW-3 location.



PHOTO 24.

Soil cores: SB-09 at MW-4 location.

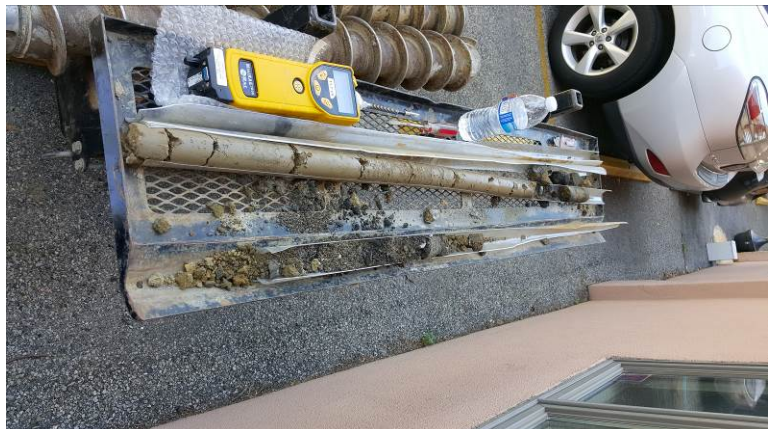


PHOTO 25.

Soil cores: SB-10 at MW-5 location.



PHOTO 26.

Drummed non-hazardous drilling waste:
Six drums of soil cuttings, one drum of well
development water.



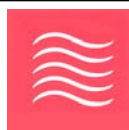
PHOTO 27.

View of labeled drums.



APPENDIX C

SOIL BORING LOGS



Property Solutions INC.

Environmental & Engineering Consulting
323 New Albany Road, Moorestown, NJ 08057
Phone: 856-813-3000 & Fax: 856-813-1068

FIELD BOREHOLE LOG

BORING NO.: **SB-01**

TOTAL DEPTH: **9 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118.201
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Parking lot, east of building unit 2312
DATE STARTED: 4/7/2016 **COMPLETED:** 4/7/2016

DRILLING INFORMATION

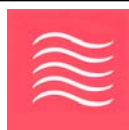
DRILLING CO.: Zebra Technical Services
DRILLER: Charles Green
RIG TYPE: Geoprobe 6620 DT
DRILLING METHOD: Direct-push
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☞ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0		GP	Asphalt pavement		0.0		
1			Stone base	2118-SB-01 (1.0-1.5)	0.0		
2			Silt, varying fractions f-m Sand, grading coarser with depth		0.4		
3					0.2		
4		ML			0.0		
5					0.0		
6					0.0		
7					0.0		
8			Decomposed Schist Bedrock	2118-SB-01 (7.5-8.0)	0.0		
9					0.0		

NOTES: Encountered refusal at 9 feet bgs



Property Solutions INC.

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323 New Albany Road, Moorestown, NJ 08057
Phone: 856-813-3000 & Fax: 856-813-1068

FIELD BOREHOLE LOG

BORING NO.: **SB-02**

TOTAL DEPTH: **5.5 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118.201
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Parking lot, east of building unit 2312
DATE STARTED: 4/7/2016 **COMPLETED:** 4/7/2016

DRILLING INFORMATION

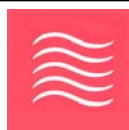
DRILLING CO.: Zebra Technical Services
DRILLER: Charles Green
RIG TYPE: Geoprobe 6620 DT
DRILLING METHOD: Direct-push
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☞ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0		GP	Asphalt pavement	2118-SB-02 (0.5-1.0)	0.0		
1		ML	Stone base		1.0		
2			Silt, varying fractions f-m Sand		1.5		
3				2118-SB-02 (4.0-4.5)	0.5		
4					0.1		
5					0.0		
					0.0		
					0.0		
					0.0		
			Refusal on concrete		0.0		

NOTES: Encountered refusal at 5.5 feet bgs



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FIELD BOREHOLE LOG

BORING NO.: **SB-03 / MW-1S**

TOTAL DEPTH: **12 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118.201
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Parking lot, east of building unit 2312
DATE STARTED: 4/7/2016 **COMPLETED:** 6/15/2016

DRILLING INFORMATION

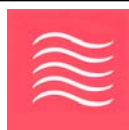
DRILLING CO.: Zebra Technical Services
DRILLER: Charles Green / Evan Moraitia
RIG TYPE: Geoprobe 6620 DT / Geoprobe 7822 DT
DRILLING METHOD: Direct-push / Hollow Stem Auger
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0		GP	Asphalt pavement	2118-SB-03 (0.5-1.0)	0		2" dia. PVC riser
1			Stone base		91		
2			Silt, varying fractions f-m Sand, grading coarser with depth		39		
3				2118-SB-03 (6.5-7.0)	1.2		2" dia. PVC screen
4					1.0		
5					0.2		
6					0.1		
7					0.2		
8					0		
9					0		
10					0		
11					0		
12		SM	Decomposed Schist Bedrock		0		

NOTES: Boring encountered refusal at 12 feet bgs; augered wellbore refusal at 9 feet bgs



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FIELD BOREHOLE LOG

BORING NO.: **SB-03 / MW-1D**

TOTAL DEPTH: **29.5 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118.201
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Parking lot, east of building unit 2312
DATE STARTED: 4/7/2016 **COMPLETED:** 6/16/2016

DRILLING INFORMATION

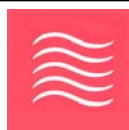
DRILLING CO.: Zebra Technical Services
DRILLER: Charles Green / Evan Moraitia
RIG TYPE: Geoprobe 6620 DT / 7822 DT
DRILLING METHOD: Direct-push, hollow-stem auger, & down-hole air hammer
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☞ Water level during drilling

☛ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0			Asphalt pavement	2118-SB-03 (0.5-1.0)	0.0		
1			Stone base		91		
2					39		
3			Silt, varying fractions f-m Sand, grading coarser with depth		1.2		
4					1.0		
5					0.2		
6					0.1		
7					0.2		
8					0.2		
9					0.0		
10					0.0		
11					0.0		
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27					0.0		
28					0.0		
29					0.0		

NOTES: Coring encountered refusal at 12 feet bgs; air hammer for deep well advanced to 29.5 feet bgs



Property Solutions INC.

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Phone: 856-813-3000 & Fax: 856-813-1068

FIELD BOREHOLE LOG

BORING NO.: **SB-04 / MW-2**

TOTAL DEPTH: **17 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118.201
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Sidewalk, west of building unit 2312
DATE STARTED: 4/7/2016 **COMPLETED:** 6/17/2016

DRILLING INFORMATION

DRILLING CO.: Zebra Technical Services
DRILLER: Charles Green / Evan Moraitia
RIG TYPE: Geoprobe 6620 DT / 7822 DT
DRILLING METHOD: Direct-push / Hollow stem auger
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☞ Water level during drilling

☛ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0		GP	Asphalt pavement		0.0		2" dia. PVC riser
1			Stone base	2118-SB-04 (1.0-1.5)	0.0		
2			Silt, varying fractions f-m Sand, grading coarser with depth		0.0		
3		ML			0.0		2" dia. PVC screen
4					0.0		
5					0.0		
6					0.0		
7					0.0		
8					0.0		
9					0.0		
10					0.0		
11		SM	Decomposed Schist Bedrock		0.0		2" dia. PVC screen
12					0.0		
13							
14							
15							
16							
17							

NOTES: Coring encountered refusal at 12 feet bgs; auger refusal at 17 feet bgs



TOTAL DEPTH: **11 ft**

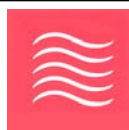
DRILLING INFORMATION

DRILLING CO.: Zebra Technical Services
DRILLER: Evan Moraitia
RIG TYPE: Geoprobe 7822 DT
DRILLING METHOD: Direct-push / Hollow Stem Auger
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

▼ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0			Asphalt pavement				
1			Fill soils, silty sand		-		
2					-		
3					0.0		
4					0.0		
5					0.0		
6					0.4		
7					2.0		
8					1.5		
9					2.4		
10					0.8		
11					-		
12					-		
13					-		
14					1.2		
15					0.4		
16					0.5		
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Page 1 of 1



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323 New Albany Road, Moorestown, NJ 08057
Phone: 856-813-3000 & Fax: 856-813-1068

FIELD BOREHOLE LOG

BORING NO.: **SB-09 / MW-4**

TOTAL DEPTH: **13.5 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Parking lot, north of 1500 Astor Avenue building portion; location of MW-4
DATE STARTED: 6/15/2016 **COMPLETED:** 6/15/2016

DRILLING INFORMATION

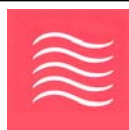
DRILLING CO.: Zebra Technical Services
DRILLER: Evan Moraitia
RIG TYPE: Geoprobe 7822 DT
DRILLING METHOD: Direct-push / Hollow stem auger
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☒ Water level during drilling

☒ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0			Asphalt pavement				
1		GP	Stone base				
2			F-m Sand, some to and silt				
3							2" dia. PVC riser
4				2118-SB-09 (4.0-4.5)	0.0		
5					0.0		
6		SM			0.0		2" dia. PVC screen
7					0.0		
8				2118-SB-09 (8.0-8.5)	0.0		
9					0.0		
10					0.0		
11		SM	Decomposed Schist Bedrock		0.0		
12							
13							

NOTES: Coring encountered refusal at 11.5 feet bgs; wellbore auger refusal at 13.5 feet bgs



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FIELD BOREHOLE LOG

BORING NO.: **SB-10 / MW-5**

TOTAL DEPTH: **11.5 ft**

PROJECT INFORMATION

PROJECT NO.: 20152118
CLIENT: KMCL
PROJECT NAME: 1500 Astor Avenue Property
SITE LOCATION: 1500 Astor Ave & 2302-2314 Eastchester Rd, Bronx, NY
BORING LOCATION: Sidewalk, at corner of Astor Avenue and Eastchester Road
DATE STARTED: 6/16/2016 **COMPLETED:** 6/16/2016

DRILLING INFORMATION

DRILLING CO.: Zebra Technical Services
DRILLER: Evan Moraitia
RIG TYPE: Geoprobe 7822 DT
DRILLING METHOD: Direct-push / Hollow stem auger
SAMPLING METHOD: Macro-core
FIELD PERSONNEL: B. Turner
HAMMER WT./DROP: N/A

☞ Water level during drilling

☛ Water level in completed well

DEPTH	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE No.	PID ppm	WELL CONSTRUCTION	WELL DESCRIPTION
0			Asphalt pavement				
1		GP	Fill soils, silty sand		-		
2			F-m Sand and silt		-		
3					0.0		2" dia. PVC riser
4					0.0		
5				2118-SB-10 (4.5-5.0)	0.0		
6		SM			0.0		2" dia. PVC screen
7					-		
8					-		
9					-		
10				2118-SB-10 (10.0-10.5)	-		
11		SM	Decomposed Schist Bedrock		0.0		
					0.0		

NOTES: Coring and augered wellbore encountered refusal at 11.5 feet bgs

APPENDIX D

ANALYTICAL DATA

TABLE 1A
SOIL ANALYTICAL RESULTS
APRIL 2016

LOCATION		2118-SB-01 (1.0-1.5)					2118-SB-01 (7.5-8.0)					2118-SB-02 (0.5-1.0)					2118-SB-02 (4.0-4.5)					2118-SB-03 (0.5-1.0)					2118-SB-03 (6.5-7.0)					2118-SB-04 (1.0-1.5)					2118-SB-04 (7.0-7.5)				
SAMPLING DATE		4/7/2016					4/7/2016					4/7/2016					4/7/2016					4/7/2016					4/7/2016					4/7/2016					4/7/2016				
LAB SAMPLE ID		L1610441-01					L1610441-02					L1610441-03					L1610441-04					L1610441-05					L1610441-06					L1610441-07					L1610441-08				
		CasNum	NY-CP51	NY-RESC	NY-RESER	NY-RESGW	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual										
General Chemistry																																									
Solids, Total																																									
Volatile Organics by 8260/5035																																									

TABLE 1B
GROUNDWATER ANALYTICAL RESULTS
APRIL 2016

LOCATION					2118-TW-03 (7.6)		2118-TW-04 (9.0)	
SAMPLING DATE					4/7/2016		4/7/2016	
LAB SAMPLE ID					L1610441-09		L1610441-10	
	CasNum	NY-AWQS	NY-TOGS-GA	Units	Results	Qual	Results	Qual
Volatile Organics by GC/MS								
Methylene chloride	75-09-2	5	5	ug/l	62	U	2.5	U
1,1-Dichloroethane	75-34-3	5	5	ug/l	62	U	2.5	U
Chloroform	67-66-3	7	7	ug/l	62	U	2.5	U
Carbon tetrachloride	56-23-5	5	5	ug/l	12	U	0.5	U
1,2-Dichloropropane	78-87-5	1	1	ug/l	25	U	1	U
Dibromochloromethane	124-48-1	50	50	ug/l	12	U	0.5	U
1,1,2-Trichloroethane	79-00-5	1	1	ug/l	38	U	1.5	U
Tetrachloroethene	127-18-4	5	5	ug/l	2100		0.87	
Chlorobenzene	108-90-7	5	5	ug/l	62	U	2.5	U
Trichlorofluoromethane	75-69-4	5	5	ug/l	62	U	2.5	U
1,2-Dichloroethane	107-06-2	0.6	0.6	ug/l	12	U	0.5	U
1,1,1-Trichloroethane	71-55-6	5	5	ug/l	62	U	2.5	U
Bromodichloromethane	75-27-4	50	50	ug/l	12	U	0.5	U
trans-1,3-Dichloropropene	10061-02-6	0.4	0.4	ug/l	12	U	0.5	U
cis-1,3-Dichloropropene	10061-01-5	0.4	0.4	ug/l	12	U	0.5	U
1,3-Dichloropropene, Total	542-75-6			ug/l	12	U	0.5	U
1,1-Dichloropropene	563-58-6	5	5	ug/l	62	U	2.5	U
Bromoform	75-25-2	50	50	ug/l	50	U	2	U
1,1,2,2-Tetrachloroethane	79-34-5	5	5	ug/l	12	U	0.5	U
Benzene	71-43-2	1	1	ug/l	12	U	0.5	U
Toluene	108-88-3	5	5	ug/l	62	U	2.5	U
Ethylbenzene	100-41-4	5	5	ug/l	62	U	2.5	U
Chloromethane	74-87-3			ug/l	62	U	2.5	U
Bromomethane	74-83-9	5	5	ug/l	62	U	2.5	U
Vinyl chloride	75-01-4	2	2	ug/l	25	U	1	U
Chloroethane	75-00-3	5	5	ug/l	62	U	2.5	U
1,1-Dichloroethene	75-35-4	5	5	ug/l	12	U	0.5	U
trans-1,2-Dichloroethene	156-60-5	5	5	ug/l	62	U	2.5	U
Trichloroethene	79-01-6	5	5	ug/l	5.2	J	0.5	U
1,2-Dichlorobenzene	95-50-1	3	3	ug/l	62	U	2.5	U
1,3-Dichlorobenzene	541-73-1	3	3	ug/l	62	U	2.5	U
1,4-Dichlorobenzene	106-46-7	3	3	ug/l	62	U	2.5	U
Methyl tert butyl ether	1634-04-4	10	10	ug/l	62	U	2.5	U
p/m-Xylene	179601-23-1	5	5	ug/l	62	U	2.5	U
o-Xylene	95-47-6	5	5	ug/l	62	U	2.5	U
Xylenes, Total	1330-20-7			ug/l	62	U	2.5	U
cis-1,2-Dichloroethene	156-59-2	5	5	ug/l	62	U	2.5	U
1,2-Dichloroethene, Total	540-59-0			ug/l	62	U	2.5	U
Dibromomethane	74-95-3	5	5	ug/l	120	U	5	U
1,2,3-Trichloropropane	96-18-4	0.04	0.04	ug/l	62	U	2.5	U
Acrylonitrile	107-13-1	5	5	ug/l	120	U	5	U
Styrene	100-42-5	5	930	ug/l	62	U	2.5	U
Dichlorodifluoromethane	75-71-8	5	5	ug/l	120	U	5	U
Acetone	67-64-1	50	50	ug/l	120	U	3.7	J
Carbon disulfide	75-15-0	60	60	ug/l	120	U	5	U
2-Butanone	78-93-3	50	50	ug/l	120	U	5	U
Vinyl acetate	108-05-4			ug/l	120	U	5	U
4-Methyl-2-pentanone	108-10-1			ug/l	120	U	5	U
2-Hexanone	591-78-6	50	50	ug/l	120	U	5	U
Bromochloromethane	74-97-5	5	5	ug/l	62	U	2.5	U
2,2-Dichloropropane	594-20-7	5	5	ug/l	62	U	2.5	U
1,2-Dibromoethane	106-93-4	0.0006	0.0006	ug/l	50	U	2	U
1,3-Dichloropropane	142-28-9	5	5	ug/l	62	U	2.5	U
1,1,1,2-Tetrachloroethane	630-20-6	5	5	ug/l	62	U	2.5	U
Bromobenzene	108-86-1	5	5	ug/l	62	U	2.5	U
n-Butylbenzene	104-51-8	5	5	ug/l	62	U	2.5	U
sec-Butylbenzene	135-98-8	5	5	ug/l	62	U	2.5	U
tert-Butylbenzene	98-06-6	5	5	ug/l	62	U	2.5	U
o-Chlorotoluene	95-49-8	5	5	ug/l	62	U	2.5	U
p-Chlorotoluene	106-43-4	5	5	ug/l	62	U	2.5	U
1,2-Dibromo-3-chloropropane	96-12-8	0.04	0.04	ug/l	62	U	2.5	U
Hexachlorobutadiene	87-68-3	0.5	0.5	ug/l	62	U	2.5	U
Isopropylbenzene	98-82-8	5	5	ug/l	62	U	2.5	U
p-Isopropyltoluene	99-87-6	5	5	ug/l	62	U	2.5	U
Naphthalene	91-20-3	10	10	ug/l	62	U	2.5	U
n-Propylbenzene	103-65-1	5	5	ug/l	62	U	2.5	U
1,2,3-Trichlorobenzene	87-61-6	5	5	ug/l	62	U	2.5	U
1,2,4-Trichlorobenzene	120-82-1	5	5	ug/l	62	U	2.5	U
1,3,5-Trimethylbenzene	108-67-8	5	5	ug/l	62	U	2.5	U
1,2,4-Trimethylbenzene	95-63-6	5	5	ug/l	62	U	2.5	U
1,4-Dioxane	123-91-1			ug/l	6200	U	250	U
p-Diethylbenzene	105-05-5			ug/l	50	U	2	U
p-Ethyltoluene	622-96-8			ug/l	50	U	2	U
1,2,4,5-Tetramethylbenzene	95-93-2	5	5	ug/l	50	U	2	U
Ethyl ether	60-29-7			ug/l	62	U	2.5	U
trans-1,4-Dichloro-2-butene	110-57-6	5	5	ug/l	62	U	2.5	U

*NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

*NY-TOGS-GA: New York TOGS 111 Groundwater Effluent Limitations criteria reflects all addendum to criteria through June 2004.

= Exceeds applicable criterion

= Non-detect result that exceeds applicable criterion due to sample dilution

TABLE 1C
SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS
APRIL 2016

LOCATION				2118-SV-01 (0.5)		2118-SV-02 (0.5)	
SAMPLING DATE				4/7/2016		4/7/2016	
LAB SAMPLE ID				L1610339-01		L1610339-02	
	CasNum	NY-SSC	Units	Results	Qual	Results	Qual
Volatile Organics in Air							
Dichlorodifluoromethane	75-71-8	5	ug/m3	3.3	U	9.89	U
Chloromethane	74-87-3	5	ug/m3	1.38	U	4.13	U
Freon-114	76-14-2	5	ug/m3	4.66	U	14	U
Vinyl chloride	75-01-4	5	ug/m3	1.71	U	5.11	U
1,3-Butadiene	106-99-0	5	ug/m3	1.48	U	4.42	U
Bromomethane	74-83-9	5	ug/m3	2.59	U	7.77	U
Chloroethane	75-00-3	5	ug/m3	1.76	U	5.28	U
Ethanol	64-17-5	5	ug/m3	31.5	U	94.2	U
Vinyl bromide	593-60-2	5	ug/m3	2.92	U	8.74	U
Acetone	67-64-1	5	ug/m3	7.91	U	28.7	
Trichlorofluoromethane	75-69-4	5	ug/m3	3.75	U	11.2	U
Isopropanol	67-63-0	5	ug/m3	4.1	U	12.3	U
1,1-Dichloroethene	75-35-4	5	ug/m3	2.64	U	7.93	U
Tertiary butyl Alcohol	75-65-0	5	ug/m3	5.06	U	15.2	U
Methylene chloride	75-09-2	5	ug/m3	5.8	U	17.4	U
3-Chloropropene	107-05-1	5	ug/m3	2.09	U	6.26	U
Carbon disulfide	75-15-0	5	ug/m3	2.08	U	6.23	U
Freon-113	76-13-1	5	ug/m3	5.11	U	15.3	U
trans-1,2-Dichloroethene	156-60-5	5	ug/m3	2.64	U	7.93	U
1,1-Dichloroethane	75-34-3	5	ug/m3	2.7	U	8.09	U
Methyl tert butyl ether	1634-04-4	5	ug/m3	2.4	U	7.21	U
2-Butanone	78-93-3	5	ug/m3	4.93	U	14.7	U
cis-1,2-Dichloroethene	156-59-2	5	ug/m3	2.64	U	7.93	U
Ethyl Acetate	141-78-6	5	ug/m3	6.02	U	18	U
Chloroform	67-66-3	5	ug/m3	3.26	U	9.77	U
Tetrahydrofuran	109-99-9	5	ug/m3	4.93	U	14.7	U
1,2-Dichloroethane	107-06-2	5	ug/m3	2.7	U	8.09	U
n-Hexane	110-54-3	5	ug/m3	2.35	U	7.05	U
1,1,1-Trichloroethane	71-55-6	5	ug/m3	3.64	U	10.9	U
Benzene	71-43-2	5	ug/m3	2.13	U	6.39	U
Carbon tetrachloride	56-23-5	5	ug/m3	4.2	U	12.6	U
Cyclohexane	110-82-7	5	ug/m3	2.3	U	6.88	U
1,2-Dichloropropane	78-87-5	5	ug/m3	3.08	U	9.24	U
Bromodichloromethane	75-27-4	5	ug/m3	4.47	U	13.4	U
1,4-Dioxane	123-91-1	5	ug/m3	2.4	U	7.21	U
Trichloroethene	79-01-6	5	ug/m3	3.58	U	10.7	U
2,2,4-Trimethylpentane	540-84-1	5	ug/m3	3.12	U	9.34	U
Heptane	142-82-5		ug/m3	2.73	U	8.2	U
cis-1,3-Dichloropropene	10061-01-5	5	ug/m3	3.03	U	9.08	U
4-Methyl-2-pentanone	108-10-1	5	ug/m3	6.84	U	20.5	U
trans-1,3-Dichloropropene	10061-02-6	5	ug/m3	3.03	U	9.08	U
1,1,2-Trichloroethane	79-00-5	5	ug/m3	3.64	U	10.9	U
Toluene	108-88-3	5	ug/m3	2.55		7.54	U
2-Hexanone	591-78-6	5	ug/m3	2.73	U	8.2	U
Dibromochloromethane	124-48-1	5	ug/m3	5.68	U	17	U
1,2-Dibromoethane	106-93-4	5	ug/m3	5.13	U	15.4	U
Tetrachloroethene	127-18-4	5	ug/m3	1950		5210	
Chlorobenzene	108-90-7	5	ug/m3	3.07	U	9.21	U
Ethylbenzene	100-41-4	5	ug/m3	2.9	U	8.69	U
p/m-Xylene	179601-23-1	5	ug/m3	5.78	U	17.4	U
Bromoform	75-25-2	5	ug/m3	6.9	U	20.7	U
Styrene	100-42-5	5	ug/m3	2.84	U	8.52	U
1,1,2,2-Tetrachloroethane	79-34-5	5	ug/m3	4.58	U	13.7	U
o-Xylene	95-47-6	5	ug/m3	2.9	U	8.69	U
4-Ethyltoluene	622-96-8	5	ug/m3	3.28	U	9.83	U
1,3,5-Trimethylbenzene	108-67-8	5	ug/m3	3.28	U	9.83	U
1,2,4-Trimethylbenzene	95-63-6	5	ug/m3	3.28	U	9.83	U
Benzyl chloride	100-44-7	5	ug/m3	3.45	U	10.4	U
1,3-Dichlorobenzene	541-73-1	5	ug/m3	4.01	U	12	U
1,4-Dichlorobenzene	106-46-7	5	ug/m3	4.01	U	12	U
1,2-Dichlorobenzene	95-50-1	5	ug/m3	4.01	U	12	U
1,2,4-Trichlorobenzene	120-82-1	5	ug/m3	4.95	U	14.8	U
Hexachlorobutadiene	87-68-3	5	ug/m3	7.11	U	21.3	U

*NY-SSC: New York DOH Matrix 1 Sub-slab Vapor Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion dated October 2006.

 = Exceeds applicable criterion

 = Non-detect result that exceeds applicable criterion due to sample dilution

TABLE 2A
SOIL ANALYTICAL RESULTS
JUNE 2016

LOCATION							2118-SB8 (4.0-4.5)	2118-SB8 (8.0-8.5)	2118-SB9 (4.0-4.5)	2118-SB9 (8.0-8.5)	2118-SB10 (4.5-5.0)	2118-SB10 (10.0-10.5)
SAMPLING DATE							6/15/2016	6/15/2016	6/15/2016	6/15/2016	6/16/2016	6/16/2016
LAB SAMPLE ID							L1618618-01	L1618618-02	L1618618-03	L1618618-04	L1618618-05	L1618618-06
	CasNum	NY-CP51	NY-RESC	NY-RESER	NY-RESGW	Units	Results	Qual	Results	Qual	Results	Qual
General Chemistry												
Solids, Total	NONE					%	87.7		91.9		88.5	
Volatile Organics by 8260/5035												
1,1-Dichloroethane	75-34-3		240		0.27	mg/kg	0.084	U	0.0012	U	0.0013	U
Tetrachloroethene	127-18-4		150	2	1.3	mg/kg	1		0.0008	U	0.00086	U
1,2-Dichloroethane	107-06-2		30	10	0.02	mg/kg	0.056	U	0.0008	U	0.00086	U
1,1,1-Trichloroethane	71-55-6		500		0.68	mg/kg	0.056	U	0.0008	U	0.00086	U
Vinyl chloride	75-01-4		13		0.02	mg/kg	0.11	U	0.0016	U	0.0017	U
1,1-Dichloroethene	75-35-4		500		0.33	mg/kg	0.056	U	0.0008	U	0.00086	U
trans-1,2-Dichloroethene	156-60-5		500		0.19	mg/kg	0.14		0.0012	U	0.0013	U
Trichloroethene	79-01-6		200	2	0.47	mg/kg	0.19		0.0008	U	0.00086	U
cis-1,2-Dichloroethene	156-59-2		500		0.25	mg/kg	4.7		0.0008	U	0.00086	U

*NY-CP51: New York DEC CP-51 Soil Cleanup Levels Criteria per NY CP-51 Soil Cleanup Levels dated October 21, 2010.

*NY-RESER: Ecological Resources Criteria, New York Restricted use current as of 5/2007

*NY-RESC: Commercial Criteria, New York Restricted use current as of 5/2007

*NY-RESGW: Groundwater Criteria, New York Restricted use current as of 5/2007

 = Exceeds applicable criterion

 = Non-detect result that exceeds applicable criterion due to sample dilution

TABLE 2B
GROUNDWATER ANALYTICAL RESULTS
JUNE 2016

LOCATION					2118-MW1S (7.4)		2118-MW1D (26.5)		2118-MW2 (13.2)		2118-MW3 (6.1)		2118-MW4 (6.8)		2118-MW5 (8.4)	
SAMPLING DATE					6/17/2016		6/17/2016		6/17/2016		6/17/2016		6/17/2016		6/17/2016	
LAB SAMPLE ID					L1618805-01		L1618805-02		L1618805-03		L1618805-04		L1618805-05		L1618805-06	
	CasNum	NY-AWQS	NY-TOGS-GA	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by GC/MS																
1,1-Dichloroethane	75-34-3	5	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	127-18-4	5	5	ug/l	180		8.3		0.79		0.5	U	0.37	J	34	
1,2-Dichloroethane	107-06-2	0.6	0.6	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	71-55-6	5	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	75-01-4	2	2	ug/l	1	U	1	U	1	U	1	U	1	U	1	U
1,1-Dichloroethene	75-35-4	5	5	ug/l	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	156-60-5	5	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	79-01-6	5	5	ug/l	1.9		0.18	J	0.5	U	0.5	U	0.5	U	30	
cis-1,2-Dichloroethene	156-59-2	5	5	ug/l	2.5	U	2.5	U	2.5	U	2.5	U	3.4		59	

*NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

*NY-TOGS-GA: New York TOGS 111 Groundwater Effluent Limitations criteria reflects all addendum to criteria through June 2004.

 = Exceeds applicable criterion

TABLE 2C
INDOOR AIR ANALYTICAL RESULTS
JUNE 2016

LOCATION				2118-IA-01		2118-IA-02	
SAMPLING DATE				6/17/2016		6/17/2016	
LAB SAMPLE ID				L1618699-01		L1618699-02	
	CasNum	NY-IAC	Units	Results	Qual	Results	Qual
Volatile Organics in Air by SIM							
Vinyl chloride	75-01-4		ug/m3	0.051	U	0.051	U
1,1-Dichloroethene	75-35-4		ug/m3	0.079	U	0.079	U
trans-1,2-Dichloroethene	156-60-5		ug/m3	0.079	U	0.079	U
1,1-Dichloroethane	75-34-3		ug/m3	0.081	U	0.081	U
cis-1,2-Dichloroethene	156-59-2		ug/m3	0.091		0.079	U
1,2-Dichloroethane	107-06-2		ug/m3	0.206		0.275	
1,1,1-Trichloroethane	71-55-6		ug/m3	0.109	U	0.109	U
Trichloroethene	79-01-6	2	ug/m3	0.21		0.15	
Tetrachloroethene	127-18-4	30	ug/m3	10.2		7.32	

*NY-IAC: New York DOH Matrix 1 Indoor Air Concentrations Criteria per Guidance for Evaluating Soil Vapor Intrusion dated October 2006.

 = Exceeds applicable criterion



ANALYTICAL REPORT

Lab Number:	L1610441
Client:	Property Solutions Inc. 323 New Albany Road Moorestown, NJ 08057
ATTN:	Burt Turner
Phone:	(856) 813-3000
Project Name:	1500 ASTOR
Project Number:	20152118.201
Report Date:	04/18/16

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1610441-01	2118-SB-01 (1.0-1.5)	SOIL	BRONX, NY	04/07/16 09:10	04/08/16
L1610441-02	2118-SB-01 (7.5-8.0)	SOIL	BRONX, NY	04/07/16 09:25	04/08/16
L1610441-03	2118-SB-02 (0.5-1.0)	SOIL	BRONX, NY	04/07/16 09:30	04/08/16
L1610441-04	2118-SB-02 (4.0-4.5)	SOIL	BRONX, NY	04/07/16 09:40	04/08/16
L1610441-05	2118-SB-03 (0.5-1.0)	SOIL	BRONX, NY	04/07/16 10:00	04/08/16
L1610441-06	2118-SB-03 (6.5-7.0)	SOIL	BRONX, NY	04/07/16 10:15	04/08/16
L1610441-07	2118-SB-04 (1.0-1.5)	SOIL	BRONX, NY	04/07/16 11:15	04/08/16
L1610441-08	2118-SB-04 (7.0-7.5)	SOIL	BRONX, NY	04/07/16 11:30	04/08/16
L1610441-09	2118-TW-03 (7.6)	WATER	BRONX, NY	04/07/16 10:25	04/08/16
L1610441-10	2118-TW-04 (9.0)	WATER	BRONX, NY	04/07/16 11:50	04/08/16

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

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: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Case Narrative (continued)

Report Submission

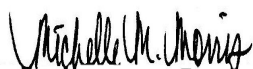
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L1610441-10: Headspace was noted in the sample containers submitted for Volatile Organics. The analysis was performed at the client's request.

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: 04/18/16

ORGANICS

VOLATILES

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-01
Client ID: 2118-SB-01 (1.0-1.5)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:43
Analyst: BS
Percent Solids: 85%

Date Collected: 04/07/16 09:10
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	540	59.	1
1,1-Dichloroethane	ND		ug/kg	80	4.6	1
Chloroform	ND		ug/kg	80	20.	1
Carbon tetrachloride	ND		ug/kg	54	11.	1
1,2-Dichloropropane	ND		ug/kg	190	12.	1
Dibromochloromethane	ND		ug/kg	54	8.2	1
1,1,2-Trichloroethane	ND		ug/kg	80	16.	1
Tetrachloroethene	1200		ug/kg	54	7.5	1
Chlorobenzene	ND		ug/kg	54	19.	1
Trichlorofluoromethane	ND		ug/kg	270	21.	1
1,2-Dichloroethane	ND		ug/kg	54	6.1	1
1,1,1-Trichloroethane	ND		ug/kg	54	5.9	1
Bromodichloromethane	ND		ug/kg	54	9.3	1
trans-1,3-Dichloropropene	ND		ug/kg	54	6.5	1
cis-1,3-Dichloropropene	ND		ug/kg	54	6.3	1
1,3-Dichloropropene, Total	ND		ug/kg	54	6.3	1
1,1-Dichloropropene	ND		ug/kg	270	7.6	1
Bromoform	ND		ug/kg	210	13.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	54	5.4	1
Benzene	ND		ug/kg	54	6.3	1
Toluene	58	J	ug/kg	80	10.	1
Ethylbenzene	ND		ug/kg	54	6.8	1
Chloromethane	ND		ug/kg	270	16.	1
Bromomethane	ND		ug/kg	110	18.	1
Vinyl chloride	ND		ug/kg	110	6.3	1
Chloroethane	ND		ug/kg	110	17.	1
1,1-Dichloroethene	ND		ug/kg	54	14.	1
trans-1,2-Dichloroethene	ND		ug/kg	80	11.	1
Trichloroethene	ND		ug/kg	54	6.7	1
1,2-Dichlorobenzene	ND		ug/kg	270	8.2	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-01
Client ID: 2118-SB-01 (1.0-1.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:10
Date Received: 04/08/16
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	270	7.2	1
1,4-Dichlorobenzene	ND		ug/kg	270	7.4	1
Methyl tert butyl ether	ND		ug/kg	110	4.5	1
p/m-Xylene	ND		ug/kg	110	10.	1
o-Xylene	ND		ug/kg	110	9.2	1
Xylenes, Total	ND		ug/kg	110	9.2	1
cis-1,2-Dichloroethene	ND		ug/kg	54	7.6	1
1,2-Dichloroethene, Total	ND		ug/kg	54	7.6	1
Dibromomethane	ND		ug/kg	540	8.8	1
Styrene	ND		ug/kg	110	22.	1
Dichlorodifluoromethane	ND		ug/kg	540	10.	1
Acetone	ND		ug/kg	540	55.	1
Carbon disulfide	ND		ug/kg	540	59.	1
2-Butanone	160	J	ug/kg	540	14.	1
Vinyl acetate	ND		ug/kg	540	7.1	1
4-Methyl-2-pentanone	ND		ug/kg	540	13.	1
1,2,3-Trichloropropane	ND		ug/kg	540	8.7	1
2-Hexanone	ND		ug/kg	540	36.	1
Bromochloromethane	ND		ug/kg	270	15.	1
2,2-Dichloropropane	ND		ug/kg	270	12.	1
1,2-Dibromoethane	ND		ug/kg	210	9.3	1
1,3-Dichloropropane	ND		ug/kg	270	7.8	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	54	17.	1
Bromobenzene	ND		ug/kg	270	11.	1
n-Butylbenzene	ND		ug/kg	54	6.1	1
sec-Butylbenzene	ND		ug/kg	54	6.5	1
tert-Butylbenzene	ND		ug/kg	270	7.2	1
o-Chlorotoluene	ND		ug/kg	270	8.6	1
p-Chlorotoluene	ND		ug/kg	270	7.1	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	270	21.	1
Hexachlorobutadiene	ND		ug/kg	270	12.	1
Isopropylbenzene	ND		ug/kg	54	5.6	1
p-Isopropyltoluene	ND		ug/kg	54	6.7	1
Naphthalene	ND		ug/kg	270	7.4	1
Acrylonitrile	ND		ug/kg	540	28.	1
n-Propylbenzene	ND		ug/kg	54	5.8	1
1,2,3-Trichlorobenzene	ND		ug/kg	270	7.9	1
1,2,4-Trichlorobenzene	ND		ug/kg	270	9.7	1
1,3,5-Trimethylbenzene	ND		ug/kg	270	7.7	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-01
Client ID: 2118-SB-01 (1.0-1.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:10
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	270	7.6	1
1,4-Dioxane	ND		ug/kg	5400	770	1
p-Diethylbenzene	ND		ug/kg	210	8.6	1
p-Ethyltoluene	ND		ug/kg	210	6.6	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	210	7.0	1
Ethyl ether	ND		ug/kg	270	14.	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	270	21.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	96		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-02
Client ID: 2118-SB-01 (7.5-8.0)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 00:47
Analyst: BS
Percent Solids: 91%

Date Collected: 04/07/16 09:25
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.8	0.97	1
1,1-Dichloroethane	ND		ug/kg	1.3	0.08	1
Chloroform	ND		ug/kg	1.3	0.33	1
Carbon tetrachloride	ND		ug/kg	0.88	0.18	1
1,2-Dichloropropane	ND		ug/kg	3.1	0.20	1
Dibromochloromethane	ND		ug/kg	0.88	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	0.27	1
Tetrachloroethene	ND		ug/kg	0.88	0.12	1
Chlorobenzene	ND		ug/kg	0.88	0.31	1
Trichlorofluoromethane	ND		ug/kg	4.4	0.34	1
1,2-Dichloroethane	ND		ug/kg	0.88	0.10	1
1,1,1-Trichloroethane	ND		ug/kg	0.88	0.10	1
Bromodichloromethane	ND		ug/kg	0.88	0.15	1
trans-1,3-Dichloropropene	ND		ug/kg	0.88	0.11	1
cis-1,3-Dichloropropene	ND		ug/kg	0.88	0.10	1
1,3-Dichloropropene, Total	ND		ug/kg	0.88	0.10	1
1,1-Dichloropropene	ND		ug/kg	4.4	0.12	1
Bromoform	ND		ug/kg	3.5	0.21	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.88	0.09	1
Benzene	ND		ug/kg	0.88	0.10	1
Toluene	1.8		ug/kg	1.3	0.17	1
Ethylbenzene	ND		ug/kg	0.88	0.11	1
Chloromethane	ND		ug/kg	4.4	0.26	1
Bromomethane	ND		ug/kg	1.8	0.30	1
Vinyl chloride	ND		ug/kg	1.8	0.10	1
Chloroethane	ND		ug/kg	1.8	0.28	1
1,1-Dichloroethene	ND		ug/kg	0.88	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.19	1
Trichloroethene	ND		ug/kg	0.88	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	4.4	0.14	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-02
Client ID: 2118-SB-01 (7.5-8.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:25
Date Received: 04/08/16
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	4.4	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	4.4	0.12	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.07	1
p/m-Xylene	ND		ug/kg	1.8	0.17	1
o-Xylene	ND		ug/kg	1.8	0.15	1
Xylenes, Total	ND		ug/kg	1.8	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	0.88	0.12	1
1,2-Dichloroethene, Total	ND		ug/kg	0.88	0.12	1
Dibromomethane	ND		ug/kg	8.8	0.14	1
Styrene	ND		ug/kg	1.8	0.35	1
Dichlorodifluoromethane	ND		ug/kg	8.8	0.17	1
Acetone	1.1	J	ug/kg	8.8	0.91	1
Carbon disulfide	ND		ug/kg	8.8	0.97	1
2-Butanone	ND		ug/kg	8.8	0.24	1
Vinyl acetate	ND		ug/kg	8.8	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	8.8	0.22	1
1,2,3-Trichloropropane	ND		ug/kg	8.8	0.14	1
2-Hexanone	ND		ug/kg	8.8	0.59	1
Bromochloromethane	ND		ug/kg	4.4	0.24	1
2,2-Dichloropropane	ND		ug/kg	4.4	0.20	1
1,2-Dibromoethane	ND		ug/kg	3.5	0.15	1
1,3-Dichloropropane	ND		ug/kg	4.4	0.13	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.88	0.28	1
Bromobenzene	ND		ug/kg	4.4	0.18	1
n-Butylbenzene	ND		ug/kg	0.88	0.10	1
sec-Butylbenzene	ND		ug/kg	0.88	0.11	1
tert-Butylbenzene	ND		ug/kg	4.4	0.12	1
o-Chlorotoluene	ND		ug/kg	4.4	0.14	1
p-Chlorotoluene	ND		ug/kg	4.4	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.4	0.35	1
Hexachlorobutadiene	ND		ug/kg	4.4	0.20	1
Isopropylbenzene	ND		ug/kg	0.88	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.88	0.11	1
Naphthalene	ND		ug/kg	4.4	0.12	1
Acrylonitrile	ND		ug/kg	8.8	0.45	1
n-Propylbenzene	ND		ug/kg	0.88	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.4	0.13	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.4	0.16	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.4	0.13	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-02
Client ID: 2118-SB-01 (7.5-8.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:25
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.4	0.12	1
1,4-Dioxane	ND		ug/kg	88	13.	1
p-Diethylbenzene	ND		ug/kg	3.5	0.14	1
p-Ethyltoluene	ND		ug/kg	3.5	0.11	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.5	0.11	1
Ethyl ether	ND		ug/kg	4.4	0.23	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.4	0.34	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	102		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-03 D
Client ID: 2118-SB-02 (0.5-1.0)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 11:11
Analyst: BS
Percent Solids: 93%

Date Collected: 04/07/16 09:30
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	1200	140	2.5
1,1-Dichloroethane	ND		ug/kg	190	11.	2.5
Chloroform	ND		ug/kg	190	46.	2.5
Carbon tetrachloride	ND		ug/kg	120	26.	2.5
1,2-Dichloropropane	ND		ug/kg	440	29.	2.5
Dibromochloromethane	ND		ug/kg	120	19.	2.5
1,1,2-Trichloroethane	ND		ug/kg	190	38.	2.5
Tetrachloroethene	13000		ug/kg	120	18.	2.5
Chlorobenzene	ND		ug/kg	120	44.	2.5
Trichlorofluoromethane	ND		ug/kg	630	49.	2.5
1,2-Dichloroethane	ND		ug/kg	120	14.	2.5
1,1,1-Trichloroethane	ND		ug/kg	120	14.	2.5
Bromodichloromethane	ND		ug/kg	120	22.	2.5
trans-1,3-Dichloropropene	ND		ug/kg	120	15.	2.5
cis-1,3-Dichloropropene	ND		ug/kg	120	15.	2.5
1,3-Dichloropropene, Total	ND		ug/kg	120	15.	2.5
1,1-Dichloropropene	ND		ug/kg	630	18.	2.5
Bromoform	ND		ug/kg	500	30.	2.5
1,1,2,2-Tetrachloroethane	ND		ug/kg	120	13.	2.5
Benzene	ND		ug/kg	120	15.	2.5
Toluene	ND		ug/kg	190	24.	2.5
Ethylbenzene	ND		ug/kg	120	16.	2.5
Chloromethane	ND		ug/kg	630	37.	2.5
Bromomethane	ND		ug/kg	250	42.	2.5
Vinyl chloride	ND		ug/kg	250	15.	2.5
Chloroethane	ND		ug/kg	250	40.	2.5
1,1-Dichloroethene	ND		ug/kg	120	33.	2.5
trans-1,2-Dichloroethene	ND		ug/kg	190	27.	2.5
Trichloroethene	190		ug/kg	120	16.	2.5
1,2-Dichlorobenzene	ND		ug/kg	630	19.	2.5

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-03 D
Client ID: 2118-SB-02 (0.5-1.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:30
Date Received: 04/08/16
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	630	17.	2.5
1,4-Dichlorobenzene	ND		ug/kg	630	17.	2.5
Methyl tert butyl ether	ND		ug/kg	250	10.	2.5
p/m-Xylene	ND		ug/kg	250	25.	2.5
o-Xylene	ND		ug/kg	250	22.	2.5
Xylenes, Total	ND		ug/kg	250	22.	2.5
cis-1,2-Dichloroethene	ND		ug/kg	120	18.	2.5
1,2-Dichloroethene, Total	ND		ug/kg	120	18.	2.5
Dibromomethane	ND		ug/kg	1200	20.	2.5
Styrene	ND		ug/kg	250	50.	2.5
Dichlorodifluoromethane	ND		ug/kg	1200	24.	2.5
Acetone	ND		ug/kg	1200	130	2.5
Carbon disulfide	ND		ug/kg	1200	140	2.5
2-Butanone	ND		ug/kg	1200	34.	2.5
Vinyl acetate	ND		ug/kg	1200	16.	2.5
4-Methyl-2-pentanone	ND		ug/kg	1200	31.	2.5
1,2,3-Trichloropropane	ND		ug/kg	1200	20.	2.5
2-Hexanone	ND		ug/kg	1200	84.	2.5
Bromochloromethane	ND		ug/kg	630	35.	2.5
2,2-Dichloropropane	ND		ug/kg	630	28.	2.5
1,2-Dibromoethane	ND		ug/kg	500	22.	2.5
1,3-Dichloropropane	ND		ug/kg	630	18.	2.5
1,1,1,2-Tetrachloroethane	ND		ug/kg	120	40.	2.5
Bromobenzene	ND		ug/kg	630	26.	2.5
n-Butylbenzene	ND		ug/kg	120	14.	2.5
sec-Butylbenzene	ND		ug/kg	120	15.	2.5
tert-Butylbenzene	ND		ug/kg	630	17.	2.5
o-Chlorotoluene	ND		ug/kg	630	20.	2.5
p-Chlorotoluene	ND		ug/kg	630	17.	2.5
1,2-Dibromo-3-chloropropane	ND		ug/kg	630	50.	2.5
Hexachlorobutadiene	ND		ug/kg	630	29.	2.5
Isopropylbenzene	ND		ug/kg	120	13.	2.5
p-Isopropyltoluene	ND		ug/kg	120	16.	2.5
Naphthalene	ND		ug/kg	630	17.	2.5
Acrylonitrile	ND		ug/kg	1200	64.	2.5
n-Propylbenzene	ND		ug/kg	120	14.	2.5
1,2,3-Trichlorobenzene	ND		ug/kg	630	18.	2.5
1,2,4-Trichlorobenzene	ND		ug/kg	630	23.	2.5
1,3,5-Trimethylbenzene	ND		ug/kg	630	18.	2.5

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-03 D
Client ID: 2118-SB-02 (0.5-1.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:30
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	630	18.	2.5
1,4-Dioxane	ND		ug/kg	12000	1800	2.5
p-Diethylbenzene	ND		ug/kg	500	20.	2.5
p-Ethyltoluene	ND		ug/kg	500	16.	2.5
1,2,4,5-Tetramethylbenzene	ND		ug/kg	500	16.	2.5
Ethyl ether	ND		ug/kg	630	33.	2.5
trans-1,4-Dichloro-2-butene	ND		ug/kg	630	49.	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	97		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-04
Client ID: 2118-SB-02 (4.0-4.5)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 13:01
Analyst: MV
Percent Solids: 89%

Date Collected: 04/07/16 09:40
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.7	0.96	1
1,1-Dichloroethane	ND		ug/kg	1.3	0.08	1
Chloroform	ND		ug/kg	1.3	0.32	1
Carbon tetrachloride	ND		ug/kg	0.87	0.18	1
1,2-Dichloropropane	ND		ug/kg	3.0	0.20	1
Dibromochloromethane	ND		ug/kg	0.87	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	0.26	1
Tetrachloroethene	72		ug/kg	0.87	0.12	1
Chlorobenzene	ND		ug/kg	0.87	0.30	1
Trichlorofluoromethane	ND		ug/kg	4.4	0.34	1
1,2-Dichloroethane	ND		ug/kg	0.87	0.10	1
1,1,1-Trichloroethane	ND		ug/kg	0.87	0.10	1
Bromodichloromethane	ND		ug/kg	0.87	0.15	1
trans-1,3-Dichloropropene	ND		ug/kg	0.87	0.10	1
cis-1,3-Dichloropropene	ND		ug/kg	0.87	0.10	1
1,3-Dichloropropene, Total	ND		ug/kg	0.87	0.10	1
1,1-Dichloropropene	ND		ug/kg	4.4	0.12	1
Bromoform	ND		ug/kg	3.5	0.21	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.87	0.09	1
Benzene	ND		ug/kg	0.87	0.10	1
Toluene	1.0	J	ug/kg	1.3	0.17	1
Ethylbenzene	ND		ug/kg	0.87	0.11	1
Chloromethane	ND		ug/kg	4.4	0.26	1
Bromomethane	ND		ug/kg	1.7	0.30	1
Vinyl chloride	ND		ug/kg	1.7	0.10	1
Chloroethane	ND		ug/kg	1.7	0.28	1
1,1-Dichloroethene	ND		ug/kg	0.87	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.18	1
Trichloroethene	1.7		ug/kg	0.87	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	4.4	0.13	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-04
Client ID: 2118-SB-02 (4.0-4.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:40
Date Received: 04/08/16
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	4.4	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	4.4	0.12	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.07	1
p/m-Xylene	ND		ug/kg	1.7	0.17	1
o-Xylene	ND		ug/kg	1.7	0.15	1
Xylenes, Total	ND		ug/kg	1.7	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	0.87	0.12	1
1,2-Dichloroethene, Total	ND		ug/kg	0.87	0.12	1
Dibromomethane	ND		ug/kg	8.7	0.14	1
Styrene	ND		ug/kg	1.7	0.35	1
Dichlorodifluoromethane	ND		ug/kg	8.7	0.17	1
Acetone	4.9	J	ug/kg	8.7	0.90	1
Carbon disulfide	ND		ug/kg	8.7	0.96	1
2-Butanone	ND		ug/kg	8.7	0.24	1
Vinyl acetate	ND		ug/kg	8.7	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	8.7	0.21	1
1,2,3-Trichloropropane	ND		ug/kg	8.7	0.14	1
2-Hexanone	ND		ug/kg	8.7	0.58	1
Bromochloromethane	ND		ug/kg	4.4	0.24	1
2,2-Dichloropropane	ND		ug/kg	4.4	0.20	1
1,2-Dibromoethane	ND		ug/kg	3.5	0.15	1
1,3-Dichloropropane	ND		ug/kg	4.4	0.13	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.87	0.28	1
Bromobenzene	ND		ug/kg	4.4	0.18	1
n-Butylbenzene	ND		ug/kg	0.87	0.10	1
sec-Butylbenzene	ND		ug/kg	0.87	0.11	1
tert-Butylbenzene	ND		ug/kg	4.4	0.12	1
o-Chlorotoluene	ND		ug/kg	4.4	0.14	1
p-Chlorotoluene	ND		ug/kg	4.4	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.4	0.35	1
Hexachlorobutadiene	ND		ug/kg	4.4	0.20	1
Isopropylbenzene	ND		ug/kg	0.87	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.87	0.11	1
Naphthalene	ND		ug/kg	4.4	0.12	1
Acrylonitrile	ND		ug/kg	8.7	0.45	1
n-Propylbenzene	ND		ug/kg	0.87	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.4	0.13	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.4	0.16	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.4	0.12	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-04
Client ID: 2118-SB-02 (4.0-4.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 09:40
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.4	0.12	1
1,4-Dioxane	ND		ug/kg	87	13.	1
p-Diethylbenzene	ND		ug/kg	3.5	0.14	1
p-Ethyltoluene	ND		ug/kg	3.5	0.11	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.5	0.11	1
Ethyl ether	ND		ug/kg	4.4	0.23	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.4	0.34	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-05 D
Client ID: 2118-SB-03 (0.5-1.0)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/18/16 11:44
Analyst: MV
Percent Solids: 86%

Date Collected: 04/07/16 10:00
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	54000	6000	100
1,1-Dichloroethane	ND		ug/kg	8200	460	100
Chloroform	ND		ug/kg	8200	2000	100
Carbon tetrachloride	ND		ug/kg	5400	1100	100
1,2-Dichloropropane	ND		ug/kg	19000	1200	100
Dibromochloromethane	ND		ug/kg	5400	840	100
1,1,2-Trichloroethane	ND		ug/kg	8200	1600	100
Tetrachloroethene	380000		ug/kg	5400	760	100
Chlorobenzene	ND		ug/kg	5400	1900	100
Trichlorofluoromethane	ND		ug/kg	27000	2100	100
1,2-Dichloroethane	ND		ug/kg	5400	620	100
1,1,1-Trichloroethane	ND		ug/kg	5400	600	100
Bromodichloromethane	ND		ug/kg	5400	940	100
trans-1,3-Dichloropropene	ND		ug/kg	5400	660	100
cis-1,3-Dichloropropene	ND		ug/kg	5400	640	100
1,3-Dichloropropene, Total	ND		ug/kg	5400	640	100
1,1-Dichloropropene	ND		ug/kg	27000	770	100
Bromoform	ND		ug/kg	22000	1300	100
1,1,2,2-Tetrachloroethane	ND		ug/kg	5400	550	100
Benzene	ND		ug/kg	5400	640	100
Toluene	ND		ug/kg	8200	1000	100
Ethylbenzene	ND		ug/kg	5400	690	100
Chloromethane	ND		ug/kg	27000	1600	100
Bromomethane	ND		ug/kg	11000	1800	100
Vinyl chloride	ND		ug/kg	11000	640	100
Chloroethane	ND		ug/kg	11000	1700	100
1,1-Dichloroethene	ND		ug/kg	5400	1400	100
trans-1,2-Dichloroethene	ND		ug/kg	8200	1200	100
Trichloroethene	ND		ug/kg	5400	680	100
1,2-Dichlorobenzene	ND		ug/kg	27000	830	100

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-05 D
Client ID: 2118-SB-03 (0.5-1.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:00
Date Received: 04/08/16
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	27000	730	100
1,4-Dichlorobenzene	ND		ug/kg	27000	750	100
Methyl tert butyl ether	ND		ug/kg	11000	460	100
p/m-Xylene	ND		ug/kg	11000	1100	100
o-Xylene	ND		ug/kg	11000	930	100
Xylenes, Total	ND		ug/kg	11000	930	100
cis-1,2-Dichloroethene	ND		ug/kg	5400	780	100
1,2-Dichloroethene, Total	ND		ug/kg	5400	780	100
Dibromomethane	ND		ug/kg	54000	890	100
Styrene	ND		ug/kg	11000	2200	100
Dichlorodifluoromethane	ND		ug/kg	54000	1000	100
Acetone	ND		ug/kg	54000	5600	100
Carbon disulfide	ND		ug/kg	54000	6000	100
2-Butanone	ND		ug/kg	54000	1500	100
Vinyl acetate	ND		ug/kg	54000	720	100
4-Methyl-2-pentanone	ND		ug/kg	54000	1300	100
1,2,3-Trichloropropane	ND		ug/kg	54000	880	100
2-Hexanone	ND		ug/kg	54000	3600	100
Bromochloromethane	ND		ug/kg	27000	1500	100
2,2-Dichloropropane	ND		ug/kg	27000	1200	100
1,2-Dibromoethane	ND		ug/kg	22000	950	100
1,3-Dichloropropane	ND		ug/kg	27000	790	100
1,1,1,2-Tetrachloroethane	ND		ug/kg	5400	1700	100
Bromobenzene	ND		ug/kg	27000	1100	100
n-Butylbenzene	ND		ug/kg	5400	620	100
sec-Butylbenzene	ND		ug/kg	5400	660	100
tert-Butylbenzene	ND		ug/kg	27000	740	100
o-Chlorotoluene	ND		ug/kg	27000	870	100
p-Chlorotoluene	ND		ug/kg	27000	720	100
1,2-Dibromo-3-chloropropane	ND		ug/kg	27000	2200	100
Hexachlorobutadiene	ND		ug/kg	27000	1200	100
Isopropylbenzene	ND		ug/kg	5400	560	100
p-Isopropyltoluene	ND		ug/kg	5400	680	100
Naphthalene	ND		ug/kg	27000	750	100
Acrylonitrile	ND		ug/kg	54000	2800	100
n-Propylbenzene	ND		ug/kg	5400	590	100
1,2,3-Trichlorobenzene	ND		ug/kg	27000	800	100
1,2,4-Trichlorobenzene	ND		ug/kg	27000	990	100
1,3,5-Trimethylbenzene	ND		ug/kg	27000	780	100

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-05 D
Client ID: 2118-SB-03 (0.5-1.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:00
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	27000	770	100
1,4-Dioxane	ND		ug/kg	540000	78000	100
p-Diethylbenzene	ND		ug/kg	22000	870	100
p-Ethyltoluene	ND		ug/kg	22000	670	100
1,2,4,5-Tetramethylbenzene	ND		ug/kg	22000	710	100
Ethyl ether	ND		ug/kg	27000	1400	100
trans-1,4-Dichloro-2-butene	ND		ug/kg	27000	2100	100

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

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-06
Client ID: 2118-SB-03 (6.5-7.0)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/17/16 15:42
Analyst: MV
Percent Solids: 91%

Date Collected: 04/07/16 10:15
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	9.0	0.99	1
1,1-Dichloroethane	ND		ug/kg	1.3	0.08	1
Chloroform	ND		ug/kg	1.3	0.33	1
Carbon tetrachloride	ND		ug/kg	0.90	0.19	1
1,2-Dichloropropane	ND		ug/kg	3.1	0.20	1
Dibromochloromethane	ND		ug/kg	0.90	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	0.27	1
Tetrachloroethene	34		ug/kg	0.90	0.13	1
Chlorobenzene	ND		ug/kg	0.90	0.31	1
Trichlorofluoromethane	ND		ug/kg	4.5	0.35	1
1,2-Dichloroethane	ND		ug/kg	0.90	0.10	1
1,1,1-Trichloroethane	ND		ug/kg	0.90	0.10	1
Bromodichloromethane	ND		ug/kg	0.90	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	0.90	0.11	1
cis-1,3-Dichloropropene	ND		ug/kg	0.90	0.10	1
1,3-Dichloropropene, Total	ND		ug/kg	0.90	0.10	1
1,1-Dichloropropene	ND		ug/kg	4.5	0.13	1
Bromoform	ND		ug/kg	3.6	0.21	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.90	0.09	1
Benzene	ND		ug/kg	0.90	0.11	1
Toluene	1.4		ug/kg	1.3	0.18	1
Ethylbenzene	ND		ug/kg	0.90	0.11	1
Chloromethane	ND		ug/kg	4.5	0.26	1
Bromomethane	ND		ug/kg	1.8	0.30	1
Vinyl chloride	ND		ug/kg	1.8	0.10	1
Chloroethane	ND		ug/kg	1.8	0.28	1
1,1-Dichloroethene	ND		ug/kg	0.90	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.19	1
Trichloroethene	1.0		ug/kg	0.90	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	4.5	0.14	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-06
Client ID: 2118-SB-03 (6.5-7.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:15
Date Received: 04/08/16
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	4.5	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	4.5	0.12	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.08	1
p/m-Xylene	ND		ug/kg	1.8	0.18	1
o-Xylene	ND		ug/kg	1.8	0.15	1
Xylenes, Total	ND		ug/kg	1.8	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	0.90	0.13	1
1,2-Dichloroethene, Total	ND		ug/kg	0.90	0.13	1
Dibromomethane	ND		ug/kg	9.0	0.15	1
Styrene	ND		ug/kg	1.8	0.36	1
Dichlorodifluoromethane	ND		ug/kg	9.0	0.17	1
Acetone	ND		ug/kg	9.0	0.93	1
Carbon disulfide	ND		ug/kg	9.0	0.99	1
2-Butanone	ND		ug/kg	9.0	0.24	1
Vinyl acetate	ND		ug/kg	9.0	0.12	1
4-Methyl-2-pentanone	ND		ug/kg	9.0	0.22	1
1,2,3-Trichloropropane	ND		ug/kg	9.0	0.15	1
2-Hexanone	ND		ug/kg	9.0	0.60	1
Bromochloromethane	ND		ug/kg	4.5	0.25	1
2,2-Dichloropropane	ND		ug/kg	4.5	0.20	1
1,2-Dibromoethane	ND		ug/kg	3.6	0.16	1
1,3-Dichloropropane	ND		ug/kg	4.5	0.13	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.90	0.28	1
Bromobenzene	ND		ug/kg	4.5	0.19	1
n-Butylbenzene	ND		ug/kg	0.90	0.10	1
sec-Butylbenzene	ND		ug/kg	0.90	0.11	1
tert-Butylbenzene	ND		ug/kg	4.5	0.12	1
o-Chlorotoluene	ND		ug/kg	4.5	0.14	1
p-Chlorotoluene	ND		ug/kg	4.5	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.5	0.36	1
Hexachlorobutadiene	ND		ug/kg	4.5	0.20	1
Isopropylbenzene	ND		ug/kg	0.90	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.90	0.11	1
Naphthalene	ND		ug/kg	4.5	0.12	1
Acrylonitrile	ND		ug/kg	9.0	0.46	1
n-Propylbenzene	ND		ug/kg	0.90	0.10	1
1,2,3-Trichlorobenzene	ND		ug/kg	4.5	0.13	1
1,2,4-Trichlorobenzene	ND		ug/kg	4.5	0.16	1
1,3,5-Trimethylbenzene	ND		ug/kg	4.5	0.13	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-06
Client ID: 2118-SB-03 (6.5-7.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:15
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	4.5	0.13	1
1,4-Dioxane	ND		ug/kg	90	13.	1
p-Diethylbenzene	ND		ug/kg	3.6	0.14	1
p-Ethyltoluene	ND		ug/kg	3.6	0.11	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.6	0.12	1
Ethyl ether	ND		ug/kg	4.5	0.23	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.5	0.35	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	97		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-07
Client ID: 2118-SB-04 (1.0-1.5)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 01:13
Analyst: BS
Percent Solids: 89%

Date Collected: 04/07/16 11:15
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	7.8	0.86	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.07	1
Chloroform	ND		ug/kg	1.2	0.29	1
Carbon tetrachloride	ND		ug/kg	0.78	0.16	1
1,2-Dichloropropane	ND		ug/kg	2.7	0.18	1
Dibromochloromethane	ND		ug/kg	0.78	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.24	1
Tetrachloroethene	ND		ug/kg	0.78	0.11	1
Chlorobenzene	ND		ug/kg	0.78	0.27	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.30	1
1,2-Dichloroethane	ND		ug/kg	0.78	0.09	1
1,1,1-Trichloroethane	ND		ug/kg	0.78	0.09	1
Bromodichloromethane	ND		ug/kg	0.78	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	0.78	0.09	1
cis-1,3-Dichloropropene	ND		ug/kg	0.78	0.09	1
1,3-Dichloropropene, Total	ND		ug/kg	0.78	0.09	1
1,1-Dichloropropene	ND		ug/kg	3.9	0.11	1
Bromoform	ND		ug/kg	3.1	0.18	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.78	0.08	1
Benzene	ND		ug/kg	0.78	0.09	1
Toluene	1.3		ug/kg	1.2	0.15	1
Ethylbenzene	ND		ug/kg	0.78	0.10	1
Chloromethane	ND		ug/kg	3.9	0.23	1
Bromomethane	ND		ug/kg	1.6	0.26	1
Vinyl chloride	ND		ug/kg	1.6	0.09	1
Chloroethane	ND		ug/kg	1.6	0.25	1
1,1-Dichloroethene	ND		ug/kg	0.78	0.20	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.16	1
Trichloroethene	ND		ug/kg	0.78	0.10	1
1,2-Dichlorobenzene	ND		ug/kg	3.9	0.12	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-07
Client ID: 2118-SB-04 (1.0-1.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:15
Date Received: 04/08/16
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	3.9	0.10	1
1,4-Dichlorobenzene	ND		ug/kg	3.9	0.11	1
Methyl tert butyl ether	ND		ug/kg	1.6	0.07	1
p/m-Xylene	ND		ug/kg	1.6	0.15	1
o-Xylene	ND		ug/kg	1.6	0.13	1
Xylenes, Total	ND		ug/kg	1.6	0.13	1
cis-1,2-Dichloroethene	ND		ug/kg	0.78	0.11	1
1,2-Dichloroethene, Total	ND		ug/kg	0.78	0.11	1
Dibromomethane	ND		ug/kg	7.8	0.13	1
Styrene	ND		ug/kg	1.6	0.31	1
Dichlorodifluoromethane	ND		ug/kg	7.8	0.15	1
Acetone	ND		ug/kg	7.8	0.81	1
Carbon disulfide	ND		ug/kg	7.8	0.86	1
2-Butanone	ND		ug/kg	7.8	0.21	1
Vinyl acetate	ND		ug/kg	7.8	0.10	1
4-Methyl-2-pentanone	ND		ug/kg	7.8	0.19	1
1,2,3-Trichloropropane	ND		ug/kg	7.8	0.13	1
2-Hexanone	ND		ug/kg	7.8	0.52	1
Bromochloromethane	ND		ug/kg	3.9	0.22	1
2,2-Dichloropropane	ND		ug/kg	3.9	0.18	1
1,2-Dibromoethane	ND		ug/kg	3.1	0.14	1
1,3-Dichloropropane	ND		ug/kg	3.9	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.78	0.25	1
Bromobenzene	ND		ug/kg	3.9	0.16	1
n-Butylbenzene	ND		ug/kg	0.78	0.09	1
sec-Butylbenzene	ND		ug/kg	0.78	0.10	1
tert-Butylbenzene	ND		ug/kg	3.9	0.10	1
o-Chlorotoluene	ND		ug/kg	3.9	0.12	1
p-Chlorotoluene	ND		ug/kg	3.9	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.9	0.31	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.18	1
Isopropylbenzene	ND		ug/kg	0.78	0.08	1
p-Isopropyltoluene	ND		ug/kg	0.78	0.10	1
Naphthalene	ND		ug/kg	3.9	0.11	1
Acrylonitrile	ND		ug/kg	7.8	0.40	1
n-Propylbenzene	ND		ug/kg	0.78	0.09	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.9	0.12	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.9	0.14	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.9	0.11	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-07
Client ID: 2118-SB-04 (1.0-1.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:15
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	3.9	0.11	1
1,4-Dioxane	ND		ug/kg	78	11.	1
p-Diethylbenzene	ND		ug/kg	3.1	0.12	1
p-Ethyltoluene	ND		ug/kg	3.1	0.10	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.1	0.10	1
Ethyl ether	ND		ug/kg	3.9	0.20	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	3.9	0.31	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	103		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-08
Client ID: 2118-SB-04 (7.0-7.5)
Sample Location: BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 04/15/16 01:39
Analyst: BS
Percent Solids: 90%

Date Collected: 04/07/16 11:30
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	7.7	0.85	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.07	1
Chloroform	ND		ug/kg	1.2	0.28	1
Carbon tetrachloride	ND		ug/kg	0.77	0.16	1
1,2-Dichloropropane	ND		ug/kg	2.7	0.18	1
Dibromochloromethane	ND		ug/kg	0.77	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.23	1
Tetrachloroethene	ND		ug/kg	0.77	0.11	1
Chlorobenzene	ND		ug/kg	0.77	0.27	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.30	1
1,2-Dichloroethane	ND		ug/kg	0.77	0.09	1
1,1,1-Trichloroethane	ND		ug/kg	0.77	0.09	1
Bromodichloromethane	ND		ug/kg	0.77	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	0.77	0.09	1
cis-1,3-Dichloropropene	ND		ug/kg	0.77	0.09	1
1,3-Dichloropropene, Total	ND		ug/kg	0.77	0.09	1
1,1-Dichloropropene	ND		ug/kg	3.8	0.11	1
Bromoform	ND		ug/kg	3.1	0.18	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.77	0.08	1
Benzene	ND		ug/kg	0.77	0.09	1
Toluene	0.69	J	ug/kg	1.2	0.15	1
Ethylbenzene	ND		ug/kg	0.77	0.10	1
Chloromethane	ND		ug/kg	3.8	0.23	1
Bromomethane	ND		ug/kg	1.5	0.26	1
Vinyl chloride	ND		ug/kg	1.5	0.09	1
Chloroethane	ND		ug/kg	1.5	0.24	1
1,1-Dichloroethene	ND		ug/kg	0.77	0.20	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.16	1
Trichloroethene	ND		ug/kg	0.77	0.10	1
1,2-Dichlorobenzene	ND		ug/kg	3.8	0.12	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-08
Client ID: 2118-SB-04 (7.0-7.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:30
Date Received: 04/08/16
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	3.8	0.10	1
1,4-Dichlorobenzene	ND		ug/kg	3.8	0.11	1
Methyl tert butyl ether	ND		ug/kg	1.5	0.07	1
p/m-Xylene	ND		ug/kg	1.5	0.15	1
o-Xylene	ND		ug/kg	1.5	0.13	1
Xylenes, Total	ND		ug/kg	1.5	0.13	1
cis-1,2-Dichloroethene	ND		ug/kg	0.77	0.11	1
1,2-Dichloroethene, Total	ND		ug/kg	0.77	0.11	1
Dibromomethane	ND		ug/kg	7.7	0.12	1
Styrene	ND		ug/kg	1.5	0.31	1
Dichlorodifluoromethane	ND		ug/kg	7.7	0.15	1
Acetone	ND		ug/kg	7.7	0.80	1
Carbon disulfide	ND		ug/kg	7.7	0.85	1
2-Butanone	ND		ug/kg	7.7	0.21	1
Vinyl acetate	ND		ug/kg	7.7	0.10	1
4-Methyl-2-pentanone	ND		ug/kg	7.7	0.19	1
1,2,3-Trichloropropane	ND		ug/kg	7.7	0.12	1
2-Hexanone	ND		ug/kg	7.7	0.51	1
Bromochloromethane	ND		ug/kg	3.8	0.21	1
2,2-Dichloropropane	ND		ug/kg	3.8	0.17	1
1,2-Dibromoethane	ND		ug/kg	3.1	0.13	1
1,3-Dichloropropane	ND		ug/kg	3.8	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.77	0.24	1
Bromobenzene	ND		ug/kg	3.8	0.16	1
n-Butylbenzene	ND		ug/kg	0.77	0.09	1
sec-Butylbenzene	ND		ug/kg	0.77	0.09	1
tert-Butylbenzene	ND		ug/kg	3.8	0.10	1
o-Chlorotoluene	ND		ug/kg	3.8	0.12	1
p-Chlorotoluene	ND		ug/kg	3.8	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.8	0.30	1
Hexachlorobutadiene	ND		ug/kg	3.8	0.18	1
Isopropylbenzene	ND		ug/kg	0.77	0.08	1
p-Isopropyltoluene	ND		ug/kg	0.77	0.10	1
Naphthalene	ND		ug/kg	3.8	0.11	1
Acrylonitrile	ND		ug/kg	7.7	0.40	1
n-Propylbenzene	ND		ug/kg	0.77	0.08	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.8	0.11	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.8	0.14	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.8	0.11	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-08
Client ID: 2118-SB-04 (7.0-7.5)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:30
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/kg	3.8	0.11	1
1,4-Dioxane	ND		ug/kg	77	11.	1
p-Diethylbenzene	ND		ug/kg	3.1	0.12	1
p-Ethyltoluene	ND		ug/kg	3.1	0.10	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	3.1	0.10	1
Ethyl ether	ND		ug/kg	3.8	0.20	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	3.8	0.30	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	103		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-09 D
Client ID: 2118-TW-03 (7.6)
Sample Location: BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/15/16 13:15
Analyst: PD

Date Collected: 04/07/16 10:25
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	62	18.	25
1,1-Dichloroethane	ND		ug/l	62	18.	25
Chloroform	ND		ug/l	62	18.	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
1,2-Dichloropropane	ND		ug/l	25	3.3	25
Dibromochloromethane	ND		ug/l	12	3.7	25
1,1,2-Trichloroethane	ND		ug/l	38	12.	25
Tetrachloroethene	2100		ug/l	12	4.5	25
Chlorobenzene	ND		ug/l	62	18.	25
Trichlorofluoromethane	ND		ug/l	62	18.	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
1,1,1-Trichloroethane	ND		ug/l	62	18.	25
Bromodichloromethane	ND		ug/l	12	4.8	25
trans-1,3-Dichloropropene	ND		ug/l	12	4.1	25
cis-1,3-Dichloropropene	ND		ug/l	12	3.6	25
1,3-Dichloropropene, Total	ND		ug/l	12	3.6	25
1,1-Dichloropropene	ND		ug/l	62	18.	25
Bromoform	ND		ug/l	50	16.	25
1,1,2,2-Tetrachloroethane	ND		ug/l	12	3.6	25
Benzene	ND		ug/l	12	4.0	25
Toluene	ND		ug/l	62	18.	25
Ethylbenzene	ND		ug/l	62	18.	25
Chloromethane	ND		ug/l	62	18.	25
Bromomethane	ND		ug/l	62	18.	25
Vinyl chloride	ND		ug/l	25	1.7	25
Chloroethane	ND		ug/l	62	18.	25
1,1-Dichloroethene	ND		ug/l	12	3.6	25
trans-1,2-Dichloroethene	ND		ug/l	62	18.	25
Trichloroethene	5.2	J	ug/l	12	4.4	25
1,2-Dichlorobenzene	ND		ug/l	62	18.	25

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-09 D
Client ID: 2118-TW-03 (7.6)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:25
Date Received: 04/08/16
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	62	18.	25
1,4-Dichlorobenzene	ND		ug/l	62	18.	25
Methyl tert butyl ether	ND		ug/l	62	18.	25
p/m-Xylene	ND		ug/l	62	18.	25
o-Xylene	ND		ug/l	62	18.	25
Xylenes, Total	ND		ug/l	62	18.	25
cis-1,2-Dichloroethene	ND		ug/l	62	18.	25
1,2-Dichloroethene, Total	ND		ug/l	62	18.	25
Dibromomethane	ND		ug/l	120	25.	25
1,2,3-Trichloropropane	ND		ug/l	62	18.	25
Acrylonitrile	ND		ug/l	120	38.	25
Styrene	ND		ug/l	62	18.	25
Dichlorodifluoromethane	ND		ug/l	120	25.	25
Acetone	ND		ug/l	120	36.	25
Carbon disulfide	ND		ug/l	120	25.	25
2-Butanone	ND		ug/l	120	48.	25
Vinyl acetate	ND		ug/l	120	25.	25
4-Methyl-2-pentanone	ND		ug/l	120	25.	25
2-Hexanone	ND		ug/l	120	25.	25
Bromochloromethane	ND		ug/l	62	18.	25
2,2-Dichloropropane	ND		ug/l	62	18.	25
1,2-Dibromoethane	ND		ug/l	50	16.	25
1,3-Dichloropropane	ND		ug/l	62	18.	25
1,1,1,2-Tetrachloroethane	ND		ug/l	62	18.	25
Bromobenzene	ND		ug/l	62	18.	25
n-Butylbenzene	ND		ug/l	62	18.	25
sec-Butylbenzene	ND		ug/l	62	18.	25
tert-Butylbenzene	ND		ug/l	62	18.	25
o-Chlorotoluene	ND		ug/l	62	18.	25
p-Chlorotoluene	ND		ug/l	62	18.	25
1,2-Dibromo-3-chloropropane	ND		ug/l	62	18.	25
Hexachlorobutadiene	ND		ug/l	62	18.	25
Isopropylbenzene	ND		ug/l	62	18.	25
p-Isopropyltoluene	ND		ug/l	62	18.	25
Naphthalene	ND		ug/l	62	18.	25
n-Propylbenzene	ND		ug/l	62	18.	25
1,2,3-Trichlorobenzene	ND		ug/l	62	18.	25
1,2,4-Trichlorobenzene	ND		ug/l	62	18.	25
1,3,5-Trimethylbenzene	ND		ug/l	62	18.	25

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-09 D
Client ID: 2118-TW-03 (7.6)
Sample Location: BRONX, NY

Date Collected: 04/07/16 10:25
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	62	18.	25
1,4-Dioxane	ND		ug/l	6200	1000	25
p-Diethylbenzene	ND		ug/l	50	18.	25
p-Ethyltoluene	ND		ug/l	50	18.	25
1,2,4,5-Tetramethylbenzene	ND		ug/l	50	16.	25
Ethyl ether	ND		ug/l	62	18.	25
trans-1,4-Dichloro-2-butene	ND		ug/l	62	18.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	95		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-10
Client ID: 2118-TW-04 (9.0)
Sample Location: BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 04/15/16 13:47
Analyst: PD

Date Collected: 04/07/16 11:50
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.87		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	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-10
Client ID: 2118-TW-04 (9.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:50
Date Received: 04/08/16
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	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		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	3.7	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	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-10
Client ID: 2118-TW-04 (9.0)
Sample Location: BRONX, NY

Date Collected: 04/07/16 11:50
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	41.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	99		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/14/16 22:11
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,07-08 Batch: WG884030-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/14/16 22:11
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,07-08 Batch: WG884030-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/14/16 22:11
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02,07-08 Batch: WG884030-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

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

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 12:43
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09-10 Batch: WG884114-3					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-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	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 12:43
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09-10 Batch: WG884114-3					
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: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 12:43
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09-10 Batch: WG884114-3					
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	41.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.65
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	97		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:15
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03 Batch: WG884361-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	ND		ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.
Trichloroethene	ND		ug/kg	50	6.2

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:15
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03 Batch: WG884361-3					
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylenes, Total	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene, Total	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8
o-Chlorotoluene	ND		ug/kg	250	8.0

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:15
Analyst: BS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01,03 Batch: WG884361-3					
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
1,4-Dioxane	ND		ug/kg	5000	720
p-Diethylbenzene	ND		ug/kg	200	8.0
p-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
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	96		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	94		70-130

Project Name: 1500 ASTOR
Project Number: 20152118.201

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:15
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG884365-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	ND		ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

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Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/15/16 10:15
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG884365-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

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Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG884365-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	94		70-130

Project Name: 1500 ASTOR
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/17/16 12:30
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG884614-3					
Methylene chloride	ND		ug/kg	10	1.1
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Chloroform	ND		ug/kg	1.5	0.37
Carbon tetrachloride	ND		ug/kg	1.0	0.21
1,2-Dichloropropane	ND		ug/kg	3.5	0.23
Dibromochloromethane	ND		ug/kg	1.0	0.15
1,1,2-Trichloroethane	ND		ug/kg	1.5	0.30
Tetrachloroethene	ND		ug/kg	1.0	0.14
Chlorobenzene	ND		ug/kg	1.0	0.35
Trichlorofluoromethane	ND		ug/kg	5.0	0.39
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Bromodichloromethane	ND		ug/kg	1.0	0.17
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
cis-1,3-Dichloropropene	ND		ug/kg	1.0	0.12
1,3-Dichloropropene, Total	ND		ug/kg	1.0	0.12
1,1-Dichloropropene	ND		ug/kg	5.0	0.14
Bromoform	ND		ug/kg	4.0	0.24
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	0.10
Benzene	ND		ug/kg	1.0	0.12
Toluene	0.30	J	ug/kg	1.5	0.19
Ethylbenzene	ND		ug/kg	1.0	0.13
Chloromethane	ND		ug/kg	5.0	0.29
Bromomethane	ND		ug/kg	2.0	0.34
Vinyl chloride	ND		ug/kg	2.0	0.12
Chloroethane	ND		ug/kg	2.0	0.32
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG884614-3					
1,2-Dichlorobenzene	ND		ug/kg	5.0	0.15
1,3-Dichlorobenzene	ND		ug/kg	5.0	0.14
1,4-Dichlorobenzene	ND		ug/kg	5.0	0.14
Methyl tert butyl ether	ND		ug/kg	2.0	0.08
p/m-Xylene	ND		ug/kg	2.0	0.20
o-Xylene	ND		ug/kg	2.0	0.17
Xylenes, Total	ND		ug/kg	2.0	0.17
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	10	0.16
Styrene	ND		ug/kg	2.0	0.40
Dichlorodifluoromethane	ND		ug/kg	10	0.19
Acetone	ND		ug/kg	10	1.0
Carbon disulfide	ND		ug/kg	10	1.1
2-Butanone	ND		ug/kg	10	0.27
Vinyl acetate	ND		ug/kg	10	0.13
4-Methyl-2-pentanone	ND		ug/kg	10	0.24
1,2,3-Trichloropropane	ND		ug/kg	10	0.16
2-Hexanone	ND		ug/kg	10	0.67
Bromochloromethane	ND		ug/kg	5.0	0.28
2,2-Dichloropropane	ND		ug/kg	5.0	0.23
1,2-Dibromoethane	ND		ug/kg	4.0	0.17
1,3-Dichloropropane	ND		ug/kg	5.0	0.14
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	0.32
Bromobenzene	ND		ug/kg	5.0	0.21
n-Butylbenzene	ND		ug/kg	1.0	0.11
sec-Butylbenzene	ND		ug/kg	1.0	0.12
tert-Butylbenzene	ND		ug/kg	5.0	0.14
o-Chlorotoluene	ND		ug/kg	5.0	0.16

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Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 06 Batch: WG884614-3					
p-Chlorotoluene	ND		ug/kg	5.0	0.13
1,2-Dibromo-3-chloropropane	ND		ug/kg	5.0	0.40
Hexachlorobutadiene	ND		ug/kg	5.0	0.23
Isopropylbenzene	ND		ug/kg	1.0	0.10
p-Isopropyltoluene	ND		ug/kg	1.0	0.12
Naphthalene	ND		ug/kg	5.0	0.14
Acrylonitrile	ND		ug/kg	10	0.51
n-Propylbenzene	ND		ug/kg	1.0	0.11
1,2,3-Trichlorobenzene	ND		ug/kg	5.0	0.15
1,2,4-Trichlorobenzene	ND		ug/kg	5.0	0.18
1,3,5-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,2,4-Trimethylbenzene	ND		ug/kg	5.0	0.14
1,4-Dioxane	ND		ug/kg	100	14.
p-Diethylbenzene	ND		ug/kg	4.0	0.16
p-Ethyltoluene	ND		ug/kg	4.0	0.12
1,2,4,5-Tetramethylbenzene	ND		ug/kg	4.0	0.13
Ethyl ether	ND		ug/kg	5.0	0.26
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	0.39

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	95		70-130

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Method Blank Analysis
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Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG884683-3					
Methylene chloride	ND		ug/kg	500	55.
1,1-Dichloroethane	ND		ug/kg	75	4.3
Chloroform	ND		ug/kg	75	18.
Carbon tetrachloride	ND		ug/kg	50	10.
1,2-Dichloropropane	ND		ug/kg	180	11.
Dibromochloromethane	ND		ug/kg	50	7.7
1,1,2-Trichloroethane	ND		ug/kg	75	15.
Tetrachloroethene	ND		ug/kg	50	7.0
Chlorobenzene	ND		ug/kg	50	17.
Trichlorofluoromethane	ND		ug/kg	250	19.
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Bromodichloromethane	ND		ug/kg	50	8.7
trans-1,3-Dichloropropene	ND		ug/kg	50	6.0
cis-1,3-Dichloropropene	ND		ug/kg	50	5.9
1,3-Dichloropropene, Total	ND		ug/kg	50	5.9
1,1-Dichloropropene	ND		ug/kg	250	7.1
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	50	5.0
Benzene	ND		ug/kg	50	5.9
Toluene	10	J	ug/kg	75	9.7
Ethylbenzene	ND		ug/kg	50	6.4
Chloromethane	ND		ug/kg	250	15.
Bromomethane	ND		ug/kg	100	17.
Vinyl chloride	ND		ug/kg	100	5.9
Chloroethane	ND		ug/kg	100	16.
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.
Trichloroethene	ND		ug/kg	50	6.2

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Analytical Method: 1,8260C
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Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG884683-3					
1,2-Dichlorobenzene	ND		ug/kg	250	7.7
1,3-Dichlorobenzene	ND		ug/kg	250	6.8
1,4-Dichlorobenzene	ND		ug/kg	250	6.9
Methyl tert butyl ether	ND		ug/kg	100	4.2
p/m-Xylene	ND		ug/kg	100	9.9
o-Xylene	ND		ug/kg	100	8.6
Xylenes, Total	ND		ug/kg	100	8.6
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1
1,2-Dichloroethene, Total	ND		ug/kg	50	7.1
Dibromomethane	ND		ug/kg	500	8.2
Styrene	ND		ug/kg	100	20.
Dichlorodifluoromethane	ND		ug/kg	500	9.5
Acetone	ND		ug/kg	500	52.
Carbon disulfide	ND		ug/kg	500	55.
2-Butanone	ND		ug/kg	500	14.
Vinyl acetate	ND		ug/kg	500	6.6
4-Methyl-2-pentanone	ND		ug/kg	500	12.
1,2,3-Trichloropropane	ND		ug/kg	500	8.1
2-Hexanone	ND		ug/kg	500	33.
Bromochloromethane	ND		ug/kg	250	14.
2,2-Dichloropropane	ND		ug/kg	250	11.
1,2-Dibromoethane	ND		ug/kg	200	8.7
1,3-Dichloropropane	ND		ug/kg	250	7.3
1,1,1,2-Tetrachloroethane	ND		ug/kg	50	16.
Bromobenzene	ND		ug/kg	250	10.
n-Butylbenzene	ND		ug/kg	50	5.7
sec-Butylbenzene	ND		ug/kg	50	6.1
tert-Butylbenzene	ND		ug/kg	250	6.8
o-Chlorotoluene	ND		ug/kg	250	8.0

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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 04/18/16 11:17
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 05 Batch: WG884683-3					
p-Chlorotoluene	ND		ug/kg	250	6.6
1,2-Dibromo-3-chloropropane	ND		ug/kg	250	20.
Hexachlorobutadiene	ND		ug/kg	250	11.
Isopropylbenzene	ND		ug/kg	50	5.2
p-Isopropyltoluene	ND		ug/kg	50	6.2
Naphthalene	ND		ug/kg	250	6.9
Acrylonitrile	ND		ug/kg	500	26.
n-Propylbenzene	ND		ug/kg	50	5.5
1,2,3-Trichlorobenzene	ND		ug/kg	250	7.4
1,2,4-Trichlorobenzene	ND		ug/kg	250	9.1
1,3,5-Trimethylbenzene	ND		ug/kg	250	7.2
1,2,4-Trimethylbenzene	ND		ug/kg	250	7.1
1,4-Dioxane	ND		ug/kg	5000	720
p-Diethylbenzene	ND		ug/kg	200	8.0
p-Ethyltoluene	ND		ug/kg	200	6.2
1,2,4,5-Tetramethylbenzene	ND		ug/kg	200	6.5
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	92		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	91		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,07-08 Batch: WG884030-1 WG884030-2								
Methylene chloride	106		108		70-130	2		30
1,1-Dichloroethane	104		107		70-130	3		30
Chloroform	104		108		70-130	4		30
Carbon tetrachloride	109		110		70-130	1		30
1,2-Dichloropropane	102		106		70-130	4		30
Dibromochloromethane	93		96		70-130	3		30
2-Chloroethylvinyl ether	90		95		70-130	5		30
1,1,2-Trichloroethane	100		102		70-130	2		30
Tetrachloroethene	102		104		70-130	2		30
Chlorobenzene	97		101		70-130	4		30
Trichlorofluoromethane	118		121		70-139	3		30
1,2-Dichloroethane	102		105		70-130	3		30
1,1,1-Trichloroethane	103		105		70-130	2		30
Bromodichloromethane	96		100		70-130	4		30
trans-1,3-Dichloropropene	90		92		70-130	2		30
cis-1,3-Dichloropropene	97		101		70-130	4		30
1,1-Dichloropropene	105		109		70-130	4		30
Bromoform	82		85		70-130	4		30
1,1,2,2-Tetrachloroethane	98		101		70-130	3		30
Benzene	101		104		70-130	3		30
Toluene	94		97		70-130	3		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,07-08 Batch: WG884030-1 WG884030-2								
Ethylbenzene	93		96		70-130	3		30
Chloromethane	115		116		52-130	1		30
Bromomethane	107		107		57-147	0		30
Vinyl chloride	84		84		67-130	0		30
Chloroethane	113		110		50-151	3		30
1,1-Dichloroethene	110		113		65-135	3		30
trans-1,2-Dichloroethene	108		109		70-130	1		30
Trichloroethene	104		109		70-130	5		30
1,2-Dichlorobenzene	97		102		70-130	5		30
1,3-Dichlorobenzene	97		102		70-130	5		30
1,4-Dichlorobenzene	98		103		70-130	5		30
Methyl tert butyl ether	96		99		66-130	3		30
p/m-Xylene	94		97		70-130	3		30
o-Xylene	91		94		70-130	3		30
cis-1,2-Dichloroethene	107		110		70-130	3		30
Dibromomethane	104		109		70-130	5		30
Styrene	90		93		70-130	3		30
Dichlorodifluoromethane	114		116		30-146	2		30
Acetone	92		91		54-140	1		30
Carbon disulfide	59		60		59-130	2		30
2-Butanone	95		96		70-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
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Lab Number: L1610441
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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,07-08 Batch: WG884030-1 WG884030-2								
Vinyl acetate	94		94		70-130	0		30
4-Methyl-2-pentanone	79		84		70-130	6		30
1,2,3-Trichloropropane	98		101		68-130	3		30
2-Hexanone	72		73		70-130	1		30
Bromochloromethane	114		118		70-130	3		30
2,2-Dichloropropane	99		101		70-130	2		30
1,2-Dibromoethane	99		102		70-130	3		30
1,3-Dichloropropane	98		101		69-130	3		30
1,1,1,2-Tetrachloroethane	99		101		70-130	2		30
Bromobenzene	100		104		70-130	4		30
n-Butylbenzene	93		97		70-130	4		30
sec-Butylbenzene	94		98		70-130	4		30
tert-Butylbenzene	93		98		70-130	5		30
o-Chlorotoluene	92		95		70-130	3		30
p-Chlorotoluene	93		96		70-130	3		30
1,2-Dibromo-3-chloropropane	80		87		68-130	8		30
Hexachlorobutadiene	97		101		67-130	4		30
Isopropylbenzene	94		97		70-130	3		30
p-Isopropyltoluene	94		98		70-130	4		30
Naphthalene	90		96		70-130	6		30
Acrylonitrile	97		96		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,07-08 Batch: WG884030-1 WG884030-2								
Isopropyl Ether	93		93		66-130	0		30
tert-Butyl Alcohol	85		86		70-130	1		30
n-Propylbenzene	95		98		70-130	3		30
1,2,3-Trichlorobenzene	96		102		70-130	6		30
1,2,4-Trichlorobenzene	95		101		70-130	6		30
1,3,5-Trimethylbenzene	94		98		70-130	4		30
1,2,4-Trimethylbenzene	92		96		70-130	4		30
Methyl Acetate	97		96		51-146	1		30
Ethyl Acetate	108		110		70-130	2		30
Acrolein	119		120		70-130	1		30
Cyclohexane	100		102		59-142	2		30
1,4-Dioxane	97		101		65-136	4		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	115		116		50-139	1		30
p-Diethylbenzene	90		92		70-130	2		30
p-Ethyltoluene	90		93		70-130	3		30
1,2,4,5-Tetramethylbenzene	84		88		70-130	5		30
Tetrahydrofuran	96		99		66-130	3		30
Ethyl ether	110		108		67-130	2		30
trans-1,4-Dichloro-2-butene	87		88		70-130	1		30
Methyl cyclohexane	99		103		70-130	4		30
Ethyl-Tert-Butyl-Ether	91		94		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR

Project Number: 20152118.201

Lab Number: L1610441

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02,07-08 Batch: WG884030-1 WG884030-2								
Tertiary-Amyl Methyl Ether	89		92		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		97		70-130
Toluene-d8	94		93		70-130
4-Bromofluorobenzene	98		96		70-130
Dibromofluoromethane	103		101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG884114-1 WG884114-2								
Methylene chloride	94		93		70-130	1		20
1,1-Dichloroethane	93		91		70-130	2		20
Chloroform	100		98		70-130	2		20
2-Chloroethylvinyl ether	95		105		70-130	10		20
Carbon tetrachloride	108		104		63-132	4		20
1,2-Dichloropropane	92		91		70-130	1		20
Dibromochloromethane	98		97		63-130	1		20
1,1,2-Trichloroethane	94		94		70-130	0		20
Tetrachloroethene	102		98		70-130	4		20
Chlorobenzene	96		94		75-130	2		20
Trichlorofluoromethane	104		102		62-150	2		20
1,2-Dichloroethane	94		96		70-130	2		20
1,1,1-Trichloroethane	111		106		67-130	5		20
Bromodichloromethane	104		102		67-130	2		20
trans-1,3-Dichloropropene	103		98		70-130	5		20
cis-1,3-Dichloropropene	99		98		70-130	1		20
1,1-Dichloropropene	100		98		70-130	2		20
Bromoform	100		102		54-136	2		20
1,1,2,2-Tetrachloroethane	88		90		67-130	2		20
Benzene	96		94		70-130	2		20
Toluene	97		93		70-130	4		20

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG884114-1 WG884114-2								
Ethylbenzene	100		96		70-130	4		20
Chloromethane	69		64		64-130	8		20
Bromomethane	65		59		39-139	10		20
Vinyl chloride	98		96		55-140	2		20
Chloroethane	96		95		55-138	1		20
1,1-Dichloroethene	102		98		61-145	4		20
trans-1,2-Dichloroethene	97		95		70-130	2		20
Trichloroethene	97		97		70-130	0		20
1,2-Dichlorobenzene	95		95		70-130	0		20
1,3-Dichlorobenzene	95		95		70-130	0		20
1,4-Dichlorobenzene	94		93		70-130	1		20
Methyl tert butyl ether	83		87		63-130	5		20
p/m-Xylene	100		96		70-130	4		20
o-Xylene	99		95		70-130	4		20
cis-1,2-Dichloroethene	98		96		70-130	2		20
Dibromomethane	96		93		70-130	3		20
1,2,3-Trichloropropane	87		88		64-130	1		20
Acrylonitrile	84		90		70-130	7		20
Isopropyl Ether	86		86		70-130	0		20
tert-Butyl Alcohol	88		96		70-130	9		20
Styrene	104		100		70-130	4		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG884114-1 WG884114-2								
Dichlorodifluoromethane	87		81		36-147	7		20
Acetone	75		79		58-148	5		20
Carbon disulfide	82		80		51-130	2		20
2-Butanone	77		78		63-138	1		20
Vinyl acetate	96		97		70-130	1		20
4-Methyl-2-pentanone	84		89		59-130	6		20
2-Hexanone	77		82		57-130	6		20
Acrolein	100		104		40-160	4		20
Bromochloromethane	105		109		70-130	4		20
2,2-Dichloropropane	101		97		63-133	4		20
1,2-Dibromoethane	94		95		70-130	1		20
1,3-Dichloropropane	92		91		70-130	1		20
1,1,1,2-Tetrachloroethane	108		105		64-130	3		20
Bromobenzene	96		94		70-130	2		20
n-Butylbenzene	98		96		53-136	2		20
sec-Butylbenzene	98		95		70-130	3		20
tert-Butylbenzene	96		94		70-130	2		20
o-Chlorotoluene	94		93		70-130	1		20
p-Chlorotoluene	94		93		70-130	1		20
1,2-Dibromo-3-chloropropane	99		98		41-144	1		20
Hexachlorobutadiene	92		90		63-130	2		20

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG884114-1 WG884114-2								
Isopropylbenzene	101		97		70-130	4		20
p-Isopropyltoluene	96		94		70-130	2		20
Naphthalene	83		84		70-130	1		20
n-Propylbenzene	98		96		69-130	2		20
1,2,3-Trichlorobenzene	88		89		70-130	1		20
1,2,4-Trichlorobenzene	94		94		70-130	0		20
1,3,5-Trimethylbenzene	95		94		64-130	1		20
1,2,4-Trimethylbenzene	96		95		70-130	1		20
Methyl Acetate	84		90		70-130	7		20
Ethyl Acetate	79		81		70-130	3		20
Cyclohexane	92		90		70-130	2		20
Ethyl-Tert-Butyl-Ether	83		85		70-130	2		20
Tertiary-Amyl Methyl Ether	82		84		66-130	2		20
1,4-Dioxane	84		90		56-162	7		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		100		70-130	2		20
p-Diethylbenzene	92		90		70-130	2		20
p-Ethyltoluene	99		98		70-130	1		20
1,2,4,5-Tetramethylbenzene	101		99		70-130	2		20
Ethyl ether	92		99		59-134	7		20
trans-1,4-Dichloro-2-butene	91		94		70-130	3		20
Iodomethane	35	Q	38	Q	70-130	8		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 1500 ASTOR**Project Number:** 20152118.201**Lab Number:** L1610441**Report Date:** 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG884114-1 WG884114-2								
Methyl cyclohexane	93		91		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		100		70-130
Toluene-d8	95		94		70-130
4-Bromofluorobenzene	93		94		70-130
Dibromofluoromethane	101		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03 Batch: WG884361-1 WG884361-2								
Methylene chloride	83		84		70-130	1		30
1,1-Dichloroethane	86		87		70-130	1		30
Chloroform	83		84		70-130	1		30
Carbon tetrachloride	84		85		70-130	1		30
1,2-Dichloropropane	86		88		70-130	2		30
Dibromochloromethane	98		98		70-130	0		30
1,1,2-Trichloroethane	99		98		70-130	1		30
Tetrachloroethene	103		102		70-130	1		30
Chlorobenzene	96		96		70-130	0		30
Trichlorofluoromethane	67	Q	67	Q	70-139	0		30
1,2-Dichloroethane	80		81		70-130	1		30
1,1,1-Trichloroethane	84		86		70-130	2		30
Bromodichloromethane	82		83		70-130	1		30
trans-1,3-Dichloropropene	95		97		70-130	2		30
cis-1,3-Dichloropropene	80		82		70-130	2		30
1,1-Dichloropropene	85		86		70-130	1		30
Bromoform	98		100		70-130	2		30
1,1,2,2-Tetrachloroethane	108		109		70-130	1		30
Benzene	85		86		70-130	1		30
Toluene	99		100		70-130	1		30
Ethylbenzene	98		98		70-130	0		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03 Batch: WG884361-1 WG884361-2								
Chloromethane	113		116		52-130	3		30
Bromomethane	59		56	Q	57-147	5		30
Vinyl chloride	104		105		67-130	1		30
Chloroethane	74		75		50-151	1		30
1,1-Dichloroethene	87		88		65-135	1		30
trans-1,2-Dichloroethene	84		85		70-130	1		30
Trichloroethene	87		87		70-130	0		30
1,2-Dichlorobenzene	100		100		70-130	0		30
1,3-Dichlorobenzene	104		103		70-130	1		30
1,4-Dichlorobenzene	103		104		70-130	1		30
Methyl tert butyl ether	78		80		66-130	3		30
p/m-Xylene	101		101		70-130	0		30
o-Xylene	98		98		70-130	0		30
cis-1,2-Dichloroethene	83		84		70-130	1		30
Dibromomethane	82		84		70-130	2		30
Styrene	98		99		70-130	1		30
Dichlorodifluoromethane	130		131		30-146	1		30
Acetone	90		89		54-140	1		30
Carbon disulfide	93		97		59-130	4		30
2-Butanone	93		96		70-130	3		30
Vinyl acetate	83		86		70-130	4		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03 Batch: WG884361-1 WG884361-2								
4-Methyl-2-pentanone	81		82		70-130	1		30
1,2,3-Trichloropropane	105		107		68-130	2		30
2-Hexanone	102		103		70-130	1		30
Bromochloromethane	88		87		70-130	1		30
2,2-Dichloropropane	85		85		70-130	0		30
1,2-Dibromoethane	98		98		70-130	0		30
1,3-Dichloropropane	97		97		69-130	0		30
1,1,1,2-Tetrachloroethane	101		100		70-130	1		30
Bromobenzene	102		103		70-130	1		30
n-Butylbenzene	109		110		70-130	1		30
sec-Butylbenzene	107		108		70-130	1		30
tert-Butylbenzene	107		108		70-130	1		30
o-Chlorotoluene	103		104		70-130	1		30
p-Chlorotoluene	103		103		70-130	0		30
1,2-Dibromo-3-chloropropane	104		101		68-130	3		30
Hexachlorobutadiene	119		117		67-130	2		30
Isopropylbenzene	101		104		70-130	3		30
p-Isopropyltoluene	106		106		70-130	0		30
Naphthalene	105		105		70-130	0		30
Acrylonitrile	97		99		70-130	2		30
Isopropyl Ether	95		96		66-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03 Batch: WG884361-1 WG884361-2								
tert-Butyl Alcohol	82		84		70-130	2		30
n-Propylbenzene	104		105		70-130	1		30
1,2,3-Trichlorobenzene	113		111		70-130	2		30
1,2,4-Trichlorobenzene	110		108		70-130	2		30
1,3,5-Trimethylbenzene	106		107		70-130	1		30
1,2,4-Trimethylbenzene	105		106		70-130	1		30
Methyl Acetate	101		101		51-146	0		30
Ethyl Acetate	111		112		70-130	1		30
Acrolein	82		83		70-130	1		30
Cyclohexane	98		101		59-142	3		30
1,4-Dioxane	86		90		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	93		96		50-139	3		30
p-Diethylbenzene	112		113		70-130	1		30
p-Ethyltoluene	111		112		70-130	1		30
1,2,4,5-Tetramethylbenzene	94		94		70-130	0		30
Tetrahydrofuran	100		100		66-130	0		30
Ethyl ether	80		82		67-130	2		30
trans-1,4-Dichloro-2-butene	108		109		70-130	1		30
Methyl cyclohexane	90		94		70-130	4		30
Ethyl-Tert-Butyl-Ether	84		86		70-130	2		30
Tertiary-Amyl Methyl Ether	81		83		70-130	2		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 1500 ASTOR**Project Number:** 20152118.201**Lab Number:** L1610441**Report Date:** 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01,03 Batch: WG884361-1 WG884361-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		94		70-130
Toluene-d8	106		106		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	96		97		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG884365-1 WG884365-2								
Methylene chloride	83		84		70-130	1		30
1,1-Dichloroethane	86		87		70-130	1		30
Chloroform	83		84		70-130	1		30
Carbon tetrachloride	84		85		70-130	1		30
1,2-Dichloropropane	86		88		70-130	2		30
Dibromochloromethane	98		98		70-130	0		30
1,1,2-Trichloroethane	99		98		70-130	1		30
Tetrachloroethene	103		102		70-130	1		30
Chlorobenzene	96		96		70-130	0		30
Trichlorofluoromethane	67	Q	67	Q	70-139	0		30
1,2-Dichloroethane	80		81		70-130	1		30
1,1,1-Trichloroethane	84		86		70-130	2		30
Bromodichloromethane	82		83		70-130	1		30
trans-1,3-Dichloropropene	95		97		70-130	2		30
cis-1,3-Dichloropropene	80		82		70-130	2		30
1,1-Dichloropropene	85		86		70-130	1		30
Bromoform	98		100		70-130	2		30
1,1,2,2-Tetrachloroethane	108		109		70-130	1		30
Benzene	85		86		70-130	1		30
Toluene	99		100		70-130	1		30
Ethylbenzene	98		98		70-130	0		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG884365-1 WG884365-2								
Chloromethane	113		116		52-130	3		30
Bromomethane	59		56	Q	57-147	5		30
Vinyl chloride	104		105		67-130	1		30
Chloroethane	74		75		50-151	1		30
1,1-Dichloroethene	87		88		65-135	1		30
trans-1,2-Dichloroethene	84		85		70-130	1		30
Trichloroethene	87		87		70-130	0		30
1,2-Dichlorobenzene	100		100		70-130	0		30
1,3-Dichlorobenzene	104		103		70-130	1		30
1,4-Dichlorobenzene	103		104		70-130	1		30
Methyl tert butyl ether	78		80		66-130	3		30
p/m-Xylene	101		101		70-130	0		30
o-Xylene	98		98		70-130	0		30
cis-1,2-Dichloroethene	83		84		70-130	1		30
Dibromomethane	82		84		70-130	2		30
Styrene	98		99		70-130	1		30
Dichlorodifluoromethane	130		131		30-146	1		30
Acetone	90		89		54-140	1		30
Carbon disulfide	93		97		59-130	4		30
2-Butanone	93		96		70-130	3		30
Vinyl acetate	83		86		70-130	4		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG884365-1 WG884365-2								
4-Methyl-2-pentanone	81		82		70-130	1		30
1,2,3-Trichloropropane	105		107		68-130	2		30
2-Hexanone	102		103		70-130	1		30
Bromochloromethane	88		87		70-130	1		30
2,2-Dichloropropane	85		85		70-130	0		30
1,2-Dibromoethane	98		98		70-130	0		30
1,3-Dichloropropane	97		97		69-130	0		30
1,1,1,2-Tetrachloroethane	101		100		70-130	1		30
Bromobenzene	102		103		70-130	1		30
n-Butylbenzene	109		110		70-130	1		30
sec-Butylbenzene	107		108		70-130	1		30
tert-Butylbenzene	107		108		70-130	1		30
o-Chlorotoluene	103		104		70-130	1		30
p-Chlorotoluene	103		103		70-130	0		30
1,2-Dibromo-3-chloropropane	104		101		68-130	3		30
Hexachlorobutadiene	119		117		67-130	2		30
Isopropylbenzene	101		104		70-130	3		30
p-Isopropyltoluene	106		106		70-130	0		30
Naphthalene	105		105		70-130	0		30
Acrylonitrile	97		99		70-130	2		30
Isopropyl Ether	95		96		66-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG884365-1 WG884365-2								
tert-Butyl Alcohol	82		84		70-130	2		30
n-Propylbenzene	104		105		70-130	1		30
1,2,3-Trichlorobenzene	113		111		70-130	2		30
1,2,4-Trichlorobenzene	110		108		70-130	2		30
1,3,5-Trimethylbenzene	106		107		70-130	1		30
1,2,4-Trimethylbenzene	105		106		70-130	1		30
Methyl Acetate	101		101		51-146	0		30
Ethyl Acetate	111		112		70-130	1		30
Acrolein	82		83		70-130	1		30
Cyclohexane	98		101		59-142	3		30
1,4-Dioxane	86		90		65-136	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	93		96		50-139	3		30
p-Diethylbenzene	112		113		70-130	1		30
p-Ethyltoluene	111		112		70-130	1		30
1,2,4,5-Tetramethylbenzene	94		94		70-130	0		30
Tetrahydrofuran	100		100		66-130	0		30
Ethyl ether	80		82		67-130	2		30
trans-1,4-Dichloro-2-butene	108		109		70-130	1		30
Methyl cyclohexane	90		94		70-130	4		30
Ethyl-Tert-Butyl-Ether	84		86		70-130	2		30
Tertiary-Amyl Methyl Ether	81		83		70-130	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG884365-1 WG884365-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		94		70-130
Toluene-d8	107		106		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	96		97		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG884614-1 WG884614-2								
Methylene chloride	86		81		70-130	6		30
1,1-Dichloroethane	85		79		70-130	7		30
Chloroform	83		79		70-130	5		30
Carbon tetrachloride	79		74		70-130	7		30
1,2-Dichloropropane	88		83		70-130	6		30
Dibromochloromethane	96		92		70-130	4		30
1,1,2-Trichloroethane	100		95		70-130	5		30
Tetrachloroethene	93		88		70-130	6		30
Chlorobenzene	93		87		70-130	7		30
Trichlorofluoromethane	66	Q	61	Q	70-139	8		30
1,2-Dichloroethane	83		78		70-130	6		30
1,1,1-Trichloroethane	80		74		70-130	8		30
Bromodichloromethane	84		78		70-130	7		30
trans-1,3-Dichloropropene	94		91		70-130	3		30
cis-1,3-Dichloropropene	82		78		70-130	5		30
1,1-Dichloropropene	78		74		70-130	5		30
Bromoform	100		96		70-130	4		30
1,1,2,2-Tetrachloroethane	111		107		70-130	4		30
Benzene	83		78		70-130	6		30
Toluene	94		89		70-130	5		30
Ethylbenzene	92		86		70-130	7		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG884614-1 WG884614-2								
Chloromethane	124		121		52-130	2		30
Bromomethane	64		59		57-147	8		30
Vinyl chloride	103		96		67-130	7		30
Chloroethane	74		69		50-151	7		30
1,1-Dichloroethene	83		77		65-135	8		30
trans-1,2-Dichloroethene	80		75		70-130	6		30
Trichloroethene	83		77		70-130	8		30
1,2-Dichlorobenzene	98		94		70-130	4		30
1,3-Dichlorobenzene	100		94		70-130	6		30
1,4-Dichlorobenzene	100		97		70-130	3		30
Methyl tert butyl ether	78		76		66-130	3		30
p/m-Xylene	95		90		70-130	5		30
o-Xylene	91		86		70-130	6		30
cis-1,2-Dichloroethene	82		77		70-130	6		30
Dibromomethane	87		80		70-130	8		30
Styrene	93		89		70-130	4		30
Dichlorodifluoromethane	133		126		30-146	5		30
Acetone	95		92		54-140	3		30
Carbon disulfide	84		78		59-130	7		30
2-Butanone	96		86		70-130	11		30
Vinyl acetate	86		84		70-130	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG884614-1 WG884614-2								
4-Methyl-2-pentanone	79		78		70-130	1		30
1,2,3-Trichloropropane	106		102		68-130	4		30
2-Hexanone	98		98		70-130	0		30
Bromochloromethane	91		86		70-130	6		30
2,2-Dichloropropane	81		74		70-130	9		30
1,2-Dibromoethane	98		95		70-130	3		30
1,3-Dichloropropane	98		94		69-130	4		30
1,1,1,2-Tetrachloroethane	99		95		70-130	4		30
Bromobenzene	98		94		70-130	4		30
n-Butylbenzene	96		92		70-130	4		30
sec-Butylbenzene	95		90		70-130	5		30
tert-Butylbenzene	96		92		70-130	4		30
o-Chlorotoluene	108		76		70-130	35	Q	30
p-Chlorotoluene	98		92		70-130	6		30
1,2-Dibromo-3-chloropropane	101		100		68-130	1		30
Hexachlorobutadiene	100		98		67-130	2		30
Isopropylbenzene	92		87		70-130	6		30
p-Isopropyltoluene	95		91		70-130	4		30
Naphthalene	102		103		70-130	1		30
Acrylonitrile	104		100		70-130	4		30
Isopropyl Ether	93		88		66-130	6		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG884614-1 WG884614-2								
tert-Butyl Alcohol	82		82		70-130	0		30
n-Propylbenzene	98		92		70-130	6		30
1,2,3-Trichlorobenzene	107		106		70-130	1		30
1,2,4-Trichlorobenzene	104		102		70-130	2		30
1,3,5-Trimethylbenzene	98		93		70-130	5		30
1,2,4-Trimethylbenzene	100		94		70-130	6		30
Methyl Acetate	105		101		51-146	4		30
Ethyl Acetate	153	Q	160	Q	70-130	4		30
Acrolein	98		94		70-130	4		30
Cyclohexane	86		80		59-142	7		30
1,4-Dioxane	84		86		65-136	2		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	84		77		50-139	9		30
p-Diethylbenzene	96		92		70-130	4		30
p-Ethyltoluene	98		93		70-130	5		30
1,2,4,5-Tetramethylbenzene	84		81		70-130	4		30
Tetrahydrofuran	105		99		66-130	6		30
Ethyl ether	85		80		67-130	6		30
trans-1,4-Dichloro-2-butene	101		98		70-130	3		30
Methyl cyclohexane	76		71		70-130	7		30
Ethyl-Tert-Butyl-Ether	82		80		70-130	2		30
Tertiary-Amyl Methyl Ether	80		77		70-130	4		30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** 1500 ASTOR**Project Number:** 20152118.201**Lab Number:** L1610441**Report Date:** 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 06 Batch: WG884614-1 WG884614-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		94		70-130
Toluene-d8	105		105		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	97		96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG884683-1 WG884683-2								
Methylene chloride	91		90		70-130	1		30
1,1-Dichloroethane	92		90		70-130	2		30
Chloroform	89		85		70-130	5		30
Carbon tetrachloride	92		89		70-130	3		30
1,2-Dichloropropane	93		92		70-130	1		30
Dibromochloromethane	102		100		70-130	2		30
1,1,2-Trichloroethane	102		100		70-130	2		30
Tetrachloroethene	111		105		70-130	6		30
Chlorobenzene	101		98		70-130	3		30
Trichlorofluoromethane	77		74		70-139	4		30
1,2-Dichloroethane	85		83		70-130	2		30
1,1,1-Trichloroethane	92		89		70-130	3		30
Bromodichloromethane	86		85		70-130	1		30
trans-1,3-Dichloropropene	100		99		70-130	1		30
cis-1,3-Dichloropropene	90		87		70-130	3		30
1,1-Dichloropropene	96		92		70-130	4		30
Bromoform	106		104		70-130	2		30
1,1,2,2-Tetrachloroethane	114		111		70-130	3		30
Benzene	92		89		70-130	3		30
Toluene	105		102		70-130	3		30
Ethylbenzene	104		101		70-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG884683-1 WG884683-2								
Chloromethane	127		130		52-130	2		30
Bromomethane	66		64		57-147	3		30
Vinyl chloride	117		114		67-130	3		30
Chloroethane	55		79		50-151	36	Q	30
1,1-Dichloroethene	100		94		65-135	6		30
trans-1,2-Dichloroethene	94		89		70-130	5		30
Trichloroethene	92		89		70-130	3		30
1,2-Dichlorobenzene	105		104		70-130	1		30
1,3-Dichlorobenzene	107		105		70-130	2		30
1,4-Dichlorobenzene	108		106		70-130	2		30
Methyl tert butyl ether	85		85		66-130	0		30
p/m-Xylene	107		103		70-130	4		30
o-Xylene	101		99		70-130	2		30
cis-1,2-Dichloroethene	92		88		70-130	4		30
Dibromomethane	87		86		70-130	1		30
Styrene	100		98		70-130	2		30
Dichlorodifluoromethane	161	Q	156	Q	30-146	3		30
Acetone	88		88		54-140	0		30
Carbon disulfide	100		96		59-130	4		30
2-Butanone	94		90		70-130	4		30
Vinyl acetate	91		88		70-130	3		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG884683-1 WG884683-2								
4-Methyl-2-pentanone	86		85		70-130	1		30
1,2,3-Trichloropropane	109		109		68-130	0		30
2-Hexanone	105		103		70-130	2		30
Bromochloromethane	95		94		70-130	1		30
2,2-Dichloropropane	93		88		70-130	6		30
1,2-Dibromoethane	103		102		70-130	1		30
1,3-Dichloropropane	103		102		69-130	1		30
1,1,1,2-Tetrachloroethane	104		100		70-130	4		30
Bromobenzene	109		106		70-130	3		30
n-Butylbenzene	112		108		70-130	4		30
sec-Butylbenzene	114		110		70-130	4		30
tert-Butylbenzene	117		113		70-130	3		30
o-Chlorotoluene	91		106		70-130	15		30
p-Chlorotoluene	110		106		70-130	4		30
1,2-Dibromo-3-chloropropane	109		106		68-130	3		30
Hexachlorobutadiene	123		118		67-130	4		30
Isopropylbenzene	114		108		70-130	5		30
p-Isopropyltoluene	114		110		70-130	4		30
Naphthalene	114		113		70-130	1		30
Acrylonitrile	103		104		70-130	1		30
Isopropyl Ether	100		99		66-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG884683-1 WG884683-2								
tert-Butyl Alcohol	86		86		70-130	0		30
n-Propylbenzene	115		110		70-130	4		30
1,2,3-Trichlorobenzene	116		114		70-130	2		30
1,2,4-Trichlorobenzene	116		112		70-130	4		30
1,3,5-Trimethylbenzene	114		110		70-130	4		30
1,2,4-Trimethylbenzene	113		109		70-130	4		30
Methyl Acetate	103		101		51-146	2		30
Ethyl Acetate	120		119		70-130	1		30
Acrolein	102		99		70-130	3		30
Cyclohexane	110		106		59-142	4		30
1,4-Dioxane	92		95		65-136	3		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	102		97		50-139	5		30
p-Diethylbenzene	115		110		70-130	4		30
p-Ethyltoluene	114		110		70-130	4		30
1,2,4,5-Tetramethylbenzene	97		95		70-130	2		30
Tetrahydrofuran	105		102		66-130	3		30
Ethyl ether	87		86		67-130	1		30
trans-1,4-Dichloro-2-butene	105		103		70-130	2		30
Methyl cyclohexane	100		94		70-130	6		30
Ethyl-Tert-Butyl-Ether	91		90		70-130	1		30
Tertiary-Amyl Methyl Ether	88		87		70-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 05 Batch: WG884683-1 WG884683-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		91		70-130
Toluene-d8	106		106		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	94		93		70-130

INORGANICS & MISCELLANEOUS

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-01
Client ID: 2118-SB-01 (1.0-1.5)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 09:10
Date Received: 04/08/16
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	84.9		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-02
Client ID: 2118-SB-01 (7.5-8.0)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 09:25
Date Received: 04/08/16
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	91.4		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-03
Client ID: 2118-SB-02 (0.5-1.0)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 09:30
Date Received: 04/08/16
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	92.9		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-04
Client ID: 2118-SB-02 (4.0-4.5)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 09:40
Date Received: 04/08/16
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	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-05
Client ID: 2118-SB-03 (0.5-1.0)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 10:00
Date Received: 04/08/16
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	85.9		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-06
Client ID: 2118-SB-03 (6.5-7.0)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 10:15
Date Received: 04/08/16
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	91.2		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-07
Client ID: 2118-SB-04 (1.0-1.5)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 11:15
Date Received: 04/08/16
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	88.8		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

SAMPLE RESULTS

Lab ID: L1610441-08
Client ID: 2118-SB-04 (7.0-7.5)
Sample Location: BRONX, NY
Matrix: Soil

Date Collected: 04/07/16 11:30
Date Received: 04/08/16
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	90.3		%	0.100	NA	1	-	04/11/16 15:58	121,2540G	RI



Lab Duplicate Analysis
Batch Quality Control

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG882451-1 QC Sample: L1610368-01 Client ID: DUP Sample						
Solids, Total	80.1	79.8	%	0		20

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 04/09/2016 05:11

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1610441-01A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-01B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-01C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-01D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-02A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-02B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-02C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-02D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-03A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-03B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-03C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-03D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-04A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-04B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-04C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-04D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-05A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-05B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-05C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-05D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-06A	Vial MeOH preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-06B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-06C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-06D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-07A	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-07B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-07C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)

*Values in parentheses indicate holding time in days



Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1610441-07D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-08A	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-08B	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-08C	Vial water preserved	A	N/A	2.2	Y	Absent	NYTCL-8260HLW(14)
L1610441-08D	Plastic 2oz unpreserved for TS	A	N/A	2.2	Y	Absent	TS(7)
L1610441-09A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1610441-09B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1610441-09C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1610441-10A	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1610441-10B	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)
L1610441-10C	Vial HCl preserved	A	N/A	2.2	Y	Absent	NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

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

Report Format: DU Report with 'J' Qualifiers



Project Name: 1500 ASTOR
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Lab Number: L1610441
Report Date: 04/18/16

Data Qualifiers

- 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: 1500 ASTOR
Project Number: 20152118.201

Lab Number: L1610441
Report Date: 04/18/16

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance

EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols

EPA 9251: NPW: Chloride

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam

EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids

EPA 1631E: SCM: Mercury

EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1,**

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA

350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F,**

EPA 353.2: Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.


EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

	NEW YORK CHAIN OF CUSTODY	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 <div style="border: 1px solid black; padding: 2px; text-align: center;">1 of 1</div>		Date Rec'd in Lab 4/8/16	ALPHA Job # C1610441	
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	Project Information		Deliverables		Billing Information	
Client Information		Project Name: 1500 Astor Project Location: Bronx, NY Project # 20152118.201 (Use Project name as Project #) <input type="checkbox"/>		<input checked="" type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> EQulS (4 File) <input type="checkbox"/> Other		<input type="checkbox"/> Same as Client Info PO # 20152118.201	
Client: Property Solutions Inc Address: 31A Northfield Ave Edison, NJ Phone: (732) 417-0999 Fax: Email: BTurner@PropertySolutionsInc.com		Project Manager: Brianna Turner ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement		Disposal Site Information	
These samples have been previously analyzed by Alpha <input type="checkbox"/>				ANALYSIS		Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:	
Other project specific requirements/comments:				<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">8260-TCL</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">6247-TCL</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">8260-TCL</div> </div> <div style="width: 35%;"> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">8260-TCL</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">6247-TCL</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">8260-TCL</div> </div> </div>		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)	Total Bottle
Please specify Metals or TAL.							
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time		Sample Matrix	Sampler's Initials		
10441	2118-SB-01 (1.0-1.5)	4/7/16	09:10AM	Soil	BT	<input checked="" type="checkbox"/>	
02	2118-SB-01 (7.5-8.5)	4/7/16	09:25AM	Soil	BT	<input checked="" type="checkbox"/>	
03	2118-SB-02 (0.5-1.0)	4/7/16	09:30AM	Soil	BT	<input checked="" type="checkbox"/>	
04	2118-SB-02 (4.0-4.5)	4/7/16	09:40AM	Soil	BT	<input checked="" type="checkbox"/>	
05	2118-SB-03 (0.5-1.0)	4/7/16	10:00AM	Soil	BT	<input checked="" type="checkbox"/>	
06	2118-SB-03 (6.5-7.6)	4/7/16	10:15AM	Soil	BT	<input checked="" type="checkbox"/>	
07	2118-SB-04 (1.0-1.5)	4/7/16	11:15AM	Soil	BT	<input checked="" type="checkbox"/>	
08	2118-SB-04 (7.6-7.5)	4/7/16	11:30AM	Soil	BT	<input checked="" type="checkbox"/>	
09	2118-TW-03 (7.6)	4/7/16	10:25AM	AW	BT	<input checked="" type="checkbox"/>	
10	2118-TW-04 (9.0)	4/7/16	11:50AM	GW	BT	<input checked="" type="checkbox"/>	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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		Container Type <div style="display: flex; justify-content: space-around;"> A A A </div>	
				Preservative <div style="display: flex; justify-content: space-around;"> A B B </div>			
Relinquished By:		Date/Time		Received By:		Date/Time	
Brianna Turner		4/8/16-12:51		Brianna Turner		4-8-16-12:51	
Brianna Turner		4-8-16-1930		Brianna Turner		4-8-16-1930	
Brianna Turner		4/7/16 23:25		Brianna Turner		4/7/16 23:25	



ANALYTICAL REPORT

Lab Number:	L1610339
Client:	Property Solutions Inc. 323 New Albany Road Moorestown, NJ 08057
ATTN:	Burt Turner
Phone:	(856) 813-3000
Project Name:	1500 ASTOR AVENUE
Project Number:	20152118.201
Report Date:	04/18/16

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Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

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



Project Name: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1610339-01	2118-SV-01 (0.5)	SOIL_VAPOR	BRONX, NY	04/07/16 14:18	04/08/16
L1610339-02	2118-SV-02 (0.5)	SOIL_VAPOR	BRONX, NY	04/07/16 14:58	04/08/16

Project Name: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

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: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on April 6, 2016. The canister certification results are provided as an addendum.

Samples L1610339-01 and -02: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

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: 04/18/16

AIR

Project Name: 1500 ASTOR AVENUE**Project Number:** 20152118.201**Lab Number:** L1610339**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-01 D
Client ID: 2118-SV-01 (0.5)
Sample Location: BRONX, NY
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 04/17/16 19:27
Analyst: MB

Date Collected: 04/07/16 14:18
Date Received: 04/08/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
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	ND	3.33	--	ND	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	ND	0.667	--	ND	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	ND	1.67	--	ND	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: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-01 D

Date Collected: 04/07/16 14:18

Client ID: 2118-SV-01 (0.5)

Date Received: 04/08/16

Sample Location: BRONX, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	0.667	--	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	ND	0.667	--	ND	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	ND	0.667	--	ND	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	ND	0.667	--	ND	3.12	--		3.333
Heptane	ND	0.667	--	ND	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	0.676	0.667	--	2.55	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	287	0.667	--	1950	4.52	--		3.333
Chlorobenzene	ND	0.667	--	ND	3.07	--		3.333
Ethylbenzene	ND	0.667	--	ND	2.90	--		3.333
p/m-Xylene	ND	1.33	--	ND	5.78	--		3.333
Bromoform	ND	0.667	--	ND	6.90	--		3.333
Styrene	ND	0.667	--	ND	2.84	--		3.333



Project Name: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-01 D

Date Collected: 04/07/16 14:18

Client ID: 2118-SV-01 (0.5)

Date Received: 04/08/16

Sample Location: BRONX, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	0.667	--	ND	4.58	--		3.333
o-Xylene	ND	0.667	--	ND	2.90	--		3.333
4-Ethyltoluene	ND	0.667	--	ND	3.28	--		3.333
1,3,5-Trimethylbenzene	ND	0.667	--	ND	3.28	--		3.333
1,2,4-Trimethylbenzene	ND	0.667	--	ND	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	91		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	91		60-140



Project Name: 1500 ASTOR AVENUE**Project Number:** 20152118.201**Lab Number:** L1610339**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-02 D

Client ID: 2118-SV-02 (0.5)

Sample Location: BRONX, NY

Matrix: Soil_Vapor

Analytical Method: 48,TO-15

Analytical Date: 04/17/16 19:56

Analyst: MB

Date Collected: 04/07/16 14:58

Date Received: 04/08/16

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	ND	2.00	--	ND	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	ND	50.0	--	ND	94.2	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	12.1	10.0	--	28.7	23.8	--		10
Trichlorofluoromethane	ND	2.00	--	ND	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Tertiary butyl Alcohol	ND	5.00	--	ND	15.2	--		10
Methylene chloride	ND	5.00	--	ND	17.4	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	ND	2.00	--	ND	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
2-Butanone	ND	5.00	--	ND	14.7	--		10
cis-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10



Project Name: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-02 D

Date Collected: 04/07/16 14:58

Client ID: 2118-SV-02 (0.5)

Date Received: 04/08/16

Sample Location: BRONX, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	ND	2.00	--	ND	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	ND	2.00	--	ND	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	ND	2.00	--	ND	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	768	2.00	--	5210	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	ND	2.00	--	ND	8.69	--		10
p/m-Xylene	ND	4.00	--	ND	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10



Project Name: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16**SAMPLE RESULTS**

Lab ID: L1610339-02 D

Date Collected: 04/07/16 14:58

Client ID: 2118-SV-02 (0.5)

Date Received: 04/08/16

Sample Location: BRONX, NY

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	ND	2.00	--	ND	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	89		60-140



Project Name: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/17/16 13:59

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG884487-4								
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: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/17/16 13:59

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG884487-4								
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: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 04/17/16 13:59

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG884487-4								
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: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG884487-3								
Chlorodifluoromethane	84		-		70-130	-		
Propylene	97		-		70-130	-		
Propane	96		-		70-130	-		
Dichlorodifluoromethane	96		-		70-130	-		
Chloromethane	101		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	96		-		70-130	-		
Methanol	99		-		70-130	-		
Vinyl chloride	98		-		70-130	-		
1,3-Butadiene	103		-		70-130	-		
Butane	100		-		70-130	-		
Bromomethane	88		-		70-130	-		
Chloroethane	95		-		70-130	-		
Ethyl Alcohol	106		-		70-130	-		
Dichlorofluoromethane	91		-		70-130	-		
Vinyl bromide	87		-		70-130	-		
Acrolein	89		-		70-130	-		
Acetone	96		-		70-130	-		
Acetonitrile	96		-		70-130	-		
Trichlorofluoromethane	92		-		70-130	-		
iso-Propyl Alcohol	92		-		70-130	-		
Acrylonitrile	94		-		70-130	-		

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG884487-3								
Pentane	99		-		70-130	-		
Ethyl ether	104		-		70-130	-		
1,1-Dichloroethene	98		-		70-130	-		
tert-Butyl Alcohol	93		-		70-130	-		
Methylene chloride	110		-		70-130	-		
3-Chloropropene	109		-		70-130	-		
Carbon disulfide	96		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	94		-		70-130	-		
trans-1,2-Dichloroethene	89		-		70-130	-		
1,1-Dichloroethane	100		-		70-130	-		
Methyl tert butyl ether	79		-		70-130	-		
Vinyl acetate	125		-		70-130	-		
2-Butanone	92		-		70-130	-		
cis-1,2-Dichloroethene	100		-		70-130	-		
Ethyl Acetate	88		-		70-130	-		
Chloroform	87		-		70-130	-		
Tetrahydrofuran	94		-		70-130	-		
2,2-Dichloropropane	78		-		70-130	-		
1,2-Dichloroethane	84		-		70-130	-		
n-Hexane	110		-		70-130	-		
Isopropyl Ether	94		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG884487-3								
Ethyl-Tert-Butyl-Ether	98		-		70-130	-		
1,1,1-Trichloroethane	103		-		70-130	-		
1,1-Dichloropropene	98		-		70-130	-		
Benzene	102		-		70-130	-		
Carbon tetrachloride	104		-		70-130	-		
Cyclohexane	108		-		70-130	-		
Tertiary-Amyl Methyl Ether	95		-		70-130	-		
Dibromomethane	98		-		70-130	-		
1,2-Dichloropropane	112		-		70-130	-		
Bromodichloromethane	105		-		70-130	-		
1,4-Dioxane	99		-		70-130	-		
Trichloroethene	97		-		70-130	-		
2,2,4-Trimethylpentane	114		-		70-130	-		
Methyl Methacrylate	106		-		70-130	-		
Heptane	115		-		70-130	-		
cis-1,3-Dichloropropene	108		-		70-130	-		
4-Methyl-2-pentanone	119		-		70-130	-		
trans-1,3-Dichloropropene	94		-		70-130	-		
1,1,2-Trichloroethane	106		-		70-130	-		
Toluene	93		-		70-130	-		
1,3-Dichloropropane	97		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG884487-3								
2-Hexanone	118		-		70-130	-		
Dibromochloromethane	100		-		70-130	-		
1,2-Dibromoethane	98		-		70-130	-		
Butyl Acetate	96		-		70-130	-		
Octane	90		-		70-130	-		
Tetrachloroethene	94		-		70-130	-		
1,1,1,2-Tetrachloroethane	93		-		70-130	-		
Chlorobenzene	96		-		70-130	-		
Ethylbenzene	99		-		70-130	-		
p/m-Xylene	102		-		70-130	-		
Bromoform	105		-		70-130	-		
Styrene	99		-		70-130	-		
1,1,2,2-Tetrachloroethane	115		-		70-130	-		
o-Xylene	105		-		70-130	-		
1,2,3-Trichloropropane	97		-		70-130	-		
Nonane (C9)	110		-		70-130	-		
Isopropylbenzene	97		-		70-130	-		
Bromobenzene	95		-		70-130	-		
o-Chlorotoluene	93		-		70-130	-		
n-Propylbenzene	96		-		70-130	-		
p-Chlorotoluene	92		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG884487-3								
4-Ethyltoluene	98		-		70-130	-		
1,3,5-Trimethylbenzene	100		-		70-130	-		
tert-Butylbenzene	100		-		70-130	-		
1,2,4-Trimethylbenzene	110		-		70-130	-		
Decane (C10)	105		-		70-130	-		
Benzyl chloride	110		-		70-130	-		
1,3-Dichlorobenzene	104		-		70-130	-		
1,4-Dichlorobenzene	102		-		70-130	-		
sec-Butylbenzene	100		-		70-130	-		
p-Isopropyltoluene	91		-		70-130	-		
1,2-Dichlorobenzene	101		-		70-130	-		
n-Butylbenzene	103		-		70-130	-		
1,2-Dibromo-3-chloropropane	97		-		70-130	-		
Undecane	108		-		70-130	-		
Dodecane (C12)	112		-		70-130	-		
1,2,4-Trichlorobenzene	101		-		70-130	-		
Naphthalene	92		-		70-130	-		
1,2,3-Trichlorobenzene	94		-		70-130	-		
Hexachlorobutadiene	104		-		70-130	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG884487-5 QC Sample: L1611031-01 Client ID: DUP Sample						
Dichlorodifluoromethane	0.526	0.428	ppbV	21		25
Chloromethane	0.504	0.501	ppbV	1		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	1.97	1.90	ppbV	4		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	39.6	39.8	ppbV	1		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	359	361	ppbV	1		25
Trichlorofluoromethane	0.247	0.241	ppbV	2		25
iso-Propyl Alcohol	46.4	48.4	ppbV	4		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	7.52	7.77	ppbV	3		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	0.268	0.269	ppbV	0		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG884487-5 QC Sample: L1611031-01 Client ID: DUP Sample					
1,1-Dichloroethane	ND	ND	ppbV	NC	25
Methyl tert butyl ether	ND	ND	ppbV	NC	25
2-Butanone	17.0	16.5	ppbV	3	25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25
Ethyl Acetate	8.10	8.34	ppbV	3	25
Chloroform	1.57	1.59	ppbV	1	25
Tetrahydrofuran	5.77	5.83	ppbV	1	25
1,2-Dichloroethane	ND	ND	ppbV	NC	25
n-Hexane	8.47	8.32	ppbV	2	25
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25
Benzene	5.51	5.51	ppbV	0	25
Carbon tetrachloride	ND	ND	ppbV	NC	25
Cyclohexane	2.29	2.37	ppbV	3	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	1.18	1.14	ppbV	3	25
1,4-Dioxane	ND	ND	ppbV	NC	25
Trichloroethene	ND	ND	ppbV	NC	25
2,2,4-Trimethylpentane	2.46	2.49	ppbV	1	25
Heptane	12.0	11.5	ppbV	4	25

Lab Duplicate Analysis Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG884487-5 QC Sample: L1611031-01 Client ID: DUP Sample					
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
4-Methyl-2-pentanone	3.91	3.84	ppbV	2	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	30.8	30.3	ppbV	2	25
2-Hexanone	1.17	1.20	ppbV	3	25
Dibromochloromethane	1.00	1.00	ppbV	0	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	1.42	1.44	ppbV	1	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	14.2	14.2	ppbV	0	25
p/m-Xylene	56.9	55.9	ppbV	2	25
Bromoform	0.327	0.322	ppbV	2	25
Styrene	0.278	0.288	ppbV	4	25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC	25
o-Xylene	13.8	13.8	ppbV	0	25
4-Ethyltoluene	1.59	1.58	ppbV	1	25
1,3,5-Trimethylbenzene	1.63	1.65	ppbV	1	25
1,2,4-Trimethylbenzene	5.61	5.52	ppbV	2	25

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVENUE

Project Number: 20152118.201

Lab Number: L1610339

Report Date: 04/18/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG884487-5 QC Sample: L1611031-01 Client ID: DUP Sample					
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: 1500 ASTOR AVENUE

Serial_No:04181611:42
Lab Number: L1610339

Project Number: 20152118.201

Report Date: 04/18/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1610339-01	2118-SV-01 (0.5)	0518	SV200	04/06/16	220078		-	-	-	Pass	216	205	5
L1610339-01	2118-SV-01 (0.5)	253	2.7L Can	04/06/16	220078	L1609503-02	Pass	-29.9	-0.5	-	-	-	-
L1610339-02	2118-SV-02 (0.5)	0604	SV200	04/06/16	220078		-	-	-	Pass	213	207	3
L1610339-02	2118-SV-02 (0.5)	113	2.7L Can	04/06/16	220078	L1609503-02	Pass	-29.9	-0.8	-	-	-	-

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

Lab Number: L1609503
Report Date: 04/18/16

Air Canister Certification Results

Lab ID: L1609503-02
Client ID: CAN 389 SHELF 3
Sample Location:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 04/02/16 16:10
Analyst: RY

Date Collected: 04/01/16 16:30
Date Received: 04/02/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	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: L1609503
Report Date: 04/18/16

Air Canister Certification Results

Lab ID: L1609503-02
Client ID: CAN 389 SHELF 3
Sample Location:

Date Collected: 04/01/16 16:30
Date Received: 04/02/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	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**Lab Number:** L1609503**Project Number:** CANISTER QC BAT**Report Date:** 04/18/16**Air Canister Certification Results**

Lab ID: L1609503-02

Date Collected: 04/01/16 16:30

Client ID: CAN 389 SHELF 3

Date Received: 04/02/16

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
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: L1609503
Report Date: 04/18/16

Air Canister Certification Results

Lab ID: L1609503-02
Client ID: CAN 389 SHELF 3
Sample Location:

Date Collected: 04/01/16 16:30
Date Received: 04/02/16
Field Prep: Not Specified

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

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1609503**Project Number:** CANISTER QC BAT**Report Date:** 04/18/16**Air Canister Certification Results**

Lab ID: L1609503-02

Date Collected: 04/01/16 16:30

Client ID: CAN 389 SHELF 3

Date Received: 04/02/16

Sample Location:

Field Prep: Not Specified

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	93		60-140

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

Lab Number: L1609503
Report Date: 04/18/16

Air Canister Certification Results

Lab ID: L1609503-02
Client ID: CAN 389 SHELF 3
Sample Location:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 04/02/16 16:10
Analyst: RY

Date Collected: 04/01/16 16:30
Date Received: 04/02/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	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: L1609503
Report Date: 04/18/16

Air Canister Certification Results

Lab ID: L1609503-02
Client ID: CAN 389 SHELF 3
Sample Location:

Date Collected: 04/01/16 16:30
Date Received: 04/02/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.020	--	ND	0.092	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	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
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
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1609503**Project Number:** CANISTER QC BAT**Report Date:** 04/18/16**Air Canister Certification Results**

Lab ID: L1609503-02

Date Collected: 04/01/16 16:30

Client ID: CAN 389 SHELF 3

Date Received: 04/02/16

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
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	96		60-140

Project Name: 1500 ASTOR AVENUE**Lab Number:** L1610339**Project Number:** 20152118.201**Report Date:** 04/18/16**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1610339-01A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)
L1610339-02A	Canister - 2.7 Liter	N/A	N/A		Y	Absent	TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

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

Report Format: Data Usability Report



Project Name: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

Data Qualifiers

- 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.

Project Name: 1500 ASTOR AVENUE
Project Number: 20152118.201

Lab Number: L1610339
Report Date: 04/18/16

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance

EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols

EPA 9251: NPW: Chloride

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam

EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids

EPA 1631E: SCM: Mercury

EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1,**

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA

350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F,**

EPA 353.2: Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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



ANALYTICAL REPORT

Lab Number:	L1618618
Client:	Property Solutions Inc. 323 New Albany Road Moorestown, NJ 08057
ATTN:	Burt Turner
Phone:	(856) 813-3000
Project Name:	1500 ASTOR AVE.
Project Number:	20152118.202
Report Date:	06/23/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618618
Report Date: 06/23/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1618618-01	2118-SB8 (4.0-4.5)	SOIL	1500 ASTOR AVE., BRONX, NY	06/15/16 10:40	06/16/16
L1618618-02	2118-SB8 (8.0-8.5)	SOIL	1500 ASTOR AVE., BRONX, NY	06/15/16 10:55	06/16/16
L1618618-03	2118-SB9 (4.0-4.5)	SOIL	1500 ASTOR AVE., BRONX, NY	06/15/16 12:40	06/16/16
L1618618-04	2118-SB9 (8.0-8.5)	SOIL	1500 ASTOR AVE., BRONX, NY	06/15/16 12:55	06/16/16
L1618618-05	2118-SB10 (4.5-5.0)	SOIL	1500 ASTOR AVE., BRONX, NY	06/16/16 11:50	06/16/16
L1618618-06	2118-SB10 (10.0-10.5)	SOIL	1500 ASTOR AVE., BRONX, NY	06/16/16 12:00	06/16/16

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16

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: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618618
Report Date: 06/23/16

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.

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:



Cristin Walker

Title: Technical Director/Representative

Date: 06/23/16

ORGANICS

VOLATILES

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-01
Client ID: 2118-SB8 (4.0-4.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 15:02
Analyst: BN
Percent Solids: 88%

Date Collected: 06/15/16 10:40
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	84	4.8	1
Tetrachloroethene	1000		ug/kg	56	7.9	1
1,2-Dichloroethane	ND		ug/kg	56	6.4	1
1,1,1-Trichloroethane	ND		ug/kg	56	6.2	1
Vinyl chloride	ND		ug/kg	110	6.6	1
1,1-Dichloroethene	ND		ug/kg	56	15.	1
trans-1,2-Dichloroethene	140		ug/kg	84	12.	1
Trichloroethene	190		ug/kg	56	7.0	1
cis-1,2-Dichloroethene	4700		ug/kg	56	8.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	100		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-02
Client ID: 2118-SB8 (8.0-8.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 12:53
Analyst: BN
Percent Solids: 92%

Date Collected: 06/15/16 10:55
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.2	0.07	1
Tetrachloroethene	ND		ug/kg	0.80	0.11	1
1,2-Dichloroethane	ND		ug/kg	0.80	0.09	1
1,1,1-Trichloroethane	ND		ug/kg	0.80	0.09	1
Vinyl chloride	ND		ug/kg	1.6	0.09	1
1,1-Dichloroethene	ND		ug/kg	0.80	0.21	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Trichloroethene	ND		ug/kg	0.80	0.10	1
cis-1,2-Dichloroethene	ND		ug/kg	0.80	0.11	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	102		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-03
Client ID: 2118-SB9 (4.0-4.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 13:19
Analyst: BN
Percent Solids: 89%

Date Collected: 06/15/16 12:40
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.3	0.07	1
Tetrachloroethene	ND		ug/kg	0.86	0.12	1
1,2-Dichloroethane	ND		ug/kg	0.86	0.10	1
1,1,1-Trichloroethane	ND		ug/kg	0.86	0.10	1
Vinyl chloride	ND		ug/kg	1.7	0.10	1
1,1-Dichloroethene	ND		ug/kg	0.86	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.18	1
Trichloroethene	ND		ug/kg	0.86	0.11	1
cis-1,2-Dichloroethene	ND		ug/kg	0.86	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	102		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-04
Client ID: 2118-SB9 (8.0-8.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 13:45
Analyst: BN
Percent Solids: 90%

Date Collected: 06/15/16 12:55
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.3	0.07	1
Tetrachloroethene	ND		ug/kg	0.84	0.12	1
1,2-Dichloroethane	ND		ug/kg	0.84	0.10	1
1,1,1-Trichloroethane	ND		ug/kg	0.84	0.09	1
Vinyl chloride	ND		ug/kg	1.7	0.10	1
1,1-Dichloroethene	ND		ug/kg	0.84	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.18	1
Trichloroethene	ND		ug/kg	0.84	0.10	1
cis-1,2-Dichloroethene	ND		ug/kg	0.84	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-05
Client ID: 2118-SB10 (4.5-5.0)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 14:10
Analyst: BN
Percent Solids: 89%

Date Collected: 06/16/16 11:50
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.2	0.07	1
Tetrachloroethene	ND		ug/kg	0.81	0.11	1
1,2-Dichloroethane	ND		ug/kg	0.81	0.09	1
1,1,1-Trichloroethane	ND		ug/kg	0.81	0.09	1
Vinyl chloride	ND		ug/kg	1.6	0.10	1
1,1-Dichloroethene	ND		ug/kg	0.81	0.21	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.17	1
Trichloroethene	ND		ug/kg	0.81	0.10	1
cis-1,2-Dichloroethene	ND		ug/kg	0.81	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618618-06
Client ID: 2118-SB10 (10.0-10.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/22/16 14:36
Analyst: BN
Percent Solids: 88%

Date Collected: 06/16/16 12:00
Date Received: 06/16/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by 8260/5035 - Westborough Lab						
1,1-Dichloroethane	ND		ug/kg	1.2	0.07	1
Tetrachloroethene	1.0		ug/kg	0.83	0.12	1
1,2-Dichloroethane	ND		ug/kg	0.83	0.09	1
1,1,1-Trichloroethane	ND		ug/kg	0.83	0.09	1
Vinyl chloride	ND		ug/kg	1.7	0.10	1
1,1-Dichloroethene	ND		ug/kg	0.83	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.18	1
Trichloroethene	1.8		ug/kg	0.83	0.10	1
cis-1,2-Dichloroethene	6.2		ug/kg	0.83	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	101		70-130

Project Name: 1500 ASTOR AVE.

Lab Number: L1618618

Project Number: 20152118.202

Report Date: 06/23/16

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/22/16 09:06
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02-06 Batch: WG906572-3					
1,1-Dichloroethane	ND		ug/kg	1.5	0.09
Tetrachloroethene	ND		ug/kg	1.0	0.14
1,2-Dichloroethane	ND		ug/kg	1.0	0.11
1,1,1-Trichloroethane	ND		ug/kg	1.0	0.11
Vinyl chloride	ND		ug/kg	2.0	0.12
1,1-Dichloroethene	ND		ug/kg	1.0	0.26
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.21
Trichloroethene	ND		ug/kg	1.0	0.12
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Project Name: 1500 ASTOR AVE.

Lab Number: L1618618

Project Number: 20152118.202

Report Date: 06/23/16

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/22/16 09:06
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG906929-3					
1,1-Dichloroethane	ND		ug/kg	75	4.3
Tetrachloroethene	ND		ug/kg	50	7.0
1,2-Dichloroethane	ND		ug/kg	50	5.7
1,1,1-Trichloroethane	ND		ug/kg	50	5.5
Vinyl chloride	ND		ug/kg	100	5.9
1,1-Dichloroethene	ND		ug/kg	50	13.
trans-1,2-Dichloroethene	ND		ug/kg	75	11.
Trichloroethene	ND		ug/kg	50	6.2
cis-1,2-Dichloroethene	ND		ug/kg	50	7.1

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02-06 Batch: WG906572-1 WG906572-2								
Methylene chloride	101		100		70-130	1		30
1,1-Dichloroethane	110		106		70-130	4		30
Chloroform	107		106		70-130	1		30
Carbon tetrachloride	118		111		70-130	6		30
1,2-Dichloropropane	106		103		70-130	3		30
Dibromochloromethane	101		102		70-130	1		30
2-Chloroethylvinyl ether	136	Q	129		70-130	5		30
1,1,2-Trichloroethane	101		100		70-130	1		30
Tetrachloroethene	110		104		70-130	6		30
Chlorobenzene	97		97		70-130	0		30
Trichlorofluoromethane	158	Q	148	Q	70-139	7		30
1,2-Dichloroethane	106		108		70-130	2		30
1,1,1-Trichloroethane	120		113		70-130	6		30
Bromodichloromethane	106		103		70-130	3		30
trans-1,3-Dichloropropene	103		103		70-130	0		30
cis-1,3-Dichloropropene	100		97		70-130	3		30
1,1-Dichloropropene	113		106		70-130	6		30
Bromoform	102		102		70-130	0		30
1,1,2,2-Tetrachloroethane	94		95		70-130	1		30
Benzene	100		97		70-130	3		30
Toluene	104		102		70-130	2		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02-06 Batch: WG906572-1 WG906572-2								
Ethylbenzene	111		108		70-130	3		30
Chloromethane	124		133	Q	52-130	7		30
Bromomethane	133		128		57-147	4		30
Vinyl chloride	137	Q	128		67-130	7		30
Chloroethane	150		142		50-151	5		30
1,1-Dichloroethene	116		109		65-135	6		30
trans-1,2-Dichloroethene	108		102		70-130	6		30
Trichloroethene	109		105		70-130	4		30
1,2-Dichlorobenzene	97		95		70-130	2		30
1,3-Dichlorobenzene	99		96		70-130	3		30
1,4-Dichlorobenzene	98		96		70-130	2		30
Methyl tert butyl ether	96		94		66-130	2		30
p/m-Xylene	104		102		70-130	2		30
o-Xylene	103		100		70-130	3		30
cis-1,2-Dichloroethene	104		101		70-130	3		30
Dibromomethane	102		101		70-130	1		30
Styrene	104		103		70-130	1		30
Dichlorodifluoromethane	101		92		30-146	9		30
Acetone	144	Q	122		54-140	17		30
Carbon disulfide	111		103		59-130	7		30
2-Butanone	110		111		70-130	1		30

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02-06 Batch: WG906572-1 WG906572-2								
Vinyl acetate	105		104		70-130	1		30
4-Methyl-2-pentanone	107		104		70-130	3		30
1,2,3-Trichloropropane	98		94		68-130	4		30
2-Hexanone	119		115		70-130	3		30
Bromochloromethane	103		99		70-130	4		30
2,2-Dichloropropane	112		105		70-130	6		30
1,2-Dibromoethane	101		102		70-130	1		30
1,3-Dichloropropane	101		101		69-130	0		30
1,1,1,2-Tetrachloroethane	104		103		70-130	1		30
Bromobenzene	100		100		70-130	0		30
n-Butylbenzene	116		109		70-130	6		30
sec-Butylbenzene	107		101		70-130	6		30
tert-Butylbenzene	105		100		70-130	5		30
o-Chlorotoluene	104		100		70-130	4		30
p-Chlorotoluene	104		100		70-130	4		30
1,2-Dibromo-3-chloropropane	89		87		68-130	2		30
Hexachlorobutadiene	118		113		67-130	4		30
Isopropylbenzene	110		105		70-130	5		30
p-Isopropyltoluene	105		99		70-130	6		30
Naphthalene	92		91		70-130	1		30
Acrylonitrile	117		116		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02-06 Batch: WG906572-1 WG906572-2								
Isopropyl Ether	116		114		66-130	2		30
tert-Butyl Alcohol	91		88		70-130	3		30
n-Propylbenzene	111		106		70-130	5		30
1,2,3-Trichlorobenzene	100		99		70-130	1		30
1,2,4-Trichlorobenzene	106		101		70-130	5		30
1,3,5-Trimethylbenzene	103		100		70-130	3		30
1,2,4-Trimethylbenzene	104		100		70-130	4		30
Methyl Acetate	107		107		51-146	0		30
Ethyl Acetate	124		118		70-130	5		30
Acrolein	114		119		70-130	4		30
Cyclohexane	125		116		59-142	7		30
1,4-Dioxane	90		91		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		103		50-139	7		30
p-Diethylbenzene	107		98		70-130	9		30
p-Ethyltoluene	100		94		70-130	6		30
1,2,4,5-Tetramethylbenzene	99		94		70-130	5		30
Tetrahydrofuran	109		107		66-130	2		30
Ethyl ether	123		122		67-130	1		30
trans-1,4-Dichloro-2-butene	106		103		70-130	3		30
Methyl cyclohexane	105		96		70-130	9		30
Ethyl-Tert-Butyl-Ether	101		100		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Lab Number: L1618618

Project Number: 20152118.202

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02-06 Batch: WG906572-1 WG906572-2								
Tertiary-Amyl Methyl Ether	91		89		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		107		70-130
Toluene-d8	102		104		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	100		102		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG906929-1 WG906929-2								
Methylene chloride	101		100		70-130	1		30
1,1-Dichloroethane	110		106		70-130	4		30
Chloroform	107		106		70-130	1		30
Carbon tetrachloride	118		111		70-130	6		30
1,2-Dichloropropane	106		103		70-130	3		30
Dibromochloromethane	101		102		70-130	1		30
2-Chloroethylvinyl ether	136	Q	129		70-130	5		30
1,1,2-Trichloroethane	101		100		70-130	1		30
Tetrachloroethene	110		104		70-130	6		30
Chlorobenzene	97		97		70-130	0		30
Trichlorofluoromethane	158	Q	148	Q	70-139	7		30
1,2-Dichloroethane	106		108		70-130	2		30
1,1,1-Trichloroethane	120		113		70-130	6		30
Bromodichloromethane	106		103		70-130	3		30
trans-1,3-Dichloropropene	103		103		70-130	0		30
cis-1,3-Dichloropropene	100		97		70-130	3		30
1,1-Dichloropropene	113		106		70-130	6		30
Bromoform	102		102		70-130	0		30
1,1,2,2-Tetrachloroethane	94		95		70-130	1		30
Benzene	100		97		70-130	3		30
Toluene	104		102		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG906929-1 WG906929-2								
Ethylbenzene	111		108		70-130	3		30
Chloromethane	124		133	Q	52-130	7		30
Bromomethane	133		128		57-147	4		30
Vinyl chloride	137	Q	128		67-130	7		30
Chloroethane	150		142		50-151	5		30
1,1-Dichloroethene	116		109		65-135	6		30
trans-1,2-Dichloroethene	108		102		70-130	6		30
Trichloroethene	109		105		70-130	4		30
1,2-Dichlorobenzene	97		95		70-130	2		30
1,3-Dichlorobenzene	99		96		70-130	3		30
1,4-Dichlorobenzene	98		96		70-130	2		30
Methyl tert butyl ether	96		94		66-130	2		30
p/m-Xylene	104		102		70-130	2		30
o-Xylene	103		100		70-130	3		30
cis-1,2-Dichloroethene	104		101		70-130	3		30
Dibromomethane	102		101		70-130	1		30
Styrene	104		103		70-130	1		30
Dichlorodifluoromethane	101		92		30-146	9		30
Acetone	144	Q	122		54-140	17		30
Carbon disulfide	111		103		59-130	7		30
2-Butanone	110		111		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG906929-1 WG906929-2								
Vinyl acetate	105		104		70-130	1		30
4-Methyl-2-pentanone	107		104		70-130	3		30
1,2,3-Trichloropropane	98		94		68-130	4		30
2-Hexanone	119		115		70-130	3		30
Bromochloromethane	103		99		70-130	4		30
2,2-Dichloropropane	112		105		70-130	6		30
1,2-Dibromoethane	101		102		70-130	1		30
1,3-Dichloropropane	101		101		69-130	0		30
1,1,1,2-Tetrachloroethane	104		103		70-130	1		30
Bromobenzene	100		100		70-130	0		30
n-Butylbenzene	116		109		70-130	6		30
sec-Butylbenzene	107		101		70-130	6		30
tert-Butylbenzene	105		100		70-130	5		30
o-Chlorotoluene	104		100		70-130	4		30
p-Chlorotoluene	104		100		70-130	4		30
1,2-Dibromo-3-chloropropane	89		87		68-130	2		30
Hexachlorobutadiene	118		113		67-130	4		30
Isopropylbenzene	110		105		70-130	5		30
p-Isopropyltoluene	105		99		70-130	6		30
Naphthalene	92		91		70-130	1		30
Acrylonitrile	117		116		70-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG906929-1 WG906929-2								
Isopropyl Ether	116		114		66-130	2		30
tert-Butyl Alcohol	91		88		70-130	3		30
n-Propylbenzene	111		106		70-130	5		30
1,2,3-Trichlorobenzene	100		99		70-130	1		30
1,2,4-Trichlorobenzene	106		101		70-130	5		30
1,3,5-Trimethylbenzene	103		100		70-130	3		30
1,2,4-Trimethylbenzene	104		100		70-130	4		30
Methyl Acetate	107		107		51-146	0		30
Ethyl Acetate	124		118		70-130	5		30
Acrolein	114		119		70-130	4		30
Cyclohexane	125		116		59-142	7		30
1,4-Dioxane	90		91		65-136	1		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		103		50-139	7		30
p-Diethylbenzene	107		98		70-130	9		30
p-Ethyltoluene	100		94		70-130	6		30
1,2,4,5-Tetramethylbenzene	99		94		70-130	5		30
Tetrahydrofuran	109		107		66-130	2		30
Ethyl ether	123		122		67-130	1		30
trans-1,4-Dichloro-2-butene	106		103		70-130	3		30
Methyl cyclohexane	105		96		70-130	9		30
Ethyl-Tert-Butyl-Ether	101		100		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618618

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG906929-1 WG906929-2								
Tertiary-Amyl Methyl Ether	91		89		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		107		70-130
Toluene-d8	102		104		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	100		102		70-130

INORGANICS & MISCELLANEOUS

Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-01**Client ID:** 2118-SB8 (4.0-4.5)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/15/16 10:40**Date Received:** 06/16/16**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	87.7		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-02**Client ID:** 2118-SB8 (8.0-8.5)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/15/16 10:55**Date Received:** 06/16/16**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	91.9		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-03**Client ID:** 2118-SB9 (4.0-4.5)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/15/16 12:40**Date Received:** 06/16/16**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	88.5		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-04**Client ID:** 2118-SB9 (8.0-8.5)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/15/16 12:55**Date Received:** 06/16/16**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	90.0		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-05**Client ID:** 2118-SB10 (4.5-5.0)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/16/16 11:50**Date Received:** 06/16/16**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	88.6		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**SAMPLE RESULTS****Lab ID:** L1618618-06**Client ID:** 2118-SB10 (10.0-10.5)**Sample Location:** 1500 ASTOR AVE., BRONX, NY**Matrix:** Soil**Date Collected:** 06/16/16 12:00**Date Received:** 06/16/16**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	88.3		%	0.100	NA	1	-	06/17/16 12:26	121,2540G	RI



Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Duplicate Analysis**
Batch Quality Control**Lab Number:** L1618618**Report Date:** 06/23/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG905040-1 QC Sample: L1618580-01 Client ID: DUP Sample						
Solids, Total	87.4	87.5	%	0		20

Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618618**Report Date:** 06/23/16**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1618618-01A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-01B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-01C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-01D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1618618-02A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-02B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-02C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-02D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1618618-03A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-03B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-03C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-03D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1618618-04A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-04B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-04C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-04D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1618618-05A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-05B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-05C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-05D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)
L1618618-06A	Vial MeOH preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-06B	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-06C	Vial water preserved	A	N/A	4.3	Y	Absent	NYTCL-8260HLW(14)
L1618618-06D	Plastic 2oz unpreserved for TS	A	N/A	4.3	Y	Absent	TS(7)

*Values in parentheses indicate holding time in days



Project Name: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16

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: 1500 ASTOR AVE.**Lab Number:** L1618618**Project Number:** 20152118.202**Report Date:** 06/23/16**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: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618618
Report Date: 06/23/16

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance

EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols

EPA 9251: NPW: Chloride

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam

EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids

EPA 1631E: SCM: Mercury

EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1,**

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA

350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F,**

EPA 353.2: Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.


EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

 NEW YORK CHAIN OF CUSTODY		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 <div style="border: 1px solid black; padding: 2px; text-align: center;">1 of 1</div>		Date Rec'd in Lab 6/16/16		ALPHA Job # 21618618																																																																																																																																																																																																																			
		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		Project Information Project Name: 1500 Astor Ave Project Location: 1500 Astor Ave, Bronx, NY Project # 20152118, 202 (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other		Billing Information <input type="checkbox"/> Same as Client Info PO #																																																																																																																																																																																																																	
Client Information Client: Property Solutions Inc Address: 31A Northfield Ave Edison, NJ Phone: (732) 417-0999 Fax: -0888 Email: turner@propertysolutionsinc.com		Project Manager: ALPHAQuote #: Turn-Around Time		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input checked="" type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ NA <input type="checkbox"/> NY <input type="checkbox"/> Other:																																																																																																																																																																																																																					
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Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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		Container Type VA Preservative F		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)																																																																																																																																																																																																																			
Relinquished By: Burton Turner Don Paudin Tom Turner		Date/Time 6/16/16 1448 6/16/16 1830 6/16/16 2220		Received By: Don Paudin Tom Turner Turner		Date/Time 6/16/16 1448 6/16/16 1830 6/16/16 2220																																																																																																																																																																																																																					



ANALYTICAL REPORT

Lab Number:	L1618805
Client:	Property Solutions Inc. 323 New Albany Road Moorestown, NJ 08057
ATTN:	Burt Turner
Phone:	(856) 813-3000
Project Name:	1500 ASTOR AVE.
Project Number:	20152118.202
Report Date:	06/23/16

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618805
Report Date: 06/23/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1618805-01	2118-MW1S (7.4)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 08:45	06/17/16
L1618805-02	2118-MW1D (26.5)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 08:29	06/17/16
L1618805-03	2118-MW2 (13.2)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 12:40	06/17/16
L1618805-04	2118-MW3 (6.1)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 09:22	06/17/16
L1618805-05	2118-MW4 (6.8)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 09:58	06/17/16
L1618805-06	2118-MW5 (8.4)	WATER	1500 ASTOR AVE., BRONX, NY	06/17/16 10:45	06/17/16

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618805
Report Date: 06/23/16

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: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618805
Report Date: 06/23/16

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.

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:



Cristin Walker

Title: Technical Director/Representative

Date: 06/23/16

ORGANICS

VOLATILES

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-01
Client ID: 2118-MW1S (7.4)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 16:27
Analyst: PD

Date Collected: 06/17/16 08:45
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	180		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	1.9		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	99		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-02
Client ID: 2118-MW1D (26.5)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 16:56
Analyst: PD

Date Collected: 06/17/16 08:29
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	8.3		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.18	J	ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

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

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-03
Client ID: 2118-MW2 (13.2)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 17:24
Analyst: PD

Date Collected: 06/17/16 12:40
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	0.79		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

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

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-04
Client ID: 2118-MW3 (6.1)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 17:52
Analyst: PD

Date Collected: 06/17/16 09:22
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	100		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-05
Client ID: 2118-MW4 (6.8)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 18:20
Analyst: PD

Date Collected: 06/17/16 09:58
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	0.37	J	ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	3.4		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**SAMPLE RESULTS**

Lab ID: L1618805-06
Client ID: 2118-MW5 (8.4)
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/22/16 18:48
Analyst: PD

Date Collected: 06/17/16 10:45
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Tetrachloroethene	34		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
1,1-Dichloroethene	ND		ug/l	0.50	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	30		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	59		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

Project Name: 1500 ASTOR AVE.

Lab Number: L1618805

Project Number: 20152118.202

Report Date: 06/23/16

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/22/16 09:53
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG906708-5					
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Tetrachloroethene	ND		ug/l	0.50	0.18
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
1,1-Dichloroethene	ND		ug/l	0.50	0.14
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG906708-3 WG906708-4								
Methylene chloride	98		100		70-130	2		20
1,1-Dichloroethane	98		100		70-130	2		20
Chloroform	98		100		70-130	2		20
2-Chloroethylvinyl ether	110		97		70-130	13		20
Carbon tetrachloride	98		100		63-132	2		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	96		95		63-130	1		20
1,1,2-Trichloroethane	98		97		70-130	1		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	92		100		62-150	8		20
1,2-Dichloroethane	96		97		70-130	1		20
1,1,1-Trichloroethane	98		100		67-130	2		20
Bromodichloromethane	97		97		67-130	0		20
trans-1,3-Dichloropropene	99		96		70-130	3		20
cis-1,3-Dichloropropene	97		98		70-130	1		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	96		96		54-136	0		20
1,1,2,2-Tetrachloroethane	95		94		67-130	1		20
Benzene	99		100		70-130	1		20
Toluene	100		100		70-130	0		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG906708-3 WG906708-4								
Ethylbenzene	100		100		70-130	0		20
Chloromethane	70		77		64-130	10		20
Bromomethane	110		110		39-139	0		20
Vinyl chloride	79		89		55-140	12		20
Chloroethane	98		100		55-138	2		20
1,1-Dichloroethene	95		100		61-145	5		20
trans-1,2-Dichloroethene	98		100		70-130	2		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	98		100		70-130	2		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	94		94		63-130	0		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	98		100		70-130	2		20
Dibromomethane	99		98		70-130	1		20
1,2,3-Trichloropropane	93		98		64-130	5		20
Acrylonitrile	90		90		70-130	0		20
Isopropyl Ether	95		99		70-130	4		20
tert-Butyl Alcohol	76		98		70-130	25	Q	20
Styrene	105		105		70-130	0		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG906708-3 WG906708-4								
Dichlorodifluoromethane	50		54		36-147	8		20
Acetone	94		100		58-148	6		20
Carbon disulfide	87		91		51-130	4		20
2-Butanone	94		98		63-138	4		20
Vinyl acetate	95		96		70-130	1		20
4-Methyl-2-pentanone	80		80		59-130	0		20
2-Hexanone	81		81		57-130	0		20
Acrolein	91		87		40-160	4		20
Bromochloromethane	100		100		70-130	0		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	95		94		70-130	1		20
1,3-Dichloropropane	96		95		70-130	1		20
1,1,1,2-Tetrachloroethane	99		100		64-130	1		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	110		110		70-130	0		20
o-Chlorotoluene	98		100		70-130	2		20
p-Chlorotoluene	100		110		70-130	10		20
1,2-Dibromo-3-chloropropane	86		84		41-144	2		20
Hexachlorobutadiene	110		120		63-130	9		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG906708-3 WG906708-4								
Isopropylbenzene	100		110		70-130	10		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	81		86		70-130	6		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	89		100		70-130	12		20
1,2,4-Trichlorobenzene	94		97		70-130	3		20
1,3,5-Trimethylbenzene	100		110		64-130	10		20
1,2,4-Trimethylbenzene	100		110		70-130	10		20
Methyl Acetate	84		86		70-130	2		20
Ethyl Acetate	84		86		70-130	2		20
Cyclohexane	97		100		70-130	3		20
Ethyl-Tert-Butyl-Ether	95		97		70-130	2		20
Tertiary-Amyl Methyl Ether	94		94		66-130	0		20
1,4-Dioxane	60		106		56-162	55	Q	20
1,1,2-Trichloro-1,2,2-Trifluoroethane	99		100		70-130	1		20
1,4-Diethylbenzene	110		110		70-130	0		20
4-Ethyltoluene	100		110		70-130	10		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20
Tetrahydrofuran	89		97		58-130	9		20
Ethyl ether	94		95		59-134	1		20
trans-1,4-Dichloro-2-butene	84		76		70-130	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG906708-3 WG906708-4								
Iodomethane	35	Q	51	Q	70-130	37	Q	20
Methyl cyclohexane	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		95		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	101		100		70-130

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618805

Report Date: 06/23/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1618805-01A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-01B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-01C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-02A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-02B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-02C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-03A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-03B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-03C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-04A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-04B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-04C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-05A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-05B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-05C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-06A	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-06B	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)
L1618805-06C	Vial HCl preserved	A	N/A	5.6	Y	Absent	NYTCL-8260-C9(14)

*Values in parentheses indicate holding time in days

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618805
Report Date: 06/23/16

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: 1500 ASTOR AVE.**Lab Number:** L1618805**Project Number:** 20152118.202**Report Date:** 06/23/16**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: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618805
Report Date: 06/23/16

REFERENCES

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

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance

EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols

EPA 9251: NPW: Chloride

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam

EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids

EPA 1631E: SCM: Mercury

EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1,**

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA

350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F,**

EPA 353.2: Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

[illegible]



ANALYTICAL REPORT

Lab Number:	L1618699
Client:	Property Solutions Inc. 323 New Albany Road Moorestown, NJ 08057
ATTN:	Burt Turner
Phone:	(856) 813-3000
Project Name:	1500 ASTOR AVE.
Project Number:	20152118.202
Report Date:	06/24/16

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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



Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618699
Report Date: 06/24/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1618699-01	2118-IA-01	AIR	1500 ASTOR AVE., BRONX, NY	06/17/16 13:20	06/17/16
L1618699-02	2118-IA-02	AIR	1500 ASTOR AVE., BRONX, NY	06/17/16 13:15	06/17/16

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618699
Report Date: 06/24/16

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: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618699
Report Date: 06/24/16

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on June 14, 2016. The canister certification results are provided as an addendum.

Sample Receipt

The sample designated 2118-IA-01 (L1618699-01) had a RPD for the pre- and post-flow controller calibration check (57% RPD) that was outside of the control limit (20% RPD). The initial flow rate for the flow controller was 3.3 mL/minute; the final flow rate was 5.9 mL/minute. The final pressure recorded by the laboratory of the associated canister was -0.1 inches of mercury. No further action was required.

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: 06/24/16

AIR

Project Name: 1500 ASTOR AVE.**Lab Number:** L1618699**Project Number:** 20152118.202**Report Date:** 06/24/16**SAMPLE RESULTS**

Lab ID: L1618699-01
Client ID: 2118-IA-01
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 06/23/16 20:57
Analyst: RY

Date Collected: 06/17/16 13:20
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.023	0.020	--	0.091	0.079	--		1
1,2-Dichloroethane	0.051	0.020	--	0.206	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.039	0.020	--	0.210	0.107	--		1
Tetrachloroethene	1.51	0.020	--	10.2	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	95		60-140



Project Name: 1500 ASTOR AVE.**Lab Number:** L1618699**Project Number:** 20152118.202**Report Date:** 06/24/16**SAMPLE RESULTS**

Lab ID: L1618699-02
Client ID: 2118-IA-02
Sample Location: 1500 ASTOR AVE., BRONX, NY
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 06/23/16 21:32
Analyst: RY

Date Collected: 06/17/16 13:15
Date Received: 06/17/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,2-Dichloroethane	0.068	0.020	--	0.275	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.028	0.020	--	0.150	0.107	--		1
Tetrachloroethene	1.08	0.020	--	7.32	0.136	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	88		60-140
bromochloromethane	91		60-140
chlorobenzene-d5	90		60-140



Project Name: 1500 ASTOR AVE.

Lab Number: L1618699

Project Number: 20152118.202

Report Date: 06/24/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 06/23/16 18:50

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-02 Batch: WG907174-4								
Propylene	ND	0.500	--	ND	0.861	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	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	0.050	--	ND	0.281	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		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
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	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



Project Name: 1500 ASTOR AVE.

Lab Number: L1618699

Project Number: 20152118.202

Report Date: 06/24/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 06/23/16 18:50

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-02 Batch: WG907174-4								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		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
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
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
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.020	--	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
2-Hexanone	ND	0.200	--	ND	0.820	--		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



Project Name: 1500 ASTOR AVE.

Lab Number: L1618699

Project Number: 20152118.202

Report Date: 06/24/16

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15-SIM

Analytical Date: 06/23/16 18:50

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-02 Batch: WG907174-4								
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-Trimethylbenzene	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
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



Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618699

Report Date: 06/24/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG907174-3								
Propylene	86		-		70-130	-		25
Dichlorodifluoromethane	79		-		70-130	-		25
Chloromethane	75		-		70-130	-		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	78		-		70-130	-		25
Vinyl chloride	76		-		70-130	-		25
1,3-Butadiene	80		-		70-130	-		25
Bromomethane	80		-		70-130	-		25
Chloroethane	75		-		70-130	-		25
Ethyl Alcohol	90		-		70-130	-		25
Vinyl bromide	79		-		70-130	-		25
Acetone	87		-		70-130	-		25
Trichlorofluoromethane	82		-		70-130	-		25
iso-Propyl Alcohol	81		-		70-130	-		25
Acrylonitrile	78		-		70-130	-		25
1,1-Dichloroethene	80		-		70-130	-		25
Methylene chloride	85		-		70-130	-		25
3-Chloropropene	86		-		70-130	-		25
Carbon disulfide	78		-		70-130	-		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	79		-		70-130	-		25
Halothane	83		-		70-130	-		25
trans-1,2-Dichloroethene	72		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618699

Report Date: 06/24/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG907174-3								
1,1-Dichloroethane	92		-		70-130	-		25
Methyl tert butyl ether	89		-		70-130	-		25
2-Butanone	95		-		70-130	-		25
cis-1,2-Dichloroethene	98		-		70-130	-		25
Ethyl Acetate	99		-		70-130	-		25
Chloroform	96		-		70-130	-		25
Tetrahydrofuran	91		-		70-130	-		25
1,2-Dichloroethane	93		-		70-130	-		25
n-Hexane	98		-		70-130	-		25
1,1,1-Trichloroethane	107		-		70-130	-		25
Benzene	98		-		70-130	-		25
Carbon tetrachloride	109		-		70-130	-		25
Cyclohexane	96		-		70-130	-		25
1,2-Dichloropropane	102		-		70-130	-		25
Bromodichloromethane	107		-		70-130	-		25
1,4-Dioxane	102		-		70-130	-		25
Trichloroethene	100		-		70-130	-		25
2,2,4-Trimethylpentane	107		-		70-130	-		25
cis-1,3-Dichloropropene	100		-		70-130	-		25
4-Methyl-2-pentanone	111		-		70-130	-		25
trans-1,3-Dichloropropene	92		-		70-130	-		25

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618699

Report Date: 06/24/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG907174-3								
1,1,2-Trichloroethane	105		-		70-130	-		25
Toluene	96		-		70-130	-		25
2-Hexanone	117		-		70-130	-		25
Dibromochloromethane	106		-		70-130	-		25
1,2-Dibromoethane	100		-		70-130	-		25
Tetrachloroethene	95		-		70-130	-		25
1,1,1,2-Tetrachloroethane	98		-		70-130	-		25
Chlorobenzene	98		-		70-130	-		25
Ethylbenzene	99		-		70-130	-		25
p/m-Xylene	108		-		70-130	-		25
Bromoform	107		-		70-130	-		25
Styrene	106		-		70-130	-		25
1,1,2,2-Tetrachloroethane	102		-		70-130	-		25
o-Xylene	107		-		70-130	-		25
Isopropylbenzene	100		-		70-130	-		25
4-Ethyltoluene	110		-		70-130	-		25
1,3,5-Trimethylbenzene	106		-		70-130	-		25
1,2,4-Trimethylbenzene	112		-		70-130	-		25
Benzyl chloride	113		-		70-130	-		25
1,3-Dichlorobenzene	109		-		70-130	-		25
1,4-Dichlorobenzene	99		-		70-130	-		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Number: L1618699

Report Date: 06/24/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG907174-3								
sec-Butylbenzene	105		-		70-130	-		25
p-Isopropyltoluene	94		-		70-130	-		25
1,2-Dichlorobenzene	105		-		70-130	-		25
n-Butylbenzene	109		-		70-130	-		25
1,2,4-Trichlorobenzene	102		-		70-130	-		25
Naphthalene	105		-		70-130	-		25
1,2,3-Trichlorobenzene	103		-		70-130	-		25
Hexachlorobutadiene	109		-		70-130	-		25

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1618699
Report Date: 06/24/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG907174-5 QC Sample: L1618893-01 Client ID: DUP Sample						
Dichlorodifluoromethane	1.45	1.64	ppbV	12		25
Chloromethane	ND	ND	ppbV	NC		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	0.213	0.200	ppbV	6		25
Trichlorofluoromethane	1.43	1.38	ppbV	4		25
1,1-Dichloroethene	1.69	1.49	ppbV	13		25
Methylene chloride	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	20.5	18.7	ppbV	9		25
trans-1,2-Dichloroethene	1.68	1.75	ppbV	4		25
1,1-Dichloroethane	6.82	7.06	ppbV	3		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	68.7	70.8	ppbV	3		25
Chloroform	5.37	5.63	ppbV	5		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	58.3	59.9	ppbV	3		25
Benzene	0.547	0.557	ppbV	2		25

Project Name: 1500 ASTOR AVE.

Project Number: 20152118.202

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1618699

Report Date: 06/24/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG907174-5 QC Sample: L1618893-01 Client ID: DUP Sample					
Carbon tetrachloride	0.090	0.093	ppbV	4	25
1,2-Dichloropropane	ND	ND	ppbV	NC	25
Bromodichloromethane	0.253	0.253	ppbV	0	25
Trichloroethene	180E	177E	ppbV	2	25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25
Toluene	6.31	6.44	ppbV	2	25
Dibromochloromethane	ND	ND	ppbV	NC	25
1,2-Dibromoethane	ND	ND	ppbV	NC	25
Tetrachloroethene	286E	261E	ppbV	9	25
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC	25
Chlorobenzene	ND	ND	ppbV	NC	25
Ethylbenzene	0.966	1.02	ppbV	5	25
p/m-Xylene	4.18	4.46	ppbV	6	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	1.37	1.44	ppbV	5	25

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1618699
Report Date: 06/24/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG907174-5 QC Sample: L1618893-01 Client ID: DUP Sample					
4-Ethyltoluene	0.233	0.253	ppbV	8	25
1,3,5-Trimethylbenzene	0.203	0.237	ppbV	15	25
1,2,4-Trimethylbenzene	0.956	1.02	ppbV	6	25
1,3-Dichlorobenzene	ND	ND	ppbV	NC	25
1,4-Dichlorobenzene	ND	ND	ppbV	NC	25
1,2-Dichlorobenzene	0.137	0.140	ppbV	2	25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC	25
Naphthalene	ND	ND	ppbV	NC	25
Hexachlorobutadiene	ND	ND	ppbV	NC	25
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG907174-5 QC Sample: L1618893-01 Client ID: DUP Sample					
Trichloroethene	186	188	ppbV	1	25
Tetrachloroethene	291	328	ppbV	12	25

Project Name: 1500 ASTOR AVE.

Serial_No:06241612:54
Lab Number: L1618699

Project Number: 20152118.202

Report Date: 06/24/16

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1618699-01	2118-IA-01	0112	#16 AMB	06/14/16	223974		-	-	-	Pass	3.3	5.9	57
L1618699-01	2118-IA-01	1826	6.0L Can	06/14/16	223974	L1617594-02	Pass	-28.6	-0.1	-	-	-	-
L1618699-02	2118-IA-02	0201	#16 AMB	06/14/16	223974		-	-	-	Pass	3.3	3.2	3
L1618699-02	2118-IA-02	789	6.0L Can	06/14/16	223974	L1617594-02	Pass	-29.5	-8.2	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1617594**Project Number:** CANISTER QC BAT**Report Date:** 06/24/16**Air Canister Certification Results**

Lab ID: L1617594-02
 Client ID: CAN 986 SHELF 47
 Sample Location:
 Matrix: Air
 Analytical Method: 48,TO-15
 Analytical Date: 06/09/16 15:32
 Analyst: RY

Date Collected: 06/09/16 09:00
 Date Received: 06/09/16
 Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	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: L1617594
Report Date: 06/24/16

Air Canister Certification Results

Lab ID: L1617594-02
Client ID: CAN 986 SHELF 47
Sample Location:

Date Collected: 06/09/16 09:00
Date Received: 06/09/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	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**Lab Number:** L1617594**Project Number:** CANISTER QC BAT**Report Date:** 06/24/16**Air Canister Certification Results**

Lab ID: L1617594-02

Date Collected: 06/09/16 09:00

Client ID: CAN 986 SHELF 47

Date Received: 06/09/16

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
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**Lab Number:** L1617594**Project Number:** CANISTER QC BAT**Report Date:** 06/24/16**Air Canister Certification Results**

Lab ID: L1617594-02

Date Collected: 06/09/16 09:00

Client ID: CAN 986 SHELF 47

Date Received: 06/09/16

Sample Location:

Field Prep: Not Specified

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

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1617594**Project Number:** CANISTER QC BAT**Report Date:** 06/24/16**Air Canister Certification Results**

Lab ID: L1617594-02

Date Collected: 06/09/16 09:00

Client ID: CAN 986 SHELF 47

Date Received: 06/09/16

Sample Location:

Field Prep: Not Specified

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	83		60-140

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

Lab Number: L1617594
Report Date: 06/24/16

Air Canister Certification Results

Lab ID: L1617594-02
Client ID: CAN 986 SHELF 47
Sample Location:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 06/09/16 15:32
Analyst: RY

Date Collected: 06/09/16 09:00
Date Received: 06/09/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	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: L1617594
Report Date: 06/24/16

Air Canister Certification Results

Lab ID: L1617594-02
Client ID: CAN 986 SHELF 47
Sample Location:

Date Collected: 06/09/16 09:00
Date Received: 06/09/16
Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	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
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
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L1617594**Project Number:** CANISTER QC BAT**Report Date:** 06/24/16**Air Canister Certification Results**

Lab ID: L1617594-02

Date Collected: 06/09/16 09:00

Client ID: CAN 986 SHELF 47

Date Received: 06/09/16

Sample Location:

Field Prep: Not Specified

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
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	86		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	84		60-140

Project Name: 1500 ASTOR AVE.**Project Number:** 20152118.202**Lab Number:** L1618699**Report Date:** 06/24/16**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1618699-01A	Canister - 6 Liter	N/A	N/A	N/A	Y	Absent	TO15-SIM(30)
L1618699-02A	Canister - 6 Liter	N/A	N/A	N/A	Y	Absent	TO15-SIM(30)

*Values in parentheses indicate holding time in days

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618699
Report Date: 06/24/16

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: 1500 ASTOR AVE.**Lab Number:** L1618699**Project Number:** 20152118.202**Report Date:** 06/24/16**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.

Project Name: 1500 ASTOR AVE.
Project Number: 20152118.202

Lab Number: L1618699
Report Date: 06/24/16

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

EPA 1010A: NPW: Ignitability

EPA 6010C: NPW: Strontium; SCM: Strontium

EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

EPA 9038: NPW: Sulfate

EPA 9050A: NPW: Specific Conductance

EPA 9056: NPW: Chloride, Nitrate, Sulfate

EPA 9065: NPW: Phenols

EPA 9251: NPW: Chloride

SM3500: NPW: Ferrous Iron

SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.

SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility

EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam

EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane

SM 2540D: TSS

SM2540G: SCM: Percent Solids

EPA 1631E: SCM: Mercury

EPA 7474: SCM: Mercury

EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA 8270-SIM: NPW and SCM: Alkylated PAHs.

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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

Biological Tissue Matrix: **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1,**

SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA

350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

APPENDIX E

PROFESSIONAL

QUALIFICATIONS

BURTON TURNER, P.E.

TECHNICAL MANAGER

EDUCATION

Bachelor of Arts, Earth Science, 1987
Kean University, Union, New Jersey

Associates in Applied Sciences, Civil Engineering Technology, 1979
Union County College, Cranford, New Jersey

ACCREDITATIONS

Professional Engineer (Civil), New Jersey
Professional Geologist, Pennsylvania
OSHA 40-Hour HAZWOPER Training

SUMMARY OF QUALIFICATIONS

Mr. Turner is licensed as a professional engineer and professional geologist, with over 30 years of diverse technical and managerial experience in the environmental site remediation and geotechnical engineering fields. He has successfully planned and managed soil and groundwater remedial investigations, construction quality control programs for landfill closures, groundwater treatment systems, aquifer pumping tests, landfill gas control systems, and health and safety / air monitoring programs at contaminated sites. Mr. Turner has extensive experience with the regulatory framework in New Jersey site remediation as well as federal oversight projects, for due diligence assessments, receptor evaluations including vapor intrusion, underground storage tanks, and is well versed in the recent Site Remediation Reform Act (SRRA) requirements for oversight by LSRPs and resulting regulatory changes. He has completed permitting requirements for NJPDES surface and groundwater discharges, landfill disruption, and other NJDEP permit issues. Site experience includes federal Superfund sites in the northeast, and numerous small and large sites with NJDEP oversight, with the successful closure of numerous site remediation cases. Mr. Turner also has extensive experience with preparing proposals and cost estimates for all phases of the site remediation process. He has developed and managed two geotechnical laboratories along with extensive experience completing soil and foundation investigations and engineering reports. He has also managed the installation of geotechnical instrumentation for a major earthen dam and other infrastructure projects in the northeast.

PROJECT EXPERIENCE

Commercial / Residential Phase I Environmental Assessments, and Preliminary Assessments, NJ

Mr. Turner has performed Phase I Environmental Assessments on commercial and residential properties using the ASTM E1527 standards. Commercial facilities include office buildings, shopping centers, retail outlets, fueling stations, and warehouses. He has also completed numerous Preliminary Assessments under NJDEP requirements.

Commercial and Industrial Phase II and Phase III Environmental Site Investigation, NJ

Mr. Turner has prepared scopes of work for and managed numerous Phase II/III Environmental Site Assessments to evaluate the presence of, and nature and extent of organic and inorganic soil and groundwater contamination, including impact from fuels, oils, pesticides, PCBs, and chlorinated organic compounds. On many sites, responsibilities included cost management. Programs for soil, groundwater, soil vapor, and indoor air impact have been developed and implemented. He has supervised numerous sites through the investigation and remedial action phases, completed all necessary reporting and administrative submittals for obtaining no further action status for the sites or areas of concern.

Phase II and Phase III Environmental Site Assessments, UST Sites, NJ

Mr. Turner has prepared workplans and managed environmental investigation and remedial action phases for petroleum underground storage tanks at numerous gas stations, auto repair shops, churches, schools, and other commercial as well as residential sites throughout north and central New Jersey. He has completed all reporting and administrative (including LSRP) submittals to NJDEP for achieving site closure.

ISRA Site Assessments, Investigations and Remediation – Various Locations – New Jersey

Performed and managed numerous Preliminary Assessments, Site Investigations, Remedial Investigations, and Remediation at industrial establishments in New Jersey. Sites included a former sewing machine manufacturer in Elizabeth, paint manufacturing facility in Carlstadt, a former chemical manufacturing facility in Kearny, and former print shop in Paterson, among others. Site investigation activities have included soil boring and test pit sampling, groundwater monitoring well installation and sampling, geophysical surveys, soil gas surveys, potable water sampling, UST investigations, and concrete chip sampling. Remedial measures included excavation and disposal of petroleum contaminated soil and sampling & disposal of abandoned drums.

Investigation and Remediation of Pesticides-impacted Former Orchard, Wyckoff, NJ

Developed the Remedial Action Workplan for NJDEP approval, supervised sampling and analysis requirements for 7-acre site by soil excavation and blending, and completed final reporting documents for remediation of a pesticides-impacted former tree orchard, achieving site closure for future recreational reuse of the property.

Groundwater Treatment System, NJ Transit Facility, Bay Head Junction, NJ

Completed the design, installation, system startup and training, and served as O&M advisor for a groundwater extraction and treatment system at NJ Transit facility.

CERCLA Sites

Closure of NPL Landfill, Freehold, NJ.

Mr. Turner served as the Assistant Manager of Quality Control for the construction of a multi-layer impermeable cap at a 50+ acre landfill, including the development and management of an onsite geotechnical laboratory. Cap included a field-seamed HDPE liner and overlying drainage layer, with passive gas venting and perimeter bentonite slurry wall.

Closure of Hazardous Waste Landfill, Plattsburgh, NY.

Manager of Quality Control for the construction of an impermeable cap at a 13 acre landfill on a DOD site. Coordination of closure activities with Army Corps of Engineers oversight.

Groundwater Investigation and Aquifer Evaluation for Treatment System Design, Watertown, NY.

Planned, conducted, and evaluated results of an aquifer pumping / drawdown test at large petroleum-impacted area at an active DOD military base, and determined aquifer parameters for design of large dual-phase extraction groundwater treatment system.

Health and Safety

Health and Safety Plan Preparation and Site Management, Various Sites, NJ

Mr. Turner developed health and safety plans for CFR1920:120 sites per OSHA requirements, and managed site personnel H&S at various environmental remediation sites, including oversight for onsite personnel and perimeter air and dust monitoring requirements, scaffolding, excavation safety, and traffic plans for waste transport. Developed criteria and monitored for “action levels” for implementation of the OSHA-designated levels of personal protective equipment for site personnel.

Laboratory Management (Geotechnical)

Geotechnical Laboratory Development and Management: Developed and managed a permanent geotechnical laboratory and staff for Melick-Tully and Associates, South Bound Brook, NJ, for grain size, compaction, soil plasticity/liquidity indices, consolidation, unconfined compression, and flexible-wall permeability testing. Developed and managed a field geotechnical laboratory at a CERCLA landfill closure site in Freehold, NJ, for conducting onsite expedited testing, including grain size, compaction, and flexible-wall permeability testing.

DONALD P. HESSEMER

REGIONAL DIRECTOR

EDUCATION

Master of Environmental Health Science
Polytechnic Institute of New York
Brooklyn, New York

Bachelor of Science (Resource Management)
SUNY College of Environmental Science
Syracuse, New York

ACCREDITATIONS

Certified Hazardous Materials Manager – Institute of Hazardous Materials Management
OSHA 40-Hour HAZWOPER Training
AHERA Certified Asbestos Inspector
NYS Department of Labor – Asbestos Inspector

SUMMARY OF QUALIFICATIONS

Mr. Hessemer is an Environmental Scientist and Regional Director with more than 30 years of consulting experience in environmental due diligence, regulatory compliance, hazardous waste investigations and analytical laboratory analysis and management for public and private sector clients. He has conducted and managed site assessments for commercial and industrial properties, Phase II site investigations, remediation projects, asbestos and lead-based paint programs, and a contract laboratory program to support the EPA Superfund Program. Mr. Hessemer is well versed in ASTM due diligence standards, New Jersey Technical Requirements for Site Remediation, and the Superfund program. A Certified Hazardous Materials Manager (CHMM) and a skilled project manager, Mr. Hessemer makes sure that projects meet both the client's objectives and the project's schedule and budget. He has proven skill in coordinating large portfolio due diligence programs and teams and identifying environmental liabilities for prospective purchasers and lending institutions.

REPRESENTATIVE PROJECT EXPERIENCE

Commercial and Residential Phase I Environmental Assessments – US, UK, France, and Germany

Mr. Hessemer has performed or managed Phase I Environmental Assessments on thousands of commercial and residential properties using the latest ASTM standards. Commercial facilities include office buildings, shopping centers and malls, retail outlets, warehouses, apartment complexes, and television broadcasting studios and transmitter sites, and timberland.

Commercial and Industrial Phase II Environmental Site Assessments – Various States, US

Mr. Hessemer has prepared scopes of work for and managed numerous Phase II Site Assessments to evaluate environmental concerns identified in Phase I ESAs by providing information regarding the nature and extent of soil and groundwater contamination. Programs for soil, soil vapor, indoor air quality, groundwater sampling have been performed. Geophysical investigations have been designed to aid in soil boring placement.

Industrial Due Diligence Assessments – US, Brazil, and India

Performed or managed pre-acquisition due diligence assessments of industrial and manufacturing properties including cogeneration plants, healthcare product manufacturing facilities, a dairy plant, pulp and paper mills, compressed gas plants, electronics manufacturers, chemical plants, and printing facilities. The assessments generally included the identification of liabilities associated with site contamination, off-site contingent liabilities, and an evaluation of facility regulatory compliance with federal and state environmental regulations including permit status for water, stormwater, wastewater, air emissions, hazardous materials reporting, hazardous waste management, PCB-management, and oil storage.

Federal Regulatory Compliance Programs – US Postal Service – Metro New York City and Central New Jersey Districts

Mr. Hessemer managed two \$2.5 million contracts for environmental compliance services at owned or leased postal services within Manhattan and The Bronx, NY, and Central New Jersey. Served as the single point of contact with the District Environmental Compliance Coordinators and managed the overall program administration. Responsible for making management assignments, setting priorities, and ensuring administrative support for timely project performance. Projects included turnkey asbestos, lead based paint, and lead in drinking water surveys and O&M programs, noise level surveys, personal noise dosimetry testing to measure worker exposure, drinking water testing programs, and technical review of energy audit reports.

Environmental Liability Cost Assessments - International

Served on an ENSR international due diligence team assigned to evaluate the environmental liabilities of a European based company with chemical plants in the US. Responsible for assessing the liabilities of four specific plants in the US based on technical review of environmental health and safety records including permits, investigation and remediation reports, and other EHS documents, and a site inspection of the main US facility. The assessment resulted in the identification of liabilities and associated liability cost estimation and prioritization of recommended actions.

Environmental Liability Cost Assessments – Phoenix, Arizona

Served as senior scientist member of team effort to review a lending institution's loan portfolio for environmental liabilities as part of a potential acquisition. Reviewed various documents including Phase I and Phase II ESA reports and remedial action plans. Information reviewed was used to identify environmental liabilities and assign remedial cost estimates, ranked by likelihood.

Environmental Support of Emergency Bridge Reconstruction

Served as environmental lead in support of NYCDOT's emergency reconstruction of the Borden Avenue Bridge in Long Island City, NY. Prepared a Corrective Action Plan (CAP) in response to the discovery of petroleum-contaminated sediment in the adjacent Dutch Kills water body during construction. The CAP established procedures for handling and disposal of petroleum-contaminated sediment, and provided design detail of a temporary on-site water treatment system for dewatering fluid to support a SPDES-equivalent discharge permit. Prepared permit modification requests for 6 NYCRR Part 608 Water Quality Certification, NYCRR Part 661 Tidal Wetlands Permit, and ECL Article 15 Protection of Waters Permit.

Environmental Services Oversight – New York City Schools, NY

Provided oversight of field personnel engaged in various environmental activities for the NYCSCA including Phase I ESAs, Phase II Subsurface Investigations, Indoor Air Quality and Soil Vapor Investigations, and Remediation Programs. Responsible for scope of work and report review, interfacing with client representatives, and performing periodic school site visits. (06/09 – Present)

Environmental Permitting – New York, New York

Prepared NYSDEC Petroleum Bulk Storage (PBS) Applications for fuel oil storage tanks as part of an Emergency Generator Upgrade Program for six Health and Hospital Corporation (HHC) facilities in New York City. Managed subcontractor in the preparation of NYSDEC air permit modifications.

ISRA Investigations and Remediation – Various Locations – New Jersey

Performed and managed numerous Preliminary Assessments, Site Investigations, Remedial Investigations, and Remediation at industrial establishments throughout central and northern NJ. Properties included former paper mills, a miniature lighting facility, an electronic manufacturer, an ion-exchange regeneration plant, an asphalt blending and storage terminal, a polymer compound manufacturer, label printing and packaging facility. Site investigation activities have included geophysical surveys, soil gas surveys, soil boring sampling, groundwater monitoring well installation and sampling, potable water sampling, UST investigations, concrete chip sampling, and septic system sampling. Remedial measures included excavation and disposal of petroleum contaminated soil and disposal of abandoned drums.

CERCLA Superfund Investigations

Hazardous Waste Investigation and Management, Bound Brook, NJ. Project Manager of a focused feasibility study at an inactive pesticide formulation plant in Bound Brook, New Jersey. Project involved developing remedial alternatives for dioxin contamination of a building and soils, and included field sampling of contaminated materials and subcontracting a structural engineer to evaluate the structural integrity of the building. Assistant Project Manager of a CERCLA Remedial Investigation/Feasibility Study Work Plan for the site. The proposed scope of work included characterization of the nature and extent of on-site contamination and off-site migration of contaminants, determination of potential threats to public health and the environment, and the development and evaluation of remedial alternatives.

Hazardous Waste Investigation and Management, New Brunswick, NJ. Project Manager of a field testing project at New Brunswick, New Jersey, for the EPA revised Hazard Ranking System (HRS) Model for CERCLA hazardous waste sites. Project involved collecting sufficient environmental data to test the model. Tasks included field sampling of soils, private wells, surface water, and aquatic organisms; soil borings to obtain site-specific geologic information and preparation of technical reports.

CERCLA Site Investigations, NJ, NY, and PR. Program Manager of EPA Region 2 Field Investigation Team (FIT) site investigations. Responsibilities included overall coordination of program including managing a staff of 12 site managers, project assignments, review of work plans and technical reports, scheduling and budgeting, and interfacing with client (EPA).

Hazardous Waste Investigation and Management, Newark, NJ. Sample Management Officer of an area-wide dioxin contamination investigation based in Newark, New Jersey. Tasks included interfacing with the EPA Contract Laboratory Program (CLP) office, coordinating the quality assurance program, and packaging and shipping dioxin contaminated soil samples to analytical laboratories.

Hazardous Waste Investigation and Management, Toms River, NJ. Project Scientist during remedial investigation and feasibility study of an active pharmaceutical plant. Responsibilities included acting as Health and Safety Officer during the sampling of monitoring wells, Sample Management Officer during the collection of soil samples for dioxin analysis, and technical writing during report preparation.

Groundwater Investigation, Hazardous Waste Investigation and Management, Niagara Falls, NY. Health and Safety Officer during the installation and sampling of monitoring wells during an area-wide groundwater study. Responsibilities included the health and safety of on-site personnel including drilling crew and air monitoring.

Hazardous Waste Investigation and Management, Grand Island, NY. Technical Oversight Scientist during dioxin analysis of samples collected from a Niagara Falls, New York, facility involved in the manufacture of 2,4,5-TCP. Responsibilities included inspection and documentation of sample management and sample preparation procedures by Occidental personnel and their consulting laboratory.

Laboratory Management

EPA Contract Laboratory Program (CLP), Inorganic Analysis - Environmental Laboratory Analysis and Management, US-wide. Project Manager of CLP Inorganic Analysis Contract. Approximately 200 samples of water and soil samples per month from Superfund sites were analyzed for priority pollutant trace metals. Responsibilities included scheduling incoming samples, assigning work for staff chemists, bidding on samples for special analysis, contact with EPA and Sample Management headquarters and attending CLP conferences. Also served as Environmental Chemist for CLP contract.