Periodic Review Report

Webster Avenue Residences
NYSDEC Site Number C203075

June 2018

Prepared for:

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Webster Avenue Housing Development Fund Corporation entered into a Brownfield Cleanup Agreement (BCA), in November 2014 with the New York State Department of Environmental Conservation (NYSDEC) to remediate two parcels, 411 East 178th Street and 4275 Park Avenue, Bronx, New York (the Site).

The Site was remediated in accordance with the remedy selected by the NYSDEC in the RAWP dated February 2015. The entire Site was excavated to a minimum depth of two feet. Select areas were excavated to deeper depths due to building foundation depths, elevator pits, USTs etc. A demarcation layer was placed after all excavations were completed, except under building foundations, to mark where clean fill starts and residual contamination may exist.

A soil cover system was constructed and maintained to prevent human exposure to remaining contaminated soil/fill. The Site's cover system currently consists of clean fill on open areas, asphalt or concrete pavement and concrete building slabs.

A vapor barrier was installed beneath the building slab and behind foundation sidewalls below grade. An active Sub-Slab Depressurization System (SSDS) was installed in the building located at 4275 Park Avenue, however due to the depth of the building foundation and the depth of groundwater, an SSDS was not installed in the 411 Easy 178th Street building.

An environmental easement to restrict land use and prevent future exposure to any contamination remaining at the Site was executed and recorded.

Notwithstanding the completion of remedial work, some subsurface contamination remains at the Site. That remaining contamination is being addressed by Engineering Controls (ECs) pursuant to a Site Management Plan (SMP), which remains in effect. The SMP obligations are also reflected in Institutional Controls (ICs), including an Environmental Easement that has been duly recorded in accordance with ECL Article 71, Title 36.

The SMP requires the maintenance of the ECs, as well as the filing of Periodic Review Reports to document that the ICs and ECs remain in place and continue to be effective.

A summary of the results of the periodic monitoring described in this report are as follows:

- The annual inspection confirmed that the integrity of the Site cover system remains intact.

- Pressure readings collected from the SSDS suction points in March 2018 are similar to the readings obtained upon system startup in December 2016. This indicates the system is working within the original system specification.

- Indoor air samples collected in March 2018 indicate that concentrations of volatile organic compounds (VOCs) in the indoor air are all below New York State Department of Health (NYSDOH) indoor air guidance values and confirms that the SSDS has been performing effectively and is protective of public health functioning as designed.

- In summary, the ICs and ECs remain in place and effective.

1.0 SITE OVERVIEW

This Periodic Review Report (PRR) is required as an element of the remedial program at 1960-1982 Webster Avenue Site located in Bronx, New York (hereinafter referred to as the "Site") under the New York State (NYS) Brownfield Cleanup Program (BCP), Site No. C203075 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Webster Avenue Housing Development Fund Corporation entered into a Brownfield Cleanup Agreement (BCA), in November 2014 with the NYSDEC to remediate the Site. The Site location is provided in Figure 1. Site boundaries are provided in Figure 2. As shown in Figure 2, there are two parcels, 411 East 178th Street and 4275 Park Avenue, which comprise the BCP Site.

The Site was remediated in accordance with the remedy selected by the NYSDEC in the approved RAWP dated February 2015. The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Preparation of a Community Participation Plan and performance of all required BCP Citizen Participation activities according to an approved Citizen Participation Plan (CPP);
2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds;
3. Establishment of Track 4 Soil Cleanup Objectives (SCOs);
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas;
5. Excavation of soil/fill exceeding Track 4 Restricted Residential SCOs. The entire property was excavated to a minimum depth of two feet. The building area at the 4275 Park Avenue parcel was excavated to a depth of approximately six feet for building footings and elevator pit. The building area at the 411 East 178 Street parcel was excavated to a depth of approximately 13 feet for a basement in the proposed buildings. The elevator pit area was excavated to a depth of 18 feet bgs, additional remedial excavation was excavated to a depth of 16 feet bgs (see Section 2.3 for details). The sewage injector area was excavated to a depth of approximately 16 feet bgs. Due to groundwater elevation at approximately 15 feet bgs, dewatering was required in the elevator pit area, the 23 ft by 60 ft additional excavation and sewage injector areas. See Section 4.1.4.7 for further discussion. See Figure 2-8 "Extent of Remedial Excavation Performed";

6. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a photoionization detector (PID). Appropriate segregation of excavated media on-Site;
7. Removal of one 2,000 gallon, single wall, steel, fuel oil aboveground storage tank (AST) in compliance with applicable local, State and Federal laws and regulations (See Section 4.3.5 for further discussion);
8. Removal of two 550 gallon, single wall, steel, gasoline underground storage tank (UST), excavation of impacted soil, collection of endpoint samples and reporting of petroleum spill (NYSDEC #1504063) in compliance with applicable local, State and Federal laws and regulations (See Section 4.3.4 for further discussion);
9. Transportation and off-Site disposal of all soil/fill material at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and the RAWP. Sampling and analysis of excavated media were required by disposal facilities (See Section 4.3 for further discussion);
10. Construction and maintenance of a soil cover system to prevent human exposure to remaining contaminated soil/fill. The Site's composite cover system currently consists of clean fill on open areas, asphalt or concrete pavement and concrete building slabs. The soil cover layer is a minimum of two feet thick and consists of clean fill and/or top soil that meet the lower value of PGWSCOs and RRSCOs (see Table 2-3). This is currently an interim cover system. Upon completion of Site development activities, there will also be paved areas, walkways, and driveways. The location and components of the final cover system will be documented in the first Periodic review report (PRR) and any associated figures in this SMP will be revised;
11. Installation of a vapor barrier system beneath the building slab and behind foundation sidewalls below grade. The sub-slab vapor barrier consists of a 46 mil high density polyethylene (HDPE) designed to provide a barrier against water, moisture, and gas. A 60 mil HDPE membrane will be applied to vertical foundation walls;
12. Installation of an active Sub Slab Depressurization System (SSDS) in the building located at the 4275 Park Avenue parcel;
13. Placement of a demarcation layer (i.e., orange geotextile fabric and orange construction fencing) after all excavations were completed.
14. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations;

15. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations;
16. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the Site.
17. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting.

After completion of the remedial work, some contamination was left at this Site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the Site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Bronx County Clerk, requires compliance with the Site Management Report (SMP) and all ICs and ECs placed on the Site.

The SMP was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. The SMP has been approved by the NYSDEC, and compliance with the SMP is required by the grantor of the Environmental Easement and the grantor's successors and assigns.

2.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS, & PROTECTIVENESS

The following Remedial Action Objectives (RAOs) for the Site as listed in the Remedial Action Work Plan dated February 2015 are as follows:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

A combination of excavation of soil/fill exceeding Track 4 Restricted Residential SCOs to a minimum depth of two feet across the entire property area, removal three USTs removed the source of groundwater contamination. The environmental easement for the Site continues to prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Exposure to remaining contamination in soil/fill at the Site is prevented by a soil cover system placed over the Site. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, and concrete building slabs and vapor barrier under the concrete building slab.

Soil Vapor

RAOs for Public Health Protection

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

Migration of potential soil vapor is mitigated with a combination of building slab, vapor barrier and an SSDS in the 4275 Park Avenue building. Indoor air samples were collected to confirm the effectiveness of the SSDS. A summary of the results of the indoor air sampling can be found in Table 1. Results were compared with published background values and applicable NYSDOH guidance values. None of the air samples analyzed exceeded the guidance values. These results indicate that the SSDS is effective in mitigating vapor intrusion within the 4275 Park Avenue Building.

3.0 INSTITUTIONAL CONTROLS & ENGINEERING CONTROLS COMPLIANCE REPORT

The required Institutional & Engineering Controls Certification Form has been completed and signed by the remedial party and by ERM Consulting & Engineering, Inc.'s (ERM) engineer-of-record. This is provided as Appendix A. ERM conducted a Site-wide annual inspection on 28 March 2018. The results of the inspection are documented in the Inspection Form (Appendix B) and a photographic log (Appendix C). A summary of the status of the ICs and ECs is provided in the following sections.

3.1 INSTITUTIONAL CONTROLS

The Site has a series of ICs in the form of Site restrictions. Adherence to these ICs is required by the Environmental Easement. Below are the Site restrictions in italics followed by a statement regarding its status:

The property may be used for: restricted residential; commercial, or industrial use;
The Site is currently used for restricted residential use only.

All ECs must be operated and maintained as specified in the SMP;
All ECs were operated and maintained as specified.

All ECs must be inspected at a frequency and in a manner defined in the SMP;
All ECs were inspected at a frequency and manner defined in the SMP.

The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
Groundwater was not used during this reporting period and its use will remain prohibited.

Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
Vapor intrusion sampling was conducted as specified in the SMP.

Data and information pertinent to Site management must be reported at the frequency and in a manner as defined in the SMP;
This PRR satisfies the reporting requirements outlined in the SMP.

All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
There have been no activities at the Site since filing the Environmental Easement that has resulted in the disturbance of the remaining contaminated material.

Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
Vapor intrusion sampling and sampling of the SSDS exhaust stacks were completed during 2017-2018.

Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP;
An annual Site-wide inspection was completed in March 2018.

Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement;
Access to the Site continues to be available to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner

The potential for vapor intrusion must be evaluated for any buildings developed at the Site, and any potential impacts that are identified must be monitored or mitigated;
Vapor intrusion sampling was completed in 4275 Park Avenue. No other new buildings have been developed.

Vegetable gardens and farming on the Site are prohibited;
There are no vegetable gardens or farming activities on the Site.

Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement;
All ECs are still in place and functional.

In summary, the ICs remain in place and effective.

3.2 ENGINEERING CONTROLS

3.2.1 Site Cover System

The main goal of the Site Cover System is to prevent exposure to remaining contamination in soil/fill at the Site. The cover system is comprised of one or more of the following: a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, concrete building slabs, and vapor barrier under the concrete building slabs. Final redevelopment of the Site is not yet complete. Once redevelopment activities are complete, a final cover system figure will be provided in the corresponding PRR for that reporting period. In areas waiting for completion of the final cover system 24 inches of clean fill remained in place and there have been no disturbances to the Site Cover System during this reporting period.

3.2.2 Vapor Barrier

At each building, a high density polyethylene vapor barrier liner (HPDE) was installed prior to pouring the building's concrete slab. The vapor barrier consists of 46-mil Preprufe 300R. The vapor barrier extends throughout the area occupied by the footprint of the new building and up the accessible subgrade foundation walls according to manufacturer specifications. In addition, the foundation walls were covered with 60-mil HDPE Bituthene 4000.

The vapor barriers at the Site remain in place and have not been disturbed.

3.2.3 Sub-Slab Depressurization System

An active SSDS was installed beneath the 4275 Park Avenue building footprint. Due to installation of the building foundation at approximately 13 feet bgs (groundwater elevation at 15 feet bgs), a SSDS could not be installed under the 411 East 178th Street buildings.

Currently, the SSDS is designed to maintain a negative pressure (i.e., vacuum) beneath the slab when the building is sealed, and exhaust fans are operating. If measureable vacuum is obtained during such conditions, the SSDS will be considered to be effectively influencing that area. The SSDS was inspected and vacuum measurements were collected from the three SSDS exhaust stacks. Vacuum measurements collected indicate the system is meeting its design objectives. Soil vapor sampling was also performed after start-up of the SSDS to confirm air emission controls are not necessary prior to discharge. A set of soil vapor samples were collected from the three exhaust stack sampling ports. The samples were analyzed via USEPA Method TO-15. A map detailing the SSDS components and sampling points is provided as Figure 2. Further explanation of the soil vapor sampling is detailed in Section 4.2.3.

4.0 MONITORING PLAN COMPLIANCE REPORT

4.1 COMPONENTS OF MONITORING PLAN

The following table summarizes the elements of the monitoring program:

Monitoring Program	**Frequency***	**Matrix**	**Analysis**
Site-wide inspection	Annual	Not Applicable	General Site Conditions
Soil Cover	Annual	Not Applicable	Ensure integrity of soil cover system per the SMP requirements
SSDS	Quarterly	Operational	None
SSDS Pressure Field Extension Test	After building and SSDS installation	Operational	Pressure Field
Indoor Air Sampling	After building and SSDS installation during heating season	Indoor and outdoor air	VOCs via EPA MethodTO-15
SSDS exhaust	One time after start-up	Soil Vapor	VOCs via EPA Method TO-15

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

Operation Logs are provided in Appendix D.

4.2 SUMMARY OF MONITORING COMPLETED

4.2.1 Site Wide Inspection

A Site-wide inspection was performed on 28 March 2018. During this inspection, a form was completed as provided in Appendix B. The form documents the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- If these controls continue to be protective of human health and the environment;

- Achievement of remedial performance criteria;
- General Site conditions at the time of the inspection;
- Compliance with requirements of the SMP and the Environmental Easement;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that Site records are up to date.

4.2.2 Site Cover System

During the annual Site inspection of the Site cover system, minor/insignificant cracks were observed in the floor. The inspection confirmed that the integrity of the Site cover system remains intact, however the Site is still under active construction. A copy of the inspection form is provided as Appendix B.

4.2.3 Sub-Slab Depressurization System

During this reporting period, ERM performed an annual inspection to confirm that the SSDS is operating properly and performed the required annual sampling of the system.

Sampling was performed in accordance with the approved SMP. Analytical results from the annual sampling event were used in an updated evaluation of emissions from the SSDS, DAR-1 screening calculations for New York County Source Impacts were performed using the revised screening values in the August 2016 DAR-1. For simplicity, a conservative analysis was performed by using the highest detection among the three discharge points for each parameter and assuming it applied to the total flow. The calculations are presented in Table 2, and no Guideline Concentrations were exceeded. All compounds detected in the emissions were found to be well below 1 percent of their respective guideline values. Therefore, continued operation of the SSDS without emission controls is acceptable.

A round of vacuum measurements were collected from the system piping at the each extraction point on 28 March 2018. The results are summarized below along with the December 2016 extraction point start-up measurements identified in the SMP:

Blower Inlet & Extraction Point Vacuum Measurements

Extraction Point	12-2-2016	3/28/2018
SP-01	-1.9	-2.25
SP-02/SP-03	-2.2	-2.0
SP-04	-2.0	-1.3

Pressure readings collected from the system piping at the inlet to the blower and each of the extraction points in March 2018 are similar to the readings obtained upon system startup in December 2016. This indicates the system is working within the original system specification.

Since start-up, the SSDS has been performing effectively. If any significant modifications to the system are required, we will contact the Department immediately.

4.2.4 Post-Remediation Media Monitoring and Sampling – Indoor Air

Indoor air sampling was conducted during the heating season on 28 March 2018 at the 4275 Park Avenue building after the building installation was completed to confirm the effectiveness of the SSDS. Four indoor air and one outdoor air samples were collected from the locations shown on Figure 3. The analytical data package can be found as Appendix E. A photographic log of the indoor air and SSDS exhaust samples can be found in Appendix F. Sample sheets and the indoor air inventory form can be found in Appendix G. A summary of the analytical results as compared to NYSDOH Guidance Values can be found in Table 1. The analytical results indicate concentrations of VOCs in the indoor air are well below the applicable NYSDOH Guidance Values. These results confirm that the SSDS is effectively mitigating any vapor intrusion of VOCs into the building.

4.3 MONITORING DEFICIENCIES

The annual operational logs were mostly completed in full compliance with the SMP, however ERM did not receive quarterly operational logs from Site personnel. The Site personnel will be coached on the monitoring and reporting requirements to minimize data gaps during this next reporting period.

4.4 CONCLUSIONS & RECOMMENDATIONS FOR CHANGE

The data collected over the course of this reporting period indicates that the Site cover system and the SSDS are functioning as designed and are meeting the RAOs for the Site. ERM will continue to coach Site personnel on the proper methods of collecting and recording the quarterly inspections on a going-forward basis.

5.0 OPERATION & MAINTENANCE PLAN COMPLIANCE

5.1 GENERAL

The Operation and Maintenance Plan provides a brief description of the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the Site. The Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the Site to operate and maintain the SSDS located at the 4275 Park Avenue building;
- Will be updated periodically to reflect changes in Site conditions or the manner in which the SSDS is operated and maintained.

Information on non-mechanical ECs (i.e. soil cover system) is provided in Section 3.0 Engineering and Institutional Controls. A copy of the Operation and Maintenance Plan, along with the complete SMP, is maintained at the Site.

5.2 SUB-SLAB DEPRESSURIZATOIN SYSTEM

The following table identifies the target operating requirements for the SSDS:

Suction Point	Flow (cfm)	Applied Vacuum (inches w.c.)
SP-01	75-100	0.75-1.0
SP-02 and SP-03	75-100	0.75-1.0
SP-04	75-100	0.75-1.0

The following table summarizes measurements collected during the annual Site inspection:

Suction Point	Calculated Flow (cfm)	Applied Vacuum (inches w.c.)
SP-01	30	2.25
SP-02 and SP-03	52	2.0
SP-04	140	1.3

The data for SP-01 and SP-02/SP-03 were similar to the readings collected during the startup testing. SP-4 displayed a slightly lower applied vacuum than during the startup test. Flow measurements were not collected from the suction points, however flow was calculated using the applied vacuum and the performance curve for this model fan. This data was recorded in the

Operations Log which can be found in Appendix D. The indoor air sampling confirms that the site controls are effective.

Routine maintenance and inspection was conducted to ensure that the SSDS is operating properly until the NYSDEC and the NYSDOH have determined no need for the system.

As stated in the SMP, the following items are scheduled to be conducted on a quarterly basis by the Site operator:

- Confirm that the fans are operating properly by measuring flow and pressure using appropriate gauges;
- Collect measurements of sub-slab vacuum at all suction points (SP-01 through SP-04);
- Collect operating data following the SSDS Operations Log; and
- Inspect fans and ensure their operation.

On an annual basis, the following are scheduled to be performed:

- Conduct a visual inspection of the complete system;
- Inspect fans for bearing failures or signs of other abnormal operations, and repair or replace, if required;
- Inspect the discharge location of the vent pipes to ensure that no air intake or operable window has been located nearby;
- Determine, through discussions with building management, if any Heating, Ventilation, and Air Conditioning (HVAC) system modifications occurred that might affect the performance of the SSDS;
- Inspect the floor slab and foundation walls for evidence of cracks and/or holes, and repair of cracks and/or holes, if required;
- Inspect the integrity of the riser pipe and repair the riser pipe, if required.

The forms for these inspections can be found in Appendices B and D.

5.3 OPERATION AND MAINTENANCE OF SSDS

The following sections provide a description of the operations and maintenance of the SSDS.

5.3.1 System Start-up and Testing

The manufacturer recommends that prior to start-up the operator:

- Verify all connections are tight and leak-free;
- Ensure the RP Series Fan and all ducting is secure and vibration-free.

Once the system is started;

- Checks for leaks;

- Checks all seals;
- Verify system vacuum pressure with manometer;
- Ensure vacuum pressure is within normal operating range and less than the maximum recommended operating pressure.

Startup testing of the SSDS was completed on 2 December 2016. Vacuum measurements are listed below:

- SP-01: 1.9" W.C.
- SP-02 and SP-03: 2.2" W.C.
- SP-04: 2.0" W.C.

All SSDS fans were operational and no leaks were observed.

The system testing described above will be conducted if, in the course of the SSDS system lifetime, the system goes down or significant changes are made to the system and the system must be restarted.

5.3.2 Non-Routine Operation and Maintenance

If non-routine maintenance indicates the fans are not working properly, the SSDS becomes damaged, or if the building's HVAC has undergone modifications that may reduce the effectiveness of the system. The scope of non-routine maintenance will vary depending upon the situation. In general, the following actions will be taken as part of non-routine maintenance:

- Examine the building for structural or HVAC system changes, or other changes that may affect the performance of the SSDS (e.g., new combustion appliances or deterioration of the concrete floor slab);
- Examine and address the operation of the fans, as well as measure the sub-slab vacuum at monitoring points via a manometer;
- Repair or adjust the SSDS as appropriate. If necessary, the SSDS should be redesigned and restarted (see subsection 5.3.1 for system startup).

5.3.3 SSDS Deactivation

If the owner or responsible party believes system deactivation should be considered or would like to alter the operating parameters of the SSDS (e.g. operate the SSDS beneath a reduced section of the building), a work plan shall be submitted to the NYSDEC and the NYSDOH detailing the proposed testing to be undertaken. Following NYSDEC/NYSDOH approval of the testing plan, the owner or responsible party will implement the plan and forward the results to the NYSDEC/NYSDOH for their evaluation. The system may only be deactivated with NYSDEC and NYSDOH approval. Note: the NYSDEC must be notified prior to any major repair of the SSDS that would require it be taken off-line for a period longer than 48 hours.

Furthermore, the repair or decommissioning process will be documented in the subsequent PRR.

5.4 O&M DEFICIENCIES

The annual Site inspection forms were completed in full compliance with the SMP, however ERM did not receive quarterly operational logs from Site personnel. The Site personnel will be coached on the monitoring and reporting requirements to minimize data gaps during this next reporting period.

5.5 CONCLUSIONS & RECOMMENDATIONS FOR CHANGE

The SSDS performed as designed during this monitoring period. Site personnel will continue to be coached on the proper way to record quarterly operational inspections on a going-forward basis.

6.0 OVERALL PRR CONCLUSIONS & RECOMMENDATIONS

The use of the Site remains solely restricted residential in compliance with the Environmental Easement. Farming or vegetable gardens were not observed at the Site. Groundwater underlying the Site is reported by the Site owner as not being used in any manner. There has been no disturbance of the Site cover system during this reporting period.

The Site inspection, operational inspection and the indoor air sampling indicate that the SSDS is performing as designed during this reporting period and meet the RAOs for the Site.

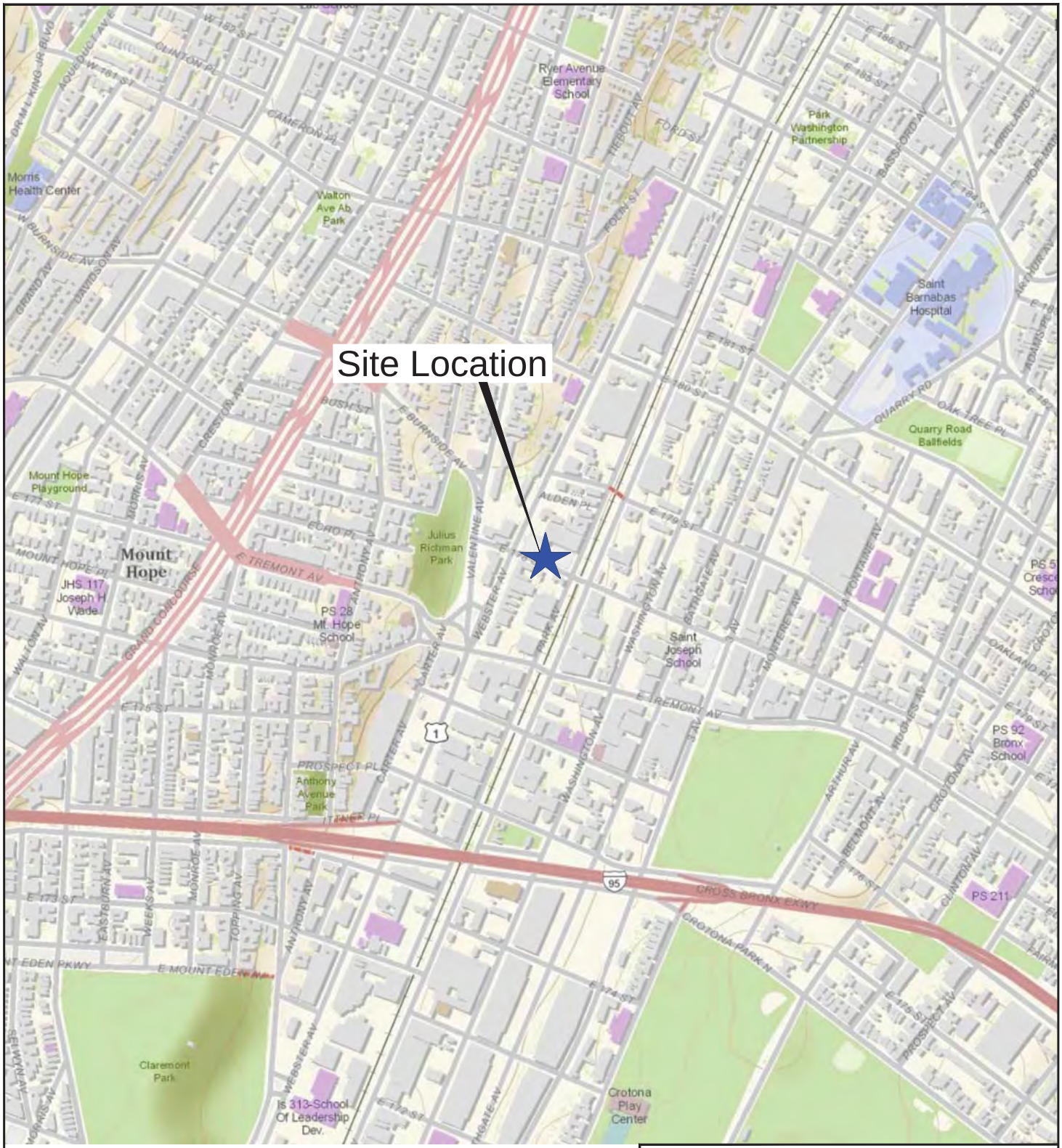
Site personnel will be re-coached on the proper methods for recording the quarterly operation logs.

As anticipated in the SMP, ERM proposes to discontinue the annual indoor air sampling as it has confirmed that the SSDS is functioning as designed.

A summary of ongoing action items is identified below:

- Continue implementing the SMP;
- Continue to coach Site personnel on the proper recording of quarterly field measurements;
- Conduct the annual Site inspection; and
- Submit next PRR in June 2019.

Figures



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GRAPHIC SCALE IN FEET

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Notes: Base Map - ESRI ArcMap Topo

TITLE

Site Location Map
1960-1982 Webster Avenue
Bronx, NY 10457

PREPARED FOR

Webster Ave Housing Development Fund Corporaton

Environmental Resources Management

FIGURE 1

DRAWN BY	SCALE	DATE	JOB NO.
EMF	AS SHOWN	07/08/16	0295737

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Legend

Site Boundary and Tax Outline

0 50 100

GRAPHIC SCALE IN FEET

TITLE

Site Boundary Map
1960-1982 Webster Avenue
Bronx, NY 10457

PREPARED FOR

Webster Ave Housing Development Fund Corporation

Environmental Resources Management

FIGURE 2

DRAWN BY	SCALE	DATE	JOB NO.
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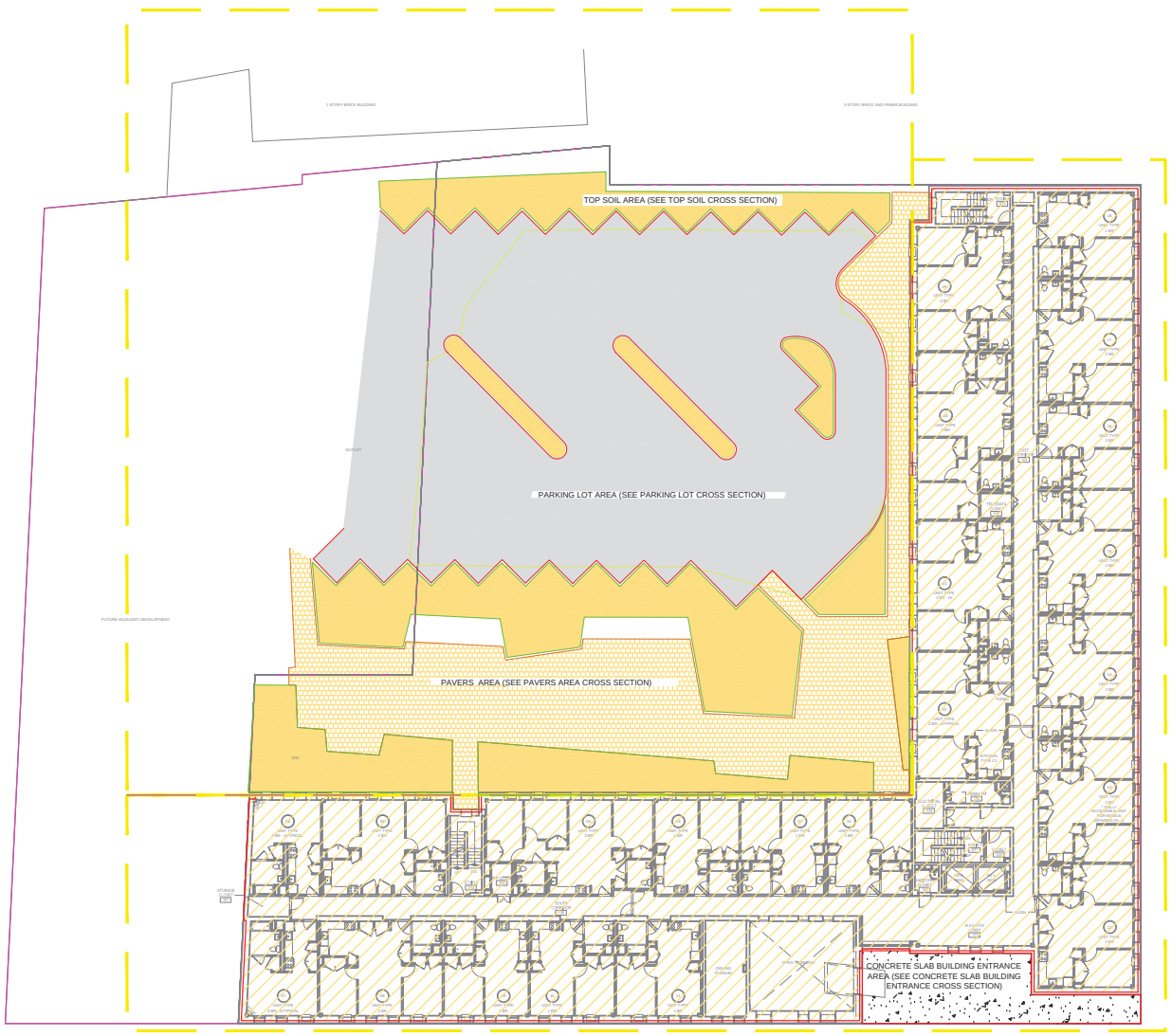

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GRAPHIC SCALE IN FEET

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TITLE

Location of Cover System Types 1960-1982 Webster Avenue Bronx, NY 10457

PREPARED FOR

Webster Ave Housing Development Fund Corporation

Environmental Resources Management

FIGURE 3A

DRAWN BY	SCALE	DATE	JOB NO.
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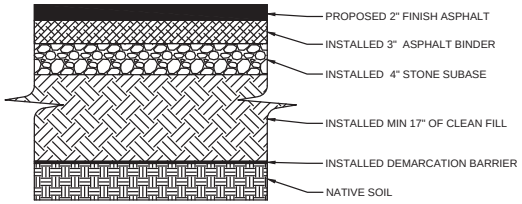
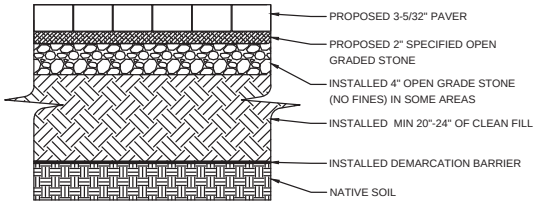


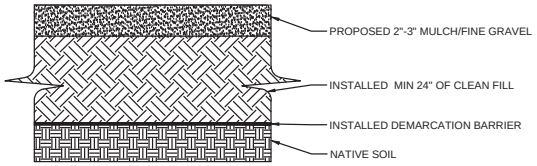
PARKING LOT CROSS SECTION
N.T.S.

PARKING LOT NOTES:
1. PROPOSED 2" FINISHED ASPHALT WILL BE INSTALLED AT THE END OF THE PROJECT AND IS NOT INCLUDED IN THE 10/15/15 SURVEY



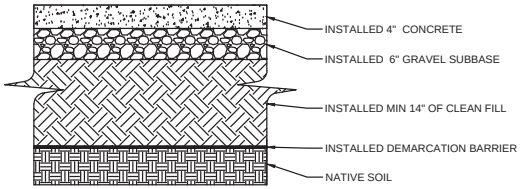
PAVERS AREA CROSS SECTION
N.T.S.

PAVERS AREA NOTES:
1. PROPOSED 3-5/32" PAVER AND 2" SPECIFIED OPEN GRADED STONE WILL BE INSTALLED AT THE END OF THE PROJECT AND ARE NOT INCLUDED IN THE 10/15/15 SURVEY

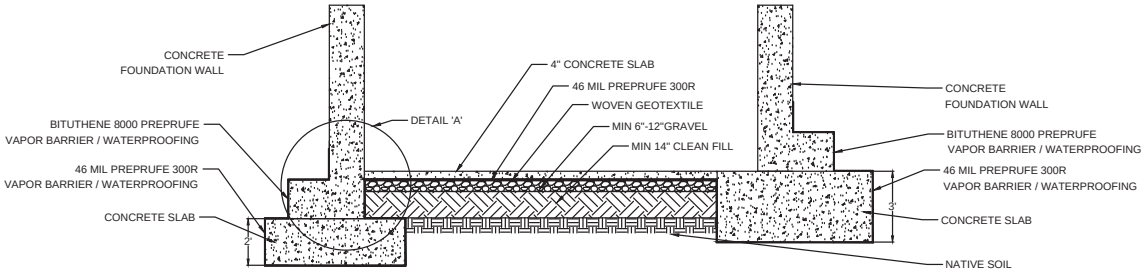


TOP SOIL CROSS SECTION
N.T.S.

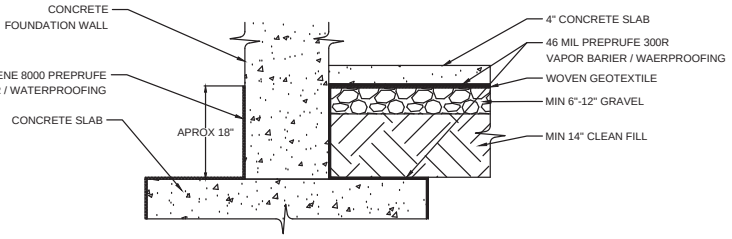
TOP SOIL NOTES:
1. PROPOSED 2"-3" MULCH/FINE GRAVEL WILL BE INSTALLED AT THE END OF THE PROJECT AND IS NOT INCLUDED IN THE 10/15/15 SURVEY



CONCRETE SLAB BUILDING ENTRANCE CROSS SECTION
N.T.S.



TYPICAL 4275 PARK AVE BUILDING CROSS SECTION
N.T.S.



DETAIL 'A'
N.T.S.

TITLE
Location of Cover System Types
Cross Sections
1960-1982 Webster Avenue
Bronx, NY 10457

PREPARED FOR
Webster Ave Housing Development Fund Corporation

Environmental Resources Management

FIGURE
3B

DRAWN BY	SCALE	DATE	JOB NO.
EK	NONE	7/12/16	0295737

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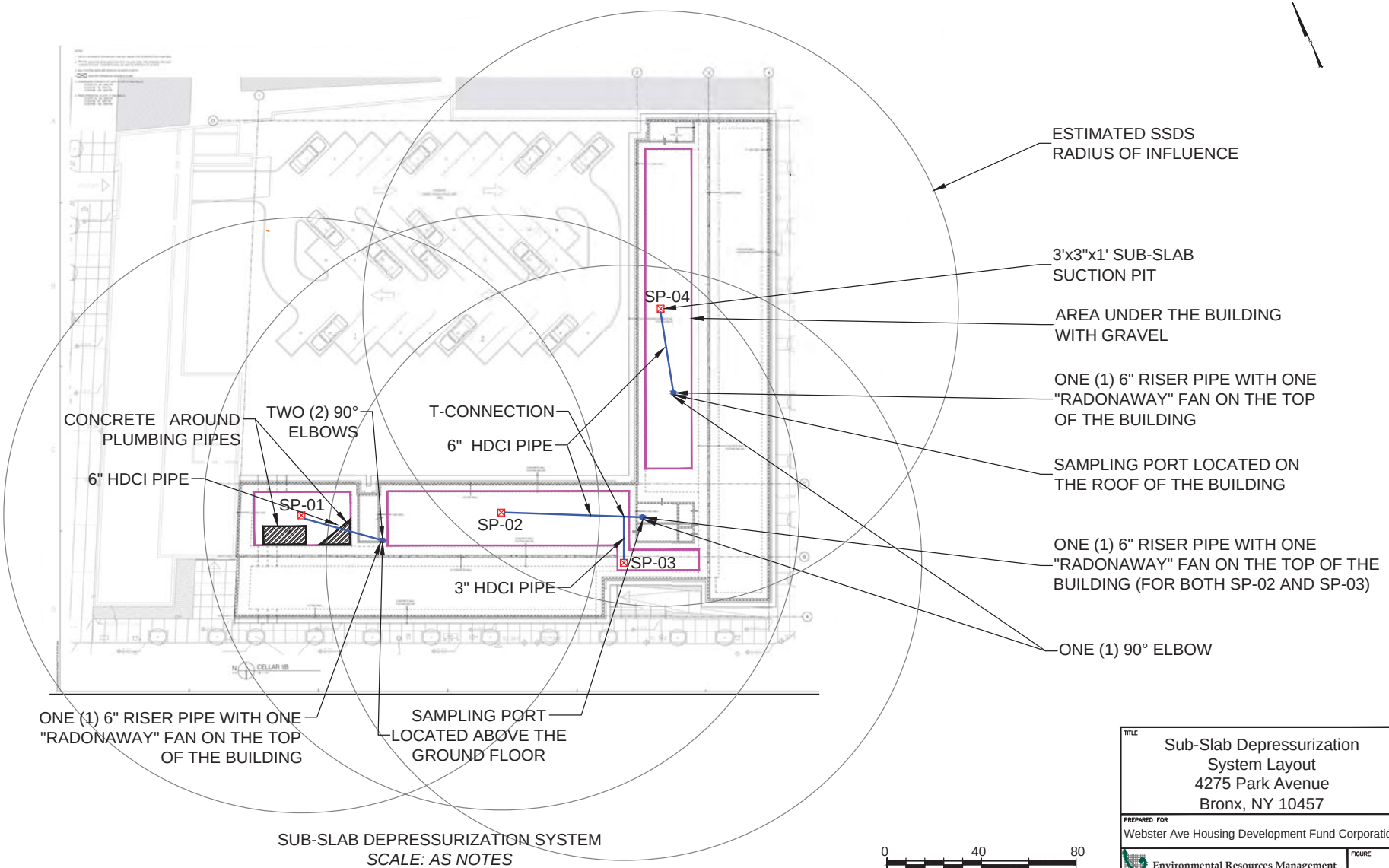


SUB-SLAB DEPRESSURIZATION SYSTEM
SCALE: AS NOTES

0 40 80
GRAPHIC SCALE IN FEET

TITLE
Sub-Slab Depressurization
System Layout
4275 Park Avenue
Bronx, NY 10457

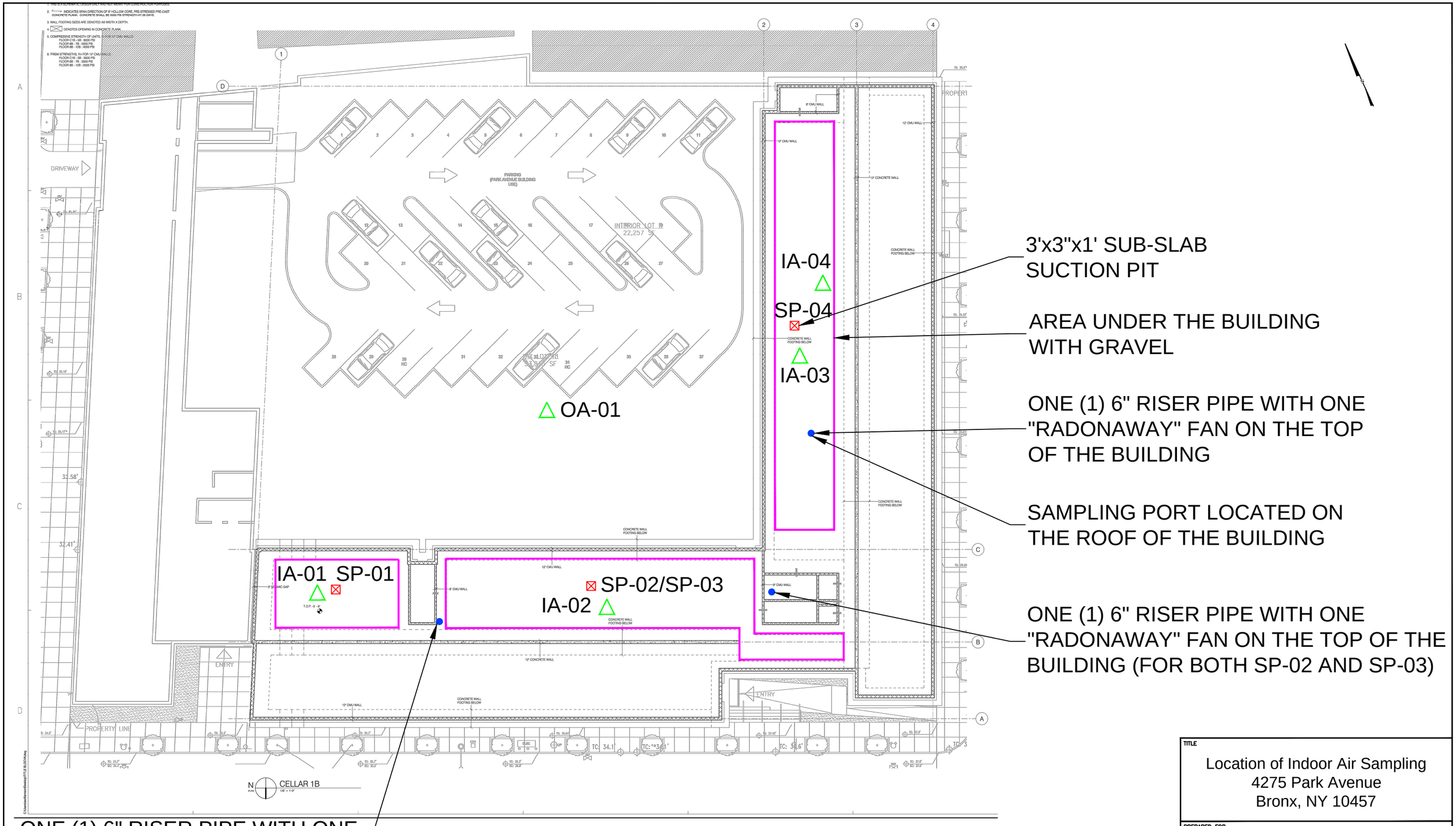
PREPARED FOR
Webster Ave Housing Development Fund Corporation

Environmental Resources Management

FIGURE
4

DRAWN BY	SCALE	DATE	JOB NO.
EK	GRAPHIC	07/11/16	0295737

C:\Users\edyta.korczynska\Desktop\New folder\2016-07 - Layout of the SSDS.dwg (07/22/2016 - 9:52am Melville)



0 30 60

GRAPHIC SCALE IN FEET

TITLE

Location of Indoor Air Sampling
4275 Park Avenue
Bronx, NY 10457

PREPARED FOR

Webster Ave Housing Development Fund Corporation

Environmental Resources Management

FIGURE 5

DRAWN BY	SCALE	DATE	JOB NO.
EK	GRAPHIC	06/12/18	0454768

M:\Scout\Projects\Mountco - Webster Ave, Bronx NY\CAD\2016 SMP\2016-07 - Indoor Air Sampling-V3.dwg (06/12/2018 - 12:50pm Melville)

Tables

Table 2 - NYSDEC DAR-1 - New York County Source Impacts
1960-1982 Webster Avenue

Qc = AGC/200
If Q (in lb/hr) is less than Qc, then the impact of the source is acceptable.

AGC = Annual Guideline Concentration
SGC = Short-term Guideline Concentration

Contaminant	CAS Number	Q (lb/hr)	AGC (µg/m^3)	SGC (µg/m^3)	Q_c	Q_c exceeded?
1,1-Dichloroethane	75-34-3	1.66E-08	1		3.15E-03	no
1,2,4-Trimethylbenzene	95-63-6	6.90E-07	6		3.00E-02	no
1,3-Dichlorobenzene	541-73-1	1.12E-06	10		5.00E-02	no
2-Butanone (MEK)	78-93-3	1.54E-05	5000	13,000	2.50E+01	no
4-Methyl-2-pentanone (MIBK)	108-10-1	9.06E-07	3000	31,000	1.50E+01	no
Acetone	67-64-1	2.37E-04	30000	180,000	1.50E+02	no
Benzene	71-43-2	7.23E-07	0.13	1,300	6.50E-04	no
Carbon tetrachloride	56-23-5	7.48E-08	0.17	1,900	8.50E-04	no
Cyclohexane	110-82-7	1.47E-06	6000		3.00E+01	no
Dichlorodifluoromethane (Freon12)	75-71-8	1.04E-06	12000		6.00E+01	no
Ethanol	64-17-5	3.12E-04	45000		2.25E+02	no
Ethyl acetate	141-78-6	7.94E-06	3400		1.70E+01	no
Ethylbenzene	100-41-4	8.31E-07	1000		5.00E+00	no
Hexane	110-54-3	2.90E-05	700		3.50E+00	no
Isopropyl alcohol	67-63-0	1.10E-05	7000	98,000	3.50E+01	no
m,p-Xylene	179601-23-1	3.30E-06	100	22,000	5.00E-01	no
Methylene chloride	75-09-2	5.32E-07	60	14,000	3.00E-01	no
Naphthalene	91-20-3	7.82E-07	3.0	7,900	1.50E-02	no
n-Heptane	142-82-5	7.40E-07	3900	210,000	1.95E+01	no
o-Xylene	95-47-6	1.16E-06	100	22,000	5.00E-01	no
Propene	115-07-1	1.26E-05	3000		1.50E+01	no
Tetrachloroethene	127-18-4	2.00E-07	4.0	300	2.00E-02	no
Tetrahydrofuran	109-99-9	8.46E-06	350	30,000	1.75E+00	no
Toluene	108-88-3	1.95E-05	5000	37,000	2.50E+01	no
Trichloroethene	79-01-6	2.49E-08	0.2	20	1.00E-03	no
Trichlorofluoromethane (Freon 11)	75-69-4	6.07E-07	5000	9,000	2.50E+01	no
Vinyl chloride	75-01-4	5.82E-08	0.1	180,000	5.50E-04	no

Concentrations based on analytical results of sample collected June 20, 2016.

	ug/m3	ug/ft3	lbs/ft3	Air flow cfm	lb/min	min/hr	lb/hr
		0.0283	2.20E-09	222		60	
1,1-Dichloroethane	0.02	0.0006	1.25E-12		2.77E-10		1.66E-08
1,2,4-Trimethylbenzene	0.83	0.0235	5.18E-11		1.15E-08		6.90E-07
1,3-Dichlorobenzene	1.4	0.0382	8.43E-11		1.87E-08		1.12E-06
2-Butanone (MEK)	18.49	0.5235	1.15E-09		2.56E-07		1.54E-05
4-Methyl-2-pentanone (MIBK)	1.09	0.0309	6.80E-11		1.51E-08		9.06E-07
Acetone	285.15	8.0734	1.78E-08		3.95E-06		2.37E-04
Benzene	0.87	0.0246	5.43E-11		1.21E-08		7.23E-07
Carbon tetrachloride	0.09	0.0025	5.62E-12		1.25E-09		7.48E-08
Cyclohexane	1.77	0.0501	1.10E-10		2.45E-08		1.47E-06
Dichlorodifluoromethane (Freon12)	1.25	0.0354	7.80E-11		1.73E-08		1.04E-06
Ethanol	375.21	10.6232	2.34E-08		5.20E-06		3.12E-04
Ethyl acetate	9.55	0.2704	5.96E-10		1.32E-07		7.94E-06
Ethylbenzene	1	0.0283	6.24E-11		1.39E-08		8.31E-07
Hexane	34.94	0.9892	2.18E-09		4.84E-07		2.90E-05
Isopropyl alcohol	13.18	0.3732	8.23E-10		1.83E-07		1.10E-05
m,p-Xylene	3.97	0.1124	2.48E-10		5.50E-08		3.30E-06
Methylene chloride	0.64	0.0181	3.99E-11		8.87E-09		5.32E-07
Naphthalene	0.94	0.0266	5.87E-11		1.30E-08		7.82E-07
n-Heptane	0.89	0.0252	5.56E-11		1.23E-08		7.40E-07
o-Xylene	1.39	0.0394	8.68E-11		1.93E-08		1.16E-06
Propene	15.15	0.4289	9.46E-10		2.10E-07		1.26E-05
Tetrachloroethene	0.24	0.0068	1.50E-11		3.33E-09		2.00E-07
Tetrahydrofuran	10.17	0.2879	6.35E-10		1.41E-07		8.46E-06
Toluene	23.48	0.6648	1.47E-09		3.25E-07		1.95E-05
Trichloroethene	0.03	0.0008	1.87E-12		4.16E-10		2.49E-08
Trichlorofluoromethane (Freon 11)	0.73	0.0207	4.56E-11		1.01E-08		6.07E-07
Vinyl chloride	0.07	0.0020	4.37E-12		9.70E-10		5.82E-08

Table 1
Summary of Indoor Air and SSDS Exhaust Analytical Results
1960-1982 Webster Avenue

Client ID:	Cas Number	NY Indoor Air Guideline	IA-01	IA-02	IA-03	DUP032818 (IA-03)	IA-04	OA-01
Lab ID:			SC45276-06	SC45276-09	SC45276-07	SC45276-04	SC45276-02	SC45276-03
Matrix:			Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Outdoor Air
Sampled:			29-Mar-18	29-Mar-18	29-Mar-18	29-Mar-18	29-Mar-18	29-Mar-18
EPA TO-15 SIM (ug/m³)								
Vinyl chloride	75-01-4	-	< 0	< 0	< 0	< 0	< 0	< 0
1,1-Dichloroethene	75-35-4	-	< 0.01	< 0.01	< 0.01	**0.01**	< 0.01	< 0.01
1,1-Dichloroethane	75-34-3	-	**0.04**	**0.01**	**0.01**	**0.02**	< 0.01	**0.01**
Carbon tetrachloride	56-23-5	-	**0.09**	**0.1**	**0.1**	**0.1**	**0.09**	**0.09**
Trichloroethene	79-01-6	2	**0.04**	**0.02**	**0.02**	**0.08**	< 0	**0.02**
Tetrachloroethene	127-18-4	30	**0.21**	**0.23**	**0.41**	**0.36**	**0.43**	**0.23**
EPA TO-15L (ug/m³)								
Propene	115-07-1	-	**0.89**	**1.08**	**0.92**	**0.99**	**1.08**	**1.01**
Dichlorodifluoromethane (Freon12)	75-71-8	-	**1.08**	**1.17**	**1.13**	**1.19**	**1.05**	**1.25**
Chloromethane	74-87-3	-	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	-	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
1,3-Butadiene	106-99-0	-	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Bromomethane	74-83-9	-	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Chloroethane	75-00-3	-	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Acetone	67-64-1	-	**79.37**	**23.05**	**14.78**	**14.14**	**225.51**	**11.83**
Trichlorofluoromethane (Freon 11)	75-69-4	-	**0.75**	**0.83**	**0.74**	**0.76**	**0.74**	**1.56**
Ethanol	64-17-5	-	**216.83**	**154.99**	**32.05**	**30.73**	**131.04**	**18.53**
Acrylonitrile	107-13-1	-	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
Methylene chloride	75-09-2	60	**0.49**	**0.49**	< 0.17	< 0.17	**0.7**	< 0.17
1,1,2-Trichlorotrifluoroethane (Freon 113)	76-13-1	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	75-15-0	-	< 0.4	< 0.4	< 0.4	**0.73**	< 0.4	< 0.4
trans-1,2-Dichloroethene	156-60-5	-	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
Methyl tert-butyl ether	1634-04-4	-	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Isopropyl alcohol	67-63-0	-	**11.61**	**20.47**	**7.73**	**6.92**	**7.8**	**5.08**
2-Butanone (MEK)	78-93-3	-	**15.69**	**5.63**	**1.56**	**2.06**	**35.68**	**2.04**
cis-1,2-Dichloroethene	156-59-2	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexane	110-54-3	-	**41.6**	< 0.33	**1.87**	**1.78**	**2.8**	< 0.33
Ethyl acetate	141-78-6	-	**7.28**	**3.96**	**3.3**	**2.56**	**2.54**	**3.4**
Chloroform	67-66-3	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Tetrahydrofuran	109-99-9	-	**11.74**	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,1,1-Trichloroethane	71-55-6	-	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
Benzene	71-43-2	-	**0.91**	**0.65**	**1.41**	**1.49**	**0.87**	**0.55**
Cyclohexane	110-82-7	-	**2.26**	**0.43**	**0.93**	**0.89**	**26.5**	**2.08**
1,4-Dioxane	123-91-1	-	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55	< 0.55
n-Heptane	142-82-5	-	**0.76**	< 0.23	**0.62**	**0.64**	**4.06**	< 0.23
4-Methyl-2-pentanone (MIBK)	108-10-1	-	**1.22**	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
cis-1,3-Dichloropropene	10061-01-5	-	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
trans-1,3-Dichloropropene	10061-02-6	-	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
Toluene	108-88-3	-	**24.68**	**6.66**	**14.56**	**14.11**	**62.84**	**4.06**
2-Hexanone (MBK)	591-78-6	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chlorobenzene	108-90-7	-	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
1,1,1,2-Tetrachloroethane	630-20-6	-	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48	< 0.48
Ethylbenzene	100-41-4	-	**0.91**	**0.49**	**1.57**	**1.29**	**1.81**	< 0.36
m,p-Xylene	179601-23-1	-	**3.78**	**2.08**	**6.37**	**5.42**	**7.89**	< 0.79
Bromoform	75-25-2	-	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
Styrene	100-42-5	-	< 0.17	< 0.17	**0.5**	< 0.17	< 0.17	< 0.17
o-Xylene	95-47-6	-	**1.4**	**0.61**	**2.61**	**2.1**	**2.72**	< 0.15
1,1,2,2-Tetrachloroethane	79-34-5	-	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Isopropylbenzene	98-82-8	-	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
1,3,5-Trimethylbenzene	108-67-8	-	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
4-Ethyltoluene	622-96-8	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2,4-Trimethylbenzene	95-63-6	-	**0.78**	< 0.28	**0.84**	**0.59**	**0.79**	< 0.28
Naphthalene	91-20-3	-	< 0.35	< 0.35	< 0.35	< 0.35	**1.47**	< 0.35
1,3-Dichlorobenzene	541-73-1	-	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22
Benzyl chloride	100-44-7	-	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
sec-Butylbenzene	135-98-8	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Isopropyltoluene	99-87-6	-	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35	< 0.35
1,2-Dichlorobenzene	95-50-1	-	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
n-Butylbenzene	104-51-8	-	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
1,2,4-Trichlorobenzene	120-82-1	-	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38

Table 1
Summary of Indoor Air and SSDS Exhaust Analytical Results
1960-1982 Webster Avenue

Client ID:	Cas Number	NY Indoor Air Guideline	SP-01	SP-02	SP-04
Lab ID:			SC45276-05	SC45276-08	SC45276-01
Matrix:			Soil Gas	Soil Gas	Soil Gas
Sampled:			29-Mar-18	29-Mar-18	29-Mar-18
EPA TO-15 SIM (ug/m³)					
Vinyl chloride	75-01-4	-	< 0	< 0	**0.07**
1,1-Dichloroethene	75-35-4	-	< 0.01	< 0.01	< 0.01
1,1-Dichloroethane	75-34-3	-	**0.02**	**0.02**	< 0.01
Carbon tetrachloride	56-23-5	-	**0.09**	**0.08**	**0.08**
Trichloroethene	79-01-6	2	**0.02**	**0.03**	**0.03**
Tetrachloroethene	127-18-4	30	**0.21**	**0.24**	**0.2**
EPA TO-15L (ug/m³)					
Propene	115-07-1	-	**0.99**	**1.11**	**15.15**
Dichlorodifluoromethane (Freon12)	75-71-8	-	**1.09**	**0.96**	**1.25**
Chloromethane	74-87-3	-	< 0.12	< 0.12	< 0.12
1,2-Dichlorotetrafluoroethane (Freon 114)	76-14-2	-	< 0.39	< 0.39	< 0.39
1,3-Butadiene	106-99-0	-	< 0.09	< 0.09	< 0.09
Bromomethane	74-83-9	-	< 0.25	< 0.25	< 0.25
Chloroethane	75-00-3	-	< 0.21	< 0.21	< 0.21
Acetone	67-64-1	-	**65.11**	**65.82**	**285.15**
Trichlorofluoromethane (Freon 11)	75-69-4	-	**0.72**	**0.73**	**0.7**
Ethanol	64-17-5	-	**203.63**	**184.59**	**375.21**
Acrylonitrile	107-13-1	-	< 0.12	< 0.12	< 0.12
Methylene chloride	75-09-2	60	**0.64**	**0.52**	**0.38**
1,1,2-Trichlorotrifluoroethane (Freon 113)	76-13-1	-	< 0.5	< 0.5	< 0.5
Carbon disulfide	75-15-0	-	< 0.4	< 0.4	< 0.4
trans-1,2-Dichloroethene	156-60-5	-	< 0.29	< 0.29	< 0.29
Methyl tert-butyl ether	1634-04-4	-	< 0.19	< 0.19	< 0.19
Isopropyl alcohol	67-63-0	-	**11.29**	**13.18**	**9.89**
2-Butanone (MEK)	78-93-3	-	**18.49**	**14.01**	**16.57**
cis-1,2-Dichloroethene	156-59-2	-	< 0.3	< 0.3	< 0.3
Hexane	110-54-3	-	**34.94**	**27.85**	**25.28**
Ethyl acetate	141-78-6	-	**9.55**	**6.7**	**3.53**
Chloroform	67-66-3	-	< 0.3	< 0.3	< 0.3
Tetrahydrofuran	109-99-9	-	**10.17**	**8.99**	**7.37**
1,1,1-Trichloroethane	71-55-6	-	< 0.19	< 0.19	< 0.19
Benzene	71-43-2	-	**0.87**	**0.81**	**0.69**
Cyclohexane	110-82-7	-	**1.77**	**1.51**	**0.94**
1,4-Dioxane	123-91-1	-	< 0.55	< 0.55	< 0.55
n-Heptane	142-82-5	-	**0.89**	**0.73**	**0.5**
4-Methyl-2-pentanone (MIBK)	108-10-1	-	**1.09**	**0.8**	**0.67**
cis-1,3-Dichloropropene	10061-01-5	-	< 0.31	< 0.31	< 0.31
trans-1,3-Dichloropropene	10061-02-6	-	< 0.17	< 0.17	< 0.17
Toluene	108-88-3	-	**23.48**	**19.15**	**8.62**
2-Hexanone (MBK)	591-78-6	-	< 0.4	< 0.4	< 0.4
Chlorobenzene	108-90-7	-	< 0.29	< 0.29	< 0.29
1,1,1,2-Tetrachloroethane	630-20-6	-	< 0.48	< 0.48	< 0.48
Ethylbenzene	100-41-4	-	**0.98**	**1**	**0.42**
m,p-Xylene	179601-23-1	-	**3.44**	**3.97**	**1.36**
Bromoform	75-25-2	-	< 0.32	< 0.32	< 0.32
Styrene	100-42-5	-	< 0.17	< 0.17	< 0.17
o-Xylene	95-47-6	-	**1.35**	**1.39**	**0.44**
1,1,2,2-Tetrachloroethane	79-34-5	-	< 0.21	< 0.21	< 0.21
Isopropylbenzene	98-82-8	-	< 0.19	< 0.19	< 0.19
1,3,5-Trimethylbenzene	108-67-8	-	< 0.19	< 0.19	< 0.19
4-Ethyltoluene	622-96-8	-	< 0.2	< 0.2	< 0.2
1,2,4-Trimethylbenzene	95-63-6	-	**0.75**	**0.83**	< 0.28
Naphthalene	91-20-3	-	**0.94**	**0.79**	< 0.35
1,3-Dichlorobenzene	541-73-1	-	< 0.22	< 0.22	**1.35**
Benzyl chloride	100-44-7	-	< 0.16	< 0.16	< 0.16
sec-Butylbenzene	135-98-8	-	< 0.3	< 0.3	< 0.3
4-Isopropyltoluene	99-87-6	-	< 0.35	< 0.35	< 0.35
1,2-Dichlorobenzene	95-50-1	-	< 0.26	< 0.26	< 0.26
n-Butylbenzene	104-51-8	-	< 0.44	< 0.44	< 0.44
1,2,4-Trichlorobenzene	120-82-1	-	< 0.38	< 0.38	< 0.38

Appendices

Appendix A
Institutional & Engineering Controls Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **C203075**

Site Name Webster Avenue Residences

Site Address: 411 East 178th Street (a/k/a 1973 Webster Avenue) Zip Code: 10457
City/Town: Bronx
County: Bronx
Site Acreage: 1.4

Reporting Period: December 21, 2016 to April 21, 2018

	YES	NO
1. Is the information above correct?	X	
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? Certificate of Occupancy	X	
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	X	

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial	X	
7. Are all ICs/ECs in place and functioning as designed?	X	

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

	Box 2A	
	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid? **If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**		X
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years) **If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**	X	

SITE NO. C203075	**Box 3**
Description of Institutional Controls	

Parcel	Owner	Institutional Control
3028-3	Webster Ave Supportive Hous Dev Fnd Corp	Ground Water Use Restriction Soil Management Plan Site Management Plan IC/EC Plan

Prohibition of use of groundwater without necessary treatment
Use must be maintained as restricted residential
Site Management Plan including IC/EC Plan

3028-55	Webster Avenue Housing Dev Fund Corp	Site Management Plan Ground Water Use Restriction O&M Plan Soil Management Plan IC/EC Plan

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 12th day of October, 2016 between
Owner(s) Webster Avenue Housing Development Fund Corporation, (the "Grantor Fee Owner") having an office at 505 8th Avenue, 5th Floor, New York, New York 10018, County of New York, State of New York, and Webster Avenue Affordable LLC, (the "Grantor Beneficial Owner"), having an office at 505 8th Avenue, 5th Floor, New York, New York 10018, County of New York, State of New York (collectively, the "Grantor"), and The People of the State of New York (the "Grantee"), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State ofNew York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been detennined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 4275 Park Avenue in the City ofNew York, County of Bronx and State of New York, known and designated on the tax map of the New York City Department of Finance as tax map parcel number: Block 3028 Lot 55 (formerly p/o Lot 48, being the same as that property conveyed to Grantor by deed dated January 15, 2014 and recorded in the City Register of the City of New York as CRFN # 2014000034695. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.995 +/-acres, and is hereinafter more fully described in the Land Title Survey dated June 16, 2016 prepared by Terry BergendorffCollins, L.L.S., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A;

WHEREAS, Grantor Beneficial Owner, is the owner of the beneficial interest in the Controlled Property, as conveyed to Grantor Beneficial Owner by means of a Declaration of Interest and Nominee Agreement dated December 30, 2014 and recorded in the City Register of the City of New York as CRFN # 2015000059238; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C203075-01-15 as amended May 13, 2016, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment_as determined by the NYSDOH or the New York City Department of Health and Mental Hygiene to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any

mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-todate version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(I) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-I.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:
(i) are in-place;
(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and
(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may, upon notice to Grantor, enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement
A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession,)aches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:
County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C203075
Office of General Counsel
NYSDEC

625 Broadway
Albany, NY 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor Fee Owner has caused this instrument to be signed in its name.

Webster Avenue Housing Development Fund Corporation

Box 4

Description of Engineering Controls

Parcel	Engineering Control
3028-3	
	Cover System
Soil cover system	
3028-55	
	Vapor Mitigation Cover System
Soil cover system Sub-slab depressurization system	

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
✓	

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
✓	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. C203075

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I David Beer (print name) at 505 8th Ave, New York, NY 10018 (print business address)

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

6-6-2018
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Stephen A. Mirabello at 105 Maxess Road, Suite 316, Melville, NY, 11747
print name print business address

am certifying as a Professional Engineer for the Owner
(Owner or Remedial Party)

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

6-12-2018
Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

NYC Buildings

Certificate of Occupancy

CO Number: 220394552T001

This certifies that the premises described herein conforms substantially to the approved plans and specifications and to the requirements of all applicable laws, rules and regulations for the uses and occupancies specified. No change of use or occupancy shall be made unless a new Certificate of Occupancy is issued. *This document or a copy shall be available for inspection at the building at all reasonable times.*

A.

Borough: Bronx
Address: 411 EAST 178TH STREET
Building Identification Number (BIN): 2127101

Block Number: 03028
Lot Number(s): 48
Building Type: New

Certificate Type: Temporary
Effective Date: 03/09/2018
Expiration Date: 04/08/2018

This building is subject to this Building Code: 2008 Code

For zoning lot metes & bounds, please see BISWeb.

B.

Construction classification: 1-B (2014/2008 Code)
Building Occupancy Group classification: R-2 (2014/2008 Code)
Multiple Dwelling Law Classification: HAEA
No. of stories: 8 **Height in feet:** 85 **No. of dwelling units:** 171

C. **Fire Protection Equipment:**
Standpipe system, Fire alarm system, Sprinkler system

D. **Type and number of open spaces:**
Arcade (6 square feet)

E. **This Certificate is issued with the following legal limitations:**
None

Outstanding requirements for obtaining Final Certificate of Occupancy:

There are 38 outstanding requirements. Please refer to BISWeb for further detail.

Borough Comments:

OK TO ISSUE TCO FOR 30 DAYS. POST ONE FIREGUARD AT LOBBY DURING OCCUPANCY UNTIL FIRE ALARM IS SIGNED OFF

Borough Commissioner

Commissioner

DOCUMENT CONTINUES ON NEXT PAGE

NYC Buildings

Certificate of Occupancy

CO Number: 220394552T001

Permissible Use and Occupancy

All Building Code occupancy group designations below are 2008 designations.

Floor From	To	Maximum persons permitted	Live load lbs per sq. ft.	Building Code occupancy group	Dwelling or Rooming Units	Zoning use group	Description of use
CEL		29	OG	R-2 A-3		3	STORAGE & ACCESSORY TO THE BUILDING, TRASH ROOM,COMMUNITY ROOM,AND UTILITY ROOMS. 88 BICYCLE PARKING SPACES. WORKOUT AND LAUNDRY ROOM.
CEL		110	OG	A-3		3	COMMUNITY ROOM (110 PERSONS)
OSP			OG			3	ACCESSORY PARKING SPACES FOR 4275 PARK AVENUE, 6 SPACES.
001		24	100	B		4	NON-PROFIT INSTITUTION WITHOUT SLEEPING ACCOMMODATIONS.
001	001	37	100	B		3	ACCESSORY OFFICES, LOBBY.
002		12	100	R-2		3	ACCESSORY OFFICES
002			40	R-2	21	3	NON PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS (21 DWELLING UNITS)
003			40	R-2	26	3	NON PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS(26 DWELLING UNITS PER FLOOR)
004			40	R-2	26	3	NON PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS(26 DWELLING UNITS PER FLOOR)
005			40	R-2	26	3	NON-PROFIT INSTITUTION WITH SLEEPING ACCOMMODATION 26 DWELLING UNITS PER FLOOR.\
006			40	R-2	26	3	NON-PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS(26 DWELLING UNITS PER FLOOR)
007			40	R-2	23	3	NON-PROFIT INSTITUTION WITH SLEEPING ACCOMMODATIONS(23 DWELLING UNITS PER FLOOR)
008			40	R-2	23	3	NON-PROFIT INSTITUTION WITH SLEEPING ACCOMODATION(23 DWELLING UNITS PER FLOOR)

Borough Commissioner

Commissioner

DOCUMENT CONTINUES ON NEXT PAGE

NYC Buildings

Certificate of Occupancy

CO Number: 220394552T001

Permissible Use and Occupancy

All Building Code occupancy group designations below are 2008 designations.

Floor From To	Maximum persons permitted	Live load lbs per sq. ft.	Building Code occupancy group	Dwelling or Rooming Units	Zoning use group	Description of use
ROF	78	100	R-2 F-2		3	BOILER ROOM, ELEVATOR MACHINE ROOM

COMMUNITY FACILITY NONPROFIT INSTITUTION WITH SLEEPING ACCOMODATION 88 BICYCLE PARKING SPACES EXHIBITS 1 & 3 WERE RECORDED UNDER CRFN # 2015000059224, 2015000059225 PARKING RESTRICTIVE DECLARATION/EASEMENT WERE RECORDED UNDER 2015000059236, 20150000069614.

END OF SECTION

Borough Commissioner

Commissioner

END OF DOCUMENT

Appendix B
Annual Site Inspection Form

Annual Site-Wide Inspection Form
1960-1982 Webster Avenue, Bronx, New York
NYSDEC Site No. C203075

Item #	Inspection Item	Yes	No	Inspector Comments	Notes
1	Has a change of ownership occurred		X		NYSDEC must be informed 60 days in advance
2	Has there been any change in Site Use?		X		Current Site Use is Restricted Residential. NYSDEC must be informed 60 days in advance per 6 NYCRR Part 375-1.11(d)
3	Are there any plans to construct a new building?		X	Facility still under construction	Per Section 3.2 of the SMP, the potential for soil vapor intrusion monitoring plan must be evaluated before construction. Notify NYSDEC and prepare vapor intrusion work plan prior to any construction.
4	Have any soil disturbances occurred in the past?		X	Still active construction	Documentation must be provided as required by the Excavation Work Plan.
5	Are any soil disturbances planned at this time?		X		NYSDEC must be informed 15 days in advance
6	Have there been any disturbances to the elements of the cover system (soil cover, asphalt areas, building concrete slab)?		X		
7	Soil Cover - Are there any signs of erosion, settlement, or bare spots?		X		
8	Asphalt Cover - Are there any significant cracks, settlement, or erosion?		X		
9	Concrete cover (including building slab)and pavers - Are there any significant cracks, settlement, or erosion?		X	Minor/not significant cracks in floor.	
10	Is ground water underlying the Site being used?		X		Use of Site ground water is prohibited without treatment rendering it safe for its intended use.
11	Are there any signs that the SSDS blower and fans are not being maintained? Any signs of operational problems?		X		
12	Are there any vegetable gardens or farming at the Site?		X		These activities are prohibited.
13	Is there any activity that may tend to interfere with the completed remedy or the continued ability to implement institutional controls?		X		

Annual Site-Wide Inspection Form
1960-1982 Webster Avenue, Bronx, New York
NYSDEC Site No. C203075

Item #	Inspection Item	Yes	No	Inspector Comments	Notes
14	SSD System - Upon visual inspection of entire system, are any components performing inadequately?		x	Magnahelic pressures consistent with start-up. No indications of fans in disrepair.	
15	SSD System pipes - Are there any holes, cracks, or other physical deficiencies? Are there any blockages in the piping?		x		
16	SSD System - Do the inline fans show signs of abnormal operation?		x		
17	SSD System - Is there an air intake or operable window located within 10 feet of any of the three exhaust points?		x		NYSDOH guidance requires SSD exhaust points tobe located at least 10 feet away from an air intake.
18	SSD System - After discussion with building management, have there been any HVAC system modifications that might affect performance of the SSD System?		x	Building generally heated through baseboards and window AC. Central air in ground floor hallways and apartment G07. Apartments typically under negative pressure due to bathroom vents	
19	SSD System - Are there any holes or cracks in the floor?		x	No significant cracks. Vacuum readings normal	Evaluate need for sealing/repairs in combination with vacuum monitoring readings.

Corrective Measures:
Specify any corrective measures needed (e.g., seal floor cracks, replace top soil, etc.):

No corrective measures at this time. Noted that demarcation layer/snow fence observed daylighting within parking lot. Spoke with construction manager Liam and Jason of MegaGroup and received site photos. The locations correspond to the edge of the excavation, where demaracation layer was vertical between parcels. Demarcation layer overall appeared to be installed to correct depth in ERM and provided documentation.

Photographs:
Attach photos showing status of the cover elements

Name of Inspector: Stephen A. Mirabello, P.E.

Signature of Inspector: 

Date of Inspection: 3/28/2018

Date of Last Inspection: Initial

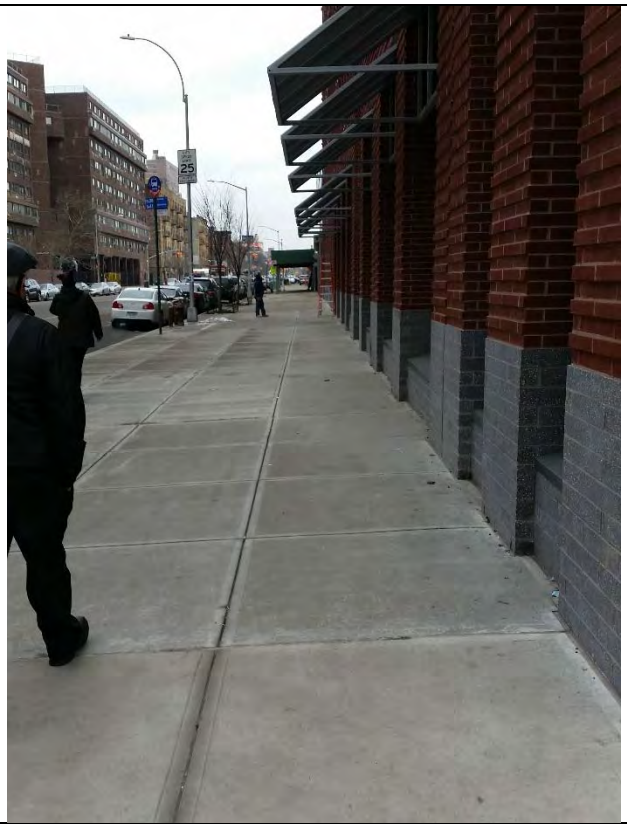
Required Date of Next Inspection: March 2019/As directed by NYSDEC.

Identify expected inspector for next inspection: Stephen A Mirabello, P.E.

Additional comments or drawings:

Check access to sample ports. Building construction sealed up openings of panels in walls, took time to relocate. Port SP-03 is in janitors closet next to elevator. Port SP-01/02 is in "electric/telecom" room.

Appendix C
Annual Site Inspection
Photographic Log



Photograph: 1	Building Exterior – East Side

Photograph: 2	Building exterior – South side

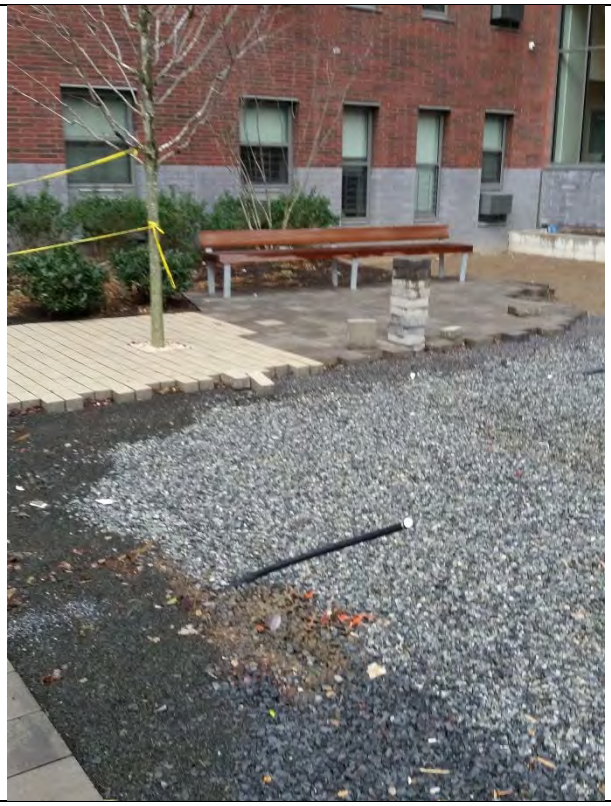
Photograph: 3	Courtyard looking north east

Photograph: 4	Courtyard looking north

Photograph: 5	Potential exposed demarcation layer in courtyard landscape area

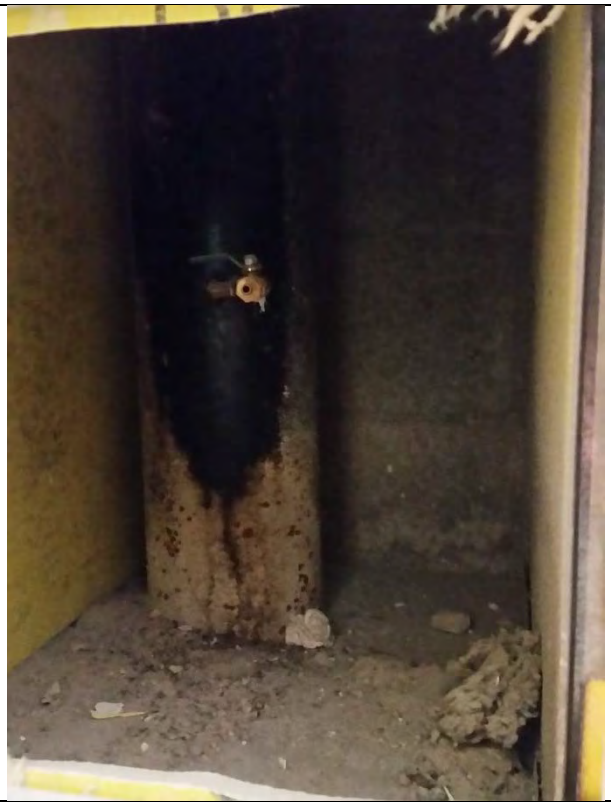
Photograph: 6	Courtyard

Photograph: 7	Parking area of courtyard

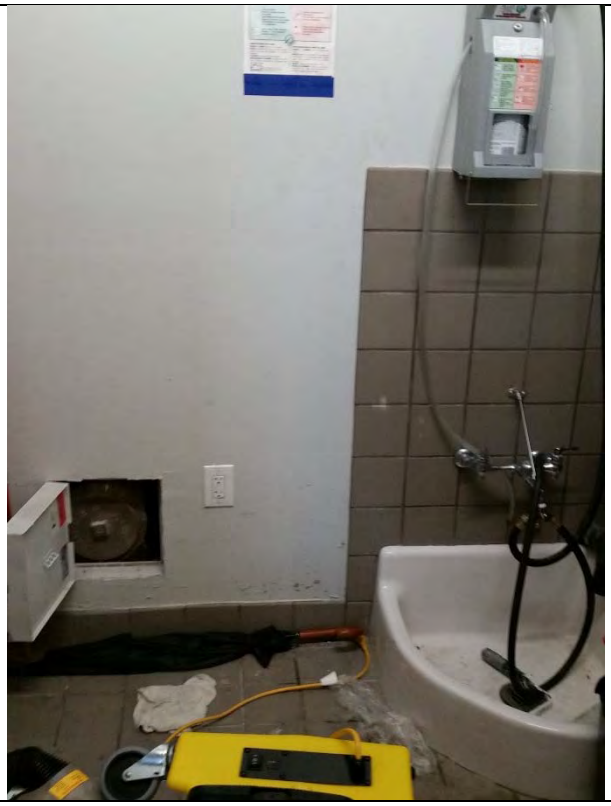


Photograph: 8	Unfinished patio in courtyard. Potential exposed demarcation layer shown

Photograph: 9	Unfinished portion of courtyard

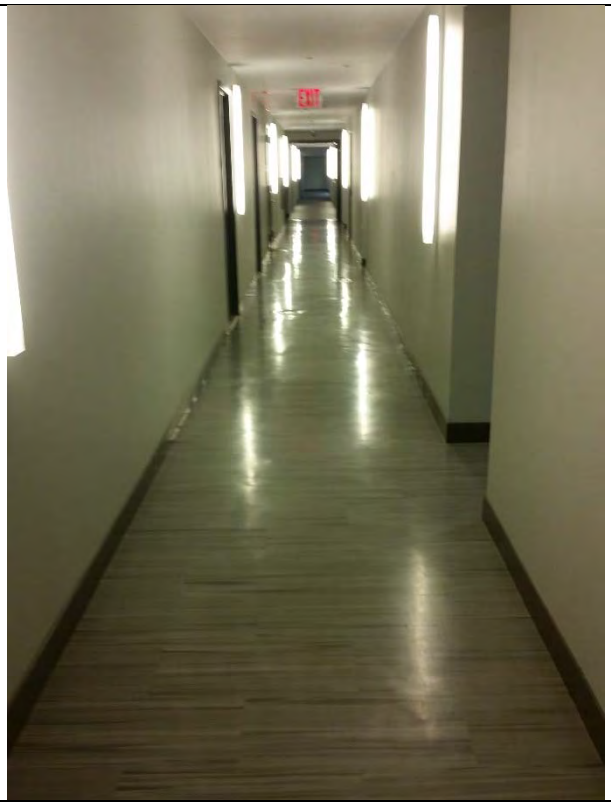


Photograph: 10	SP-01 access in electric/telecom room

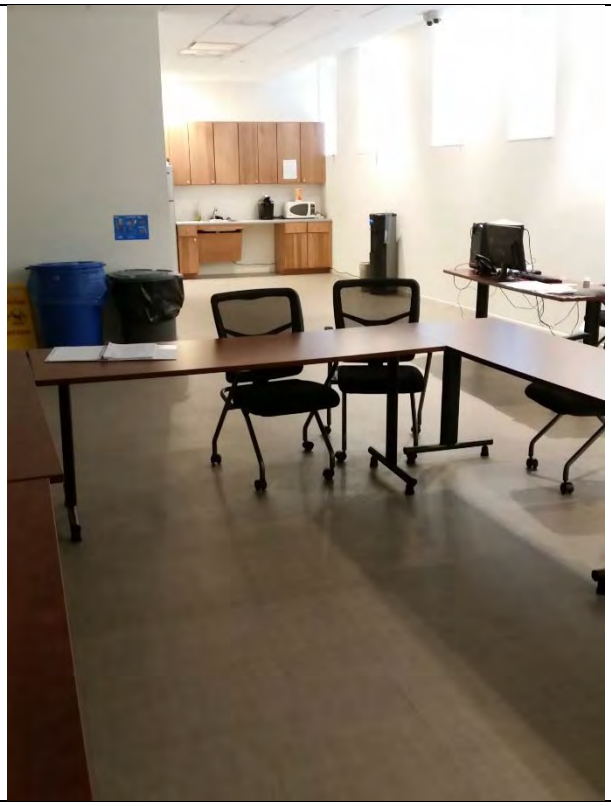


Photograph: 11	SP-02 access in janitor closet

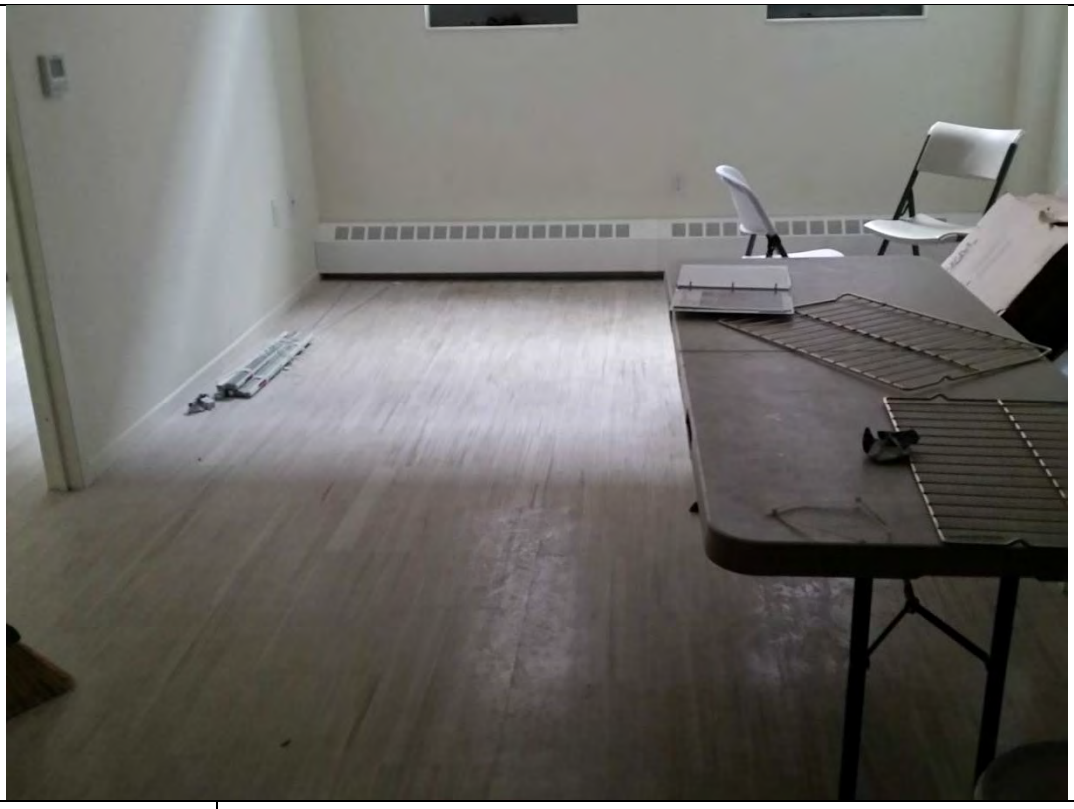
Photograph: 12	SP-03 access on roof exhaust stack



Photograph: 13	Interior hallway



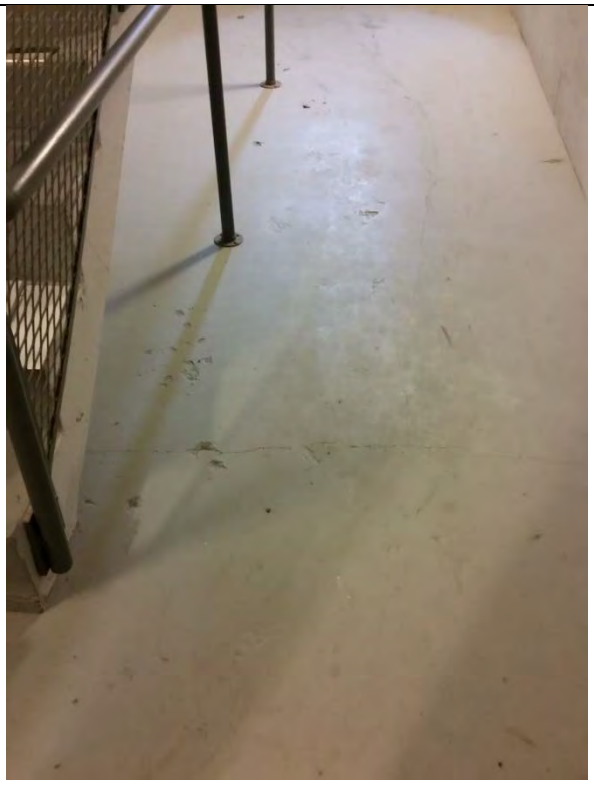
Photograph: 14	1st floor Staff lounge



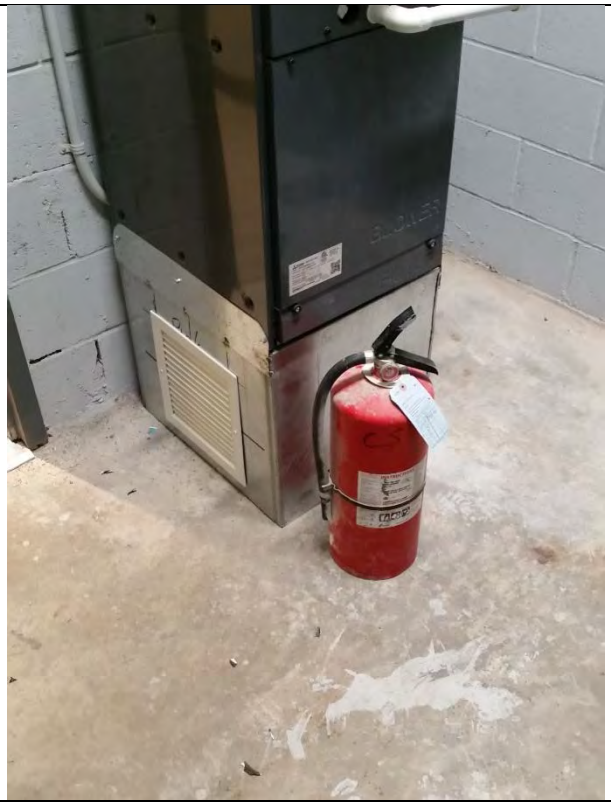
Photograph: 15	Unit interior

Photograph: 16	Unit Interior

Photograph: 17	Unit Interior

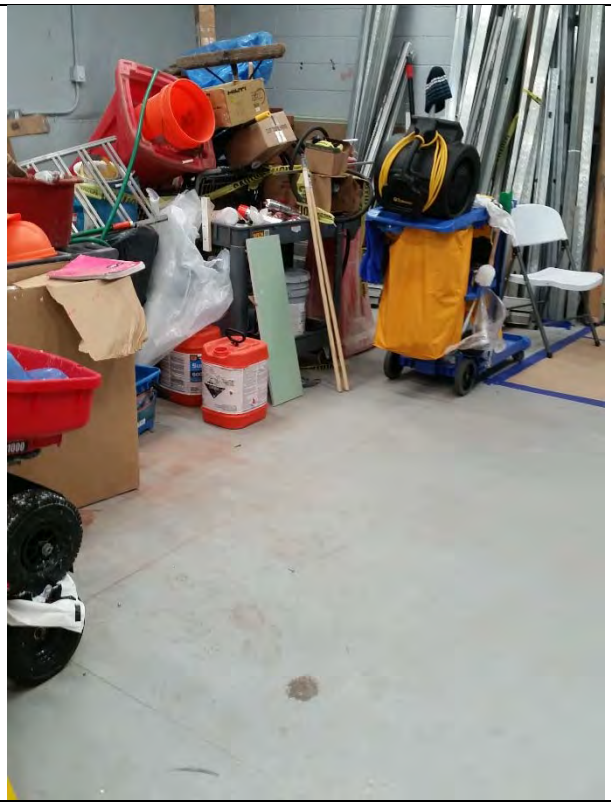


Photograph: 18	Stairway slab showing crack and chips



Photograph: 19	Air Duct

Photograph: 20	Open electrical conduit



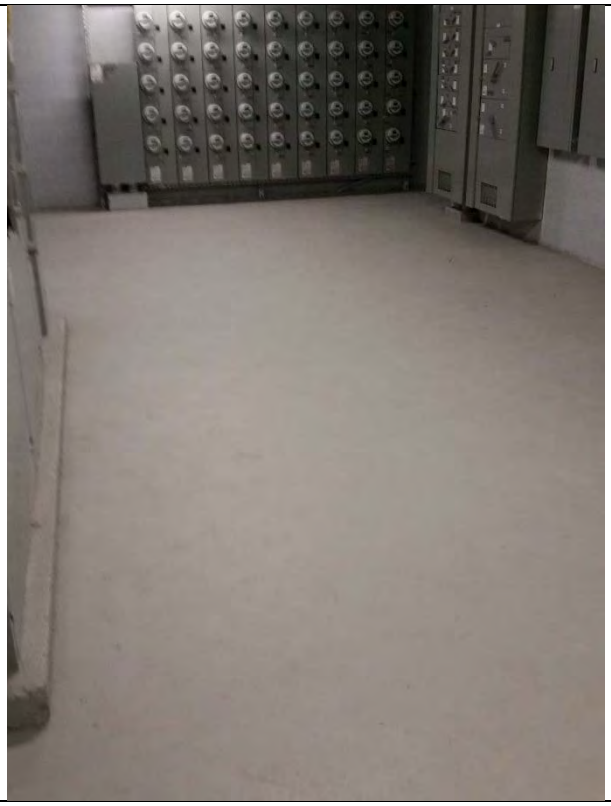
Photograph: 21	Interior Slab

Photograph: 22	Equipment pad showing crack

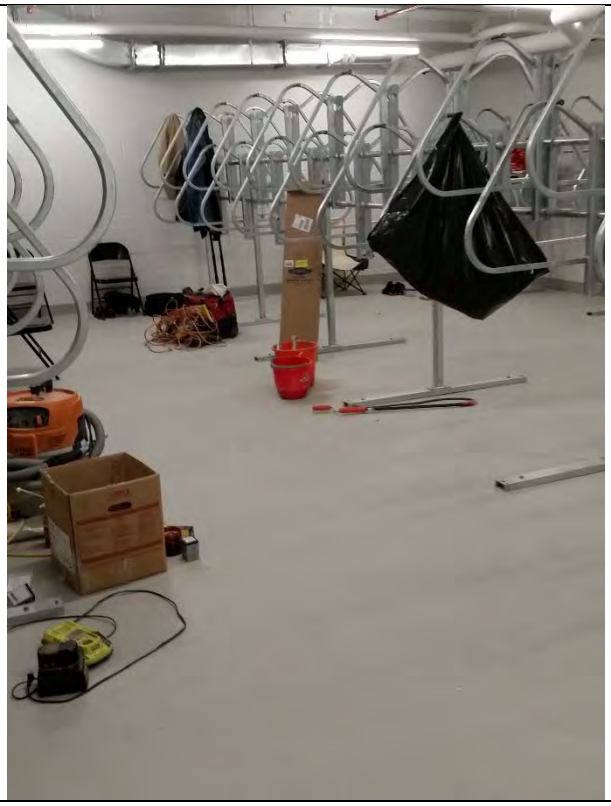
Photograph: 23	Equipment pad showing crack

Photograph: 24	Piping

Photograph: 25	Interior Slab

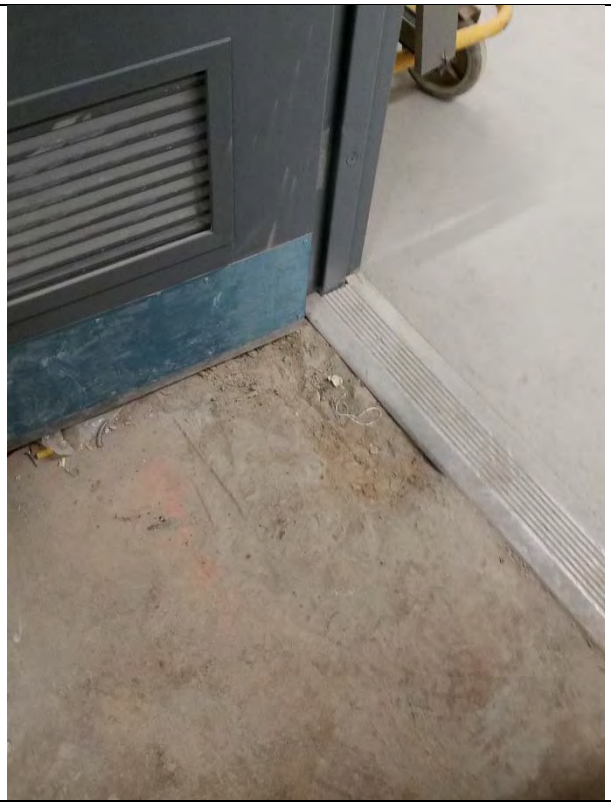


Photograph: 26	Interior Slab



Photograph: 27	Interior Slab

Photograph: 28	Opening in floor around pipe



Photograph: 29	Damaged slab in doorway

Photograph: 30	Exhaust Stack

Photograph: 31	Exhaust Stack

Appendix D
Site Operating Logs

Operations Log for SSDS

1960-1982 Webster Avenue, Bronx, New York
NYSDEC Site No. C203075

Personnel: Eric Muraus / Stephen Minabello
Date/time: 3/28/18 09:00
Company/Position: ERM
Previous inspection: 2016

	Location	Parameter	Unit	Response
In-line fan	SP-01	Fan running	Yes or No	Yes
In-line fan	SP-02/SP-03	Fan running	Yes or No	
In-line fan	SP-04	Fan running	Yes or No	
Sampling port	SP-01	Applied vacuum - typically 2.2" w.c.	inches w.c.	2.25"
Sampling port	SP-02/SP-03	Applied vacuum - typically 1.9" w.c.	inches w.c.	2.0"
Sampling port	SP-04	Applied vacuum - typically 1.6" w.c.	inches w.c.	1.3"
Sampling port	SP-01	Flow rate - typically	cfm	N/A
Sampling port	SP-02/SP-03	Flow rate - typically	cfm	N/A
Sampling port	SP-04	Flow rate - typically	cfm	N/A
Piping		Are there any holes, cracks, or other physical deficiencies? Are there any blockages in the piping?	Yes or No	No

cfm = cubic feet per minute; inches w.c. = inches of water column

Material changes in vacuum readings or flow rates?

N/A

Material changes in SSDS operations?

N/A

Action items:

None

All action items from previous inspection completed? (re-write item if unresolved)

N/A

NOTES:

SP-04 Slightly Low Response.

Appendix E
Indoor Air and SSDS Exhaust Sample
Laboratory Analytical Reports

eurofins | Spectrum Analytical

☑ Final Report
☐ Revised Report

Report Date:
30-Apr-18 09:22

Laboratory Report
SC45276

Environmental Resources Management
105 Masess Rd. Ste 316
Melville, NY 11747
Attn: Ernie Rossano

Project: 4275 Park Ave - Bronx, NY
Project #: 0454768

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Dawn E Wojcik

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 70 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC45276

Project: 4275 Park Ave - Bronx, NY

Project Number: 0454768

Laboratory ID	Client Sample ID	Container	Matrix	Date Sampled	Date Received
SC45276-01	SP-04	Summa canister 6 liter	Soil Gas	29-Mar-18 08:20	30-Mar-18 10:45
SC45276-02	IA-04	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 08:15	30-Mar-18 10:45
SC45276-03	OA-01	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 07:40	30-Mar-18 10:45
SC45276-04	DUP032818	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18 10:45
SC45276-05	SP-01	Summa canister 6 liter	Soil Gas	29-Mar-18 08:05	30-Mar-18 10:45
SC45276-06	IA-01	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 08:00	30-Mar-18 10:45
SC45276-07	IA-03	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18 10:45
SC45276-08	SP-02	Summa canister 6 liter	Soil Gas	29-Mar-18 07:50	30-Mar-18 10:45
SC45276-09	IA-02	Summa canister 6 liter	Indoor Air/Ambient Air	29-Mar-18 07:45	30-Mar-18 10:45

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

EPA TO-15 SIM

Samples:

SC45276-01 *SP-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-02 *IA-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-04 *DUP032818*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-05 *SP-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-06 *IA-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-07 *IA-03*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-08 *SP-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

SC45276-09 *IA-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

EPA TO-15L

Calibration:

Calibration 1804046

The %RSD for analyte 1,2,4-Trichlorobenzene is 30.0%. The calculated %RSD for the RRF for each compound in the calibration must be less than 30% with at most two exceptions up to a limit of 40%. This affected the following samples:

DUP032818
IA-01
IA-02
IA-03
IA-04
OA-01
SP-01
SP-02
SP-04

The %RSD for analyte Naphthalene is 39.8%. The calculated %RSD for the RRF for each compound in the calibration must be less than 30% with at most two exceptions up to a limit of 40%. This affected the following samples:

DUP032818
IA-01
IA-02
IA-03
IA-04
OA-01
SP-01
SP-02
SP-04

S818673-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

1,2,4-Trichlorobenzene (178%)
Hexachlorobutadiene (163%)
Naphthalene (227%)
n-Butylbenzene (142%)

EPA TO-15L

Calibration:

S818673-ICV1

This affected the following samples:

1805527-BLK3
1805527-BLK4
1805527-BS2
1805527-BSD2
1805581-BLK2
1805581-BLK4
1805581-BS2
1805581-BSD2
1805661-BLK1
1805661-BLK2
1805661-BS1
1805661-BSD1
1805742-BLK1
1805742-BS1
1805742-BSD1
DUP032818
IA-01
IA-02
IA-03
IA-04
OA-01
S818748-CCV1
S818748-CCV2
S818748-CCV3
S818791-CCV1
S818791-CCV2
S818791-CCV3
S818821-CCV1
S818821-CCV2
S818821-CCV3
S818879-CCV1
SP-01
SP-02
SP-04

Blanks:

1805661-BLK1

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Tetrachloroethene

1805661-BLK2

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Tetrachloroethene

Laboratory Control Samples:

1805527 BS/BSD

EPA TO-15L

Laboratory Control Samples:

1805527 BS/BSD

1,2,4-Trichlorobenzene percent recoveries (181/168) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

DUP032818
IA-04
OA-01
SP-01
SP-04

Isopropyl alcohol percent recoveries (127/136) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

DUP032818
IA-04
OA-01
SP-01
SP-04

Naphthalene percent recoveries (217/225) are outside individual acceptance criteria (50-150), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

DUP032818
IA-04
OA-01
SP-01
SP-04

1805581 BS/BSD

1,2,4-Trichlorobenzene percent recoveries (184/174) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

IA-01
IA-02
IA-03
SP-02

Isopropyl alcohol percent recoveries (127/137) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

IA-01
IA-02
IA-03
SP-02

Naphthalene percent recoveries (214/216) are outside individual acceptance criteria (50-150), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

IA-01
IA-02
IA-03
SP-02

Tetrahydrofuran percent recoveries (132/142) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

IA-01
IA-02
IA-03
SP-02

1805661-BS1

EPA TO-15L

Laboratory Control Samples:

1805661-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Tetrachloroethene

1805661-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Tetrachloroethene

Samples:

SC45276-01 *SP-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC45276-01RE1 *SP-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC45276-01RE2 *SP-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-02 *IA-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

2-Butanone (MEK)
Acetone
Ethanol
Toluene

SC45276-02RE1 *IA-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

EPA TO-15L

Samples:

SC45276-02RE1 *IA-04*

Data for this analyte may be biased low based on QC spike recoveries.

2-Butanone (MEK)

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC45276-02RE2 *IA-04*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-03 *OA-01*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-03RE1 *OA-01*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-04 *DUP032818*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-04RE1 *DUP032818*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-05 *SP-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC45276-05RE1 *SP-01*

EPA TO-15L

Samples:

SC45276-05RE1 *SP-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-05RE2 *SP-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-06 *IA-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol
Hexane

SC45276-06RE1 *IA-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-06RE2 *IA-01*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-07 *IA-03*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

EPA TO-15L

Samples:

SC45276-07RE1 *IA-03*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-08 *SP-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol
Hexane

SC45276-08RE1 *SP-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-08RE2 *SP-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC45276-09 *IA-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC45276-09RE1 *IA-02*

Canister received at 0 psi: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client:	Environmental Resources Management - Melville, NY
Project:	4275 Park Ave - Bronx, NY / 0454768
Work Order:	SC45276
Sample(s) received on:	3/30/2018

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☐	☐	☑
Were samples cooled on ice upon transfer to laboratory representative?	☐	☐	☑
Were samples refrigerated upon transfer to laboratory representative?	☐	☐	☑
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC45276-01 **Client ID:** SP-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Carbon tetrachloride	0.0131	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0294		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00490	J	0.0200	ppbv	EPA TO-15 SIM
Vinyl chloride	0.0262		0.0200	ppbv	EPA TO-15 SIM
1,3-Dichlorobenzene	0.225	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	5.62		0.500	ppbv	EPA TO-15L
4-Methyl-2-pentanone (MIBK)	0.164		0.100	ppbv	EPA TO-15L
Acetone	80.1	E	0.500	ppbv	EPA TO-15L
Benzene	0.215		0.100	ppbv	EPA TO-15L
Cyclohexane	0.274	J	0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.253		0.100	ppbv	EPA TO-15L
Ethanol	171	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	0.980		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.0966	J	0.500	ppbv	EPA TO-15L
Hexane	7.17		0.500	ppbv	EPA TO-15L
Isopropyl alcohol	4.03		0.500	ppbv	EPA TO-15L
m,p-Xylene	0.313	J	1.00	ppbv	EPA TO-15L
Methylene chloride	0.108		0.100	ppbv	EPA TO-15L
n-Heptane	0.123		0.100	ppbv	EPA TO-15L
o-Xylene	0.102	J	0.500	ppbv	EPA TO-15L
Propene	8.80		0.500	ppbv	EPA TO-15L
Tetrahydrofuran	2.50		0.100	ppbv	EPA TO-15L
Toluene	2.29		0.500	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.125		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-01RE1 **Client ID:** SP-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	110	D, E	5.00	ppbv	EPA TO-15L
Ethanol	198	D, E	5.00	ppbv	EPA TO-15L

Lab ID: SC45276-01RE2 **Client ID:** SP-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	120	D	10.0	ppbv	EPA TO-15L
Ethanol	199	D	10.0	ppbv	EPA TO-15L

Lab ID: SC45276-02 **Client ID:** IA-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Carbon tetrachloride	0.0147	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0634		0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.161	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	17.7	E	0.500	ppbv	EPA TO-15L
Acetone	75.5	E	0.500	ppbv	EPA TO-15L
Benzene	0.273		0.100	ppbv	EPA TO-15L
Cyclohexane	7.70		0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.213		0.100	ppbv	EPA TO-15L
Ethanol	73.4	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	0.706		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.418	J	0.500	ppbv	EPA TO-15L
Hexane	0.793		0.500	ppbv	EPA TO-15L
Isopropyl alcohol	3.18		0.500	ppbv	EPA TO-15L
m,p-Xylene	1.82		1.00	ppbv	EPA TO-15L
Methylene chloride	0.203		0.100	ppbv	EPA TO-15L
Naphthalene	0.280	J	0.500	ppbv	EPA TO-15L
n-Heptane	0.990		0.100	ppbv	EPA TO-15L
o-Xylene	0.627		0.500	ppbv	EPA TO-15L
Propene	0.626		0.500	ppbv	EPA TO-15L
Toluene	18.9	E	0.500	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.132		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-02RE1 **Client ID:** IA-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	12.1	BsL, D	2.50	ppbv	EPA TO-15L
Acetone	84.4	D, E	2.50	ppbv	EPA TO-15L
Ethanol	60.2	D, E	2.50	ppbv	EPA TO-15L
Toluene	16.7	D	0.500	ppbv	EPA TO-15L

Lab ID: SC45276-02RE2 **Client ID:** IA-04

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	94.9	D	5.00	ppbv	EPA TO-15L
Ethanol	69.5	D	5.00	ppbv	EPA TO-15L

Lab ID: SC45276-03 **Client ID:** OA-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00160	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0146	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0336		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00430	J	0.0200	ppbv	EPA TO-15 SIM
2-Butanone (MEK)	0.693		0.500	ppbv	EPA TO-15L
Acetone	4.98		0.500	ppbv	EPA TO-15L
Benzene	0.173		0.100	ppbv	EPA TO-15L
Cyclohexane	0.604		0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.252		0.100	ppbv	EPA TO-15L
Ethanol	11.2	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	0.943		0.100	ppbv	EPA TO-15L
Isopropyl alcohol	2.07		0.500	ppbv	EPA TO-15L
Propene	0.585		0.500	ppbv	EPA TO-15L
Toluene	1.08		0.100	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.278		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-03RE1 **Client ID:** OA-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	9.83	D	1.00	ppbv	EPA TO-15L

Lab ID: SC45276-04 **Client ID:** DUP032818

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00390	J	0.0200	ppbv	EPA TO-15 SIM
1,1-Dichloroethene	0.00330	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0158	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0529		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.0154	J	0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.121	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	0.700		0.500	ppbv	EPA TO-15L
Acetone	5.95		0.500	ppbv	EPA TO-15L
Benzene	0.467		0.100	ppbv	EPA TO-15L
Carbon disulfide	0.234	J	0.500	ppbv	EPA TO-15L
Cyclohexane	0.260	J	0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.240		0.100	ppbv	EPA TO-15L
Ethanol	19.9	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	0.710		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.298		0.100	ppbv	EPA TO-15L
Hexane	0.504		0.500	ppbv	EPA TO-15L
Isopropyl alcohol	2.82		0.500	ppbv	EPA TO-15L
m,p-Xylene	1.25		1.00	ppbv	EPA TO-15L
n-Heptane	0.157		0.100	ppbv	EPA TO-15L
o-Xylene	0.485	J	0.500	ppbv	EPA TO-15L
Propene	0.577		0.500	ppbv	EPA TO-15L
Toluene	3.75		0.100	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.135		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-04RE1 **Client ID:** DUP032818

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	16.3	D	2.50	ppbv	EPA TO-15L

Lab ID: SC45276-05 **Client ID:** SP-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00540	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0146	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0314		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00300	J	0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.152	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	6.27		0.500	ppbv	EPA TO-15L
4-Methyl-2-pentanone (MIBK)	0.265		0.100	ppbv	EPA TO-15L
Acetone	22.6	E	0.500	ppbv	EPA TO-15L
Benzene	0.274		0.100	ppbv	EPA TO-15L
Cyclohexane	0.515		0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.220		0.100	ppbv	EPA TO-15L
Ethanol	99.4	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	2.65		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.225		0.100	ppbv	EPA TO-15L
Hexane	9.91		0.500	ppbv	EPA TO-15L
Isopropyl alcohol	4.60		0.500	ppbv	EPA TO-15L
m,p-Xylene	0.794	J	1.00	ppbv	EPA TO-15L
Methylene chloride	0.185		0.100	ppbv	EPA TO-15L
Naphthalene	0.180	J	0.500	ppbv	EPA TO-15L
n-Heptane	0.218		0.100	ppbv	EPA TO-15L
o-Xylene	0.312	J	0.500	ppbv	EPA TO-15L
Propene	0.574		0.500	ppbv	EPA TO-15L
Tetrahydrofuran	3.45		0.100	ppbv	EPA TO-15L
Toluene	6.24		0.100	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.128		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-05RE1 **Client ID:** SP-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	27.4	D	2.50	ppbv	EPA TO-15L
Ethanol	106	D, E	2.50	ppbv	EPA TO-15L

Lab ID: SC45276-05RE2 **Client ID:** SP-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	108	D	10.0	ppbv	EPA TO-15L

Lab ID: SC45276-06 **Client ID:** IA-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00900	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0142	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0315		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00800	J	0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.158	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	5.32		0.500	ppbv	EPA TO-15L
4-Methyl-2-pentanone (MIBK)	0.298		0.100	ppbv	EPA TO-15L
Acetone	27.6	E	0.500	ppbv	EPA TO-15L
Benzene	0.284	J	0.500	ppbv	EPA TO-15L
Cyclohexane	0.656		0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.219		0.100	ppbv	EPA TO-15L
Ethanol	116	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	2.02		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.211	J	0.500	ppbv	EPA TO-15L
Hexane	15.2	E	0.500	ppbv	EPA TO-15L
Isopropyl alcohol	4.73		0.500	ppbv	EPA TO-15L
m,p-Xylene	0.872	J	1.00	ppbv	EPA TO-15L
Methylene chloride	0.140		0.100	ppbv	EPA TO-15L
n-Heptane	0.185		0.100	ppbv	EPA TO-15L
o-Xylene	0.322	J	0.500	ppbv	EPA TO-15L
Propene	0.516		0.500	ppbv	EPA TO-15L
Tetrahydrofuran	3.98		0.100	ppbv	EPA TO-15L
Toluene	6.56		0.500	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.134		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-06RE1 **Client ID:** IA-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	33.4	D	2.50	ppbv	EPA TO-15L
Ethanol	107	D, E	2.50	ppbv	EPA TO-15L
Hexane	11.8	D	2.50	ppbv	EPA TO-15L

Lab ID: SC45276-06RE2 **Client ID:** IA-01

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	115	D	10.0	ppbv	EPA TO-15L

Lab ID: SC45276-07 **Client ID:** IA-03

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00320	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0165	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0606		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00460	J	0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.171	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	0.529		0.500	ppbv	EPA TO-15L
Acetone	6.22		0.500	ppbv	EPA TO-15L
Benzene	0.443	J	0.500	ppbv	EPA TO-15L
Cyclohexane	0.269	J	0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.228		0.100	ppbv	EPA TO-15L
Ethanol	21.0	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	0.917		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.362	J	0.500	ppbv	EPA TO-15L
Hexane	0.529		0.500	ppbv	EPA TO-15L
Isopropyl alcohol	3.15		0.500	ppbv	EPA TO-15L
m,p-Xylene	1.47		1.00	ppbv	EPA TO-15L
n-Heptane	0.152		0.100	ppbv	EPA TO-15L
o-Xylene	0.602		0.500	ppbv	EPA TO-15L
Propene	0.537		0.500	ppbv	EPA TO-15L
Styrene	0.117	J	0.500	ppbv	EPA TO-15L
Toluene	3.87		0.500	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.131		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-07RE1 **Client ID:** IA-03

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	17.0	D	2.50	ppbv	EPA TO-15L

Lab ID: SC45276-08 **Client ID:** SP-02

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00560	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0125	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0356		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00500	J	0.0200	ppbv	EPA TO-15 SIM
1,2,4-Trimethylbenzene	0.169	J	0.500	ppbv	EPA TO-15L
2-Butanone (MEK)	4.75		0.500	ppbv	EPA TO-15L
4-Methyl-2-pentanone (MIBK)	0.194		0.100	ppbv	EPA TO-15L
Acetone	24.2	E	0.500	ppbv	EPA TO-15L
Benzene	0.253	J	0.500	ppbv	EPA TO-15L
Cyclohexane	0.439	J	0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.195		0.100	ppbv	EPA TO-15L
Ethanol	102	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	1.86		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.230	J	0.500	ppbv	EPA TO-15L
Hexane	10.8	E	0.500	ppbv	EPA TO-15L
Isopropyl alcohol	5.37		0.500	ppbv	EPA TO-15L
m,p-Xylene	0.915	J	1.00	ppbv	EPA TO-15L
Methylene chloride	0.149		0.100	ppbv	EPA TO-15L
Naphthalene	0.150	J	0.500	ppbv	EPA TO-15L
n-Heptane	0.177		0.100	ppbv	EPA TO-15L
o-Xylene	0.321	J	0.500	ppbv	EPA TO-15L
Propene	0.645		0.500	ppbv	EPA TO-15L
Tetrahydrofuran	3.05		0.100	ppbv	EPA TO-15L
Toluene	5.09		0.500	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.130		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-08RE1 **Client ID:** SP-02

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	27.7	D	2.50	ppbv	EPA TO-15L
Ethanol	96.0	D, E	2.50	ppbv	EPA TO-15L
Hexane	7.90	D	2.50	ppbv	EPA TO-15L

Lab ID: SC45276-08RE2 **Client ID:** SP-02

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	97.9	D	10.0	ppbv	EPA TO-15L

Lab ID: SC45276-09 **Client ID:** IA-02

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
1,1-Dichloroethane	0.00130	J	0.0200	ppbv	EPA TO-15 SIM
Carbon tetrachloride	0.0152	J	0.0200	ppbv	EPA TO-15 SIM
Tetrachloroethene	0.0342		0.0200	ppbv	EPA TO-15 SIM
Trichloroethene	0.00330	J	0.0200	ppbv	EPA TO-15 SIM
2-Butanone (MEK)	1.91		0.500	ppbv	EPA TO-15L
Acetone	9.70		0.500	ppbv	EPA TO-15L
Benzene	0.204		0.100	ppbv	EPA TO-15L
Cyclohexane	0.126	J	0.500	ppbv	EPA TO-15L
Dichlorodifluoromethane (Freon12)	0.236		0.100	ppbv	EPA TO-15L
Ethanol	98.7	E	0.500	ppbv	EPA TO-15L
Ethyl acetate	1.10		0.100	ppbv	EPA TO-15L
Ethylbenzene	0.112		0.100	ppbv	EPA TO-15L
Isopropyl alcohol	8.34		0.500	ppbv	EPA TO-15L
m,p-Xylene	0.479	J	1.00	ppbv	EPA TO-15L
Methylene chloride	0.142		0.100	ppbv	EPA TO-15L
o-Xylene	0.141		0.100	ppbv	EPA TO-15L
Propene	0.625		0.500	ppbv	EPA TO-15L
Toluene	1.77		0.100	ppbv	EPA TO-15L
Trichlorofluoromethane (Freon 11)	0.147		0.100	ppbv	EPA TO-15L

Lab ID: SC45276-09RE1 **Client ID:** IA-02

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Ethanol	82.2	D	5.00	ppbv	EPA TO-15L

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-04 SC45276-01	0454768	Soil Gas	29-Mar-18 08:20	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 23-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 28553 — Regulator ID: 2860

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**8.80**	0.500	**15.2**	0.860		EPA TO-15L	23-Apr-18	SAD	1805527	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.253**	0.100	**1.25**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**80.1**	0.500	**190**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.125**	0.100	**0.700**	0.560		"	"	"	"	X
64-17-5	Ethanol	**171**	0.500	**322**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.108**	0.100	**0.380**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**4.03**	0.500	**9.89**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**5.62**	0.500	**16.6**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.500	0.500	< 1.98	1.98	U	"	"	"	"	X
110-54-3	Hexane	**7.17**	0.500	**25.3**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**0.980**	0.100	**3.53**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	**2.50**	0.100	**7.37**	0.290		"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.215**	0.100	**0.690**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**0.274**	0.500	**0.940**	1.72	J	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.123**	0.100	**0.500**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.164**	0.100	**0.670**	0.410		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	U	"	"	"	"	X
108-88-3	Toluene	**2.29**	0.500	**8.62**	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.500	0.500	< 3.44	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.0966**	0.500	**0.420**	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	**0.313**	1.00	**1.36**	4.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.102**	0.500	**0.440**	2.17	J	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-04 SC45276-01	0454768	Soil Gas	29-Mar-18 08:20	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28553		Regulator ID: 2860		
95-63-6	1,2,4-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	EPA TO-15L	23-Apr-18	SAD	1805527	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	**0.225**	0.500	**1.35**	3.01	J	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 10			GS1					
67-64-1	Acetone	**110**	5.00	**261**	11.9	D, E	EPA TO-15L	25-Apr-18	EK	1805661	X
64-17-5	Ethanol	**198**	5.00	**373**	9.43	D, E	"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 20			GS1					
67-64-1	Acetone	**120**	10.0	**285**	23.8	D	EPA TO-15L	25-Apr-18	EK	1805661	X
64-17-5	Ethanol	**199**	10.0	**375**	18.8	D	"	"	"	"	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*101*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28553		Regulator ID: 2860		
75-01-4	Vinyl chloride	**0.0262**	0.0200	**0.0700**	0.0500		EPA TO-15 SIM	23-Apr-18	SAD	1805527	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0131**	0.0200	**0.0800**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00490**	0.0200	**0.0300**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0294**	0.0200	**0.200**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-04 SC45276-02	0454768	Indoor Air/Ambient Air	29-Mar-18 08:15	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 23-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 28573 — Regulator ID: 0048

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.626**	0.500	**1.08**	0.860		EPA TO-15L	23-Apr-18	SAD	1805527	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.213**	0.100	**1.05**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**75.5**	0.500	**179**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.132**	0.100	**0.740**	0.560		"	"	"	"	X
64-17-5	Ethanol	**73.4**	0.500	**138**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.203**	0.100	**0.700**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**3.18**	0.500	**7.80**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**17.7**	0.500	**52.2**	1.47	E	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.500	0.500	< 1.98	1.98	U	"	"	"	"	X
110-54-3	Hexane	**0.793**	0.500	**2.80**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**0.706**	0.100	**2.54**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.290	0.290	U	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.273**	0.100	**0.870**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**7.70**	0.500	**26.5**	1.72		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.990**	0.100	**4.06**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	U	"	"	"	"	X
108-88-3	Toluene	**18.9**	0.500	**71.1**	1.88	E	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.500	0.500	< 3.44	3.44	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.418**	0.500	**1.81**	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	**1.82**	1.00	**7.89**	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.627**	0.500	**2.72**	2.17		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-04 SC45276-02	0454768	Indoor Air/Ambient Air	29-Mar-18 08:15	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28573		Regulator ID: 0048		
95-63-6	1,2,4-Trimethylbenzene	**0.161**	0.500	**0.790**	2.46	J	EPA TO-15L	23-Apr-18	SAD	1805527	X
91-20-3	Naphthalene	**0.280**	0.500	**1.47**	2.62	J	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*118*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
67-64-1	Acetone	**84.4**	2.50	**200**	5.94	D, E	EPA TO-15L	25-Apr-18	EK	1805661	X
64-17-5	Ethanol	**60.2**	2.50	**114**	4.71	D, E	"	"	"	"	
78-93-3	2-Butanone (MEK)	**12.1**	2.50	**35.7**	7.37	BsL, D	"	"	"	"	X
108-88-3	Toluene	**16.7**	0.500	**62.8**	1.88	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 10			GS1					
67-64-1	Acetone	**94.9**	5.00	**226**	11.9	D	EPA TO-15L	27-Apr-18	SAD	1805742	X
64-17-5	Ethanol	**69.5**	5.00	**131**	9.43	D	"	"	"	"	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*100*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28573		Regulator ID: 0048		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	23-Apr-18	SAD	1805527	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0147**	0.0200	**0.0900**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	< 0.0200	0.0200	< 0.110	0.110	U	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0634**	0.0200	**0.430**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*118*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
OA-01	0454768	Indoor Air/Ambient Air	29-Mar-18 07:40	30-Mar-18
SC45276-03				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 23-Apr-18 — Dilution: 1 — Can pressure: +1 — Can ID: 5577 — Regulator ID: 2841

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.585**	0.500	**1.01**	0.860		EPA TO-15L	23-Apr-18	SAD	1805527	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.252**	0.100	**1.25**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**4.98**	0.500	**11.8**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.278**	0.100	**1.56**	0.560		"	"	"	"	X
64-17-5	Ethanol	**11.2**	0.500	**21.1**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.350	0.350	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**2.07**	0.500	**5.08**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**0.693**	0.500	**2.04**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	< 0.500	0.500	< 1.76	1.76	U	"	"	"	"	X
141-78-6	Ethyl acetate	**0.943**	0.100	**3.40**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.290	0.290	U	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.173**	0.100	**0.550**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**0.604**	0.500	**2.08**	1.72		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
108-88-3	Toluene	**1.08**	0.100	**4.06**	0.380		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	< 0.100	0.100	< 0.430	0.430	U	"	"	"	"	X
179601-23-1	m,p-Xylene	< 1.00	1.00	< 4.34	4.34	U	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	< 0.500	0.500	< 2.17	2.17	U	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
OA-01 SC45276-03	0454768	Indoor Air/Ambient Air	29-Mar-18 07:40	30-Mar-18

CAS No.	*Analyte(s)*	*Result/Units*	**RDL*	*Result ug/m³*	**RDL*	*Flag*	*Method Ref.*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: +1 Can ID: 5577		Regulator ID: 2841		
95-63-6	1,2,4-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	EPA TO-15L	23-Apr-18	SAD	1805527	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.520	0.520	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*105*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 2			GS1					
64-17-5	Ethanol	**9.83**	1.00	**18.5**	1.89	D	EPA TO-15L	25-Apr-18	SAD	1805581	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*100*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: +1 Can ID: 5577		Regulator ID: 2841		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	23-Apr-18	SAD	1805527	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00160**	0.0200	**0.0100**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0146**	0.0200	**0.0900**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00430**	0.0200	**0.0200**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0336**	0.0200	**0.230**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*105*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
DUP032818 SC45276-04	0454768	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 23-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 0205 — Regulator ID: 0035

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.577**	0.500	**0.990**	0.860		EPA TO-15L	24-Apr-18	SAD	1805527	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.240**	0.100	**1.19**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**5.95**	0.500	**14.1**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.135**	0.100	**0.760**	0.560		"	"	"	"	X
64-17-5	Ethanol	**19.9**	0.500	**37.5**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.350	0.350	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	**0.234**	0.500	**0.730**	1.56	J	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**2.82**	0.500	**6.92**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**0.700**	0.500	**2.06**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	**0.504**	0.500	**1.78**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**0.710**	0.100	**2.56**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.290	0.290	U	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.467**	0.100	**1.49**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**0.260**	0.500	**0.890**	1.72	J	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.157**	0.100	**0.640**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
108-88-3	Toluene	**3.75**	0.100	**14.1**	0.380		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.298**	0.100	**1.29**	0.430		"	"	"	"	X
179601-23-1	m,p-Xylene	**1.25**	1.00	**5.42**	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.485**	0.500	**2.10**	2.17	J	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
DUP032818 SC45276-04	0454768	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 0205		Regulator ID: 0035		
95-63-6	1,2,4-Trimethylbenzene	**0.121**	0.500	**0.590**	2.46	J	EPA TO-15L	24-Apr-18	SAD	1805527	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.520	0.520	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*109*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
64-17-5	Ethanol	**16.3**	2.50	**30.7**	4.71	D	EPA TO-15L	25-Apr-18	EK	1805661	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 0205		Regulator ID: 0035		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805527	X
75-35-4	1,1-Dichloroethene	**0.00330**	0.0200	**0.0100**	0.0800	J	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00390**	0.0200	**0.0200**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0158**	0.0200	**0.100**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.0154**	0.0200	**0.0800**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0529**	0.0200	**0.360**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*109*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-01 SC45276-05	0454768	Soil Gas	29-Mar-18 08:05	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 23-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 28606 — Regulator ID: 1319

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.574**	0.500	**0.990**	0.860		EPA TO-15L	24-Apr-18	SAD	1805527	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.220**	0.100	**1.09**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**22.6**	0.500	**53.7**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.128**	0.100	**0.720**	0.560		"	"	"	"	X
64-17-5	Ethanol	**99.4**	0.500	**187**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.185**	0.100	**0.640**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**4.60**	0.500	**11.3**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**6.27**	0.500	**18.5**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	**9.91**	0.500	**34.9**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**2.65**	0.100	**9.55**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	**3.45**	0.100	**10.2**	0.290		"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.274**	0.100	**0.870**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**0.515**	0.500	**1.77**	1.72		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.218**	0.100	**0.890**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.265**	0.100	**1.09**	0.410		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
108-88-3	Toluene	**6.24**	0.100	**23.5**	0.380		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.225**	0.100	**0.980**	0.430		"	"	"	"	X
179601-23-1	m,p-Xylene	**0.794**	1.00	**3.44**	4.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.312**	0.500	**1.35**	2.17	J	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-01 SC45276-05	0454768	Soil Gas	29-Mar-18 08:05	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28606		Regulator ID: 1319		
95-63-6	1,2,4-Trimethylbenzene	**0.152**	0.500	**0.750**	2.46	J	EPA TO-15L	24-Apr-18	SAD	1805527	X
91-20-3	Naphthalene	**0.180**	0.500	**0.940**	2.62	J	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.520	0.520	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*108*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
67-64-1	Acetone	**27.4**	2.50	**65.1**	5.94	D	EPA TO-15L	25-Apr-18	SAD	1805581	X
64-17-5	Ethanol	**106**	2.50	**200**	4.71	D, E	"	"	"	"	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 20			GS1					
64-17-5	Ethanol	**108**	10.0	**204**	18.8	D	EPA TO-15L	25-Apr-18	SAD	1805581	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*95*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 23-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 28606		Regulator ID: 1319		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805527	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00540**	0.0200	**0.0200**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0146**	0.0200	**0.0900**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00300**	0.0200	**0.0200**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0314**	0.0200	**0.210**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-01 SC45276-06	0454768	Indoor Air/Ambient Air	29-Mar-18 08:00	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 24-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 5575 — Regulator ID: 0026

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.516**	0.500	**0.890**	0.860		EPA TO-15L	24-Apr-18	SAD	1805581	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.219**	0.100	**1.08**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**27.6**	0.500	**65.6**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.134**	0.100	**0.750**	0.560		"	"	"	"	X
64-17-5	Ethanol	**116**	0.500	**219**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.140**	0.100	**0.490**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**4.73**	0.500	**11.6**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**5.32**	0.500	**15.7**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	**15.2**	0.500	**53.6**	1.76	E	"	"	"	"	X
141-78-6	Ethyl acetate	**2.02**	0.100	**7.28**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	**3.98**	0.100	**11.7**	0.290		"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.284**	0.500	**0.910**	1.60	J	"	"	"	"	X
110-82-7	Cyclohexane	**0.656**	0.500	**2.26**	1.72		"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.185**	0.100	**0.760**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.298**	0.100	**1.22**	0.410		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	U	"	"	"	"	X
108-88-3	Toluene	**6.56**	0.500	**24.7**	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.211**	0.500	**0.910**	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	**0.872**	1.00	**3.78**	4.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.322**	0.500	**1.40**	2.17	J	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-01 SC45276-06	0454768	Indoor Air/Ambient Air	29-Mar-18 08:00	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5575		Regulator ID: 0026		
95-63-6	1,2,4-Trimethylbenzene	**0.158**	0.500	**0.780**	2.46	J	EPA TO-15L	24-Apr-18	SAD	1805581	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*104*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
67-64-1	Acetone	**33.4**	2.50	**79.4**	5.94	D	EPA TO-15L	26-Apr-18	EK	1805661	X
64-17-5	Ethanol	**107**	2.50	**202**	4.71	D, E	"	"	"	"	
110-54-3	Hexane	**11.8**	2.50	**41.6**	8.81	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*97*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 20			GS1					
64-17-5	Ethanol	**115**	10.0	**217**	18.8	D	EPA TO-15L	26-Apr-18	EK	1805661	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*101*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5575		Regulator ID: 0026		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805581	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00900**	0.0200	**0.0400**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0142**	0.0200	**0.0900**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00800**	0.0200	**0.0400**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0315**	0.0200	**0.210**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*107*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-03	0454768	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18
SC45276-07				

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 24-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 16009 — Regulator ID: 2937

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.537**	0.500	**0.920**	0.860		EPA TO-15L	24-Apr-18	SAD	1805581	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.228**	0.100	**1.13**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**6.22**	0.500	**14.8**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.131**	0.100	**0.740**	0.560		"	"	"	"	X
64-17-5	Ethanol	**21.0**	0.500	**39.6**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	< 0.100	0.100	< 0.350	0.350	U	"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**3.15**	0.500	**7.73**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**0.529**	0.500	**1.56**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	**0.529**	0.500	**1.87**	1.76		"	"	"	"	X
141-78-6	Ethyl acetate	**0.917**	0.100	**3.30**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.290	0.290	U	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.443**	0.500	**1.41**	1.60	J	"	"	"	"	X
110-82-7	Cyclohexane	**0.269**	0.500	**0.930**	1.72	J	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.152**	0.100	**0.620**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	U	"	"	"	"	X
108-88-3	Toluene	**3.87**	0.500	**14.6**	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.362**	0.500	**1.57**	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	**1.47**	1.00	**6.37**	4.34		"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	**0.117**	0.500	**0.500**	2.13	J	"	"	"	"	X
95-47-6	o-Xylene	**0.602**	0.500	**2.61**	2.17		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-03 SC45276-07	0454768	Indoor Air/Ambient Air	29-Mar-18 08:10	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 16009		Regulator ID: 2937		
95-63-6	1,2,4-Trimethylbenzene	**0.171**	0.500	**0.840**	2.46	J	EPA TO-15L	24-Apr-18	SAD	1805581	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*109*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
64-17-5	Ethanol	**17.0**	2.50	**32.0**	4.71	D	EPA TO-15L	26-Apr-18	EK	1805661	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*102*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 16009		Regulator ID: 2937		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805581	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00320**	0.0200	**0.0100**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0165**	0.0200	**0.100**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00460**	0.0200	**0.0200**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0606**	0.0200	**0.410**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*108*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-02 SC45276-08	0454768	Soil Gas	29-Mar-18 07:50	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 24-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 5580 — Regulator ID: 0007

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.645**	0.500	**1.11**	0.860		EPA TO-15L	24-Apr-18	SAD	1805581	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.195**	0.100	**0.960**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**24.2**	0.500	**57.5**	1.19	E	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.130**	0.100	**0.730**	0.560		"	"	"	"	X
64-17-5	Ethanol	**102**	0.500	**192**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.149**	0.100	**0.520**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**5.37**	0.500	**13.2**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**4.75**	0.500	**14.0**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	**10.8**	0.500	**38.1**	1.76	E	"	"	"	"	X
141-78-6	Ethyl acetate	**1.86**	0.100	**6.70**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	**3.05**	0.100	**8.99**	0.290		"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.253**	0.500	**0.810**	1.60	J	"	"	"	"	X
110-82-7	Cyclohexane	**0.439**	0.500	**1.51**	1.72	J	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	**0.177**	0.100	**0.730**	0.410		"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	**0.194**	0.100	**0.800**	0.410		"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.500	0.500	< 2.27	2.27	U	"	"	"	"	X
108-88-3	Toluene	**5.09**	0.500	**19.2**	1.88		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.230**	0.500	**1.00**	2.17	J	"	"	"	"	X
179601-23-1	m,p-Xylene	**0.915**	1.00	**3.97**	4.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.321**	0.500	**1.39**	2.17	J	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-02 SC45276-08	0454768	Soil Gas	29-Mar-18 07:50	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5580		Regulator ID: 0007		
95-63-6	1,2,4-Trimethylbenzene	**0.169**	0.500	**0.830**	2.46	J	EPA TO-15L	24-Apr-18	SAD	1805581	X
91-20-3	Naphthalene	**0.150**	0.500	**0.790**	2.62	J	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.500	0.500	< 2.58	2.58	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.500	0.500	< 3.01	3.01	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*103*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 5			GS1					
67-64-1	Acetone	**27.7**	2.50	**65.8**	5.94	D	EPA TO-15L	26-Apr-18	EK	1805661	X
64-17-5	Ethanol	**96.0**	2.50	**181**	4.71	D, E	"	"	"	"	
110-54-3	Hexane	**7.90**	2.50	**27.8**	8.81	D	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 20			GS1					
64-17-5	Ethanol	**97.9**	10.0	**184**	18.8	D	EPA TO-15L	26-Apr-18	EK	1805661	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*98*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5580		Regulator ID: 0007		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805581	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00560**	0.0200	**0.0200**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0125**	0.0200	**0.0800**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00500**	0.0200	**0.0300**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0356**	0.0200	**0.240**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*103*		*80-120 %*			"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-02 SC45276-09	0454768	Indoor Air/Ambient Air	29-Mar-18 07:45	30-Mar-18

Air Quality Analyses

Volatile Organics in Air Low Level — ppbv — Prepared 24-Apr-18 — Dilution: 1 — Can pressure: 0 — Can ID: 5567 — Regulator ID: 2878

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
115-07-1	Propene	**0.625**	0.500	**1.08**	0.860		EPA TO-15L	24-Apr-18	SAD	1805581	
75-71-8	Dichlorodifluoromethane (Freon12)	**0.236**	0.100	**1.17**	0.490		"	"	"	"	X
74-87-3	Chloromethane	< 0.100	0.100	< 0.210	0.210	U	"	"	"	"	X
76-14-2	1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	0.100	< 0.700	0.700	U	"	"	"	"	X
106-99-0	1,3-Butadiene	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
74-83-9	Bromomethane	< 0.100	0.100	< 0.390	0.390	U	"	"	"	"	X
75-00-3	Chloroethane	< 0.100	0.100	< 0.260	0.260	U	"	"	"	"	X
67-64-1	Acetone	**9.70**	0.500	**23.0**	1.19		"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	**0.147**	0.100	**0.830**	0.560		"	"	"	"	X
64-17-5	Ethanol	**98.7**	0.500	**186**	0.940	E	"	"	"	"	
107-13-1	Acrylonitrile	< 0.100	0.100	< 0.220	0.220	U	"	"	"	"	X
75-09-2	Methylene chloride	**0.142**	0.100	**0.490**	0.350		"	"	"	"	X
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	0.100	< 0.770	0.770	U	"	"	"	"	X
75-15-0	Carbon disulfide	< 0.500	0.500	< 1.56	1.56	U	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 0.100	0.100	< 0.360	0.360	U	"	"	"	"	X
67-63-0	Isopropyl alcohol	**8.34**	0.500	**20.5**	1.23		"	"	"	"	X
78-93-3	2-Butanone (MEK)	**1.91**	0.500	**5.63**	1.47		"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 0.100	0.100	< 0.400	0.400	U	"	"	"	"	X
110-54-3	Hexane	< 0.500	0.500	< 1.76	1.76	U	"	"	"	"	X
141-78-6	Ethyl acetate	**1.10**	0.100	**3.96**	0.360		"	"	"	"	
67-66-3	Chloroform	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 0.100	0.100	< 0.290	0.290	U	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	< 0.100	0.100	< 0.550	0.550	U	"	"	"	"	X
71-43-2	Benzene	**0.204**	0.100	**0.650**	0.320		"	"	"	"	X
110-82-7	Cyclohexane	**0.126**	0.500	**0.430**	1.72	J	"	"	"	"	X
123-91-1	1,4-Dioxane	< 0.500	0.500	< 1.80	1.80	U	"	"	"	"	X
142-82-5	n-Heptane	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 0.100	0.100	< 0.410	0.410	U	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.100	0.100	< 0.450	0.450	U	"	"	"	"	X
108-88-3	Toluene	**1.77**	0.100	**6.66**	0.380		"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 0.500	0.500	< 2.05	2.05	U	"	"	"	"	
108-90-7	Chlorobenzene	< 0.100	0.100	< 0.460	0.460	U	"	"	"	"	X
630-20-6	1,1,1,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	
100-41-4	Ethylbenzene	**0.112**	0.100	**0.490**	0.430		"	"	"	"	X
179601-23-1	m,p-Xylene	**0.479**	1.00	**2.08**	4.34	J	"	"	"	"	X
75-25-2	Bromoform	< 0.100	0.100	< 1.03	1.03	U	"	"	"	"	X
100-42-5	Styrene	< 0.500	0.500	< 2.13	2.13	U	"	"	"	"	X
95-47-6	o-Xylene	**0.141**	0.100	**0.610**	0.430		"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 0.100	0.100	< 0.690	0.690	U	"	"	"	"	X
98-82-8	Isopropylbenzene	< 0.100	0.100	< 0.490	0.490	U	"	"	"	"	X
108-67-8	1,3,5-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	X
622-96-8	4-Ethyltoluene	< 0.500	0.500	< 2.46	2.46	U	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
IA-02 SC45276-09	0454768	Indoor Air/Ambient Air	29-Mar-18 07:45	30-Mar-18

CAS No.	Analyte(s)	Result/Units	*RDL	Result ug/m³	*RDL	Flag	Method Ref.	Analyzed	Analyst	Batch	Cert.
Air Quality Analyses											
Volatile Organics in Air Low Level		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5567		Regulator ID: 2878		
95-63-6	1,2,4-Trimethylbenzene	< 0.500	0.500	< 2.46	2.46	U	EPA TO-15L	24-Apr-18	SAD	1805581	X
91-20-3	Naphthalene	< 0.500	0.500	< 2.62	2.62	U	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
100-44-7	Benzyl chloride	< 0.100	0.100	< 0.520	0.520	U	"	"	"	"	X
135-98-8	sec-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
99-87-6	4-Isopropyltoluene	< 0.500	0.500	< 2.68	2.68	U	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 0.100	0.100	< 0.600	0.600	U	"	"	"	"	X
104-51-8	n-Butylbenzene	< 0.500	0.500	< 2.74	2.74	U	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 0.500	0.500	< 3.71	3.71	U	"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*107*		*80-120 %*			"	"	"	"	
Re-analysis of Volatile Organics in Air Low Level			Dilution: 10			GS1					
64-17-5	Ethanol	**82.2**	5.00	**155**	9.43	D	EPA TO-15L	25-Apr-18	EK	1805661	
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*102*		*80-120 %*			"	"	"	"	
Chlorinated SIM		ppbv	Prepared 24-Apr-18 Dilution: 1				Can pressure: 0 Can ID: 5567		Regulator ID: 2878		
75-01-4	Vinyl chloride	< 0.0200	0.0200	< 0.0500	0.0500	U	EPA TO-15 SIM	24-Apr-18	SAD	1805581	X
75-35-4	1,1-Dichloroethene	< 0.0200	0.0200	< 0.0800	0.0800	U	"	"	"	"	X
75-34-3	1,1-Dichloroethane	**0.00130**	0.0200	**0.0100**	0.0800	J	"	"	"	"	X
56-23-5	Carbon tetrachloride	**0.0152**	0.0200	**0.100**	0.130	J	"	"	"	"	X
79-01-6	Trichloroethene	**0.00330**	0.0200	**0.0200**	0.110	J	"	"	"	"	X
127-18-4	Tetrachloroethene	**0.0342**	0.0200	**0.230**	0.140		"	"	"	"	X
Surrogate recoveries:											
460-00-4	*4-Bromofluorobenzene*	*107*		*80-120 %*			"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15 SIM										
Batch 1805527 - General Air Prep										
Blank (1805527-BLK1)						Prepared & Analyzed: 23-Apr-18				
Vinyl chloride	< 0.0200	U	ppbv	0.00177						
1,1-Dichloroethene	< 0.0200	U	ppbv	0.00173						
1,1-Dichloroethane	**0.00200**	J	ppbv	0.00125						
Carbon tetrachloride	**0.00100**	J	ppbv	0.000660						
Trichloroethene	**0.00430**	J	ppbv	0.000720						
Tetrachloroethene	**0.00200**	J	ppbv	0.000590						
Surrogate: 4-Bromofluorobenzene	*10.1*		ppbv		*10.0*		*101*	*80-120*		
Blank (1805527-BLK2)						Prepared & Analyzed: 23-Apr-18				
Vinyl chloride	< 0.0200	U	ppbv	0.00177						
1,1-Dichloroethene	**0.00230**	J	ppbv	0.00173						
1,1-Dichloroethane	**0.00230**	J	ppbv	0.00125						
Carbon tetrachloride	**0.000900**	J	ppbv	0.000660						
Trichloroethene	**0.00400**	J	ppbv	0.000720						
Tetrachloroethene	**0.00170**	J	ppbv	0.000590						
Surrogate: 4-Bromofluorobenzene	*10.1*		ppbv		*10.0*		*101*	*80-120*		
LCS (1805527-BS1)						Prepared & Analyzed: 23-Apr-18				
Vinyl chloride	**0.0410**		ppbv		0.0400		102	65-135		
1,1-Dichloroethene	**0.0420**		ppbv		0.0400		105	65-135		
1,1-Dichloroethane	**0.0345**		ppbv		0.0400		86	65-135		
Carbon tetrachloride	**0.0288**		ppbv		0.0400		72	65-135		
Trichloroethene	**0.0381**		ppbv		0.0400		95	65-135		
Tetrachloroethene	**0.0395**		ppbv		0.0400		99	65-135		
Surrogate: 4-Bromofluorobenzene	*10.0*		ppbv		*10.0*		*100*	*80-120*		
LCS Dup (1805527-BSD1)						Prepared & Analyzed: 23-Apr-18				
Vinyl chloride	**0.0373**		ppbv		0.0400		93	65-135	9	35
1,1-Dichloroethene	**0.0408**		ppbv		0.0400		102	65-135	3	35
1,1-Dichloroethane	**0.0345**		ppbv		0.0400		86	65-135	0	35
Carbon tetrachloride	**0.0292**		ppbv		0.0400		73	65-135	1	35
Trichloroethene	**0.0387**		ppbv		0.0400		97	65-135	2	35
Tetrachloroethene	**0.0411**		ppbv		0.0400		103	65-135	4	35
Surrogate: 4-Bromofluorobenzene	*9.98*		ppbv		*10.0*		*100*	*80-120*		
Batch 1805581 - General Air Prep										
Blank (1805581-BLK1)						Prepared & Analyzed: 24-Apr-18				
Vinyl chloride	< 0.0200	U	ppbv	0.00177						
1,1-Dichloroethene	< 0.0200	U	ppbv	0.00173						
1,1-Dichloroethane	**0.00310**	J	ppbv	0.00125						
Carbon tetrachloride	**0.00120**	J	ppbv	0.000660						
Trichloroethene	**0.00450**	J	ppbv	0.000720						
Tetrachloroethene	**0.00180**	J	ppbv	0.000590						
Surrogate: 4-Bromofluorobenzene	*9.86*		ppbv		*10.0*		*99*	*80-120*		
Blank (1805581-BLK3)						Prepared & Analyzed: 24-Apr-18				
Vinyl chloride	**0.00300**	J	ppbv	0.00177						
1,1-Dichloroethene	**0.00270**	J	ppbv	0.00173						
1,1-Dichloroethane	**0.00410**	J	ppbv	0.00125						
Carbon tetrachloride	**0.00190**	J	ppbv	0.000660						
Trichloroethene	**0.00750**	J	ppbv	0.000720						
Tetrachloroethene	**0.00230**	J	ppbv	0.000590						
Surrogate: 4-Bromofluorobenzene	*10.3*		ppbv		*10.0*		*103*	*80-120*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15 SIM										
Batch 1805581 - General Air Prep										
LCS (1805581-BS1)					Prepared & Analyzed: 24-Apr-18					
Vinyl chloride	**0.0383**		ppbv		0.0400		96	65-135		
1,1-Dichloroethene	**0.0401**		ppbv		0.0400		100	65-135		
1,1-Dichloroethane	**0.0333**		ppbv		0.0400		83	65-135		
Carbon tetrachloride	**0.0282**		ppbv		0.0400		70	65-135		
Trichloroethene	**0.0375**		ppbv		0.0400		94	65-135		
Tetrachloroethene	**0.0405**		ppbv		0.0400		101	65-135		
Surrogate: 4-Bromofluorobenzene	*9.85*		ppbv		*10.0*		*98*	*80-120*		
LCS Dup (1805581-BSD1)					Prepared & Analyzed: 24-Apr-18					
Vinyl chloride	**0.0395**		ppbv		0.0400		99	65-135	3	35
1,1-Dichloroethene	**0.0388**		ppbv		0.0400		97	65-135	3	35
1,1-Dichloroethane	**0.0336**		ppbv		0.0400		84	65-135	0.9	35
Carbon tetrachloride	**0.0288**		ppbv		0.0400		72	65-135	2	35
Trichloroethene	**0.0396**		ppbv		0.0400		99	65-135	5	35
Tetrachloroethene	**0.0407**		ppbv		0.0400		102	65-135	0.5	35
Surrogate: 4-Bromofluorobenzene	*9.97*		ppbv		*10.0*		*100*	*80-120*		
EPA TO-15L										
Batch 1805527 - General Air Prep										
Blank (1805527-BLK3)					Prepared & Analyzed: 23-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805527 - General Air Prep										
Blank (1805527-BLK3)					Prepared & Analyzed: 23-Apr-18					
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	< 0.100	U	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.500	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*10.1*		ppbv		*10.0*		*101*	*80-120*		
Blank (1805527-BLK4)					Prepared & Analyzed: 23-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805527 - General Air Prep										
Blank (1805527-BLK4)					Prepared & Analyzed: 23-Apr-18					
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	< 0.100	U	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805527 - General Air Prep										
Blank (1805527-BLK4)					Prepared & Analyzed: 23-Apr-18					
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.500	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*10.0*		ppbv		*10.0*		*100*	*80-120*		
LCS (1805527-BS2)					Prepared & Analyzed: 23-Apr-18					
Propene	**1.63**		ppbv		2.00		82	65-135		
Dichlorodifluoromethane (Freon12)	**1.69**		ppbv		2.00		84	65-135		
Chloromethane	**2.17**		ppbv		2.00		109	65-135		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.91**		ppbv		2.00		96	65-135		
Vinyl chloride	**1.80**		ppbv		2.00		90	65-135		
1,3-Butadiene	**2.10**		ppbv		2.00		105	65-135		
Bromomethane	**2.12**		ppbv		2.00		106	65-135		
Chloroethane	**1.84**		ppbv		2.00		92	65-135		
Acetone	**2.20**		ppbv		2.00		110	65-135		
Trichlorofluoromethane (Freon 11)	**1.83**		ppbv		2.00		92	65-135		
Ethanol	**2.29**		ppbv		2.00		115	65-135		
Acrylonitrile	**2.06**		ppbv		2.00		103	50-150		
1,1-Dichloroethene	**2.06**		ppbv		2.00		103	65-135		
Methylene chloride	**1.96**		ppbv		2.00		98	65-135		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.82**		ppbv		2.00		91	65-135		
Carbon disulfide	**1.90**		ppbv		2.00		95	65-135		
trans-1,2-Dichloroethene	**1.94**		ppbv		2.00		97	65-135		
1,1-Dichloroethane	**1.77**		ppbv		2.00		88	65-135		
Methyl tert-butyl ether	**2.41**		ppbv		2.00		121	65-135		
Isopropyl alcohol	**2.53**		ppbv		2.00		127	65-135		
2-Butanone (MEK)	**2.26**		ppbv		2.00		113	65-135		
cis-1,2-Dichloroethene	**1.96**		ppbv		2.00		98	65-135		
Hexane	**1.95**		ppbv		2.00		98	65-135		
Ethyl acetate	**2.32**		ppbv		2.00		116	65-135		
Chloroform	**1.83**		ppbv		2.00		91	65-135		
Tetrahydrofuran	**2.57**		ppbv		2.00		128	65-135		
1,2-Dichloroethane	**1.86**		ppbv		2.00		93	65-135		
1,1,1-Trichloroethane	**1.90**		ppbv		2.00		95	65-135		
Benzene	**1.93**		ppbv		2.00		97	65-135		
Carbon tetrachloride	**1.85**		ppbv		2.00		92	65-135		
Cyclohexane	**2.02**		ppbv		2.00		101	65-135		
1,2-Dichloropropane	**1.84**		ppbv		2.00		92	65-135		
Bromodichloromethane	**1.93**		ppbv		2.00		96	65-135		
Trichloroethene	**2.06**		ppbv		2.00		103	65-135		
1,4-Dioxane	**2.45**		ppbv		2.00		123	65-135		
n-Heptane	**2.26**		ppbv		2.00		113	65-135		
4-Methyl-2-pentanone (MIBK)	**2.39**		ppbv		2.00		119	65-135		
cis-1,3-Dichloropropene	**2.21**		ppbv		2.00		110	65-135		
trans-1,3-Dichloropropene	**2.20**		ppbv		2.00		110	65-135		
1,1,2-Trichloroethane	**2.05**		ppbv		2.00		103	65-135		
Toluene	**2.27**		ppbv		2.00		114	65-135		
2-Hexanone (MBK)	**2.49**		ppbv		2.00		125	65-135		
Dibromochloromethane	**1.99**		ppbv		2.00		99	65-135		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805527 - General Air Prep										
LCS (1805527-BS2)					Prepared & Analyzed: 23-Apr-18					
1,2-Dibromoethane (EDB)	**2.13**		ppbv		2.00		107	65-135		
Tetrachloroethene	**2.15**		ppbv		2.00		107	65-135		
Chlorobenzene	**2.00**		ppbv		2.00		100	65-135		
1,1,1,2-Tetrachloroethane	**2.15**		ppbv		2.00		108	50-150		
Ethylbenzene	**2.45**		ppbv		2.00		122	65-135		
m,p-Xylene	**4.37**		ppbv		4.00		109	65-135		
Bromoform	**2.03**		ppbv		2.00		102	65-135		
Styrene	**2.36**		ppbv		2.00		118	65-135		
o-Xylene	**2.35**		ppbv		2.00		118	65-135		
1,1,2,2-Tetrachloroethane	**2.08**		ppbv		2.00		104	65-135		
Isopropylbenzene	**2.24**		ppbv		2.00		112	50-150		
1,3,5-Trimethylbenzene	**2.39**		ppbv		2.00		119	65-135		
4-Ethyltoluene	**2.48**		ppbv		2.00		124	65-135		
1,2,4-Trimethylbenzene	**2.31**		ppbv		2.00		116	65-135		
Naphthalene	**4.34**	QC2	ppbv		2.00		217	50-150		
1,3-Dichlorobenzene	**2.35**		ppbv		2.00		118	65-135		
Benzyl chloride	**2.60**		ppbv		2.00		130	65-135		
1,4-Dichlorobenzene	**2.28**		ppbv		2.00		114	65-135		
sec-Butylbenzene	**2.33**		ppbv		2.00		117	50-150		
4-Isopropyltoluene	**2.27**		ppbv		2.00		114	50-150		
1,2-Dichlorobenzene	**2.35**		ppbv		2.00		118	65-135		
n-Butylbenzene	**2.59**		ppbv		2.00		129	50-150		
1,2,4-Trichlorobenzene	**3.62**	QC2	ppbv		2.00		181	65-135		
Hexachlorobutadiene	**3.34**	QC2	ppbv		2.00		167	65-135		
Surrogate: 4-Bromofluorobenzene	*10.8*		ppbv		*10.0*		*108*	*80-120*		
LCS Dup (1805527-BSD2)					Prepared & Analyzed: 23-Apr-18					
Propene	**1.78**		ppbv		2.00		89	65-135	8	35
Dichlorodifluoromethane (Freon12)	**1.89**		ppbv		2.00		95	65-135	11	35
Chloromethane	**2.29**		ppbv		2.00		115	65-135	5	35
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.96**		ppbv		2.00		98	65-135	3	35
Vinyl chloride	**1.97**		ppbv		2.00		99	65-135	9	35
1,3-Butadiene	**2.07**		ppbv		2.00		103	65-135	2	35
Bromomethane	**2.30**		ppbv		2.00		115	65-135	8	35
Chloroethane	**1.97**		ppbv		2.00		99	65-135	7	35
Acetone	**2.48**		ppbv		2.00		124	65-135	12	35
Trichlorofluoromethane (Freon 11)	**1.93**		ppbv		2.00		96	65-135	5	35
Ethanol	**2.57**		ppbv		2.00		128	65-135	11	35
Acrylonitrile	**2.24**		ppbv		2.00		112	50-150	9	35
1,1-Dichloroethene	**2.17**		ppbv		2.00		109	65-135	5	35
Methylene chloride	**2.01**		ppbv		2.00		100	65-135	2	35
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.91**		ppbv		2.00		96	65-135	5	35
Carbon disulfide	**1.96**		ppbv		2.00		98	65-135	3	35
trans-1,2-Dichloroethene	**2.10**		ppbv		2.00		105	65-135	8	35
1,1-Dichloroethane	**1.84**		ppbv		2.00		92	65-135	4	35
Methyl tert-butyl ether	**2.47**		ppbv		2.00		123	65-135	2	35
Isopropyl alcohol	**2.72**	QM9	ppbv		2.00		136	65-135	7	35
2-Butanone (MEK)	**2.30**		ppbv		2.00		115	65-135	2	35
cis-1,2-Dichloroethene	**2.07**		ppbv		2.00		103	65-135	5	35
Hexane	**2.10**		ppbv		2.00		105	65-135	7	35
Ethyl acetate	**2.35**		ppbv		2.00		117	65-135	1	35

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805527 - General Air Prep										
LCS Dup (1805527-BSD2)					Prepared & Analyzed: 23-Apr-18					
Chloroform	**1.97**		ppbv		2.00		99	65-135	8	35
Tetrahydrofuran	**2.56**		ppbv		2.00		128	65-135	0.3	35
1,2-Dichloroethane	**1.97**		ppbv		2.00		98	65-135	6	35
1,1,1-Trichloroethane	**1.99**		ppbv		2.00		99	65-135	5	35
Benzene	**2.03**		ppbv		2.00		101	65-135	5	35
Carbon tetrachloride	**1.99**		ppbv		2.00		100	65-135	7	35
Cyclohexane	**2.12**		ppbv		2.00		106	65-135	5	35
1,2-Dichloropropane	**1.90**		ppbv		2.00		95	65-135	3	35
Bromodichloromethane	**1.92**		ppbv		2.00		96	65-135	0.3	35
Trichloroethene	**2.14**		ppbv		2.00		107	65-135	4	35
1,4-Dioxane	**2.44**		ppbv		2.00		122	65-135	0.6	35
n-Heptane	**2.35**		ppbv		2.00		118	65-135	4	35
4-Methyl-2-pentanone (MIBK)	**2.37**		ppbv		2.00		119	65-135	0.7	35
cis-1,3-Dichloropropene	**2.23**		ppbv		2.00		112	65-135	1	35
trans-1,3-Dichloropropene	**2.25**		ppbv		2.00		112	65-135	2	35
1,1,2-Trichloroethane	**2.08**		ppbv		2.00		104	65-135	1	35
Toluene	**2.25**		ppbv		2.00		113	65-135	0.9	35
2-Hexanone (MBK)	**2.50**		ppbv		2.00		125	65-135	0.3	35
Dibromochloromethane	**2.06**		ppbv		2.00		103	65-135	3	35
1,2-Dibromoethane (EDB)	**2.15**		ppbv		2.00		107	65-135	0.5	35
Tetrachloroethene	**2.10**		ppbv		2.00		105	65-135	2	35
Chlorobenzene	**1.92**		ppbv		2.00		96	65-135	4	35
1,1,1,2-Tetrachloroethane	**2.08**		ppbv		2.00		104	50-150	3	35
Ethylbenzene	**2.38**		ppbv		2.00		119	65-135	3	35
m,p-Xylene	**4.28**		ppbv		4.00		107	65-135	2	35
Bromoform	**2.02**		ppbv		2.00		101	65-135	0.4	35
Styrene	**2.28**		ppbv		2.00		114	65-135	4	35
o-Xylene	**2.25**		ppbv		2.00		113	65-135	4	35
1,1,2,2-Tetrachloroethane	**2.05**		ppbv		2.00		102	65-135	1	35
Isopropylbenzene	**2.17**		ppbv		2.00		108	50-150	3	35
1,3,5-Trimethylbenzene	**2.35**		ppbv		2.00		117	65-135	2	35
4-Ethyltoluene	**2.39**		ppbv		2.00		119	65-135	4	35
1,2,4-Trimethylbenzene	**2.19**		ppbv		2.00		110	65-135	5	35
Naphthalene	**4.51**	QC2	ppbv		2.00		225	50-150	4	35
1,3-Dichlorobenzene	**2.24**		ppbv		2.00		112	65-135	5	35
Benzyl chloride	**2.57**		ppbv		2.00		129	65-135	1	35
1,4-Dichlorobenzene	**2.23**		ppbv		2.00		111	65-135	2	35
sec-Butylbenzene	**2.29**		ppbv		2.00		114	50-150	2	35
4-Isopropyltoluene	**2.21**		ppbv		2.00		110	50-150	3	35
1,2-Dichlorobenzene	**2.28**		ppbv		2.00		114	65-135	3	35
n-Butylbenzene	**2.56**		ppbv		2.00		128	50-150	0.9	35
1,2,4-Trichlorobenzene	**3.37**	QC2	ppbv		2.00		168	65-135	7	35
Hexachlorobutadiene	**3.07**	QC2	ppbv		2.00		154	65-135	8	35
Surrogate: 4-Bromofluorobenzene	*10.5*		ppbv		*10.0*		*105*	*80-120*		
Batch 1805581 - General Air Prep										
Blank (1805581-BLK2)					Prepared & Analyzed: 24-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
Blank (1805581-BLK2)					Prepared & Analyzed: 24-Apr-18					
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	< 0.100	U	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
Blank (1805581-BLK2)					Prepared & Analyzed: 24-Apr-18					
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.100	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*9.98*		ppbv		*10.0*		*100*	*80-120*		
Blank (1805581-BLK4)					Prepared & Analyzed: 24-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
Blank (1805581-BLK4)					Prepared & Analyzed: 24-Apr-18					
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	< 0.100	U	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.100	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*10.3*		ppbv		*10.0*		*103*	*80-120*		
LCS (1805581-BS2)					Prepared & Analyzed: 24-Apr-18					
Propene	**1.71**		ppbv		2.00		86	65-135		
Dichlorodifluoromethane (Freon12)	**1.80**		ppbv		2.00		90	65-135		
Chloromethane	**2.09**		ppbv		2.00		104	65-135		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.74**		ppbv		2.00		87	65-135		
Vinyl chloride	**1.90**		ppbv		2.00		95	65-135		
1,3-Butadiene	**2.06**		ppbv		2.00		103	65-135		
Bromomethane	**2.05**		ppbv		2.00		103	65-135		
Chloroethane	**1.76**		ppbv		2.00		88	65-135		
Acetone	**2.26**		ppbv		2.00		113	65-135		
Trichlorofluoromethane (Freon 11)	**1.85**		ppbv		2.00		92	65-135		
Ethanol	**2.44**		ppbv		2.00		122	65-135		
Acrylonitrile	**2.19**		ppbv		2.00		110	50-150		
1,1-Dichloroethene	**2.01**		ppbv		2.00		101	65-135		
Methylene chloride	**1.92**		ppbv		2.00		96	65-135		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.88**		ppbv		2.00		94	65-135		
Carbon disulfide	**1.96**		ppbv		2.00		98	65-135		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
LCS (1805581-BS2)					Prepared & Analyzed: 24-Apr-18					
trans-1,2-Dichloroethene	**1.94**		ppbv		2.00		97	65-135		
1,1-Dichloroethane	**1.82**		ppbv		2.00		91	65-135		
Methyl tert-butyl ether	**2.37**		ppbv		2.00		118	65-135		
Isopropyl alcohol	**2.54**		ppbv		2.00		127	65-135		
2-Butanone (MEK)	**2.22**		ppbv		2.00		111	65-135		
cis-1,2-Dichloroethene	**2.02**		ppbv		2.00		101	65-135		
Hexane	**2.06**		ppbv		2.00		103	65-135		
Ethyl acetate	**2.22**		ppbv		2.00		111	65-135		
Chloroform	**1.93**		ppbv		2.00		96	65-135		
Tetrahydrofuran	**2.63**		ppbv		2.00		132	65-135		
1,2-Dichloroethane	**1.90**		ppbv		2.00		95	65-135		
1,1,1-Trichloroethane	**1.91**		ppbv		2.00		95	65-135		
Benzene	**2.00**		ppbv		2.00		100	65-135		
Carbon tetrachloride	**1.93**		ppbv		2.00		97	65-135		
Cyclohexane	**2.05**		ppbv		2.00		102	65-135		
1,2-Dichloropropane	**1.99**		ppbv		2.00		99	65-135		
Bromodichloromethane	**2.06**		ppbv		2.00		103	65-135		
Trichloroethene	**2.26**		ppbv		2.00		113	65-135		
1,4-Dioxane	**2.29**		ppbv		2.00		115	65-135		
n-Heptane	**2.24**		ppbv		2.00		112	65-135		
4-Methyl-2-pentanone (MIBK)	**2.50**		ppbv		2.00		125	65-135		
cis-1,3-Dichloropropene	**2.31**		ppbv		2.00		115	65-135		
trans-1,3-Dichloropropene	**2.33**		ppbv		2.00		117	65-135		
1,1,2-Trichloroethane	**2.13**		ppbv		2.00		106	65-135		
Toluene	**2.35**		ppbv		2.00		118	65-135		
2-Hexanone (MBK)	**2.53**		ppbv		2.00		126	65-135		
Dibromochloromethane	**2.18**		ppbv		2.00		109	65-135		
1,2-Dibromoethane (EDB)	**2.22**		ppbv		2.00		111	65-135		
Tetrachloroethene	**2.19**		ppbv		2.00		110	65-135		
Chlorobenzene	**2.01**		ppbv		2.00		100	65-135		
1,1,1,2-Tetrachloroethane	**2.20**		ppbv		2.00		110	50-150		
Ethylbenzene	**2.46**		ppbv		2.00		123	65-135		
m,p-Xylene	**4.56**		ppbv		4.00		114	65-135		
Bromoform	**2.18**		ppbv		2.00		109	65-135		
Styrene	**2.41**		ppbv		2.00		120	65-135		
o-Xylene	**2.46**		ppbv		2.00		123	65-135		
1,1,2,2-Tetrachloroethane	**2.20**		ppbv		2.00		110	65-135		
Isopropylbenzene	**2.34**		ppbv		2.00		117	50-150		
1,3,5-Trimethylbenzene	**2.48**		ppbv		2.00		124	65-135		
4-Ethyltoluene	**2.54**		ppbv		2.00		127	65-135		
1,2,4-Trimethylbenzene	**2.37**		ppbv		2.00		118	65-135		
Naphthalene	**4.28**	QC2	ppbv		2.00		214	50-150		
1,3-Dichlorobenzene	**2.34**		ppbv		2.00		117	65-135		
Benzyl chloride	**2.57**		ppbv		2.00		128	65-135		
1,4-Dichlorobenzene	**2.37**		ppbv		2.00		118	65-135		
sec-Butylbenzene	**2.42**		ppbv		2.00		121	50-150		
4-Isopropyltoluene	**2.35**		ppbv		2.00		117	50-150		
1,2-Dichlorobenzene	**2.42**		ppbv		2.00		121	65-135		
n-Butylbenzene	**2.74**		ppbv		2.00		137	50-150		
1,2,4-Trichlorobenzene	**3.67**	QC2	ppbv		2.00		184	65-135		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
LCS (1805581-BS2)					Prepared & Analyzed: 24-Apr-18					
Hexachlorobutadiene	**3.34**	QC2	ppbv		2.00		167	65-135		
Surrogate: 4-Bromofluorobenzene	*11.0*		ppbv		*10.0*		*110*	*80-120*		
LCS Dup (1805581-BSD2)					Prepared & Analyzed: 24-Apr-18					
Propene	**1.79**		ppbv		2.00		90	65-135	5	35
Dichlorodifluoromethane (Freon12)	**1.90**		ppbv		2.00		95	65-135	5	35
Chloromethane	**2.16**		ppbv		2.00		108	65-135	3	35
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.84**		ppbv		2.00		92	65-135	6	35
Vinyl chloride	**1.90**		ppbv		2.00		95	65-135	0.3	35
1,3-Butadiene	**2.07**		ppbv		2.00		104	65-135	0.5	35
Bromomethane	**2.06**		ppbv		2.00		103	65-135	0.6	35
Chloroethane	**1.93**		ppbv		2.00		96	65-135	9	35
Acetone	**2.29**		ppbv		2.00		115	65-135	1	35
Trichlorofluoromethane (Freon 11)	**1.84**		ppbv		2.00		92	65-135	0.1	35
Ethanol	**2.59**		ppbv		2.00		130	65-135	6	35
Acrylonitrile	**2.13**		ppbv		2.00		106	50-150	3	35
1,1-Dichloroethene	**2.09**		ppbv		2.00		105	65-135	4	35
Methylene chloride	**1.99**		ppbv		2.00		99	65-135	3	35
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.91**		ppbv		2.00		96	65-135	2	35
Carbon disulfide	**1.92**		ppbv		2.00		96	65-135	2	35
trans-1,2-Dichloroethene	**2.02**		ppbv		2.00		101	65-135	4	35
1,1-Dichloroethane	**1.85**		ppbv		2.00		92	65-135	1	35
Methyl tert-butyl ether	**2.37**		ppbv		2.00		118	65-135	0.03	35
Isopropyl alcohol	**2.73**	QM9	ppbv		2.00		137	65-135	7	35
2-Butanone (MEK)	**2.12**		ppbv		2.00		106	65-135	5	35
cis-1,2-Dichloroethene	**2.06**		ppbv		2.00		103	65-135	2	35
Hexane	**2.11**		ppbv		2.00		105	65-135	2	35
Ethyl acetate	**2.25**		ppbv		2.00		112	65-135	1	35
Chloroform	**1.90**		ppbv		2.00		95	65-135	1	35
Tetrahydrofuran	**2.85**	QM9	ppbv		2.00		142	65-135	8	35
1,2-Dichloroethane	**1.93**		ppbv		2.00		96	65-135	1	35
1,1,1-Trichloroethane	**1.92**		ppbv		2.00		96	65-135	0.8	35
Benzene	**1.98**		ppbv		2.00		99	65-135	1	35
Carbon tetrachloride	**1.87**		ppbv		2.00		93	65-135	4	35
Cyclohexane	**2.02**		ppbv		2.00		101	65-135	1	35
1,2-Dichloropropane	**1.98**		ppbv		2.00		99	65-135	0.4	35
Bromodichloromethane	**2.06**		ppbv		2.00		103	65-135	0.2	35
Trichloroethene	**2.21**		ppbv		2.00		111	65-135	2	35
1,4-Dioxane	**2.58**		ppbv		2.00		129	65-135	12	35
n-Heptane	**2.06**		ppbv		2.00		103	65-135	8	35
4-Methyl-2-pentanone (MIBK)	**2.36**		ppbv		2.00		118	65-135	6	35
cis-1,3-Dichloropropene	**2.27**		ppbv		2.00		114	65-135	1	35
trans-1,3-Dichloropropene	**2.21**		ppbv		2.00		110	65-135	6	35
1,1,2-Trichloroethane	**2.16**		ppbv		2.00		108	65-135	2	35
Toluene	**2.37**		ppbv		2.00		118	65-135	0.7	35
2-Hexanone (MBK)	**2.54**		ppbv		2.00		127	65-135	0.7	35
Dibromochloromethane	**2.09**		ppbv		2.00		104	65-135	4	35
1,2-Dibromoethane (EDB)	**2.16**		ppbv		2.00		108	65-135	3	35
Tetrachloroethene	**2.14**		ppbv		2.00		107	65-135	2	35
Chlorobenzene	**2.01**		ppbv		2.00		100	65-135	0.08	35
1,1,1,2-Tetrachloroethane	**2.07**		ppbv		2.00		103	50-150	6	35

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805581 - General Air Prep										
LCS Dup (1805581-BSD2)					Prepared & Analyzed: 24-Apr-18					
Ethylbenzene	**2.40**		ppbv		2.00		120	65-135	2	35
m,p-Xylene	**4.43**		ppbv		4.00		111	65-135	3	35
Bromoform	**2.16**		ppbv		2.00		108	65-135	0.8	35
Styrene	**2.31**		ppbv		2.00		115	65-135	4	35
o-Xylene	**2.33**		ppbv		2.00		116	65-135	6	35
1,1,2,2-Tetrachloroethane	**2.12**		ppbv		2.00		106	65-135	4	35
Isopropylbenzene	**2.28**		ppbv		2.00		114	50-150	2	35
1,3,5-Trimethylbenzene	**2.48**		ppbv		2.00		124	65-135	0.3	35
4-Ethyltoluene	**2.53**		ppbv		2.00		127	65-135	0.1	35
1,2,4-Trimethylbenzene	**2.31**		ppbv		2.00		116	65-135	2	35
Naphthalene	**4.32**	QC2	ppbv		2.00		216	50-150	0.8	35
1,3-Dichlorobenzene	**2.34**		ppbv		2.00		117	65-135	0.004	35
Benzyl chloride	**2.58**		ppbv		2.00		129	65-135	0.6	35
1,4-Dichlorobenzene	**2.32**		ppbv		2.00		116	65-135	2	35
sec-Butylbenzene	**2.38**		ppbv		2.00		119	50-150	2	35
4-Isopropyltoluene	**2.31**		ppbv		2.00		116	50-150	1	35
1,2-Dichlorobenzene	**2.40**		ppbv		2.00		120	65-135	0.6	35
n-Butylbenzene	**2.76**		ppbv		2.00		138	50-150	1	35
1,2,4-Trichlorobenzene	**3.48**	QC2	ppbv		2.00		174	65-135	5	35
Hexachlorobutadiene	**3.30**	QC2	ppbv		2.00		165	65-135	1	35
Surrogate: 4-Bromofluorobenzene	*10.7*		ppbv		*10.0*		*107*	*80-120*		
Batch 1805661 - General Air Prep										
Blank (1805661-BLK1)					Prepared & Analyzed: 25-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805661 - General Air Prep										
Blank (1805661-BLK1)					Prepared & Analyzed: 25-Apr-18					
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	**0.177**	QB2	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.500	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*9.63*		ppbv		*10.0*		*96*	*80-120*		
Blank (1805661-BLK2)					Prepared & Analyzed: 25-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805661 - General Air Prep										
Blank (1805661-BLK2)					Prepared & Analyzed: 25-Apr-18					
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	**0.175**	QB2	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805661 - General Air Prep										
Blank (1805661-BLK2)					Prepared & Analyzed: 25-Apr-18					
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.500	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*10.3*		ppbv		*10.0*		*103*	*80-120*		
LCS (1805661-BS1)					Prepared & Analyzed: 25-Apr-18					
Propene	**1.71**		ppbv		2.00		85	65-135		
Dichlorodifluoromethane (Freon12)	**1.80**		ppbv		2.00		90	65-135		
Chloromethane	**2.12**		ppbv		2.00		106	65-135		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.87**		ppbv		2.00		93	65-135		
Vinyl chloride	**1.82**		ppbv		2.00		91	65-135		
1,3-Butadiene	**1.99**		ppbv		2.00		99	65-135		
Bromomethane	**2.07**		ppbv		2.00		103	65-135		
Chloroethane	**1.72**		ppbv		2.00		86	65-135		
Acetone	**2.28**		ppbv		2.00		114	65-135		
Trichlorofluoromethane (Freon 11)	**1.96**		ppbv		2.00		98	65-135		
Ethanol	**2.38**		ppbv		2.00		119	65-135		
Acrylonitrile	**2.10**		ppbv		2.00		105	50-150		
1,1-Dichloroethene	**2.10**		ppbv		2.00		105	65-135		
Methylene chloride	**2.05**		ppbv		2.00		103	65-135		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.95**		ppbv		2.00		98	65-135		
Carbon disulfide	**1.89**		ppbv		2.00		95	65-135		
trans-1,2-Dichloroethene	**2.07**		ppbv		2.00		104	65-135		
1,1-Dichloroethane	**1.82**		ppbv		2.00		91	65-135		
Methyl tert-butyl ether	**2.33**		ppbv		2.00		117	65-135		
Isopropyl alcohol	**2.65**		ppbv		2.00		132	65-135		
2-Butanone (MEK)	**2.15**		ppbv		2.00		107	65-135		
cis-1,2-Dichloroethene	**2.07**		ppbv		2.00		104	65-135		
Hexane	**2.02**		ppbv		2.00		101	65-135		
Ethyl acetate	**2.40**		ppbv		2.00		120	65-135		
Chloroform	**1.96**		ppbv		2.00		98	65-135		
Tetrahydrofuran	**2.50**		ppbv		2.00		125	65-135		
1,2-Dichloroethane	**1.92**		ppbv		2.00		96	65-135		
1,1,1-Trichloroethane	**1.94**		ppbv		2.00		97	65-135		
Benzene	**2.05**		ppbv		2.00		102	65-135		
Carbon tetrachloride	**1.92**		ppbv		2.00		96	65-135		
Cyclohexane	**2.03**		ppbv		2.00		102	65-135		
1,2-Dichloropropane	**1.99**		ppbv		2.00		99	65-135		
Bromodichloromethane	**2.03**		ppbv		2.00		102	65-135		
Trichloroethene	**2.11**		ppbv		2.00		106	65-135		
1,4-Dioxane	**2.91**	QC2	ppbv		2.00		145	65-135		
n-Heptane	**2.20**		ppbv		2.00		110	65-135		
4-Methyl-2-pentanone (MIBK)	**2.48**		ppbv		2.00		124	65-135		
cis-1,3-Dichloropropene	**2.18**		ppbv		2.00		109	65-135		
trans-1,3-Dichloropropene	**2.20**		ppbv		2.00		110	65-135		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805661 - General Air Prep										
LCS (1805661-BS1)					Prepared & Analyzed: 25-Apr-18					
1,1,2-Trichloroethane	**2.08**		ppbv		2.00		104	65-135		
Toluene	**2.30**		ppbv		2.00		115	65-135		
2-Hexanone (MBK)	**2.70**		ppbv		2.00		135	65-135		
Dibromochloromethane	**2.09**		ppbv		2.00		105	65-135		
1,2-Dibromoethane (EDB)	**2.16**		ppbv		2.00		108	65-135		
Tetrachloroethene	**2.06**	B	ppbv		2.00		103	65-135		
Chlorobenzene	**2.02**		ppbv		2.00		101	65-135		
1,1,1,2-Tetrachloroethane	**2.19**		ppbv		2.00		110	50-150		
Ethylbenzene	**2.41**		ppbv		2.00		121	65-135		
m,p-Xylene	**4.63**		ppbv		4.00		116	65-135		
Bromoform	**2.22**		ppbv		2.00		111	65-135		
Styrene	**2.29**		ppbv		2.00		115	65-135		
o-Xylene	**2.47**		ppbv		2.00		123	65-135		
1,1,2,2-Tetrachloroethane	**2.20**		ppbv		2.00		110	65-135		
Isopropylbenzene	**2.32**		ppbv		2.00		116	50-150		
1,3,5-Trimethylbenzene	**2.47**		ppbv		2.00		124	65-135		
4-Ethyltoluene	**2.62**		ppbv		2.00		131	65-135		
1,2,4-Trimethylbenzene	**2.39**		ppbv		2.00		120	65-135		
Naphthalene	**4.22**	QC2	ppbv		2.00		211	50-150		
1,3-Dichlorobenzene	**2.43**		ppbv		2.00		122	65-135		
Benzyl chloride	**2.68**		ppbv		2.00		134	65-135		
1,4-Dichlorobenzene	**2.41**		ppbv		2.00		121	65-135		
sec-Butylbenzene	**2.42**		ppbv		2.00		121	50-150		
4-Isopropyltoluene	**2.35**		ppbv		2.00		117	50-150		
1,2-Dichlorobenzene	**2.48**		ppbv		2.00		124	65-135		
n-Butylbenzene	**2.80**		ppbv		2.00		140	50-150		
1,2,4-Trichlorobenzene	**3.56**	QC2	ppbv		2.00		178	65-135		
Hexachlorobutadiene	**3.33**	QC2	ppbv		2.00		166	65-135		
Surrogate: 4-Bromofluorobenzene	*10.7*		ppbv		*10.0*		*107*	*80-120*		
LCS Dup (1805661-BSD1)					Prepared & Analyzed: 25-Apr-18					
Propene	**1.87**		ppbv		2.00		93	65-135	9	35
Dichlorodifluoromethane (Freon12)	**1.88**		ppbv		2.00		94	65-135	4	35
Chloromethane	**2.06**		ppbv		2.00		103	65-135	3	35
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.84**		ppbv		2.00		92	65-135	2	35
Vinyl chloride	**1.82**		ppbv		2.00		91	65-135	0.2	35
1,3-Butadiene	**2.03**		ppbv		2.00		102	65-135	2	35
Bromomethane	**2.22**		ppbv		2.00		111	65-135	7	35
Chloroethane	**1.79**		ppbv		2.00		90	65-135	4	35
Acetone	**2.36**		ppbv		2.00		118	65-135	3	35
Trichlorofluoromethane (Freon 11)	**1.90**		ppbv		2.00		95	65-135	3	35
Ethanol	**2.51**		ppbv		2.00		125	65-135	5	35
Acrylonitrile	**2.16**		ppbv		2.00		108	50-150	2	35
1,1-Dichloroethene	**2.12**		ppbv		2.00		106	65-135	1	35
Methylene chloride	**1.94**		ppbv		2.00		97	65-135	5	35
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.96**		ppbv		2.00		98	65-135	0.7	35
Carbon disulfide	**1.72**		ppbv		2.00		86	65-135	10	35
trans-1,2-Dichloroethene	**2.01**		ppbv		2.00		100	65-135	3	35
1,1-Dichloroethane	**1.63**		ppbv		2.00		82	65-135	11	35
Methyl tert-butyl ether	**2.26**		ppbv		2.00		113	65-135	3	35
Isopropyl alcohol	**2.62**		ppbv		2.00		131	65-135	1	35

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805661 - General Air Prep										
LCS Dup (1805661-BSD1)					Prepared & Analyzed: 25-Apr-18					
2-Butanone (MEK)	**2.21**		ppbv		2.00		110	65-135	3	35
cis-1,2-Dichloroethene	**1.99**		ppbv		2.00		100	65-135	4	35
Hexane	**2.05**		ppbv		2.00		103	65-135	2	35
Ethyl acetate	**2.39**		ppbv		2.00		120	65-135	0.3	35
Chloroform	**1.98**		ppbv		2.00		99	65-135	0.7	35
Tetrahydrofuran	**2.54**		ppbv		2.00		127	65-135	2	35
1,2-Dichloroethane	**1.97**		ppbv		2.00		98	65-135	3	35
1,1,1-Trichloroethane	**1.94**		ppbv		2.00		97	65-135	0.06	35
Benzene	**1.95**		ppbv		2.00		97	65-135	5	35
Carbon tetrachloride	**1.88**		ppbv		2.00		94	65-135	2	35
Cyclohexane	**2.05**		ppbv		2.00		102	65-135	0.9	35
1,2-Dichloropropane	**2.06**		ppbv		2.00		103	65-135	3	35
Bromodichloromethane	**2.15**		ppbv		2.00		108	65-135	6	35
Trichloroethene	**2.21**		ppbv		2.00		110	65-135	4	35
1,4-Dioxane	**3.01**	QC2	ppbv		2.00		151	65-135	4	35
n-Heptane	**2.38**		ppbv		2.00		119	65-135	8	35
4-Methyl-2-pentanone (MIBK)	**2.40**		ppbv		2.00		120	65-135	3	35
cis-1,3-Dichloropropene	**2.27**		ppbv		2.00		114	65-135	4	35
trans-1,3-Dichloropropene	**2.31**		ppbv		2.00		115	65-135	5	35
1,1,2-Trichloroethane	**2.21**		ppbv		2.00		110	65-135	6	35
Toluene	**2.40**		ppbv		2.00		120	65-135	4	35
2-Hexanone (MBK)	**2.69**		ppbv		2.00		134	65-135	0.3	35
Dibromochloromethane	**2.20**		ppbv		2.00		110	65-135	5	35
1,2-Dibromoethane (EDB)	**2.17**		ppbv		2.00		108	65-135	0.4	35
Tetrachloroethene	**2.21**	B	ppbv		2.00		111	65-135	7	35
Chlorobenzene	**2.03**		ppbv		2.00		102	65-135	0.5	35
1,1,1,2-Tetrachloroethane	**2.28**		ppbv		2.00		114	50-150	4	35
Ethylbenzene	**2.46**		ppbv		2.00		123	65-135	2	35
m,p-Xylene	**4.70**		ppbv		4.00		118	65-135	2	35
Bromoform	**2.26**		ppbv		2.00		113	65-135	2	35
Styrene	**2.39**		ppbv		2.00		120	65-135	4	35
o-Xylene	**2.56**		ppbv		2.00		128	65-135	4	35
1,1,2,2-Tetrachloroethane	**2.28**		ppbv		2.00		114	65-135	3	35
Isopropylbenzene	**2.39**		ppbv		2.00		120	50-150	3	35
1,3,5-Trimethylbenzene	**2.60**		ppbv		2.00		130	65-135	5	35
4-Ethyltoluene	**2.68**		ppbv		2.00		134	65-135	2	35
1,2,4-Trimethylbenzene	**2.49**		ppbv		2.00		124	65-135	4	35
Naphthalene	**4.38**	QC2	ppbv		2.00		219	50-150	4	35
1,3-Dichlorobenzene	**2.52**		ppbv		2.00		126	65-135	4	35
Benzyl chloride	**2.79**	QM9	ppbv		2.00		139	65-135	4	35
1,4-Dichlorobenzene	**2.47**		ppbv		2.00		123	65-135	2	35
sec-Butylbenzene	**2.49**		ppbv		2.00		125	50-150	3	35
4-Isopropyltoluene	**2.45**		ppbv		2.00		122	50-150	4	35
1,2-Dichlorobenzene	**2.56**		ppbv		2.00		128	65-135	3	35
n-Butylbenzene	**2.93**		ppbv		2.00		147	50-150	4	35
1,2,4-Trichlorobenzene	**3.69**	QC2	ppbv		2.00		185	65-135	4	35
Hexachlorobutadiene	**3.43**	QC2	ppbv		2.00		172	65-135	3	35
Surrogate: 4-Bromofluorobenzene	*11.0*		ppbv		*10.0*		*110*	*80-120*		
Batch 1805742 - General Air Prep										
Blank (1805742-BLK1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805742 - General Air Prep										
Blank (1805742-BLK1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
Propene	< 0.500	U	ppbv	0.0960						
Dichlorodifluoromethane (Freon12)	< 0.100	U	ppbv	0.0990						
Chloromethane	< 0.100	U	ppbv	0.0560						
1,2-Dichlorotetrafluoroethane (Freon 114)	< 0.100	U	ppbv	0.0560						
Vinyl chloride	< 0.100	U	ppbv	0.0600						
1,3-Butadiene	< 0.100	U	ppbv	0.0390						
Bromomethane	< 0.100	U	ppbv	0.0650						
Chloroethane	< 0.100	U	ppbv	0.0810						
Acetone	< 0.500	U	ppbv	0.0890						
Trichlorofluoromethane (Freon 11)	< 0.100	U	ppbv	0.0570						
Ethanol	< 0.500	U	ppbv	0.192						
Acrylonitrile	< 0.100	U	ppbv	0.0570						
1,1-Dichloroethene	< 0.100	U	ppbv	0.0960						
Methylene chloride	< 0.100	U	ppbv	0.0500						
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 0.100	U	ppbv	0.0650						
Carbon disulfide	< 0.500	U	ppbv	0.128						
trans-1,2-Dichloroethene	< 0.100	U	ppbv	0.0720						
1,1-Dichloroethane	< 0.100	U	ppbv	0.0220						
Methyl tert-butyl ether	< 0.100	U	ppbv	0.0530						
Isopropyl alcohol	< 0.500	U	ppbv	0.102						
2-Butanone (MEK)	< 0.500	U	ppbv	0.0670						
cis-1,2-Dichloroethene	< 0.100	U	ppbv	0.0760						
Hexane	< 0.500	U	ppbv	0.0950						
Ethyl acetate	< 0.100	U	ppbv	0.0710						
Chloroform	< 0.100	U	ppbv	0.0610						
Tetrahydrofuran	< 0.100	U	ppbv	0.0810						
1,2-Dichloroethane	< 0.100	U	ppbv	0.0570						
1,1,1-Trichloroethane	< 0.100	U	ppbv	0.0350						
Benzene	< 0.100	U	ppbv	0.0510						
Carbon tetrachloride	< 0.100	U	ppbv	0.0250						
Cyclohexane	< 0.500	U	ppbv	0.0430						
1,2-Dichloropropane	< 0.100	U	ppbv	0.0590						
Bromodichloromethane	< 0.100	U	ppbv	0.0810						
Trichloroethene	< 0.100	U	ppbv	0.0590						
1,4-Dioxane	< 0.500	U	ppbv	0.154						
n-Heptane	< 0.100	U	ppbv	0.0570						
4-Methyl-2-pentanone (MIBK)	< 0.100	U	ppbv	0.0610						
cis-1,3-Dichloropropene	< 0.100	U	ppbv	0.0690						
trans-1,3-Dichloropropene	< 0.100	U	ppbv	0.0380						
1,1,2-Trichloroethane	< 0.100	U	ppbv	0.0610						
Toluene	< 0.100	U	ppbv	0.0780						
2-Hexanone (MBK)	< 0.500	U	ppbv	0.0970						
Dibromochloromethane	< 0.100	U	ppbv	0.0740						
1,2-Dibromoethane (EDB)	< 0.100	U	ppbv	0.0840						
Tetrachloroethene	**0.204**	J	ppbv	0.0340						
Chlorobenzene	< 0.100	U	ppbv	0.0620						
1,1,1,2-Tetrachloroethane	< 0.100	U	ppbv	0.0700						
Ethylbenzene	< 0.100	U	ppbv	0.0840						
m,p-Xylene	< 0.200	U	ppbv	0.183						
Bromoform	< 0.100	U	ppbv	0.0310						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805742 - General Air Prep										
Blank (1805742-BLK1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
Styrene	< 0.500	U	ppbv	0.0390						
o-Xylene	< 0.100	U	ppbv	0.0350						
1,1,2,2-Tetrachloroethane	< 0.100	U	ppbv	0.0300						
Isopropylbenzene	< 0.100	U	ppbv	0.0390						
1,3,5-Trimethylbenzene	< 0.100	U	ppbv	0.0390						
4-Ethyltoluene	< 0.100	U	ppbv	0.0410						
1,2,4-Trimethylbenzene	< 0.500	U	ppbv	0.0570						
Naphthalene	< 0.500	U	ppbv	0.0660						
1,3-Dichlorobenzene	< 0.100	U	ppbv	0.0360						
Benzyl chloride	< 0.100	U	ppbv	0.0310						
1,4-Dichlorobenzene	< 0.100	U	ppbv	0.0280						
sec-Butylbenzene	< 0.100	U	ppbv	0.0540						
4-Isopropyltoluene	< 0.500	U	ppbv	0.0650						
1,2-Dichlorobenzene	< 0.100	U	ppbv	0.0440						
n-Butylbenzene	< 0.100	U	ppbv	0.0810						
1,2,4-Trichlorobenzene	< 0.500	U	ppbv	0.0510						
Hexachlorobutadiene	< 0.100	U	ppbv	0.0540						
Surrogate: 4-Bromofluorobenzene	*10.3*		ppbv		*10.0*		*103*	*80-120*		
LCS (1805742-BS1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
Propene	**1.68**		ppbv		2.00		84	65-135		
Dichlorodifluoromethane (Freon12)	**1.83**		ppbv		2.00		91	65-135		
Chloromethane	**2.08**		ppbv		2.00		104	65-135		
1,2-Dichlorotetrafluoroethane (Freon 114)	**1.86**		ppbv		2.00		93	65-135		
Vinyl chloride	**1.89**		ppbv		2.00		95	65-135		
1,3-Butadiene	**2.08**		ppbv		2.00		104	65-135		
Bromomethane	**2.12**		ppbv		2.00		106	65-135		
Chloroethane	**1.77**		ppbv		2.00		88	65-135		
Acetone	**2.16**		ppbv		2.00		108	65-135		
Trichlorofluoromethane (Freon 11)	**1.97**		ppbv		2.00		98	65-135		
Ethanol	**2.11**		ppbv		2.00		106	65-135		
Acrylonitrile	**2.04**		ppbv		2.00		102	50-150		
1,1-Dichloroethene	**2.18**		ppbv		2.00		109	65-135		
Methylene chloride	**1.87**		ppbv		2.00		93	65-135		
1,1,2-Trichlorotrifluoroethane (Freon 113)	**2.03**		ppbv		2.00		101	65-135		
Carbon disulfide	**2.00**		ppbv		2.00		100	65-135		
trans-1,2-Dichloroethene	**2.05**		ppbv		2.00		103	65-135		
1,1-Dichloroethane	**1.83**		ppbv		2.00		92	65-135		
Methyl tert-butyl ether	**2.33**		ppbv		2.00		117	65-135		
Isopropyl alcohol	**2.55**		ppbv		2.00		128	65-135		
2-Butanone (MEK)	**2.16**		ppbv		2.00		108	65-135		
cis-1,2-Dichloroethene	**1.99**		ppbv		2.00		99	65-135		
Hexane	**1.96**		ppbv		2.00		98	65-135		
Ethyl acetate	**2.37**		ppbv		2.00		119	65-135		
Chloroform	**1.96**		ppbv		2.00		98	65-135		
Tetrahydrofuran	**2.74**	QM9	ppbv		2.00		137	65-135		
1,2-Dichloroethane	**1.92**		ppbv		2.00		96	65-135		
1,1,1-Trichloroethane	**1.92**		ppbv		2.00		96	65-135		
Benzene	**2.00**		ppbv		2.00		100	65-135		
Carbon tetrachloride	**2.02**		ppbv		2.00		101	65-135		
Cyclohexane	**2.00**		ppbv		2.00		100	65-135		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805742 - General Air Prep										
LCS (1805742-BS1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
1,2-Dichloropropane	**1.98**		ppbv		2.00		99	65-135		
Bromodichloromethane	**2.02**		ppbv		2.00		101	65-135		
Trichloroethene	**2.21**		ppbv		2.00		110	65-135		
1,4-Dioxane	**2.81**	QM9	ppbv		2.00		140	65-135		
n-Heptane	**2.28**		ppbv		2.00		114	65-135		
4-Methyl-2-pentanone (MIBK)	**2.40**		ppbv		2.00		120	65-135		
cis-1,3-Dichloropropene	**2.26**		ppbv		2.00		113	65-135		
trans-1,3-Dichloropropene	**2.16**		ppbv		2.00		108	65-135		
1,1,2-Trichloroethane	**2.11**		ppbv		2.00		106	65-135		
Toluene	**2.34**		ppbv		2.00		117	65-135		
2-Hexanone (MBK)	**2.57**		ppbv		2.00		128	65-135		
Dibromochloromethane	**2.11**		ppbv		2.00		106	65-135		
1,2-Dibromoethane (EDB)	**2.21**		ppbv		2.00		110	65-135		
Tetrachloroethene	**2.11**		ppbv		2.00		106	65-135		
Chlorobenzene	**2.14**		ppbv		2.00		107	65-135		
1,1,1,2-Tetrachloroethane	**2.23**		ppbv		2.00		111	50-150		
Ethylbenzene	**2.53**		ppbv		2.00		127	65-135		
m,p-Xylene	**4.84**		ppbv		4.00		121	65-135		
Bromoform	**2.31**		ppbv		2.00		115	65-135		
Styrene	**2.39**		ppbv		2.00		120	65-135		
o-Xylene	**2.57**		ppbv		2.00		128	65-135		
1,1,2,2-Tetrachloroethane	**2.30**		ppbv		2.00		115	65-135		
Isopropylbenzene	**2.43**		ppbv		2.00		121	50-150		
1,3,5-Trimethylbenzene	**2.62**		ppbv		2.00		131	65-135		
4-Ethyltoluene	**2.59**		ppbv		2.00		130	65-135		
1,2,4-Trimethylbenzene	**2.52**		ppbv		2.00		126	65-135		
Naphthalene	**4.37**	QC2	ppbv		2.00		219	50-150		
1,3-Dichlorobenzene	**2.52**		ppbv		2.00		126	65-135		
Benzyl chloride	**2.67**		ppbv		2.00		134	65-135		
1,4-Dichlorobenzene	**2.51**		ppbv		2.00		126	65-135		
sec-Butylbenzene	**2.56**		ppbv		2.00		128	50-150		
4-Isopropyltoluene	**2.49**		ppbv		2.00		124	50-150		
1,2-Dichlorobenzene	**2.55**		ppbv		2.00		127	65-135		
n-Butylbenzene	**2.96**		ppbv		2.00		148	50-150		
1,2,4-Trichlorobenzene	**3.68**	QC2	ppbv		2.00		184	65-135		
Hexachlorobutadiene	**3.49**	QC2	ppbv		2.00		174	65-135		
Surrogate: 4-Bromofluorobenzene	*11.1*		ppbv		*10.0*		*111*	*80-120*		
LCS Dup (1805742-BSD1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
Propene	**1.80**		ppbv		2.00		90	65-135	7	35
Dichlorodifluoromethane (Freon12)	**1.80**		ppbv		2.00		90	65-135	1	35
Chloromethane	**2.20**		ppbv		2.00		110	65-135	6	35
1,2-Dichlorotetrafluoroethane (Freon 114)	**2.04**		ppbv		2.00		102	65-135	9	35
Vinyl chloride	**1.91**		ppbv		2.00		95	65-135	0.8	35
1,3-Butadiene	**2.19**		ppbv		2.00		109	65-135	5	35
Bromomethane	**2.16**		ppbv		2.00		108	65-135	2	35
Chloroethane	**1.77**		ppbv		2.00		88	65-135	0.1	35
Acetone	**2.21**		ppbv		2.00		111	65-135	2	35
Trichlorofluoromethane (Freon 11)	**1.93**		ppbv		2.00		96	65-135	2	35
Ethanol	**2.57**		ppbv		2.00		129	65-135	20	35
Acrylonitrile	**1.96**		ppbv		2.00		98	50-150	4	35

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805742 - General Air Prep										
LCS Dup (1805742-BSD1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
1,1-Dichloroethene	**2.26**		ppbv		2.00		113	65-135	4	35
Methylene chloride	**1.87**		ppbv		2.00		93	65-135	0.01	35
1,1,2-Trichlorotrifluoroethane (Freon 113)	**1.92**		ppbv		2.00		96	65-135	5	35
Carbon disulfide	**1.90**		ppbv		2.00		95	65-135	5	35
trans-1,2-Dichloroethene	**2.12**		ppbv		2.00		106	65-135	3	35
1,1-Dichloroethane	**1.83**		ppbv		2.00		92	65-135	0.02	35
Methyl tert-butyl ether	**2.44**		ppbv		2.00		122	65-135	5	35
Isopropyl alcohol	**2.77**	QM9	ppbv		2.00		138	65-135	8	35
2-Butanone (MEK)	**2.22**		ppbv		2.00		111	65-135	3	35
cis-1,2-Dichloroethene	**2.12**		ppbv		2.00		106	65-135	6	35
Hexane	**2.01**		ppbv		2.00		101	65-135	3	35
Ethyl acetate	**2.36**		ppbv		2.00		118	65-135	0.7	35
Chloroform	**1.88**		ppbv		2.00		94	65-135	4	35
Tetrahydrofuran	**2.59**		ppbv		2.00		130	65-135	5	35
1,2-Dichloroethane	**1.85**		ppbv		2.00		93	65-135	4	35
1,1,1-Trichloroethane	**1.98**		ppbv		2.00		99	65-135	3	35
Benzene	**2.00**		ppbv		2.00		100	65-135	0.05	35
Carbon tetrachloride	**1.94**		ppbv		2.00		97	65-135	4	35
Cyclohexane	**2.01**		ppbv		2.00		101	65-135	0.6	35
1,2-Dichloropropane	**1.91**		ppbv		2.00		96	65-135	3	35
Bromodichloromethane	**2.00**		ppbv		2.00		100	65-135	1	35
Trichloroethene	**2.18**		ppbv		2.00		109	65-135	1	35
1,4-Dioxane	**2.37**		ppbv		2.00		119	65-135	17	35
n-Heptane	**1.95**		ppbv		2.00		98	65-135	15	35
4-Methyl-2-pentanone (MIBK)	**2.39**		ppbv		2.00		119	65-135	0.5	35
cis-1,3-Dichloropropene	**2.25**		ppbv		2.00		112	65-135	0.4	35
trans-1,3-Dichloropropene	**2.19**		ppbv		2.00		109	65-135	1	35
1,1,2-Trichloroethane	**2.08**		ppbv		2.00		104	65-135	1	35
Toluene	**2.30**		ppbv		2.00		115	65-135	2	35
2-Hexanone (MBK)	**2.51**		ppbv		2.00		126	65-135	2	35
Dibromochloromethane	**2.06**		ppbv		2.00		103	65-135	2	35
1,2-Dibromoethane (EDB)	**2.18**		ppbv		2.00		109	65-135	1	35
Tetrachloroethene	**2.14**		ppbv		2.00		107	65-135	1	35
Chlorobenzene	**2.04**		ppbv		2.00		102	65-135	5	35
1,1,1,2-Tetrachloroethane	**2.30**		ppbv		2.00		115	50-150	3	35
Ethylbenzene	**2.49**		ppbv		2.00		125	65-135	2	35
m,p-Xylene	**4.66**		ppbv		4.00		117	65-135	4	35
Bromoform	**2.35**		ppbv		2.00		117	65-135	2	35
Styrene	**2.36**		ppbv		2.00		118	65-135	1	35
o-Xylene	**2.40**		ppbv		2.00		120	65-135	7	35
1,1,2,2-Tetrachloroethane	**2.15**		ppbv		2.00		107	65-135	7	35
Isopropylbenzene	**2.24**		ppbv		2.00		112	50-150	8	35
1,3,5-Trimethylbenzene	**2.42**		ppbv		2.00		121	65-135	8	35
4-Ethyltoluene	**2.49**		ppbv		2.00		125	65-135	4	35
1,2,4-Trimethylbenzene	**2.28**		ppbv		2.00		114	65-135	10	35
Naphthalene	**4.15**	QC2	ppbv		2.00		208	50-150	5	35
1,3-Dichlorobenzene	**2.42**		ppbv		2.00		121	65-135	4	35
Benzyl chloride	**2.55**		ppbv		2.00		127	65-135	5	35
1,4-Dichlorobenzene	**2.29**		ppbv		2.00		114	65-135	9	35
sec-Butylbenzene	**2.35**		ppbv		2.00		118	50-150	8	35

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA TO-15L										
Batch 1805742 - General Air Prep										
LCS Dup (1805742-BSD1)					Prepared: 27-Apr-07 Analyzed: 27-Apr-18					
4-Isopropyltoluene	**2.31**		ppbv		2.00		116	50-150	7	35
1,2-Dichlorobenzene	**2.42**		ppbv		2.00		121	65-135	5	35
n-Butylbenzene	**2.70**		ppbv		2.00		135	50-150	9	35
1,2,4-Trichlorobenzene	**3.47**	QC2	ppbv		2.00		173	65-135	6	35
Hexachlorobutadiene	**3.34**	QC2	ppbv		2.00		167	65-135	4	35
Surrogate: 4-Bromofluorobenzene	*10.2*		ppbv		*10.0*		*102*	*80-120*		

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/20/2018

Canister ID: 0205 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

0205

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/20/2018

Canister ID: 28553 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

28553

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/20/2018

Canister ID: 28573 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

28573

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/20/2018

Canister ID: 28606 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

28606

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/14/2018

Canister ID: 5567 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

5567

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/20/2018

Canister ID: 5575 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.2	Ethanol	<0.2
Acrylonitrile	<0.2	4-Isopropyl Toluene	<0.2
Benzene	<0.2	Ethyl acetate	<0.2
Benzyl chloride	<0.2	Ethylbenzene	<0.2
Bromodichloromethane	<0.2	4-Ethyltoluene	<0.2
Bromoform	<0.2	n-Heptane	<0.2
Bromomethane	<0.2	Hexachlorobutadiene	<0.2
1,3-Butadiene	<0.2	Hexane	<0.2
2-Butanone (MEK)	<0.2	2-Hexanone (MBK)	<0.2
Carbon disulfide	<0.2	Isopropyl alcohol	<0.2
Carbon tetrachloride	<0.2	4-Methyl-2-pentanone (MIBK)	<0.2
Chlorobenzene	<0.2	Methyl tert-butyl ether	<0.2
Chloroethane	<0.2	Methylene chloride	<0.2
1,4-Dioxane	<0.2	Naphthalene	<0.2
n-Butylbenzene	<0.2	1,1,1,2-Tetrachlorethane	<0.2
Chloroform	<0.2	Propene	<0.2
Chloromethane	<0.2	Styrene	<0.2
Cyclohexane	<0.2	1,1,2,2-Tetrachloroethane	<0.2
Dibromochloromethane	<0.2	Tetrachloroethene	<0.2
1,2-Dibromoethane (EDB)	<0.2	Tetrahydrofuran	<0.2
1,2-Dichlorobenzene	<0.2	Toluene	<0.2
1,3-Dichlorobenzene	<0.2	1,2,4-Trichlorobenzene	<0.2
1,4-Dichlorobenzene	<0.2	1,1,1-Trichloroethane	<0.2
Dichlorodifluoromethane (Freon12)	<0.2	1,1,2-Trichloroethane	<0.2
1,1-Dichloroethane	<0.2	Trichloroethene	<0.2
1,2-Dichloroethane	<0.2	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.2
1,1-Dichloroethene	<0.2	Trichlorofluoromethane (Freon 11)	<0.2
cis-1,2-Dichloroethene	<0.2	1,2,4-Trimethylbenzene	<0.2
trans-1,2-Dichloroethene	<0.2	1,3,5-Trimethylbenzene	<0.2
1,2-Dichloropropane	<0.2	Vinyl chloride	<0.2
cis-1,3-Dichloropropene	<0.2	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.2	o-Xylene	<0.2
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.2	sec-Butylbenzene	<0.2
Isopropylbenzene	<0.2		

This certification applies to the following sampling devices:

16009

5575

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/14/2018

Canister ID: 5577 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

5577

Certificate of Analysis

Container Type: Summa canister 6 liter **Date of Analysis:** 3/16/2018

Canister ID: 5580 **Analyst's Initials:** SAD

The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.

Analyte	*Quantitation Limit (ppbv)*	*Analyte*	*Quantitation Limit (ppbv)*
Acetone	<0.5	Ethanol	<0.5
Acrylonitrile	<0.1	4-Isopropyl Toluene	<0.5
Benzene	<0.1	Ethyl acetate	<0.1
Benzyl chloride	<0.1	Ethylbenzene	<0.1
Bromodichloromethane	<0.04	4-Ethyltoluene	<0.1
Bromoform	<0.1	n-Heptane	<0.1
Bromomethane	<0.1	Hexachlorobutadiene	<0.04
1,3-Butadiene	<0.1	Hexane	<0.5
2-Butanone (MEK)	<0.1	2-Hexanone (MBK)	<0.1
Carbon disulfide	<0.5	Isopropyl alcohol	<0.5
Carbon tetrachloride	<0.04	4-Methyl-2-pentanone (MIBK)	<0.1
Chlorobenzene	<0.1	Methyl tert-butyl ether	<0.1
Chloroethane	<0.1	Methylene chloride	<0.1
1,4-Dioxane	<0.5	Naphthalene	<0.1
n-Butylbenzene	<0.1	1,1,1,2-Tetrachlorethane	<0.1
Chloroform	<0.1	Propene	<0.1
Chloromethane	<0.1	Styrene	<0.1
Cyclohexane	<0.1	1,1,2,2-Tetrachloroethane	<0.04
Dibromochloromethane	<0.04	Tetrachloroethene	<0.04
1,2-Dibromoethane (EDB)	<0.04	Tetrahydrofuran	<0.1
1,2-Dichlorobenzene	<0.1	Toluene	<0.1
1,3-Dichlorobenzene	<0.1	1,2,4-Trichlorobenzene	<0.1
1,4-Dichlorobenzene	<0.04	1,1,1-Trichloroethane	<0.1
Dichlorodifluoromethane (Freon12)	<0.1	1,1,2-Trichloroethane	<0.04
1,1-Dichloroethane	<0.04	Trichloroethene	<0.04
1,2-Dichloroethane	<0.04	1,1,2-Trichlorotrifluoroethane (Freon 113)	<0.1
1,1-Dichloroethene	<0.04	Trichlorofluoromethane (Freon 11)	<0.1
cis-1,2-Dichloroethene	<0.1	1,2,4-Trimethylbenzene	<0.1
trans-1,2-Dichloroethene	<0.1	1,3,5-Trimethylbenzene	<0.1
1,2-Dichloropropane	<0.04	Vinyl chloride	<0.04
cis-1,3-Dichloropropene	<0.1	m,p-Xylene	<0.2
trans-1,3-Dichloropropene	<0.1	o-Xylene	<0.1
1,2-Dichlorotetrafluoroethane (Freon 114)	<0.1	sec-Butylbenzene	<0.1
Isopropylbenzene	<0.1		

This certification applies to the following sampling devices:

5580

Notes and Definitions

B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
BsL	Data for this analyte may be biased low based on QC spike recoveries.
D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QB2	The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC 452766M

Chain of Custody Record/Field Test Data Sheets for Air Analyses

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Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To: Ernie Rossano	**Invoice To:** ERM	**Project No.:** 04541768
105 Maxess Road Ste 316	105 Maxess Road Suite 316	**Site Name:** Webster Ave
Melville NY, 11747	Melville NY, ~~HO~~ EM 3/29 11747	**Location:** 4275 Park Ave Bronx **State:** NY
Tel #: 1(631) 756-8917	**Attn:** Ernie Rossano	**Sampler(s):** Eric Marcus
Project Manager: Karen ~~R~~ EM 3/29 Pickering	**P.O. No.:** N/A **RQN:** N/A	

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO-15	Matrix: Indoor /Ambient Air	Matrix: Soil Gas	Check box if canister is returned unused
LABORATORY USE ONLY																		
LL02553	6	-30		28603.14		45376-01	SP-04	3/28/18	1210	0820	-30+	-1	50°	50°	↓		X	
LL02573	6	-30		00483.16		02	IA-04		12.00	0815	-30	-2	65°	65°		X		
LL05577	6	-30		28413.15		03	OA-01		1145	0740	-29	-2	50°	50°		X		
LL02055	6	-30		00353.16		04	DUP032818		1155	0810	-30+	-2	65°	65°		X		
LL02606	6	-30		13193.17		05	SP-01		1123	0805	-25	-1	65°	65°			X	
LL05575	6	-30		00263.16		06	IA-01		1130	0800	-25	-2	65°	65°		X		
LL16009	6	-30		29373.12		07	IA-03		11:55	0810	-30+	-2	65°	65°		X		
LL05580	6	-30		00073.15		08	SP-02		11:40	0750	-30+	~~-1~~ ~~0750~~ EM 3/29	65°	65°			X	
LL05576		-30		28783.15	↓	09	IA-02	↓	11:35	0745	-30+	-4	65°	65°	↓	X		

Date of Request: 3-22-18	**Total # Canisters:** 9	**Special Instructions/QC Requirements & Comments:**	
Requested by: James Harvey	**# LL Canisters:** 9		
Company: Env. Resources Management	**# Flow Controllers:** 9	19.8 10 19.8 IRL2	
Location: Melville, NY	**Flow Rate/Setting:** 24hr		
Date Needed: 3-26-18	**# Filters** —		
Order #: 44091	**Gauge #** 10		
Prepared by: KB			

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start	50°	30.66
Stop	50°	30.05

I attest that all media has been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: _____ Date: 3/29/18

Printed: Eric Marcus

QA/QC Reporting Level:

☒ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA CAM
☐ DQA* ☐ NY ASP B* ☐ TIER IV* ☐ CT RCP

* additional charge may apply contact ESAI's Client Service Dept for further info.

Please contact ESAI's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
Eric Marcus		3/29/18	1100
FedEx	BM	3/30/18	1045

☒ EDD Format
☒ E-mail Results to Eric.Marcus@erm.com

A 6072

SC 45276 [illegible]

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Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ________
All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To: Ernie Rossano	Invoice To: ERM	
105 Maxess Road Ste 316	105 Maxess Road Suite 316	Project No.: 0454768
Melville NY, 11747	Melville NY, ~~11[illegible]~~ (EM) 11747	Site Name: Webster Ave
		Location: 4275 Park Ave Bronx State: NY
Tel #: 1 (631) 756-8917	Attn: Ernie Rossano	Sampler(s): Eric Marcus
Project Manager: Karen R. (EM 3/29) Pickering	P.O. No.: N/A RQN: N/A	

@ 4/3/18

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID	Flow Controller Readout (ml/min)	Lab Id:	Sample Id:	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO-15	Matrix: Indoor /Ambient Air	Matrix: Soil Gas	Check box if canister is returned unused
LL28553	6	-30		2860	3.14	45276-01	SP-04	3/28/18 – 3/29	1210	0820	-30+	-1	50°	50°	↓		X	
LL28573	6	-30		0048	3.16	02	IA-04	↓	1200	0815	-30	-2	65°	65°	↓	X		
LL5577	6	-30		2841	3.15	03	OA-01	↓	1145	0740	-29	-2	50°	50°	↓	X		
LL0205	6	-30		0035	3.16	04	DuP032818	↓	1155	0810	-30+	-2	65°	65°	↓	X		
LL28606	6	-30		1319	3.17	05	SP-01	↓	1123	0805	-25	-1	65°	65°	↓		X	
LL5575	6	-30		0026	3.16	06	IA-01	↓	1130	0800	-25	-2	65°	65°	↓	X		
LL16009	6	-30		2937	3.12	07	IA-03	↓	11:55	0810	-30+	-2	65°	65°	↓	X		
LL5580	6	-30		0007	3.15	08	SP-02	↓	11:40	0750	-30+	~~0750~~ -1 (EM 3/29)	65°	65°	↓		X	
LL5567	6	-30		2878	3.15	↓ 09	IA-02	↓	11:35	0745	-30+	-4	65°	65°	↓	X		

LABORATORY USE ONLY (Incoming Canister Pressure, Flow Reg. ID)

Date of Request: 3-22-18	Total # Canisters: 9
Requested by: James Harvey	# LL Canisters: 9
Company: Env. Resources Management	# Flow Controllers: 9
Location: Melville, NY	Flow Rate/Setting: 24hrs
Date Needed: 3-26-18	# Filters —
Order #: 44091	Gauge # 10
Prepared by: KB [signature]	

Special Instructions/QC Requirements & Comments:

19.8/0/19.8 IRUZ

Client Use	Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start	50°	30.66
Stop	50°	30.05

I attest that all media has been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: [signature] Date: 3/29/18

Printed: Eric Marcus

collection date per client range 4/3/18

QA/QC Reporting Level:
☒ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA CAM
☐ DQA* ☐ NY ASP B* ☐ TIER IV* ☐ CT RCP
* additional charge may apply contact ESAI's Client Service Dept for further info.

Please contact ESAI's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
Eric Marcus		3/29/18	1100
FedEx	BM	3/30/18	1045

☒ EDD Format
☒ E-mail Results to Eric.Marcus@erm.com

A 6072

SC 457 Rock

Chain of Custody Record/Field Test Data Sheets for Air Analyses

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Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed _____
All TAT's subject to laboratory approval.
Min. 24-hour notification needed for rushes.

Report To: Ernie Rossano	Invoice To: ERM	Project No.: 0454718
105 Maxess Road Ste 316	105 Maxess Road Suite 316	Site Name: Webster Ave
Melville NY, 11747	Melville NY, ~~11747~~ 11747	Location: 4275 Park Ave Bronx State: NY
Tel #: 1(631) 756-8917	Attn: Ernie Rossano	Sampler(s): Eric Marcus
Project Manager: Karen ~~R~~ Pickering	P.O. No.: N/A RQN: N/A	

Can ID	Can Size (L)	Outgoing Canister Pressure ("Hg) (Lab)	Incoming Canister Pressure ("Hg) (Lab)	Flow Reg. ID (LABORATORY USE ONLY)	Flow Controller Readout (ml/min)	Lab Id.	Sample Id.	Sample Date(s)	Time Start (24 hr clock)	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Analysis: TO-15	Matrix: Indoor/Ambient Air	Matrix: Soil Gas	Check box if canister is returned unused
LL 28553	6	-30	0	28603.14		457876-01	SP-04	3/28/18	1210	0820	-30+	-1	50°	50°	✓		X	
LL 28573	6	-30	0	00483.16		02	IA-04		1200	0815	-30	-2	65°	65°		X		
LL 5577	6	-30	+1	2841 3.15		03	OA-01		1145	0740	-29	-2	50°	50°		X		
LL 0205	6	-30	0	00353.16		04	DUP032818		1155	0810	-30+	-2	65°	65°		X		
LL 28606	6	-30	0	13193.17		05	SP-01		1123	0805	-25	-1	65°	65°			X	
LL 5575	6	-30	0	00263.16		06	IA-01		1130	0800	-25	-2	65°	65°		X		
LL 16009	6	-30	0	29373.12		07	IA-03		1155	0810	-30+	-2	65°	65°		X		
LL 5580	6	-30	0	00073.15		08	SP-02		1140	0750	-30+	~~-3750~~ -4	65°	65°			X	
LL 5567	6	-30	0	28783.15		09	IA-02		1135	0745	-30+	-4	65°	65°		X		

Date of Request: 3-22-18	Total # Canisters: 9	Special Instructions/QC Requirements & Comments:	Client Use
Requested by: James Harvey	# LL Canisters: 9		
Company: Env Resources Mangement	# Flow Controllers: 9	19.8/0/19.8 IR02	Start
Location: Melville NY	Flow Rate/Setting: 24HR		Stop
Date Needed: 3-26-18	# Filters —		
Order #: 44091	Gauge # 10		
Prepared by: KB			

Ambient Temperature (Fahrenheit)	Ambient Pressure (inches of Hg)
Start 50°	30.66
Stop 50°	30.05

I attest that all media has been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document

Signed: _____ Date: 3/29/18

Printed: Eric Marcus

QA/QC Reporting Level:

☒ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA CAM
☐ DQA* ☐ NY ASP B* ☐ TIER IV* ☐ CT RCP*

* additional charge may apply contact ESAI's Client Service Dept for further info

Please contact ESAI's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.

Relinquished by:	Received by:	Date:	Time:
Eric Marcus		3/29/18	1100
FedEx	DM	3/30/18	1045
	e		

☒ EDD Format
☒ E-mail Results to Eric.Marcus@erm.com

FROM:
Eric Marcus
(631) 379-5068
105 MAXESS RD STE 316
MELVILLE NY 11747
US

SHIP DATE: 29MAR18
ACTWGT: 25.40 LB
CAD: 6995485/SSF01822
DIMMED: 20 X 19 X 17 IN
BILL 3rd PARTY

TO EUROFINS SPECTRUM ANALYTI
EUROFINS SPECTRUM ANALYTICAL
11 ALMGREN DR
AGAWAM MA 01001 (US)
(413) 789-9018 REF:
INV: DEPT:
PO:

FedEx Ground

1 of 2
TRK# 7802 9937 1855
MASTER

DSR
01001

9622 0418 4 (000 000 0000) 0 00 7802 9937 1855

Part # 156297-435 RRDB EXP 01/1

FROM:
Eric Marcus
(631) 379-5068
105 MAXESS RD STE 316
MELVILLE NY 11747
US

SHIP DATE: 29MAR18
ACTWGT: 40.70 LB
CAD: 6995485/SSF01822
DIMMED: 28 X 28 X 28 IN
BILL 3rd PARTY

TO EUROFINS SPECTRUM ANALYTI
EUROFINS SPECTRUM ANALYTICAL
11 ALMGREN DR
AGAWAM MA 01001 (US)
(413) 789-9018 REF:
INV: DEPT:
PO:

FedEx Ground

2 of 2
MPS# 7802 9937 1866
Mstr# 7802 9937 1855

DSR
01001

9622 0418 4 (000 000 0000) 0 00 7802 9937 1866

Part # 156297-435 RRDB EXP 01/1

Align bottom of peel-and-stick airbill or

Batch Summary

1805527

Air Quality Analyses

1805527-BLK1
1805527-BLK2
1805527-BLK3
1805527-BLK4
1805527-BS1
1805527-BS2
1805527-BSD1
1805527-BSD2
SC45276-01 (SP-04)
SC45276-02 (IA-04)
SC45276-03 (OA-01)
SC45276-04 (DUP032818)
SC45276-05 (SP-01)

1805581

Air Quality Analyses

1805581-BLK1
1805581-BLK2
1805581-BLK3
1805581-BLK4
1805581-BS1
1805581-BS2
1805581-BSD1
1805581-BSD2
SC45276-03RE1 (OA-01)
SC45276-05RE1 (SP-01)
SC45276-05RE2 (SP-01)
SC45276-06 (IA-01)
SC45276-07 (IA-03)
SC45276-08 (SP-02)
SC45276-09 (IA-02)

1805661

Air Quality Analyses

1805661-BLK1
1805661-BLK2
1805661-BS1
1805661-BSD1
SC45276-01RE1 (SP-04)
SC45276-01RE2 (SP-04)
SC45276-02RE1 (IA-04)
SC45276-04RE1 (DUP032818)
SC45276-06RE1 (IA-01)
SC45276-06RE2 (IA-01)
SC45276-07RE1 (IA-03)
SC45276-08RE1 (SP-02)
SC45276-08RE2 (SP-02)
SC45276-09RE1 (IA-02)

1805742

Air Quality Analyses

1805742-BLK1
1805742-BS1
1805742-BSD1
SC45276-02RE2 (IA-04)

S818671

Air Quality Analyses

S818671-CAL1
S818671-CAL2
S818671-CAL3
S818671-CAL4
S818671-CAL5
S818671-CAL6
S818671-CAL7
S818671-CAL8
S818671-ICV1
S818671-LCV2
S818671-TUN1

S818673

Air Quality Analyses

S818673-CAL1
S818673-CAL2
S818673-CAL3
S818673-CAL4
S818673-CAL5
S818673-CAL6
S818673-ICV1
S818673-LCV1
S818673-LCV2
S818673-TUN1

S818746

Air Quality Analyses

S818746-CCV1
S818746-CCV2
S818746-CCV3
S818746-CRL1
S818746-CRL2
S818746-TUN1
S818746-TUN2
S818746-TUN3

S818748

Air Quality Analyses

S818748-CCV1
S818748-CCV2
S818748-CCV3
S818748-CRL1
S818748-CRL2
S818748-CRL3
S818748-CRL4
S818748-TUN1
S818748-TUN2
S818748-TUN3

S818791

Air Quality Analyses

S818791-CCV1
S818791-CCV2
S818791-CCV3
S818791-CRL1
S818791-CRL2
S818791-CRL3
S818791-CRL4
S818791-TUN1
S818791-TUN2

S818792

Air Quality Analyses

S818792-CCV1
S818792-CCV2
S818792-CCV3
S818792-CRL1
S818792-CRL2
S818792-TUN1
S818792-TUN2

S818821

Air Quality Analyses

S818821-CCV1
S818821-CCV2
S818821-CCV3
S818821-CRL1
S818821-CRL2
S818821-CRL3
S818821-CRL4
S818821-TUN1
S818821-TUN2

S818879

Air Quality Analyses

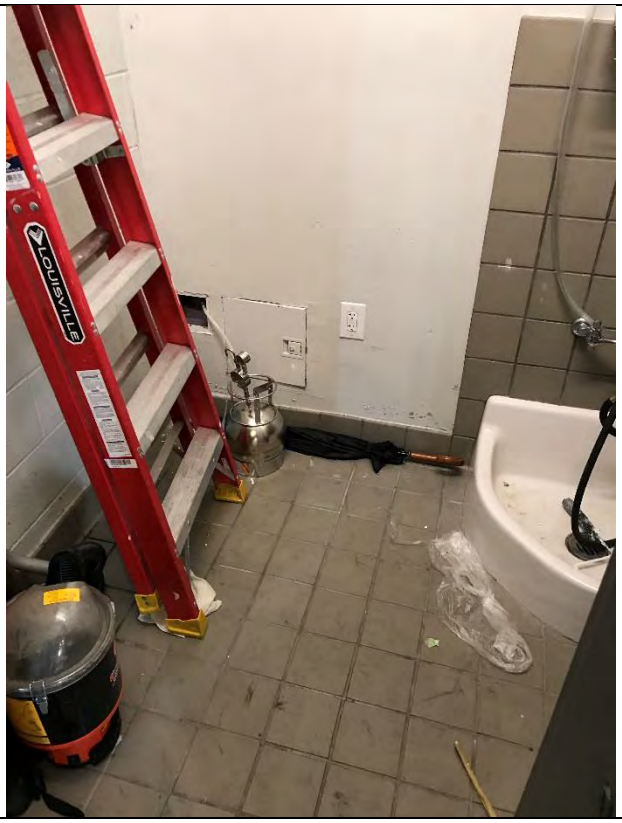
S818879-CCV1
S818879-CRL1
S818879-TUN1

Appendix F
Indoor Air and Exhaust Sampling Photographic Log

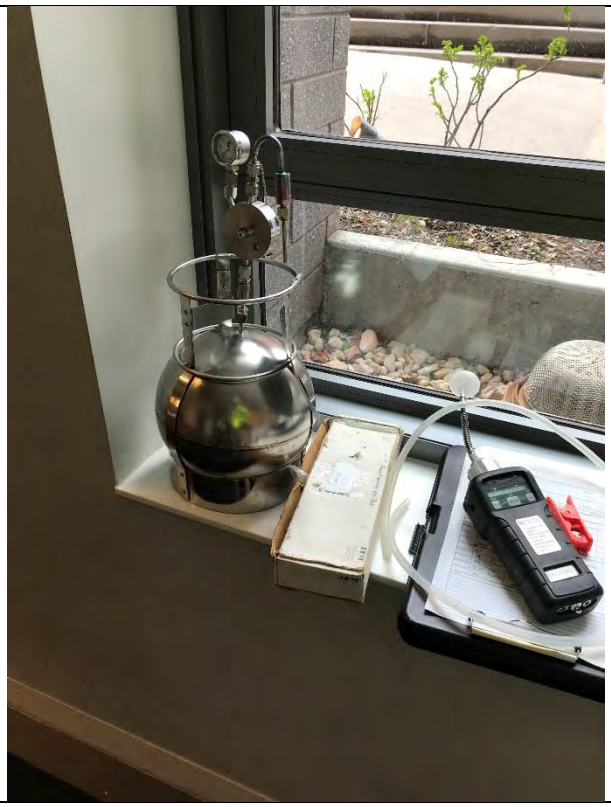
Photograph: 1	SP-01

Photograph: 2	IA-01

ERM	**1960-1982 Webster Avenue** **Indoor Air and SSDS Exhaust Sample Photo Log** Date: March 2018



Photograph: 3	SP-02



Photograph: 4	IA-02

Photograph: 5	IA-03 and DUP328218

Photograph: 6	IA-04

Photograph: 7	OA-01

Photograph: 8	Cleaning Chemicals near SP-02

Photograph: 9	Cleaning chemicals near SP-02

Appendix G
Indoor Air Sampling Sheets and Inventory Form

Environmental Resources Management
105 Maxess Road Suite 316
Melville, NY 11747
Phone: (631) 756-8900
Fax: (631) 756-8901

Project #:	0454768
Project Name:	Webster Ave
Location:	Bronx, NY
Project Manager:	Ernie Rossano Karen Pickering

Sample Location:	1st Floor	**Collector(s):**	Eric Marcus
Address:	7254 Park Avenue Bronx, NY		
PID Meter Used: (Model, Serial #)	ppb Rae Plus PGM-7240	**Building No:**	N/A

SUMMA Canister Record:

INDOOR AIR (1st Floor)		**SUBSTRUCTURE SOIL GAS**		**OUTDOOR AIR**		**INDOOR AIR (1st Floor)**	
Sample ID: IA-01		**Sample ID: SP-01**		**Sample ID: OA-01**		**Sample ID: IA-02**	
Canister Serial No.:	5575	Canister Serial No.:	28606	Canister Serial No.:	5577	Canister Serial No.:	5567
Flow Controller Id No:	00168	Flow Controller Id No:	00164	Flow Controller Id No:	02937	Flow Controller Id No:	02878
Start Date/Time:	3/28/2018 1130	Start Date/Time:	3/28/2018 1123	Start Date/Time:	3/28/2018 11:45	Start Date/Time:	3/28/2018 11:35
Start Pressure: (inches Hg)	-25	Start Pressure: (inches Hg)	-25	Start Pressure: (inches Hg)	-29	Start Pressure: (inches Hg)	-30+
Stop Date/Time:	3/29/2018 0800	Stop Date/Time:	3/29/2018 0805	Stop Date/Time:	3/29/2018 0740	Stop Date/Time:	3/29/2018 0745
Stop Pressure: (inches Hg)	-2	Stop Pressure: (inches Hg)	-1	Stop Pressure: (inches Hg)	-2	Stop Pressure: (inches Hg)	-4
Other Sampling Information:							
PID Reading (ppm)	0.0	PID Reading (ppm) Room & as purged	0.0/0.0	PID Reading (ppm)	0.0	PID Reading (ppm)	0.0
Story/Level	Ground	Basement or Crawl Space?	No	Depth of Vapor Probe	N/A	Story/Level	Ground
Room	Electric/Telecom	Floor Slab Thickness (inches) *[if present]*	Sampled from riser pipe	Distance from Building	100'	Room	Hallway outside Janitor Closet
Indoor Air Temp (^{o}F)	65	Potential Vapor Entry Points Observed?	No	Intake Height Above Ground Level (ft.)	3'	Indoor Air Temp (^{o}F)	65
Intake Height Above Floor Level (ft.)	3'	Ground Surface Condition (Crawl Space Only)	N/A	Intake Tubing used?	No	Intake Height Above Floor Level (ft.)	4'
Noticeable Odor?	fresh paint	Noticeable Odor?	Fresh Paint	Distance to nearest Roadway (ft.)	300'	Noticeable Odor?	No
Barometric Pressure ("Hg or mb)	30.06''	Percent O_2/CO_2/CH	N/A	Noticeable Odor?	No	Barometric Pressure ("Hg or mb)	30.66''
Duplicate Sample?	No	Duplicate Sample?	No	Duplicate Sample?	No	Duplicate Sample?	No

Comments:

Signature: _____

Environmental Resources Management
105 Maxess Road Suite 316
Melville, NY 11747
Phone: (631) 756-8900
Fax: (631) 756-8901

Project #:	0454768
Project Name:	Webster Ave
Location:	Bronx, NY
Project Manager:	Ernie Rossano Karen Pickering

Sample Location:	1st Floor	**Collector(s):**	Eric Marcus
Address:	7254 Park Avenue Bronx, NY		
PID Meter Used: (Model, Serial #)	ppb Rae Plus PGM-7240	**Building No:**	N/A

SUMMA Canister Record:

SUBSTRUCTURE SOIL GAS		**INDOOR AIR (1st Floor)**		**INDOOR AIR (1st Floor)**		**INDOOR AIR (1st Floor)**	
Sample ID: SP-02		**Sample ID: IA-03**		**Sample ID: DUP032818**		**Sample ID: IA-04**	
Canister Serial No.:	5580	Canister Serial No.:	16009	Canister Serial No.:	0205	Canister Serial No.:	28553
Flow Controller Id No:	1319	Flow Controller Id No:	2860	Flow Controller Id No:	48	Flow Controller Id No:	02841
Start Date/Time:	3/28/2018 1140	Start Date/Time:	3/28/2018 1155	Start Date/Time:	3/28/2018 11:55	Start Date/Time:	3/28/2018 1200
Start Pressure: (inches Hg)	-30+	Start Pressure: (inches Hg)	-30+	Start Pressure: (inches Hg)	-30+	Start Pressure: (inches Hg)	-30
Stop Date/Time:	3/29/2018 0750	Stop Date/Time:	3/29/2018 0810	Stop Date/Time:	3/29/2018 0810	Stop Date/Time:	3/29/2018 0815
Stop Pressure: (inches Hg)	-1	Stop Pressure: (inches Hg)	-2	Stop Pressure: (inches Hg)	-2	Stop Pressure: (inches Hg)	-2
Other Sampling Information:							
PID Reading (ppm) Room & as purged	0.0	PID Reading (ppm)	0.0	PID Reading (ppm)	0.0	PID Reading (ppm)	0.0
Basement or Crawl Space?	No	Story/Level	Ground	Story/Level	N/A	Story/Level	Ground
Floor Slab Thickness (inches) *[if present]*	Sampled from riser pipe	Room	Storage	Room	Storage	Room	Work Room
Potential Vapor Entry Points Observed?	No	Indoor Air Temp (^{o}F)	65	Indoor Air Temp (^{o}F)	65	Indoor Air Temp (^{o}F)	65
Ground Surface Condition (Crawl Space Only)	N/A	Intake Height Above Floor Level (ft.)	5'	Intake Height Above Floor Level (ft.)	5'	Intake Height Above Floor Level (ft.)	6'
Noticeable Odor?	Cleaning Products	Noticeable Odor?	No	Noticeable Odor?	No	Noticeable Odor?	Plastic
Percent O_2/CO_2/CH_4	N/A	Barometric Pressure ("Hg or mb)	30.66	Barometric Pressure ("Hg or mb)	30.66	Barometric Pressure ("Hg or mb)	30.66"
Duplicate Sample?	No	Duplicate Sample?	Yes	Duplicate Sample?	This sample is the DUP	Duplicate Sample?	No

Comments:

Signature: _____

Environmental Resources Management
105 Maxess Road Suite 316
Melville, NY 11747
Phone: (631) 756-8900
Fax: (631) 756-8901

Project #:	0454768
Project Name:	Webster Ave
Location:	Bronx, NY
Project Manager:	Ernie Rossano Karen Pickering

Sample Location:	Roof top	**Collector(s):**	Eric Marcus
Address:	7254 Park Avenue Bronx, NY		
PID Meter Used: (Model, Serial #)	ppb Rae Plus PGM-7240	**Building No:**	N/A

SUMMA Canister Record:

SUBSTRUCTURE SOIL GAS		**INDOOR AIR (1st Floor)**		**INDOOR AIR (1st Floor)**		**INDOOR AIR (1st Floor)**	
Sample ID: SP-04		**Sample ID:**		**Sample ID:**		**Sample ID:**	
Canister Serial No.:	28553	Canister Serial No.:		Canister Serial No.:		Canister Serial No.:	
Flow Controller Id No:	35	Flow Controller Id No:		Flow Controller Id No:		Flow Controller Id No:	
Start Date/Time:	3/28/2018 1210	Start Date/Time:		Start Date/Time:		Start Date/Time:	
Start Pressure: (inches Hg)	-30+	Start Pressure: (inches Hg)		Start Pressure: (inches Hg)		Start Pressure: (inches Hg)	
Stop Date/Time:	3/29/2018 0820	Stop Date/Time:		Stop Date/Time:		Stop Date/Time:	
Stop Pressure: (inches Hg)	-1	Stop Pressure: (inches Hg)		Stop Pressure: (inches Hg)		Stop Pressure: (inches Hg)	
Other Sampling Information:							
PID Reading (ppm) Room & as purged	0.0	PID Reading (ppm)		PID Reading (ppm)		PID Reading (ppm)	
Basement or Crawl Space?	No	Story/Level		Story/Level		Story/Level	
Floor Slab Thickness (inches) *[if present]*	Sampled from riser pipe	Room		Room		Room	
Potential Vapor Entry Points Observed?	No	Indoor Air Temp (^{o}F)		Indoor Air Temp (^{o}F)		Indoor Air Temp (^{o}F)	
Ground Surface Condition (Crawl Space Only)	N/A	Intake Height Above Floor Level (ft.)		Intake Height Above Floor Level (ft.)		Intake Height Above Floor Level (ft.)	
Noticeable Odor?	No	Noticeable Odor?		Noticeable Odor?		Noticeable Odor?	
Percent O_2/CO_2/CH_4	N/A	Barometric Pressure ("Hg or mb)		Barometric Pressure ("Hg or mb)		Barometric Pressure ("Hg or mb)	
Duplicate Sample?	No	Duplicate Sample?		Duplicate Sample?		Duplicate Sample?	

Comments:

SP-04 controller caughe background loose. Therefor pressure readings may be inaccurate

Signature: EM

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Eric Marcus Date/Time Prepared 3/28 12:30

Preparer's Affiliation ERM Phone No. 631-379-5006

Purpose of Investigation TO-15

1. OCCUPANT:

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y / (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

(Residential) School Commercial/Multi-use
Industrial Church Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: Apartment Building

If multiple units, how many? 248

If the property is commercial, type?

Business Type(s) N/A

Does it include residences (i.e., multi-use)? Y / N If yes, how many? N/A

Other characteristics:

Number of floors 12 Building age 1 yr

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other Ground Floor acrylic
c. Basement floor:	concrete	dirt	stone	other ~~N/A~~
d. Basement floor:	uncovered	covered	covered with tile	
e. Concrete floor:	unsealed	sealed	sealed with N/A	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with Paint	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 5 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Various Small cracks in Slab in Stairwells, Some Gen Pipes entering ground. w/ ~~No~~ op

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other_____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? (Y) / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Joints look tight. Not sure about return

7. OCCUPANCY

Is basement/lowest level occupied? (Full-time) Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Apartments
1st Floor	
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / (N)

b. Does the garage have a separate heating unit? Y / N / (NA)

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / (NA) Please specify_____

d. Has the building ever had a fire? Y / (N) When?_____

e. Is a kerosene or unvented gas space heater present? Y (N) Where?_____

f. Is there a workshop or hobby/craft area? (Y) N Where & Type? work shop w/ power tools

g. Is there smoking in the building? Y (N) How frequently?_____

h. Have cleaning products been used recently? (Y) N When & Type? Not Sure

i. Have cosmetic products been used recently? (Y) N When & Type? Not Sure

j. Has painting/staining been done in the last 6 months? (Y) N Where & When? Unsure

k. Is there new carpet, drapes or other textiles? (Y) N Where & When? _____

l. Have air fresheners been used recently? (Y) N When & Type? _____

m. Is there a kitchen exhaust fan? (Y) N If yes, where vented? _____

n. Is there a bathroom exhaust fan? (Y) N If yes, where vented? _____

o. Is there a clothes dryer? (Y) N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? Not sure.

Are there odors in the building? (Y) N
If yes, please describe: New Paint, Cleaning Supplies, Cooking

Do any of the building occupants use solvents at work? Y / N Maybe
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? not sure

If yes, are their clothes washed at work? Y / N not sure

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) — No
Yes, use dry-cleaning infrequently (monthly or less) — (Unknown)
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: N/A
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply:	(Public Water)	Drilled Well	Driven Well	Dug Well	Other: _____
Sewage Disposal:	(Public Sewer)	Septic Tank	Leach Field	Dry Well	Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: N/A

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

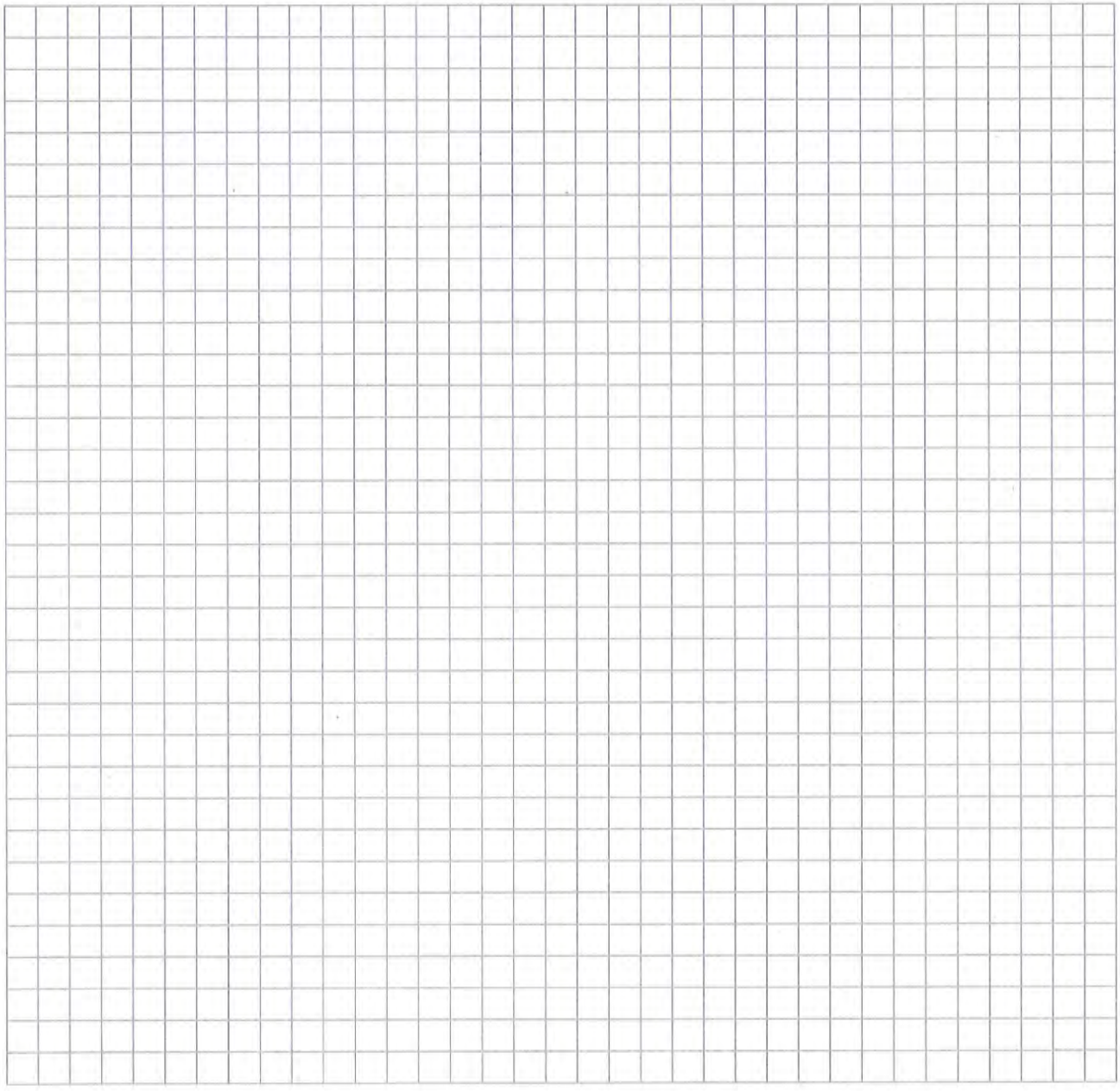
Basement:

First Floor:

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: ______________________________

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Janitor closet	[illegible]				0.0	Y
					0.0	
Janitor	Heavy duty floor strip	1(gal)	U	unsure		Y
	Concentrated cleaner	1(gal)	U	unsure		Y

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.