



Prepared for:
Endzone, Inc.
Ozone Park, NY

Prepared by:
AECOM
Chelmsford, MA
60527976
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Former Ozone Industries, Inc. Site, Ozone Park, Queens New York

NYSDEC Site Number: 2-41-033

August 2022 Progress Report: December 2021 through May 2022 (6-months)



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1. Introduction

On behalf of Endzone Inc. (Endzone), AECOM has prepared this semi-annual (6-month) Progress Report, which summarizes the results of the Operation and Maintenance (O&M) of the Soil Vapor Extraction (SVE) and Sub-slab Depressurization (SSD) remedial systems at the Former Ozone Industries, Inc. site (New York State Department of Environmental Conservation [NYSDEC] Site Number: 2-41-033). This report covers the 6-month period of December 2021 through May 2022.

Extensive re-bound site testing and monitoring was completed after the remedial systems were shut off in July 2019 per NYSDEC and in conjunction with an approved work plan by AECOM (dated August 21, 2019 and approved by NYSDEC on October 30, 2019). The results of the testing were provided in the January 2021 semi-annual Progress Report by AECOM. In the January 2021 report, AECOM recommended the completion of a Final Engineering Report that includes the shutdown and decommissioning of the SVE system and implementation of Engineering Controls. Subsequently, there were attempts to meet with NYSDEC and NYSDOH to discuss the results and site closure, and AECOM provided additional requested figures to NYSDEC for their evaluation. Eventually, AECOM had a call with NYSDEC in May 2021, and NYSDEC requested that the remedial systems (SVE and SSDS) be re-started and operated as they create a “P” site and launch an investigation into other off-site source areas and responsible parties (current time frame is unknown and no updates have been provided). Thus, submittal of this 6-month progress report summarizing system operations (which began in June 2021) consistent with the format of previous reports provided.

The site is located in a mixed commercial/industrial/residential area of the Ozone Park section of Queens County of New York City, New York and is identified as Block 9106 and Lot 70 on the New York City Tax Map. The site is bounded by 101st Avenue to the north, 103rd Avenue to the south, 99th Street to the west, and 100th Street to the east (see **Figures 1 and 2**). The site is located across the street from 101-32 101st Street, the location of the former Ozone Industries facility.

The monthly O&M visits and quarterly sampling events reported herein were conducted by Clean Globe Environmental (Clean Globe) under sub-contract to AECOM. The results are discussed below.

All the data included in this report will be submitted electronically to the NYSDEC website.

2. SVE/SSD Operation and Maintenance

This section presents the evaluation of the system influent and effluent analytical air sampling data (two rounds during this 6-month period) and the field data collected during each of the O&M site visits during this period (December 2021 through May 2022). The O&M events were conducted on a bi-monthly basis when the system was operational.

Figure 1 depicts the Bays and systems. The bi-monthly O&M site visits took place on January 4th, March 28th, and May 23rd, 2022.

O&M Events

The following information was primarily gathered during the O&M events:

- SSD vacuum blower, vacuum, flow, and temperature readings;
- SSD monitoring well head vacuums and PID concentrations;
- Effluent concentrations exiting the SSD carbon vessels;
- SVE vacuum blower, vacuum, flow, and temperature readings;
- SVE monitoring well head vacuums and PID concentrations;
- Effluent concentrations exiting the SVE carbon vessels;
- Total effluent concentrations being discharged from the exhaust stack; and
- Air samples collected for laboratory analysis from the influent of the SVE and SSD, and systems and total combined effluent following off gas treatment.

SSD

During this period, the SSD system maintained an average flowrate of 288 standard cubic feet per minute (SCFM) (with a range between 283 SCFM and 291 SCFM) applied to the 8 SSD legs. The vacuum applied to each leg was individually adjusted to provide a minimum flowrate of at least 30 SCFM to each bay to maintain adequate protection from mitigation of potential subsurface vapor migration as outlined in the July 2016 Interim Site Management Plan (ISMP) for the site, as approved by NYSDEC on September 8, 2016. During each O&M visit when the system was running, the flowrate at each leg was measured with a hot wire anemometer to confirm that the minimum flowrate was being upheld. Flowrates in each of the individual legs ranged from a minimum of 50.9 SCFM to a maximum of 61.4 SCFM, all above the minimum designed 30 SCFM.

Influent volatile organic compounds (VOCs) were measured with a calibrated photoionization detector (PID) from each of the SSD legs during each event. During this period, VOC readings from each individual SSD leg were below the detection limit for all regularly scheduled O&M events. Total VOC levels prior to carbon treatment were below detection limits during all O&M events, indicating the lack of VOCs present in the shallow soils. A summary of the readings taken each O&M visit are presented in **Appendix A**.

SVE

The SVE system maintained an average total flowrate of 403 SCFM during this period. Due to historical non-detect PID readings during previous (pre-2021) monitoring and sub slab vapor sampling events, eleven of the SVE legs (SVE-1, SVE-2, SVE-4, SVE-5, SVE-6, SVE-7, SVE-8, SVE-24, SVE-25, SVE-26, and SVE-27) have been shut off since 2019 to increase vacuum influence on the remaining legs. Like the SSD system, the vacuum applied to the SVE wells was manually adjusted so that each leg maintained a minimum flowrate of approximately 25 SCFM, as stated in the ISMP. Although the ISMP estimates that a vacuum of 10 inches of water column (IWC) be applied at each leg of the manifold, the actual vacuum measured averaged 4.8 IWC which is consistent with past operational conditions.

Influent VOCs from each of the SVE legs were measured with a calibrated PID during each event. VOC readings from individual SVE legs during this period ranged from non-detect for all O&M events.

The VOC concentrations collected following the end of the rebound period were less than what has previously been observed indicating that the majority of remediation has already occurred and results for the SVE appear to be approaching asymptotic levels. A summary of the readings taken each O&M visit are presented in **Appendix A**.

Combined Systems Operation

In each of the eight Bays, two shallow monitoring points, each at a depth of 1.5 feet below ground surface (bgs) were monitored to observe SSD system influence. Two deep monitoring points, each at a depth of approximately 15 feet bgs, were monitored in each Bay to observe SVE influence. In addition to these monitoring points, two wells each at a depth of 30 feet bgs were also monitored in Bay 12 because that Bay has bi-level SVE wells which extend to approximately 30 feet bgs. During each O&M event, the vacuum influence and the VOC concentrations were measured at each monitoring point with a manometer. It should be noted that the mechanisms used to operate the overhead doors of several of the bays have become increasingly unusable due to damage by neighboring trucks and vehicles. During each O&M visit, access to each bay was attempted but not all doors are able to be opened during every visit. However, historic monitoring point data has shown that a vacuum is present in all locations within the bays. A summary of the monitoring point results is included in **Appendix A**. The points which were unable to be accessed due to overhead door issues during each O&M event have a 'NA' noted as their measurement.

Consistent vacuum influence was observed across all accessible shallow points at an average of 0.23 IWC and has remained above 0.05 IWC for the duration of the monitoring period this quarter, indicating that there is a constant negative pressure under the sub slab throughout the area of concern (8 Bays at site). Consistent vacuum influence was observed across all deep points at an average of approximately 0.46 IWC and has remained above 0.05 IWC in subsequent monitoring events indicating the installed SVE system achieves the predicted influence throughout the site or Bays. Because adequate measurable vacuum influence has been defined as 0.05 IWC for this project, it is confirmed that the SSD system is operating as designed and providing appropriate mitigation when operational. Additionally, the measured vacuums in the deeper monitoring points are significantly higher than necessary to facilitate removal of residual VOCs from soils and are also considered to be operating as designed.

Laboratory Analyses of Air Samples – Quarterly System Samples

Two rounds of quarterly air samples from the system were collected from the SVE influent, SSD influent (both before carbon treatment), and the total combined effluent (following carbon treatment), one on December 28, 2021 and March 28, 2022. Per compliance requirements established in a memorandum issued by the NYSDEC on February 28, 2003 (Substantive Compliance with Air Requirements), the emissions from the system is not to exceed 0.5 lbs/hr. The results of the completed air sampling events are shown in **Table 1**.

The laboratory analytical report from the air sampling is provided in **Appendix B**. The system samples were analyzed for the VOCs listed in the TO-15 method.

Analytically, effluent concentrations have remained below the effluent limit established by the NYSDEC regulations. Mass removal data at the influent of both SVE and SSD system as well as the combined effluent mass discharge rate following carbon treatment is presented in **Table 2**.

Mass removal achieved from the SVE system is approximately 0.0030 lbs/hr, whereas; the mass removal from the SSD system is approximately 0.0009 lbs/hr. When the mass removal rate for the SVE and SSD system are totaled for each sampling event, it is below the aforementioned discharge limit requiring pollution control. The mass of contaminants discharged to the atmosphere following carbon treatment was an average of 0.0026 lbs/hr.

Two graphs are included in **Appendix C** which depict VOC concentrations vs time for the influent (prior to treatment) SSD and SVE systems. Following the system restart in June 2021 after being shut down since August 2019, VOC concentrations did not rebound to the levels previously measured during past sampling events. A slight increase in concentrations of VOCs was observed directly following restart, but influent concentrations have remained below detection limits since the August 2021 O&M event. Analytical results are still well below the initial concentration observed at the startup of the systems.

3. Summary and Future Actions

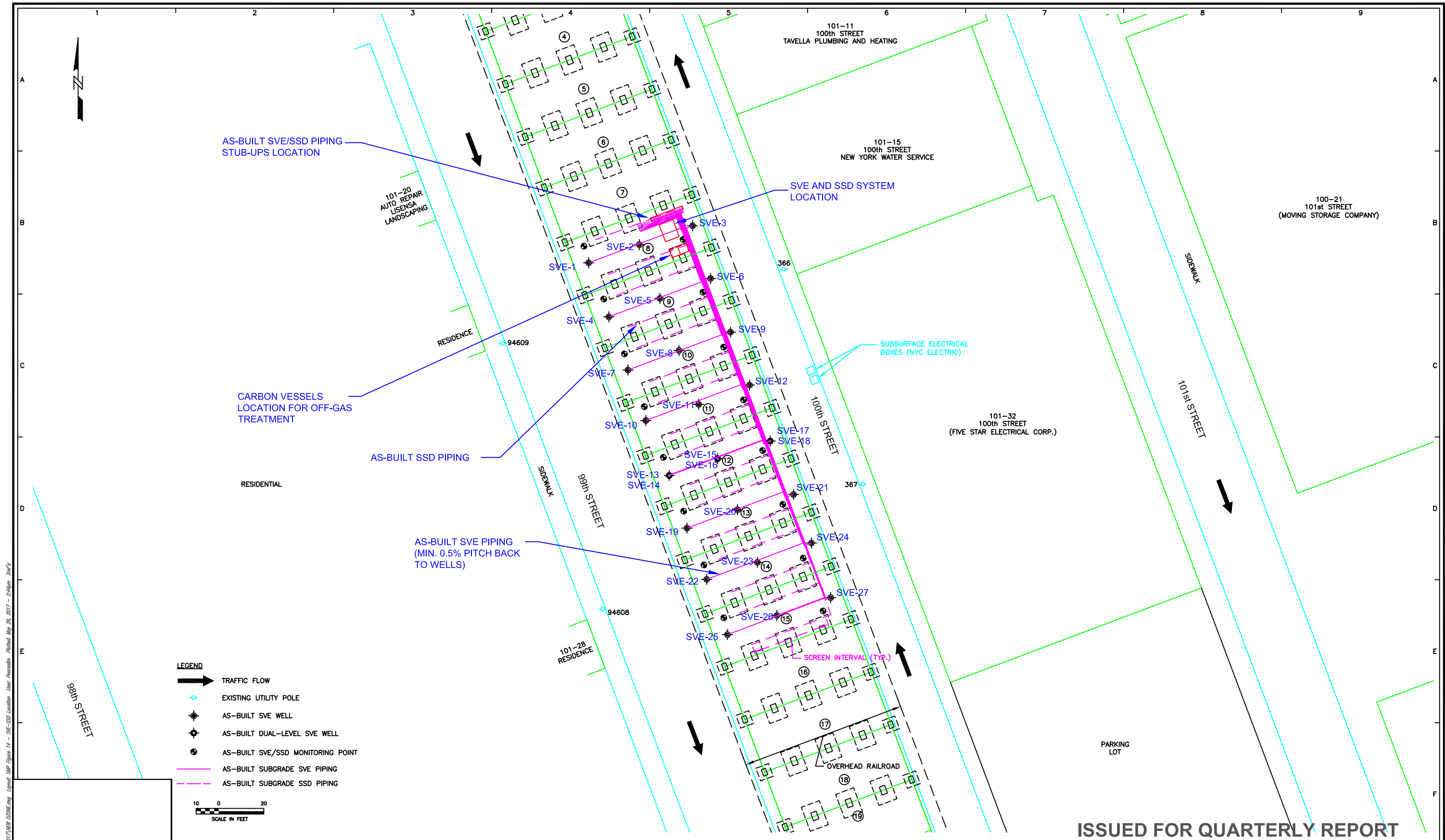
During this period, the SSD and SVE systems have operated as intended. The SVE and SSD influent levels from this reporting period are similar or “flat” after decreasing from higher levels in 2016.

Due to the consistency of the performance of the system, it is suggested that the O&M events continue on a bi-monthly basis. AECOM will also continue to do sporadic site visits throughout the six-month period to ensure that the storage bays have not been tampered or damaged. Air samples will continue to be taken at the SVE influent, SSD influent, and total effluent following carbon treatment on a quarterly basis (July and September 2022), while the system is operational. The results of the monitoring will be provided in the semi-annual (6-month) reports to NYSDEC.

No additional assessment work is currently planned.

FIGURES

File: A:\Projects\Ozone Park\Drawings\2017\NEW OZONE.dwg Layout: SMP Figure 14 - SVE-SSD Location User: Paramarin PlotDate: May 26, 2017 - 2:46pm Scale: 1/8"=1'-0"



ISSUED FOR QUARTERLY REPORT

7									
6									
5									
4									
3									
2									
1	MRP	05/25/17	ISSUED FOR QUARTERLY REPORT						
0	RWM	03/18/15	ISSUED FOR SMP	RM	03/19/15	SAC	03/19/15		
NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE		

AECOM
AECOM
250 APOLLO DRIVE
CHELMSFORD, MA 01824
www.aecom.com

FORMER OZONE INDUSTRIES, INC.
OZONE PARK
101-61 99 ST, QUEENS, NY

PROJ. NUMBER: 60221764

DATE: 05/25/17

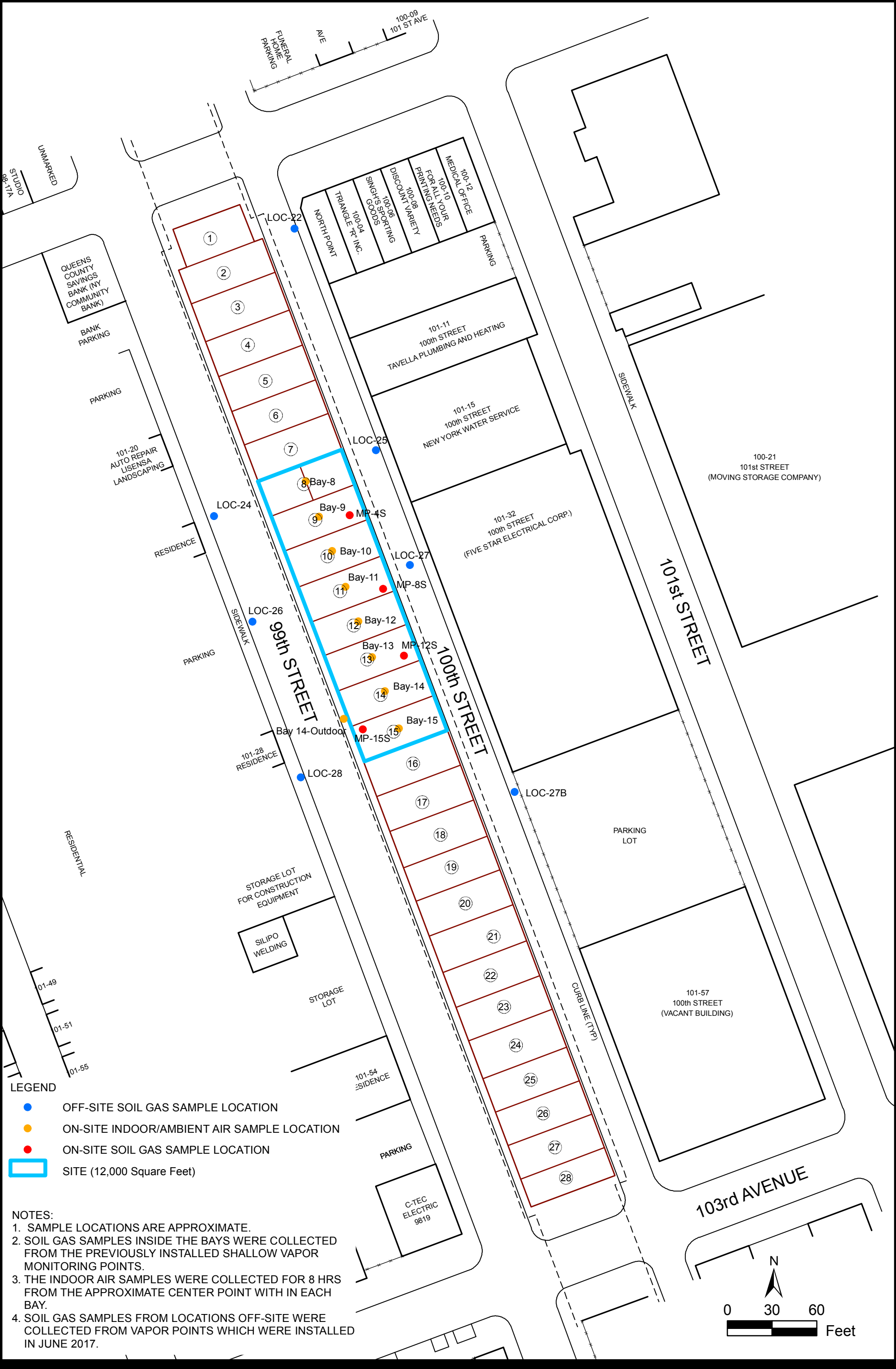
LOCATION OF SOIL VAPOR EXTRACTION
AND SUB SLAB DEPRESSURIZATION
TREATMENT SYSTEMS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER:
2

SHEET NUMBER:
2 of 2

REVISION
0



SITE and LOCATION OF SAMPLING POINTS FORMER OZONE INDUSTRIES, INC. OZONE PARK, NEW YORK, NY
Project No.: 60527976.1 Date: 2017-09-18

TABLES

Table 1- Summary O&M Air Sample Analytical Data
Former Ozone Industries, Inc. Site, Ozone Park,
Queens, NY

ANALYTE	LAB SAMPLE ID	SVE Influent				SSD Influent				Total Effluent			
		SVE INFLUENT 062121	SVE INF	SVE EFF ⁶	SVE EFF ⁸	SSD INFLUENT 062121	SSD INF	SSD EFF ⁶	SSD EFF ⁸	TOTAL EFFLUENT 062121	EFF TOTAL	Eff Com	EFF COMB
		6/21/2021	9/20/2021	12/28/2021	3/28/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022
		After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event	After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event	After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event
		L2134418-01	L2150935-03	22A0162-03	L2215966-03	L2134418-02	L2150935-02	22A0162-02	L2215966-02	L1906089-05	L2150935-01	22A0162-01	L2215966-01
	PID READING(ppm)	1.4	ND	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND
VOCs TO-15	Units												
1,1,1-Trichloroethane	ug/m ³	<5.46	NS	1.20	<4.54	<1.09	NS	<1.1	<1.09	<1.09	NS	<1.1	<1.09
1,2,4-Trimethylbenzene	ug/m ³	<4.92	NS	4.50	<4.1	<0.983	NS	3.9	<0.983	<0.983	NS	<0.98	1.2
1,4-Dichlorobenzene	ug/m ³	<6.01	NS	<1.2	<5.01	<1.2	NS	<1.2	<1.2	<1.2	NS	<1.2	<1.2
2,2,4-Trimethylpentane	ug/m ³	<4.67	NS	NS	<3.89	<0.934	NS	NS	<0.934	<0.934	NS	NS	<0.934
2-Butanone (MEK)	ug/m ³	NS	NS	<24	<6.13	NS	NS	<24	<1.47	<1.47	NS	<24	<1.47
Acetone ^a	ug/m ³	<11.9	NS	<19	<9.91	2.52	NS	<19	<2.38	<2.38	NS	<19	<2.38
Benzene	ug/m ³	<3.19	NS	3.30	2.95	0.99	NS	1.1	<0.639	0.64	NS	<0.64	<0.639
Carbon Disulfide ^a	ug/m ³	<3.11	NS	<0.2	<2.59	<0.623	NS	<0.2	<0.623	<0.623	NS	<0.2	<0.623
Chloroform	ug/m ³	6.64	NS	3.90	7.81	<0.977	NS	<0.98	<0.977	1.88	NS	3.6	2.12
Chloromethane	ug/m ³	<2.07	NS	<0.83	<1.72	0.85	NS	<0.83	0.733	0.71	NS	<0.83	0.475
cis-1,2-Dichloroethene	ug/m ³	167	161	88	197	4.80	3.89	1.8	<0.793	99.5	254	62	42.4
Dichlorodifluoromethane	ug/m ³	<4.94	NS	2.20	<4.12	2.24	NS	2.2	2.18		NS	1.8	1.45
Ethanol	ug/m ³	<47.1	NS	<15	<39.2	<9.42	NS	20	<9.42	9.52	NS	<15	<9.42
Isopropyl Alcohol	ug/m ³	<6.15	NS	<20	<5.11	<1.23	NS	<20	<1.23	<1.23	NS	<20	<1.23
Methylene Chloride	ug/m ³	<8.69	NS	<6.9	<7.23	<1.74	NS	<6.9	<1.74	<1.74	NS	<6.9	<1.74
n-Hexane	ug/m ³	<3.52	NS	<28	<2.94	<0.705	NS	<28	<0.705	1.71	NS	<28	<0.705
Tertiary butyl Alcohol	ug/m ³	7.58	NS	NS	<6.31	<1.52	NS	NS	<1.52	<1.52	NS	NS	<1.52
Tetrachloroethene	ug/m ³	176	342	190	390	5.34	24.3	15	1.8		<1.36	<1.4	<1.36
Tetrahydrofuran	ug/m ³	<7.37	NS	<5.9	<6.13	<1.47	NS	11	<1.47	<1.47	NS	<5.9	1.61
Toluene	ug/m ³	<3.77	NS	2.50	<3.14	1.84	NS	4.7	0.874	<0.754	NS	<0.75	1.03
trans-1,2-Dichloroethene	ug/m ³	<3.96	<5.67	<0.79	<3.3	<0.793	<0.793	<0.79	<0.793	3.45	2.62	<0.79	<0.793
Trichloroethene	ug/m ³	1,840	2,290	1,200	1810	82.20	101	6.3	15.4		<1.07	<1.1	<1.07
Naphthalene	ug/m ³	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	ug/m ³	<5.62	NS	<4.5	<4.68	<1.12	NS	<4.5	<1.12	1.84	NS	<4.5	<1.12
Total VOCs	ug/m³	2,949	4,640	2,185	3,025	113	130	123	36	142	258	137	64

Notes:
1) - = Non-existent data dependent on laboratory specific analyte list
2) * = As reported by laboratory this analyte is common laboratory background contaminant.
3) ug/m3 = micrograms per cubic meter
4) ppm = parts-per-million
5) NS = Not Sampled
6) **Bold** = Analyte detected in sample
7) Effluent samples were taken from the total effluent of both systems
8) Sample names for SVE and SSD were incorrectly labeled as effluent when they are in fact influent samples

Table 2 - Summary of Mass Removal
Former Ozone Industries, Inc. Site, Ozone Park
Queens New York

	LOCATION	SVE Influent				SSD Influent				Total Effluent				
	SAMPLE NAME	SVE INFLUENT 062121	SVE INF	SVE EFF	SVE EFF	SSD INFLUENT 062121	SSD INF	SSD EFF	SSD EFF	TOTAL EFFLUENT_062121	EFF TOTAL	Eff Com	EFF COMB	
	SAMPLING DATE	6/21/2021	9/20/2021	12/28/2021	3/28/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	
	LAB SAMPLE ID	L2134418-01	L2150935-03	22A0162-03	L2215966-03	L2134418-02	L2150935-02	22A0162-02	L2215966-02	L1906089-05	L2150935-01	22A0162-01	L2215966-01	
ANALYTE	Flow Rate (CFM)	370	468	410	380	324	299	295	291	694	767	705	671	
VOCs TO-15	Units													
1,1,1-Trichloroethane	lbs/hr	0.000004	0.000000	0.000002	0.000003	0.000001	0.000000	0.000001	0.000001	0.000001	0.000000	0.000001	0.000001	
1,2,4-Trimethylbenzene	lbs/hr	0.000003	0.000000	0.000007	0.000003	0.000001	0.000000	0.000004	0.000001	0.000001	0.000000	0.000001	0.000003	
1,4-Dichlorobenzene	lbs/hr	0.000004	0.000000	0.000001	0.000004	0.000001	0.000000	0.000001	0.000001	0.000002	0.000000	0.000002	0.000002	
2,2,4-Trimethylpentane	lbs/hr	0.000003	0.000000	0.000000	0.000003	0.000001	0.000000	0.000000	0.000001	0.000001	0.000000	0.000000	0.000001	
2-Butanone (MEK)	lbs/hr	0.000000	0.000000	0.000018	0.000004	0.000000	0.000000	0.000013	0.000001	0.000002	0.000000	0.000032	0.000002	
Acetone	lbs/hr	0.000008	0.000000	0.000015	0.000007	0.000003	0.000000	0.000010	0.000001	0.000003	0.000000	0.000025	0.000003	
Benzene	lbs/hr	0.000002	0.000000	0.000005	0.000004	0.000001	0.000000	0.000001	0.000000	0.000002	0.000000	0.000001	0.000001	
Carbon Disulfide	lbs/hr	0.000002	0.000000	0.000005	0.000002	0.000000	0.000000	0.000003	0.000000	0.000001	0.000000	0.000008	0.000001	
Chloroform	lbs/hr	0.000009	0.000000	0.000006	0.000011	0.000001	0.000000	0.000001	0.000001	0.000005	0.000000	0.000010	0.000005	
Chloromethane	lbs/hr	0.000001	0.000000	0.000001	0.000001	0.000001	0.000000	0.000000	0.000001	0.000002	0.000000	0.000001	0.000001	
cis-1,2-Dichloroethene	lbs/hr	0.000231	0.000282	0.000135	0.000280	0.000006	0.000004	0.000002	0.000000	0.000259	0.000730	0.000164	0.000107	
Dichlorodifluoromethane	lbs/hr	0.000003	0.000000	0.000003	0.000003	0.000003	0.000000	0.000002	0.000002	0.000006	0.000000	0.000005	0.000004	
Ethanol	lbs/hr	0.000033	0.000000	0.000012	0.000028	0.000006	0.000000	0.000022	0.000005	0.000025	0.000000	0.000020	0.000012	
Isopropyl Alcohol	lbs/hr	0.000004	0.000000	0.000015	0.000004	0.000001	0.000000	0.000011	0.000001	0.000002	0.000000	0.000026	0.000002	
Methylene Chloride	lbs/hr	0.000006	0.000000	0.000005	0.000005	0.000001	0.000000	0.000004	0.000001	0.000002	0.000000	0.000009	0.000002	
n-Hexane	lbs/hr	0.000002	0.000000	0.000022	0.000002	0.000000	0.000000	0.000015	0.000000	0.000004	0.000000	0.000037	0.000001	
Tertiary butyl Alcohol	lbs/hr	0.000011	0.000000	0.000000	0.000004	0.000001	0.000000	0.000000	0.000001	0.000002	0.000000	0.000000	0.000002	
Tetrachloroethene	lbs/hr	0.000244	0.000600	0.000292	0.000555	0.000006	0.000027	0.000017	0.000002	0.000005	0.000002	0.000002	0.000002	
Tetrahydrofuran	lbs/hr	0.000005	0.000000	0.000005	0.000004	0.000001	0.000000	0.000012	0.000001	0.000002	0.000000	0.000008	0.000004	
Toluene	lbs/hr	0.000003	0.000000	0.000004	0.000002	0.000002	0.000000	0.000005	0.000001	0.000001	0.000000	0.000001	0.000003	
trans-1,2-Dichloroethene	lbs/hr	0.000003	0.000005	0.000001	0.000002	0.000000	0.000000	0.000000	0.000000	0.000009	0.000008	0.000001	0.000001	
Trichloroethene	lbs/hr	0.002550	0.004014	0.001843	0.002576	0.000100	0.000113	0.000007	0.000017	0.000029	0.000002	0.000001	0.000001	
Naphthalene	lbs/hr	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
Trichlorofluoromethane	lbs/hr	0.000004	0.000000	0.000003	0.000003	0.000001	0.000000	0.000002	0.000001	0.000005	0.000000	0.000006	0.000001	
Total Mass Removal Rate	lbs/hr	0.00314	0.00490	0.00240	0.00351	0.00014	0.00015	0.00014	0.00004	0.00037	0.00074	0.00036	0.00016	

Notes:

1) Compliance with Air Requirements = Per DEC memorandum issued 2/28/2003, remediation systems that have the potential to discharged greater than 0.5 lb/hr shall require pollution controls.

2) Mass Removal = VOC conc. ug/m3*flow rate (CFM)*(60 mins/hr)/(453,590,000 ug/lb)/(35.32 ft3/m3)

3) ug/m3 = micrograms per cubic meter

4) ppm = parts-per-million

5) **Bold** = Analyte detected in sample

6) Effluent samples were taken from the total effluent of both systems

Appendix A

System Summary Tables

SSD System Summary
Former Ozone Industries, Inc.
Ozone Park, Queens NY

DATE OF O&M VISIT		06/16/21	07/27/21	08/25/21	09/20/21	10/26/21	11/09/21	01/04/22	03/28/22	05/23/22
SSD System Status (Up / Down / Off)										
	Status On Arrival	OFF	Up	Up	Up	Up	Up	Up	Down	Down
	Overall Up Time Since Restart	0%	59%	76%	83%	87%	87%	91%	93%	81%
System Operation Status Between O&M Events										
	On Arrival									
	% Up Time	#N/A	100%	100%	100%	100%	100%	100%	100%	20%
	% Down Time	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0%	80%
	% Off Time	100%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub Slab Depression Blower (B-2)										
	Days Between O&M Events	0	41	29	26	36	14	56	83	56
	Days Of Operations	0	41	70	96	132	146	202	285	341
SSD Blower Operation										
	Hour Meter (hrs)	21,666.4	22,252.0	22,945.0	23,572.0	24,434.6	24,713.1	26,060.6	28,048.0	28,320.5
	Hours Between Events	5.4	585.6	693.0	627.0	862.6	278.5	1,347.5	1,987.4	272.5
	Time Between Events (hrs)	0.0	985.0	697.0	622.3	865.7	333.3	1,343.6	1,992.9	1,343.5
	Time Since Start Up (hrs)	0.0	985.0	1,682.0	2,304.3	3,169.9	3,503.3	4,846.8	6,839.8	8,183.3
	VFD Frequency (Hz)	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.0
	VFD Load (Amps)	16.2	16.2	15.7	15.8	15.2	16.0	16.3	16.2	15.8
Pressure ("H ₂ O)										
	SSD-1	-3.0	-3.0	-2.0	-2.3	-2.3	-2.4	-2.5	-2.5	-2.5
	SSD-2	-4.5	-4.5	-2.6	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
	SSD-3	-4.3	-4.3	-3.4	-3.6	-3.5	-3.4	-3.5	-3.5	-3.4
	SSD-4	-2.9	-2.9	-3.5	-3.9	-3.8	-3.7	-3.5	-3.5	-3.4
	SSD-5	-4.7	-4.7	-3.5	-3.9	-3.9	-3.8	-3.6	-3.5	-3.5
	SSD-6	-4.9	-4.9	-3.5	-3.9	-3.9	-3.9	-3.8	-3.8	-3.8
	SSD-7	-4.8	-4.8	-3.6	-3.9	-3.9	-3.9	-3.8	-3.8	-3.8
	SSD-8	-4.9	-4.9	-3.6	-3.8	-3.9	-3.9	-3.8	-3.8	-3.8
Soil Vapor Velocity (ft/min)										
	SSD-1	3,648	3,648	NM	2,913	2,910	2,889	2,710	2,643	2,613
	SSD-2	1,799	1,799	NM	2,840	2,845	2,705	2,689	2,589	2,555
	SSD-3	2,690	2,690	NM	2,800	2,807	2,798	2,751	2,731	2,725
	SSD-4	3,588	3,588	NM	3,100	3,095	2,938	2,813	2,800	2,786
	SSD-5	2,387	2,387	NM	2,325	2,321	2,400	2,410	2,400	2,410
	SSD-6	2,420	2,420	NM	2,220	2,219	2,241	2,253	2,230	221
	SSD-7	2,431	2,431	NM	2,016	2,019	2,015	2,019	2,100	2,157
	SSD-8	2,306	2,306	NM	1,910	1,998	1,973	1,810	1,800	1,811
Soil Vapor Flow Rate (ft ³ /min)										
	SSD-1	79.59	79.59	NM	63.55	63.49	63.03	59.12	57.66	57.01
	SSD-2	39.25	39.25	NM	61.96	62.07	59.01	58.66	56.48	55.74
	SSD-3	58.69	58.69	NM	61.09	61.24	61.04	60.02	59.58	59.45
	SSD-4	78.28	78.28	NM	67.63	67.52	64.10	61.37	61.09	60.78
	SSD-5	52.08	52.08	NM	50.72	50.64	52.36	52.58	52.36	52.58
	SSD-6	52.80	52.80	NM	48.43	48.41	48.89	49.15	48.65	4.82
	SSD-7	53.04	53.04	NM	43.98	44.05	43.96	44.05	45.81	47.06
	SSD-8	50.31	50.31	NM	41.67	43.59	43.04	39.49	39.27	39.51
VOCs (ppm _v)										
	SSD-1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SSD-8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSD Sample Ports										
	VOCs (ppm _v)									
	SSD-SP01	0.1	0.1	0.1	1.0	2.0	2.0	2.0	1.4	1.9
	SSD-SP04	0.7	0.7	0.0	1.0	0.0	0.0	0.0	0.0	0.0

- Notes:
- 1) Soil Vapor Velocity taken form individual SSD Wells is from a 2.0-inch diameter pipe.

2) Soil Vapor Velocity taken with pitot tube assuming soil vapor temp of 65 deg F, from SSD SP-03, which is from a 4.0" diameter pipe.

3) Soil Vapor Velocity taken form SSD-SP-04 is from a 3.0-inch diameter pipe.

4) Dilution is calculated by subtracting Blower Inlet and Discharge Soil Vapor Flow Rate.

5) NR= Not Recorded, #N/A = Not recorded placeholder for calculation purposes.

SVE System Summary
Former Ozone Industries, Inc.
Ozone Park, Queens NY

DATE OF O&M VISIT		06/16/21	07/27/21	08/25/21	09/20/21	10/26/21	11/09/21	01/04/22	03/28/22	05/23/22
SVE System Status (Up / Down / Off)										
	Status On Arrival	RESTART	UP	UP	UP	UP	UP	UP	Down	Down
	Overall Up Time Since Start Up	100%	100%	100%	100%	100%	100%	100%	100%	100%
System Status Between O&M Events										
	On Arrival									
	% Up Time	#N/A	100%	100%	100%	100%	100%	100%	91%	20%
	% Down Time	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	9%	80%
	% Off Time	100%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Soil Vapor Extraction Blower (B-1)										
	Days Between O&M Events	0	41	29	26	36	14	56	83	56
	Days Of Operations	0	41	70	96	132	146	202	285	341
SVE Blower Operation										
	Hour Meter (hrs)	16,188.8	17,174.3	17,867.3	18,494.6	19,358.1	19,637.0	20,984.0	22,802.5	23,074.9
	Hours Between Events	0.8	985.5	693.0	627.3	863.5	278.9	1,347.0	1,818.5	272.4
	Time Between Events (hrs)	1.0	985.5	694.5	624.0	866.0	333.5	1,343.5	1,993.0	1,343.6
	Time Since Restart (hrs)	1.0	986.5	1,681.0	2,305.0	3,171.0	3,504.5	4,848.0	6,841.0	8,184.6
	VFD Frequency (Hz)	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	VFD Load (Amps)	51.9	53.2	52.2	53.7	51.2	54.6	56.5	55.7	53.1
	Vacuum ("H ₂ O)									
	SVE-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-11	-2.5	-2.2	-2.3	-3.1	-3.1	-3.0	-3.0	-3.0	-3.1
	SVE-10	-2.5	-2.2	-2.3	-3.1	-3.1	-3.0	-3.0	-3.0	-3.1
	SVE-15	-4.1	-3.6	-3.7	-5.1	-5.0	-5.1	-4.9	-4.7	-4.8
	SVE-13	-3.4	-3.2	-3.5	-4.4	-4.3	-4.4	-4.7	-4.7	-4.8
	SVE-14	-6.7	-6.4	-6.5	-9.1	-9.0	-9.2	-9.0	-5.0	-5.0
	SVE-16	-2.7	-2.4	-2.4	-3.6	-3.6	-3.5	-3.6	-3.5	-3.6
	SVE-18	-2.6	-2.3	-2.4	-3.3	-3.2	-3.2	-3.2	-3.4	-3.5
	SVE-17	-2.7	-1.5	-1.5	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
	SVE-12	-3.5	-3.2	-3.0	-4.5	-4.4	-9.3	-4.0	-4.0	-6.1
	SVE-9	-6.8	-6.6	-6.7	-9.2	-9.3	-9.2	-9.1	-9.0	-9.0
	SVE-21	-6.0	-5.4	-5.4	-8.1	-8.2	-8.1	-8.6	-8.5	-8.4
	SVE-3	-2.7	-2.5	-2.5	-3.3	-3.5	-3.5	-3.7	-3.7	-3.7
	SVE-1	7.8	-7.5	-7.6	-10.7	-10.9	-10.8	-10.8	-10.5	-10.3
	SVE-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-20	-5.8	-6.3	-6.4	-9.7	-9.6	-9.5	-8.5	-8.5	-8.2
	SVE-19	-1.8	-1.5	-1.5	-2.2	-2.2	-2.2	-2.0	-2.0	-2.0
	SVE-23	-1.2	-0.7	-1.0	-1.4	-1.4	-1.5	-1.0	-1.0	-1.0
	SVE-22	-0.6	-0.5	-0.2	-0.6	-0.6	-0.7	-0.9	-0.9	-0.9
	SVE-25	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-26	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-27	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Soil Vapor Velocity (ft/min)									
	SVE-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-11	1911	1301	NM	1660	1638	1599	1251	1240	1235
	SVE-10	2319	1787	NM	2100	2010	1999	1996	1939	1951
	SVE-15	1928	1685	NM	1750	1610	1585	1480	1456	1459
	SVE-13	2516	1298	NM	2700	2800	2700	2531	2520	2539
	SVE-14	1308	959	NM	1525	1510	1500	1598	1556	1561
	SVE-16	1561	901	NM	1260	1276	1293	1295	1275	1279
	SVE-18	761.2	667	NM	500	500	498	500	490	510
	SVE-17	1851	1599	NM	2050	2043	2031	2097	1998	2013
	SVE-12	2182	2938	NM	3790	3690	3535	3584	3483	3507
	SVE-9	5812	2981	NM	3760	3150	3019	3000	2995	3004
	SVE-21	1630	1402	NM	1480	1882	1478	2511	2498	2687
	SVE-3	5886	1397	NM	5045	5070	4398	4097	4007	4019
	SVE-1	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-20	3541	2450	NM	2898	2919	2839	2533	2510	2505
	SVE-19	912	901	NM	1020	1037	1010	1002	997	1012
	SVE-23	3849	610	NM	910	700	658	700	695	718
	SVE-22	296.1	650	NM	285	289	267	310	304	331
	SVE-25	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-26	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-27	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-6	NA	NA	NA	NA	NA	NA	NA	NA	NA

SVE System Summary
Former Ozone Industries, Inc.
Ozone Park, Queens NY

DATE OF O&M VISIT		06/16/21	07/27/21	08/25/21	09/20/21	10/26/21	11/09/21	01/04/22	03/28/22	05/23/22
SVE System Status (Up / Down / Off)										
	Status On Arrival	RESTART	UP	UP	UP	UP	UP	UP	Down	Down
	Overall Up Time Since Start Up	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Soil Vapor Flow Rate (ft ³ /min)									
	SVE-8	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-7	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-11	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-10	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-15	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-13	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-14	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-16	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-18	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-17	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-12	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-9	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-21	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-3	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-1	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-4	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-2	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-5	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-20	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-19	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-23	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-22	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-25	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-26	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-27	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-24	NR	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-6	NR	NR	NR	NR	NR	NR	NR	NR	NR
VOCs (ppm _v)										
	SVE-8	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-11	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-10	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-15	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-13	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-14	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-16	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-18	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-17	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-12	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-9	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-21	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-5	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-20	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-19	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-23	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-22	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SVE-25	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-26	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-27	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	SVE-6	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVE Sample Ports										
		0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VOCs (ppm _v)										
	SVE-SP01	NM	NM	NM	NM	NM	NM	NM	NM	NM
	SVE-SP04	NM	NM	NM	NM	NM	NM	NM	NM	NM

- Notes:
- 1) Soil Vapor Velocity taken form individual SVE Wells is from a 2.0-inch diameter pipe.

2) Soil Vapor Velocity taken with pitot tube assuming soil vapor temp of 65 deg F, from SVE-SP-03, which is from a 4.0-inch diameter pipe.

3) Soil Vapor Velocity taken form SVE-SP-04 is from a 3.0-inch diameter pipe.

4) Dilution is calculated by subtracting Blower Inlet and Discharge Soil Vapor Flow Rate.

5) Mass removal based following calculation: #/hr = Flow Rate x 111 (MW of Benzene) x VOC x 1.53x10⁻⁷) .

6) NR= Not Recorded, #N/A = Not recorded placeholder for calculation purposes.

Monitoring Point Summary
Former Ozone Industries, Inc.
Ozone Park, Queens NY

DATE OF O&M VISIT	06/16/21	07/27/21	08/25/21	09/20/21	10/26/21	11/09/21	01/04/22	03/28/22	05/23/22
TYPE OF SYSTEM CHECK	Full	Full	Full	Full	Full	Full	Full	Full	Full
FIELD TECHNICIAN	MP	CG	CG	CG	CG	CG	CG	CG	CG
Monitoring Well Network									
Pressure ("H ₂ O)									
MP-1S	-0.13	-0.10	-0.10	-0.05	-0.05	-0.05	0.00	0.00	0.00
MP-1D	-0.31	-0.20	-0.20	-0.05	-0.05	-0.05	0.00	0.00	0.00
MP-2S	-0.24	-0.05	-0.05	0.00	-0.05	-0.05	-0.10	-0.10	-0.10
MP-2D	-0.53	-0.05	-0.05	-0.05	-0.60	-0.60	-0.50	-0.50	-0.40
MP-3S	NA	NA	-0.05	-0.50	-0.50	-0.50	-0.40	-0.40	-0.30
MP-3D	NA	NA	-0.05	-0.90	-0.90	-0.80	-0.50	-0.50	-0.50
MP-4S	NA	NA	-0.05	-0.05	-0.05	-0.05	0.00	0.00	0.00
MP-4D	NA	NA	-0.10	-0.05	-0.05	-0.05	-0.10	-0.10	-0.10
MP-5S	-0.27	-0.05	-0.05	-0.05	-0.05	-0.05	0.00	0.00	0.00
MP-5D	-0.24	-0.05	-0.05	-0.05	-0.05	-0.05	-0.10	-0.10	-0.20
MP-6S	-0.28	-0.05	-0.05	-0.05	-0.05	-0.05	0.00	-0.10	-0.20
MP-6D	-0.54	-0.05	-0.05	-0.80	-0.80	-0.70	-0.50	-0.50	-0.60
MP-7S	-0.25	-0.05	-0.05	NA	NA	NA	NA	NA	NA
MP-7D	-0.11	-0.05	-0.10	NA	NA	NA	NA	NA	NA
MP-8S	-0.43	-0.05	-0.05	NA	NA	NA	NA	NA	NA
MP-8D	-0.76	-0.10	-0.10	NA	NA	NA	NA	NA	NA
MP-9S	-0.43	-0.05	-0.05	-0.60	-0.60	-0.50	-0.40	-0.40	-0.50
MP-9M	-0.48	-0.05	-0.05	-1.30	-1.30	-1.30	-1.00	-1.00	-1.10
MP-9D	-0.79	-0.10	-0.10	-1.10	-1.00	-1.00	-1.00	-1.00	-1.00
MP-10S	-0.44	-0.05	-0.05	-0.90	-0.80	-0.80	-0.80	-0.80	-0.80
MP-10M	-0.74	-0.05	-0.05	-0.60	-0.60	-0.60	-0.50	-0.50	-0.60
MP-10D	-0.83	-0.10	-0.10	-1.10	-1.10	-1.00	-0.90	-0.90	-1.00
MP-11S	-0.41	NA	NA	NA	NA	NA	NA	NA	NA
MP-11D	-0.84	NA	NA	NA	NA	NA	NA	NA	NA
MP-12S	-0.24	NA	NA	NA	NA	NA	NA	NA	NA
MP-12D	-0.46	NA	NA	NA	NA	NA	NA	NA	NA
MP-13S	-0.32	-0.10	-0.10	NA	NA	NA	NA	NA	NA
MP-13D	-0.40	-0.20	-0.20	NA	NA	NA	NA	NA	NA
MP-14S	-0.32	-0.05	-0.05	NA	NA	NA	NA	NA	NA
MP-14D	-0.42	-0.10	-0.10	NA	NA	NA	NA	NA	NA
MP-15S	-0.22	-0.05	-0.05	NA	NA	NA	NA	NA	NA
MP-15D	-0.24	-0.10	-0.10	NA	NA	NA	NA	NA	NA
MP-16S	-0.20	-0.05	-0.05	NA	NA	NA	NA	NA	NA
MP-16D	-0.36	-0.10	-0.10	NA	NA	NA	NA	NA	NA

Notes

NA - Not Accessible

"H₂O - Inches of water column

Appendix B
System Air Sample Lab Results – December 2021 and March 2022

January 11, 2022

Matthew Pearsall
AECOM Environment - Latham, NY
40 British American Blvd.
Latham, NY 12110

Project Location: End Zone
Client Job Number:
Project Number: 60671903
Laboratory Work Order Number: 22A0162

Enclosed are results of analyses for samples as received by the laboratory on January 5, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Matthew J Beaupre
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332AECOM Environment - Latham, NY
40 British American Blvd.
Latham, NY 12110
ATTN: Matthew Pearsall

REPORT DATE: 1/11/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 60671903

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22A0162

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: End Zone

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Eff Com	22A0162-01	Sub Slab		EPA TO-15	
SSD Eff	22A0162-02	Sub Slab		EPA TO-15	
SVE Eff	22A0162-03	Sub Slab		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15**Qualifications:**

L-01

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:**Vinyl Acetate**

B298672-BS1

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Ethyl Acetate**

22A0162-01[Eff Com], 22A0162-02[SSD Eff], 22A0162-03[SVE Eff], B298672-BLK1, B298672-BS1, B298672-DUP1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:**Vinyl Acetate**

22A0162-01[Eff Com], 22A0162-02[SSD Eff], 22A0162-03[SVE Eff], B298672-BLK1, B298672-BS1, B298672-DUP1, S067245-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Ethyl Acetate**

22A0162-01[Eff Com], 22A0162-02[SSD Eff], 22A0162-03[SVE Eff], B298672-BLK1, B298672-BS1, B298672-DUP1, S067245-CCV1

V-36

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Vinyl Acetate**

B298672-BS1, S067245-CCV1

Z-01

Sample had a final vacuum of zero. Flow controllers have been verified to be okay, RPD was <20%

Analyte & Samples(s) Qualified:

22A0162-01[Eff Com], 22A0162-02[SSD Eff], 22A0162-03[SVE Eff]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

 Project Location: End Zone
 Date Received: 1/5/2022
Field Sample #: Eff Com
Sample ID: 22A0162-01
 Sample Matrix: Sub Slab
 Sampled: 12/28/2021 09:15

 Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1134
 Canister Size: 6 liter
 Flow Controller ID: 5029
 Sample Type: Grab

Work Order: 22A0162
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): 1.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15								
Sample Flags: Z-01								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Acetone	ND	8.0		ND	19	4	1/10/22 14:31	BRF
Benzene	ND	0.20		ND	0.64	4	1/10/22 14:31	BRF
Benzyl chloride	ND	0.20		ND	1.0	4	1/10/22 14:31	BRF
Bromodichloromethane	ND	0.20		ND	1.3	4	1/10/22 14:31	BRF
Bromoform	ND	0.20		ND	2.1	4	1/10/22 14:31	BRF
Bromomethane	ND	0.20		ND	0.78	4	1/10/22 14:31	BRF
1,3-Butadiene	ND	0.20		ND	0.44	4	1/10/22 14:31	BRF
2-Butanone (MEK)	ND	8.0		ND	24	4	1/10/22 14:31	BRF
Carbon Disulfide	ND	2.0		ND	6.2	4	1/10/22 14:31	BRF
Carbon Tetrachloride	ND	0.20		ND	1.3	4	1/10/22 14:31	BRF
Chlorobenzene	ND	0.20		ND	0.92	4	1/10/22 14:31	BRF
Chloroethane	ND	0.20		ND	0.53	4	1/10/22 14:31	BRF
Chloroform	0.74	0.20		3.6	0.98	4	1/10/22 14:31	BRF
Chloromethane	ND	0.40		ND	0.83	4	1/10/22 14:31	BRF
Cyclohexane	ND	0.20		ND	0.69	4	1/10/22 14:31	BRF
Dibromochloromethane	ND	0.20		ND	1.7	4	1/10/22 14:31	BRF
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	1/10/22 14:31	BRF
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 14:31	BRF
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 14:31	BRF
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 14:31	BRF
Dichlorodifluoromethane (Freon 12)	0.36	0.20		1.8	0.99	4	1/10/22 14:31	BRF
1,1-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 14:31	BRF
1,2-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 14:31	BRF
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 14:31	BRF
cis-1,2-Dichloroethylene	16	0.20		62	0.79	4	1/10/22 14:31	BRF
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 14:31	BRF
1,2-Dichloropropane	ND	0.20		ND	0.92	4	1/10/22 14:31	BRF
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 14:31	BRF
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 14:31	BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	1/10/22 14:31	BRF
1,4-Dioxane	ND	2.0		ND	7.2	4	1/10/22 14:31	BRF
Ethanol	ND	8.0		ND	15	4	1/10/22 14:31	BRF
Ethyl Acetate	ND	2.0	L-03, V-34	ND	7.2	4	1/10/22 14:31	BRF
Ethylbenzene	ND	0.20		ND	0.87	4	1/10/22 14:31	BRF
4-Ethyltoluene	ND	0.20		ND	0.98	4	1/10/22 14:31	BRF
Heptane	ND	0.20		ND	0.82	4	1/10/22 14:31	BRF
Hexachlorobutadiene	ND	0.20		ND	2.1	4	1/10/22 14:31	BRF

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ANALYTICAL RESULTS

Project Location: End Zone
Date Received: 1/5/2022
Field Sample #: Eff Com
Sample ID: 22A0162-01
Sample Matrix: Sub Slab
Sampled: 12/28/2021 09:15

Sample Description/Location:
Sub Description/Location:
Canister ID: 1134
Canister Size: 6 liter
Flow Controller ID: 5029
Sample Type: Grab

Work Order: 22A0162
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): 0
Receipt Vacuum(in Hg): 1.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Sample Flags: Z-01								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	1/10/22 14:31	BRF
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	1/10/22 14:31	BRF
Isopropanol	ND	8.0		ND	20	4	1/10/22 14:31	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	1/10/22 14:31	BRF
Methylene Chloride	ND	2.0		ND	6.9	4	1/10/22 14:31	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	1/10/22 14:31	BRF
Naphthalene	ND	0.20		ND	1.0	4	1/10/22 14:31	BRF
Propene	ND	8.0		ND	14	4	1/10/22 14:31	BRF
Styrene	ND	0.20		ND	0.85	4	1/10/22 14:31	BRF
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	1/10/22 14:31	BRF
Tetrachloroethylene	ND	0.20		ND	1.4	4	1/10/22 14:31	BRF
Tetrahydrofuran	ND	2.0		ND	5.9	4	1/10/22 14:31	BRF
Toluene	ND	0.20		ND	0.75	4	1/10/22 14:31	BRF
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	1/10/22 14:31	BRF
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	1/10/22 14:31	BRF
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	1/10/22 14:31	BRF
Trichloroethylene	ND	0.20		ND	1.1	4	1/10/22 14:31	BRF
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	1/10/22 14:31	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	1/10/22 14:31	BRF
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	1/10/22 14:31	BRF
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	1/10/22 14:31	BRF
Vinyl Acetate	ND	4.0	V-05	ND	14	4	1/10/22 14:31	BRF
Vinyl Chloride	ND	0.20		ND	0.51	4	1/10/22 14:31	BRF
m&p-Xylene	ND	0.40		ND	1.7	4	1/10/22 14:31	BRF
o-Xylene	ND	0.20		ND	0.87	4	1/10/22 14:31	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	111	70-130	1/10/22 14:31

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ANALYTICAL RESULTS

 Project Location: End Zone
 Date Received: 1/5/2022
Field Sample #: SSD Eff
Sample ID: 22A0162-02
 Sample Matrix: Sub Slab
 Sampled: 12/28/2021 09:45

 Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1260
 Canister Size: 6 liter
 Flow Controller ID: 5052
 Sample Type: Grab

Work Order: 22A0162
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): 0.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Sample Flags: Z-01									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	ND	8.0		ND	19	4	1/10/22 15:12		BRF
Benzene	0.34	0.20		1.1	0.64	4	1/10/22 15:12		BRF
Benzyl chloride	ND	0.20		ND	1.0	4	1/10/22 15:12		BRF
Bromodichloromethane	ND	0.20		ND	1.3	4	1/10/22 15:12		BRF
Bromoform	ND	0.20		ND	2.1	4	1/10/22 15:12		BRF
Bromomethane	ND	0.20		ND	0.78	4	1/10/22 15:12		BRF
1,3-Butadiene	ND	0.20		ND	0.44	4	1/10/22 15:12		BRF
2-Butanone (MEK)	ND	8.0		ND	24	4	1/10/22 15:12		BRF
Carbon Disulfide	ND	2.0		ND	6.2	4	1/10/22 15:12		BRF
Carbon Tetrachloride	ND	0.20		ND	1.3	4	1/10/22 15:12		BRF
Chlorobenzene	ND	0.20		ND	0.92	4	1/10/22 15:12		BRF
Chloroethane	ND	0.20		ND	0.53	4	1/10/22 15:12		BRF
Chloroform	ND	0.20		ND	0.98	4	1/10/22 15:12		BRF
Chloromethane	ND	0.40		ND	0.83	4	1/10/22 15:12		BRF
Cyclohexane	ND	0.20		ND	0.69	4	1/10/22 15:12		BRF
Dibromochloromethane	ND	0.20		ND	1.7	4	1/10/22 15:12		BRF
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	1/10/22 15:12		BRF
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 15:12		BRF
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 15:12		BRF
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 15:12		BRF
Dichlorodifluoromethane (Freon 12)	0.44	0.20		2.2	0.99	4	1/10/22 15:12		BRF
1,1-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 15:12		BRF
1,2-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 15:12		BRF
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 15:12		BRF
cis-1,2-Dichloroethylene	0.44	0.20		1.8	0.79	4	1/10/22 15:12		BRF
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 15:12		BRF
1,2-Dichloropropane	ND	0.20		ND	0.92	4	1/10/22 15:12		BRF
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 15:12		BRF
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 15:12		BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	1/10/22 15:12		BRF
1,4-Dioxane	ND	2.0		ND	7.2	4	1/10/22 15:12		BRF
Ethanol	11	8.0		20	15	4	1/10/22 15:12		BRF
Ethyl Acetate	ND	2.0	L-03, V-34	ND	7.2	4	1/10/22 15:12		BRF
Ethylbenzene	0.30	0.20		1.3	0.87	4	1/10/22 15:12		BRF
4-Ethyltoluene	0.24	0.20		1.2	0.98	4	1/10/22 15:12		BRF
Heptane	0.20	0.20		0.84	0.82	4	1/10/22 15:12		BRF
Hexachlorobutadiene	ND	0.20		ND	2.1	4	1/10/22 15:12		BRF

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ANALYTICAL RESULTS

Project Location: End Zone
Date Received: 1/5/2022
Field Sample #: SSD Eff
Sample ID: 22A0162-02
Sample Matrix: Sub Slab
Sampled: 12/28/2021 09:45

Sample Description/Location:
Sub Description/Location:
Canister ID: 1260
Canister Size: 6 liter
Flow Controller ID: 5052
Sample Type: Grab

Work Order: 22A0162
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): 0
Receipt Vacuum(in Hg): 0.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15								
Sample Flags: Z-01								
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time	
	Results	RL		Results	RL		Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	1/10/22 15:12	BRF
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	1/10/22 15:12	BRF
Isopropanol	ND	8.0		ND	20	4	1/10/22 15:12	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	1/10/22 15:12	BRF
Methylene Chloride	ND	2.0		ND	6.9	4	1/10/22 15:12	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	1/10/22 15:12	BRF
Naphthalene	ND	0.20		ND	1.0	4	1/10/22 15:12	BRF
Propene	ND	8.0		ND	14	4	1/10/22 15:12	BRF
Styrene	ND	0.20		ND	0.85	4	1/10/22 15:12	BRF
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	1/10/22 15:12	BRF
Tetrachloroethylene	2.1	0.20		15	1.4	4	1/10/22 15:12	BRF
Tetrahydrofuran	3.6	2.0		11	5.9	4	1/10/22 15:12	BRF
Toluene	1.3	0.20		4.7	0.75	4	1/10/22 15:12	BRF
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	1/10/22 15:12	BRF
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	1/10/22 15:12	BRF
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	1/10/22 15:12	BRF
Trichloroethylene	1.2	0.20		6.3	1.1	4	1/10/22 15:12	BRF
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	1/10/22 15:12	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	1/10/22 15:12	BRF
1,2,4-Trimethylbenzene	0.79	0.20		3.9	0.98	4	1/10/22 15:12	BRF
1,3,5-Trimethylbenzene	0.25	0.20		1.2	0.98	4	1/10/22 15:12	BRF
Vinyl Acetate	ND	4.0	V-05	ND	14	4	1/10/22 15:12	BRF
Vinyl Chloride	ND	0.20		ND	0.51	4	1/10/22 15:12	BRF
m&p-Xylene	1.2	0.40		5.4	1.7	4	1/10/22 15:12	BRF
o-Xylene	0.46	0.20		2.0	0.87	4	1/10/22 15:12	BRF

Surrogates	% Recovery	% REC Limits
4-Bromofluorobenzene (1)	111	70-130

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ANALYTICAL RESULTS

 Project Location: End Zone
 Date Received: 1/5/2022
Field Sample #: SVE Eff
Sample ID: 22A0162-03
 Sample Matrix: Sub Slab
 Sampled: 12/28/2021 10:15

 Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1941
 Canister Size: 6 liter
 Flow Controller ID: 5053
 Sample Type: Grab

Work Order: 22A0162
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): 1.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Sample Flags: Z-01									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	ND	8.0		ND	19	4	1/10/22 16:33		BRF
Benzene	1.0	0.20		3.3	0.64	4	1/10/22 16:33		BRF
Benzyl chloride	ND	0.20		ND	1.0	4	1/10/22 16:33		BRF
Bromodichloromethane	ND	0.20		ND	1.3	4	1/10/22 16:33		BRF
Bromoform	ND	0.20		ND	2.1	4	1/10/22 16:33		BRF
Bromomethane	ND	0.20		ND	0.78	4	1/10/22 16:33		BRF
1,3-Butadiene	ND	0.20		ND	0.44	4	1/10/22 16:33		BRF
2-Butanone (MEK)	ND	8.0		ND	24	4	1/10/22 16:33		BRF
Carbon Disulfide	ND	2.0		ND	6.2	4	1/10/22 16:33		BRF
Carbon Tetrachloride	ND	0.20		ND	1.3	4	1/10/22 16:33		BRF
Chlorobenzene	ND	0.20		ND	0.92	4	1/10/22 16:33		BRF
Chloroethane	ND	0.20		ND	0.53	4	1/10/22 16:33		BRF
Chloroform	0.80	0.20		3.9	0.98	4	1/10/22 16:33		BRF
Chloromethane	ND	0.40		ND	0.83	4	1/10/22 16:33		BRF
Cyclohexane	ND	0.20		ND	0.69	4	1/10/22 16:33		BRF
Dibromochloromethane	ND	0.20		ND	1.7	4	1/10/22 16:33		BRF
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	1/10/22 16:33		BRF
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 16:33		BRF
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 16:33		BRF
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	1/10/22 16:33		BRF
Dichlorodifluoromethane (Freon 12)	0.44	0.20		2.2	0.99	4	1/10/22 16:33		BRF
1,1-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 16:33		BRF
1,2-Dichloroethane	ND	0.20		ND	0.81	4	1/10/22 16:33		BRF
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 16:33		BRF
cis-1,2-Dichloroethylene	22	0.20		88	0.79	4	1/10/22 16:33		BRF
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	1/10/22 16:33		BRF
1,2-Dichloropropane	ND	0.20		ND	0.92	4	1/10/22 16:33		BRF
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 16:33		BRF
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	1/10/22 16:33		BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	1/10/22 16:33		BRF
1,4-Dioxane	ND	2.0		ND	7.2	4	1/10/22 16:33		BRF
Ethanol	ND	8.0		ND	15	4	1/10/22 16:33		BRF
Ethyl Acetate	ND	2.0	L-03, V-34	ND	7.2	4	1/10/22 16:33		BRF
Ethylbenzene	0.20	0.20		0.89	0.87	4	1/10/22 16:33		BRF
4-Ethyltoluene	0.23	0.20		1.1	0.98	4	1/10/22 16:33		BRF
Heptane	ND	0.20		ND	0.82	4	1/10/22 16:33		BRF
Hexachlorobutadiene	ND	0.20		ND	2.1	4	1/10/22 16:33		BRF

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ANALYTICAL RESULTS

 Project Location: End Zone
 Date Received: 1/5/2022
Field Sample #: SVE Eff
Sample ID: 22A0162-03
 Sample Matrix: Sub Slab
 Sampled: 12/28/2021 10:15

 Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1941
 Canister Size: 6 liter
 Flow Controller ID: 5053
 Sample Type: Grab

Work Order: 22A0162
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): 1.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15									
Sample Flags: Z-01									
Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	8.0		ND	28	4	1/10/22 16:33		BRF
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	1/10/22 16:33		BRF
Isopropanol	ND	8.0		ND	20	4	1/10/22 16:33		BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	1/10/22 16:33		BRF
Methylene Chloride	ND	2.0		ND	6.9	4	1/10/22 16:33		BRF
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	1/10/22 16:33		BRF
Naphthalene	ND	0.20		ND	1.0	4	1/10/22 16:33		BRF
Propene	ND	8.0		ND	14	4	1/10/22 16:33		BRF
Styrene	ND	0.20		ND	0.85	4	1/10/22 16:33		BRF
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	1/10/22 16:33		BRF
Tetrachloroethylene	28	0.20		190	1.4	4	1/10/22 16:33		BRF
Tetrahydrofuran	ND	2.0		ND	5.9	4	1/10/22 16:33		BRF
Toluene	0.66	0.20		2.5	0.75	4	1/10/22 16:33		BRF
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	1/10/22 16:33		BRF
1,1,1-Trichloroethane	0.22	0.20		1.2	1.1	4	1/10/22 16:33		BRF
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	1/10/22 16:33		BRF
Trichloroethylene	230	1.0		1200	5.4	20	1/10/22 17:12		BRF
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	1/10/22 16:33		BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	1/10/22 16:33		BRF
1,2,4-Trimethylbenzene	0.92	0.20		4.5	0.98	4	1/10/22 16:33		BRF
1,3,5-Trimethylbenzene	0.25	0.20		1.2	0.98	4	1/10/22 16:33		BRF
Vinyl Acetate	ND	4.0	V-05	ND	14	4	1/10/22 16:33		BRF
Vinyl Chloride	ND	0.20		ND	0.51	4	1/10/22 16:33		BRF
m&p-Xylene	0.88	0.40		3.8	1.7	4	1/10/22 16:33		BRF
o-Xylene	0.34	0.20		1.5	0.87	4	1/10/22 16:33		BRF
Surrogates	% Recovery			% REC Limits					
4-Bromofluorobenzene (1)	111			70-130			1/10/22 17:12		
4-Bromofluorobenzene (1)	111			70-130			1/10/22 16:33		

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Sample Extraction Data**Prep Method: TO-15 Prep****Analytical Method: EP**

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
22A0162-01 [Eff Com]	B298672	1.5	1	N/A	1000	400	150	01/10/22
22A0162-02 [SSD Eff]	B298672	1.5	1	N/A	1000	400	150	01/10/22
22A0162-03 [SVE Eff]	B298672	1.5	1	N/A	1000	400	150	01/10/22
22A0162-03RE1 [SVE Eff]	B298672	1.5	1	N/A	1000	400	30	01/10/22

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QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	

Batch B298672 - TO-15 Prep
Blank (B298672-BLK1)

Prepared & Analyzed: 01/10/22

Acetone	ND	1.4
Benzene	ND	0.035
Benzyl chloride	ND	0.035
Bromodichloromethane	ND	0.035
Bromoform	ND	0.035
Bromomethane	ND	0.035
1,3-Butadiene	ND	0.035
2-Butanone (MEK)	ND	1.4
Carbon Disulfide	ND	0.35
Carbon Tetrachloride	ND	0.035
Chlorobenzene	ND	0.035
Chloroethane	ND	0.035
Chloroform	ND	0.035
Chloromethane	ND	0.070
Cyclohexane	ND	0.035
Dibromochloromethane	ND	0.035
1,2-Dibromoethane (EDB)	ND	0.035
1,2-Dichlorobenzene	ND	0.035
1,3-Dichlorobenzene	ND	0.035
1,4-Dichlorobenzene	ND	0.035
Dichlorodifluoromethane (Freon 12)	ND	0.035
1,1-Dichloroethane	ND	0.035
1,2-Dichloroethane	ND	0.035
1,1-Dichloroethylene	ND	0.035
cis-1,2-Dichloroethylene	ND	0.035
trans-1,2-Dichloroethylene	ND	0.035
1,2-Dichloropropane	ND	0.035
cis-1,3-Dichloropropene	ND	0.035
trans-1,3-Dichloropropene	ND	0.035
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035
1,4-Dioxane	ND	0.35
Ethanol	ND	1.4
Ethyl Acetate	ND	0.35
Ethylbenzene	ND	0.035
4-Ethyltoluene	ND	0.035
Heptane	ND	0.035
Hexachlorobutadiene	ND	0.035
Hexane	ND	1.4
2-Hexanone (MBK)	ND	0.035
Isopropanol	ND	1.4
Methyl tert-Butyl Ether (MTBE)	ND	0.035
Methylene Chloride	ND	0.35
4-Methyl-2-pentanone (MIBK)	ND	0.035
Naphthalene	ND	0.035
Propene	ND	1.4
Styrene	ND	0.035

L-03, V-34

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QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	

Batch B298672 - TO-15 Prep
Blank (B298672-BLK1)

Prepared & Analyzed: 01/10/22

1,1,2,2-Tetrachloroethane	ND	0.035								
Tetrachloroethylene	ND	0.035								
Tetrahydrofuran	ND	0.35								
Toluene	ND	0.035								
1,2,4-Trichlorobenzene	ND	0.035								
1,1,1-Trichloroethane	ND	0.035								
1,1,2-Trichloroethane	ND	0.035								
Trichloroethylene	ND	0.035								
Trichlorofluoromethane (Freon 11)	ND	0.14								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14								
1,2,4-Trimethylbenzene	ND	0.035								
1,3,5-Trimethylbenzene	ND	0.035								
Vinyl Acetate	ND	0.70								V-05
Vinyl Chloride	ND	0.035								
m&p-Xylene	ND	0.070								
o-Xylene	ND	0.035								

<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.84</i>				<i>8.00</i>		<i>111</i>	<i>70-130</i>		
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LCS (B298672-BS1)

Prepared & Analyzed: 01/10/22

Acetone	4.34				5.00		86.9	70-130		
Benzene	4.12				5.00		82.4	70-130		
Benzyl chloride	5.12				5.00		102	70-130		
Bromodichloromethane	4.54				5.00		90.8	70-130		
Bromoform	6.05				5.00		121	70-130		
Bromomethane	4.10				5.00		82.1	70-130		
1,3-Butadiene	3.87				5.00		77.5	70-130		
2-Butanone (MEK)	4.54				5.00		90.8	70-130		
Carbon Disulfide	4.00				5.00		80.0	70-130		
Carbon Tetrachloride	5.49				5.00		110	70-130		
Chlorobenzene	4.48				5.00		89.6	70-130		
Chloroethane	4.01				5.00		80.3	70-130		
Chloroform	4.38				5.00		87.7	70-130		
Chloromethane	3.98				5.00		79.7	70-130		
Cyclohexane	3.96				5.00		79.1	70-130		
Dibromochloromethane	5.51				5.00		110	70-130		
1,2-Dibromoethane (EDB)	4.62				5.00		92.4	70-130		
1,2-Dichlorobenzene	5.03				5.00		101	70-130		
1,3-Dichlorobenzene	5.23				5.00		105	70-130		
1,4-Dichlorobenzene	5.06				5.00		101	70-130		
Dichlorodifluoromethane (Freon 12)	4.64				5.00		92.8	70-130		
1,1-Dichloroethane	4.18				5.00		83.5	70-130		
1,2-Dichloroethane	4.59				5.00		91.8	70-130		
1,1-Dichloroethylene	4.44				5.00		88.9	70-130		
cis-1,2-Dichloroethylene	4.21				5.00		84.1	70-130		
trans-1,2-Dichloroethylene	4.13				5.00		82.5	70-130		
1,2-Dichloropropane	4.04				5.00		80.8	70-130		

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QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	
Batch B298672 - TO-15 Prep										
LCS (B298672-BS1)					Prepared & Analyzed: 01/10/22					
cis-1,3-Dichloropropene	4.31				5.00		86.3	70-130		L-03, V-34
trans-1,3-Dichloropropene	4.67				5.00		93.3	70-130		
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.92				5.00		78.5	70-130		
1,4-Dioxane	4.14				5.00		82.7	70-130		
Ethanol	4.58				5.00		91.6	70-130		
Ethyl Acetate	3.01				5.00		60.2	* 70-130		
Ethylbenzene	4.53				5.00		90.6	70-130		
4-Ethyltoluene	4.96				5.00		99.2	70-130		
Heptane	4.16				5.00		83.3	70-130		
Hexachlorobutadiene	5.75				5.00		115	70-130		
Hexane	5.28				5.00		106	70-130		L-01, V-05,
2-Hexanone (MBK)	5.08				5.00		102	70-130		
Isopropanol	3.65				5.00		73.0	70-130		
Methyl tert-Butyl Ether (MTBE)	4.07				5.00		81.4	70-130		
Methylene Chloride	4.30				5.00		86.0	70-130		
4-Methyl-2-pentanone (MIBK)	4.74				5.00		94.9	70-130		
Naphthalene	5.52				5.00		110	70-130		
Propene	4.21				5.00		84.2	70-130		
Styrene	4.76				5.00		95.1	70-130		
1,1,2,2-Tetrachloroethane	4.26				5.00		85.1	70-130		
Tetrachloroethylene	5.09				5.00		102	70-130		
Tetrahydrofuran	3.93				5.00		78.6	70-130		
Toluene	4.46				5.00		89.2	70-130		
1,2,4-Trichlorobenzene	5.46				5.00		109	70-130		
1,1,1-Trichloroethane	4.67				5.00		93.5	70-130		
1,1,2-Trichloroethane	4.52				5.00		90.4	70-130		
Trichloroethylene	4.35				5.00		86.9	70-130		
Trichlorofluoromethane (Freon 11)	4.51				5.00		90.2	70-130		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.45				5.00		89.0	70-130		
1,2,4-Trimethylbenzene	4.82				5.00		96.4	70-130		
1,3,5-Trimethylbenzene	4.89				5.00		97.8	70-130		
Vinyl Acetate	6.70				5.00		134	* 70-130		
Vinyl Chloride	3.80				5.00		76.0	70-130		
m&p-Xylene	9.39				10.0		93.9	70-130		
o-Xylene	4.73				5.00		94.5	70-130		
Surrogate: 4-Bromofluorobenzene (1)	9.08				8.00		114	70-130		

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QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL							
Batch B298672 - TO-15 Prep											
Duplicate (B298672-DUP1)		Source: 22A0162-02				Prepared & Analyzed: 01/10/22					
Acetone	4.9	8.0	12	19		5.0			0.404	25	
Benzene	0.35	0.20	1.1	0.64		0.34			4.65	25	
Benzyl chloride	ND	0.20	ND	1.0		ND				25	
Bromodichloromethane	ND	0.20	ND	1.3		ND				25	
Bromoform	ND	0.20	ND	2.1		ND				25	
Bromomethane	ND	0.20	ND	0.78		ND				25	
1,3-Butadiene	ND	0.20	ND	0.44		ND				25	
2-Butanone (MEK)	1.8	8.0	5.2	24		1.7			1.83	25	
Carbon Disulfide	ND	2.0	ND	6.2		ND				25	
Carbon Tetrachloride	0.076	0.20	0.48	1.3		0.080			5.13	25	
Chlorobenzene	ND	0.20	ND	0.92		ND				25	
Chloroethane	ND	0.20	ND	0.53		ND				25	
Chloroform	ND	0.20	ND	0.98		ND				25	
Chloromethane	0.33	0.40	0.68	0.83		0.32			2.47	25	
Cyclohexane	ND	0.20	ND	0.69		ND				25	
Dibromochloromethane	ND	0.20	ND	1.7		ND				25	
1,2-Dibromoethane (EDB)	ND	0.20	ND	1.5		ND				25	
1,2-Dichlorobenzene	ND	0.20	ND	1.2		ND				25	
1,3-Dichlorobenzene	ND	0.20	ND	1.2		ND				25	
1,4-Dichlorobenzene	ND	0.20	ND	1.2		ND				25	
Dichlorodifluoromethane (Freon 12)	0.43	0.20	2.1	0.99		0.44			1.83	25	
1,1-Dichloroethane	ND	0.20	ND	0.81		ND				25	
1,2-Dichloroethane	ND	0.20	ND	0.81		ND				25	
1,1-Dichloroethylene	ND	0.20	ND	0.79		ND				25	
cis-1,2-Dichloroethylene	0.45	0.20	1.8	0.79		0.44			0.897	25	
trans-1,2-Dichloroethylene	ND	0.20	ND	0.79		ND				25	
1,2-Dichloropropane	ND	0.20	ND	0.92		ND				25	
cis-1,3-Dichloropropene	ND	0.20	ND	0.91		ND				25	
trans-1,3-Dichloropropene	ND	0.20	ND	0.91		ND				25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20	ND	1.4		ND				25	
1,4-Dioxane	ND	2.0	ND	7.2		ND				25	
Ethanol	11	8.0	20	15		11			0.555	25	
Ethyl Acetate	ND	2.0	ND	7.2		ND				25	L-03, V-3
Ethylbenzene	0.30	0.20	1.3	0.87		0.30			1.34	25	
4-Ethyltoluene	0.23	0.20	1.1	0.98		0.24			1.71	25	
Heptane	0.21	0.20	0.85	0.82		0.20			1.94	25	
Hexachlorobutadiene	ND	0.20	ND	2.1		ND				25	
Hexane	ND	8.0	ND	28		ND				25	
2-Hexanone (MBK)	ND	0.20	ND	0.82		ND				25	
Isopropanol	ND	8.0	ND	20		ND				25	
Methyl tert-Butyl Ether (MTBE)	ND	0.20	ND	0.72		ND				25	
Methylene Chloride	ND	2.0	ND	6.9		ND				25	
4-Methyl-2-pentanone (MIBK)	0.19	0.20	0.79	0.82		0.19			0.00	25	
Naphthalene	ND	0.20	ND	1.0		ND				25	
Propene	ND	8.0	ND	14		ND				25	
Styrene	ND	0.20	ND	0.85		ND				25	

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QUALITY CONTROL
Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B298672 - TO-15 Prep											
Duplicate (B298672-DUP1)	Source: 22A0162-02				Prepared & Analyzed: 01/10/22						
1,1,2,2-Tetrachloroethane	ND	0.20	ND	1.4		ND				25	
Tetrachloroethylene	2.1	0.20	14	1.4		2.1			1.13	25	
Tetrahydrofuran	3.6	2.0	11	5.9		3.6			0.00	25	
Toluene	1.3	0.20	4.7	0.75		1.3			0.319	25	
1,2,4-Trichlorobenzene	ND	0.20	ND	1.5		ND				25	
1,1,1-Trichloroethane	ND	0.20	ND	1.1		ND				25	
1,1,2-Trichloroethane	ND	0.20	ND	1.1		ND				25	
Trichloroethylene	1.2	0.20	6.3	1.1		1.2			0.680	25	
Trichlorofluoromethane (Freon 11)	0.21	0.80	1.2	4.5		0.21			1.90	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80	ND	6.1		ND				25	
1,2,4-Trimethylbenzene	0.79	0.20	3.9	0.98		0.79			0.506	25	
1,3,5-Trimethylbenzene	0.25	0.20	1.2	0.98		0.25			0.00	25	
Vinyl Acetate	ND	4.0	ND	14		ND				25	V-05
Vinyl Chloride	ND	0.20	ND	0.51		ND				25	
m&p-Xylene	1.2	0.40	5.3	1.7		1.2			1.30	25	
o-Xylene	0.45	0.20	2.0	0.87		0.46			0.881	25	
Surrogate: 4-Bromofluorobenzene (1)	8.89				8.00		111	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-36	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
Z-01	Sample had a final vacuum of zero. Flow controllers have been verified to be okay, RPD was <20%

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S066182-ICV1)			Lab File ID: G21A342016.D			Analyzed: 12/08/21 16:58			
Bromochloromethane (1)	1512635	8.497	1402037	8.503	108	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3688445	10.271	3621476	10.277	102	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	3527556	14.642	3493930	14.642	101	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S067245-CCV1)			Lab File ID: G22A010004.D			Analyzed: 01/10/22 09:45			
Bromochloromethane (1)	1632650	8.497	1402037	8.503	116	60 - 140	-0.0060	+/-0.50	
1,4-Difluorobenzene (1)	4091512	10.271	3621476	10.277	113	60 - 140	-0.0060	+/-0.50	
Chlorobenzene-d5 (1)	3738129	14.642	3493930	14.642	107	60 - 140	0.0000	+/-0.50	
LCS (B298672-BS1)			Lab File ID: G22A010005.D			Analyzed: 01/10/22 10:25			
Bromochloromethane (1)	1633083	8.497	1632650	8.497	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	4095780	10.271	4091512	10.271	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3745714	14.642	3738129	14.642	100	60 - 140	0.0000	+/-0.50	
Blank (B298672-BLK1)			Lab File ID: G22A010009.D			Analyzed: 01/10/22 13:07			
Bromochloromethane (1)	1628745	8.497	1632650	8.497	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	4011715	10.271	4091512	10.271	98	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3716798	14.642	3738129	14.642	99	60 - 140	0.0000	+/-0.50	
Eff Com (22A0162-01)			Lab File ID: G22A010011.D			Analyzed: 01/10/22 14:31			
Bromochloromethane (1)	1606575	8.503	1632650	8.497	98	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3913966	10.271	4091512	10.271	96	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3632967	14.642	3738129	14.642	97	60 - 140	0.0000	+/-0.50	
SSD Eff (22A0162-02)			Lab File ID: G22A010012.D			Analyzed: 01/10/22 15:12			
Bromochloromethane (1)	1614626	8.503	1632650	8.497	99	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3963835	10.271	4091512	10.271	97	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3698074	14.642	3738129	14.642	99	60 - 140	0.0000	+/-0.50	
Duplicate (B298672-DUP1)			Lab File ID: G22A010013.D			Analyzed: 01/10/22 15:52			
Bromochloromethane (1)	1604093	8.503	1632650	8.497	98	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3948530	10.277	4091512	10.271	97	60 - 140	0.0060	+/-0.50	
Chlorobenzene-d5 (1)	3692752	14.642	3738129	14.642	99	60 - 140	0.0000	+/-0.50	
SVE Eff (22A0162-03)			Lab File ID: G22A010014.D			Analyzed: 01/10/22 16:33			
Bromochloromethane (1)	1650973	8.497	1632650	8.497	101	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	4000409	10.271	4091512	10.271	98	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3691964	14.642	3738129	14.642	99	60 - 140	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY
EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SVE Eff (22A0162-03RE1)			Lab File ID: G22A010015.D			Analyzed: 01/10/22 17:12			
Bromochloromethane (1)	1619532	8.503	1632650	8.497	99	60 - 140	0.0060	+/-0.50	
1,4-Difluorobenzene (1)	3965045	10.271	4091512	10.271	97	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	3669578	14.642	3738129	14.642	98	60 - 140	0.0000	+/-0.50	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S067245-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.00	0.9407078	0.9408527		0.02	30
Benzene	A	5.00	4.18	0.934211	0.7804962		-16.5	30
Benzyl chloride	A	5.00	5.05	0.9229464	0.9316425		0.9	30
Bromodichloromethane	A	5.00	4.62	0.6342236	0.5861606		-7.6	30
Bromoform	A	5.00	6.13	0.4468591	0.5476601		22.6	30
Bromomethane	A	5.00	4.20	0.5858487	0.4922677		-16.0	30
1,3-Butadiene	A	5.00	4.12	0.4976375	0.409971		-17.6	30
2-Butanone (MEK)	A	5.00	4.66	1.510541	1.40746		-6.8	30
Carbon Disulfide	A	5.00	4.14	2.251089	1.865192		-17.1	30
Carbon Tetrachloride	A	5.00	5.53	0.4541248	0.5024599		10.6	30
Chlorobenzene	A	5.00	4.58	0.8377285	0.7677218		-8.4	30
Chloroethane	A	5.00	4.07	0.3226291	0.2624886		-18.6	30
Chloroform	A	5.00	4.44	1.555256	1.382387		-11.1	30
Chloromethane	A	5.00	4.30	0.6106162	0.5249292		-14.0	30
Cyclohexane	A	5.00	3.97	0.396716	0.3148618		-20.6	30
Dibromochloromethane	A	5.00	5.62	0.5320738	0.5982642		12.4	30
1,2-Dibromoethane (EDB)	A	5.00	4.75	0.562252	0.5343905		-5.0	30
1,2-Dichlorobenzene	A	5.00	5.04	0.6244209	0.62889		0.7	30
1,3-Dichlorobenzene	A	5.00	5.23	0.6745915	0.7060473		4.7	30
1,4-Dichlorobenzene	A	5.00	5.13	0.6818076	0.7000289		2.7	30
Dichlorodifluoromethane (Freon 12)	A	5.00	4.83	1.52093	1.468107		-3.5	30
1,1-Dichloroethane	A	5.00	4.18	1.413309	1.180811		-16.5	30
1,2-Dichloroethane	A	5.00	4.63	0.9197802	0.851748		-7.4	30
1,1-Dichloroethylene	A	5.00	4.40	1.135823	1.000358		-11.9	30
cis-1,2-Dichloroethylene	A	5.00	4.22	1.005957	0.8497341		-15.5	30
trans-1,2-Dichloroethylene	A	5.00	4.19	1.067538	0.8949984		-16.2	30
1,2-Dichloropropane	A	5.00	4.06	0.3739952	0.3037539		-18.8	30
cis-1,3-Dichloropropene	A	5.00	4.30	0.4978307	0.4284339		-13.9	30
trans-1,3-Dichloropropene	A	5.00	4.47	0.4238936	0.3791811		-10.5	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	4.42	1.585689	1.401399		-11.6	30
1,4-Dioxane	A	5.00	4.12	0.1952184	0.1609733		-17.5	30
Ethanol	A	5.00	4.66	0.1478284	0.1378441		-6.8	30
Ethyl Acetate	A	5.00	4.23	0.3421707	0.2892995		-15.5	30
Ethylbenzene	A	5.00	4.60	1.365396	1.25633		-8.0	30
4-Ethyltoluene	A	5.00	4.89	1.318567	1.290254		-2.1	30
Heptane	A	5.00	4.27	0.2973937	0.2537421		-14.7	30
Hexachlorobutadiene	A	5.00	6.02	0.3685606	0.4440694		20.5	30
Hexane	A	5.00	5.29	0.8911197	0.8272392		5.8	30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CONTINUING CALIBRATION CHECK

EPA TO-15

S067245-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.24	0.6568943	0.6880477		4.7	30
Isopropanol	A	5.00	4.34	1.077752	0.9359733		-13.2	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	4.21	1.943419	1.635713		-15.8	30
Methylene Chloride	A	5.00	4.35	0.8890624	0.7741466		-12.9	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.02	0.6998103	0.7029769		0.5	30
Naphthalene	A	5.00	5.69	0.9681384	1.101167		13.7	30
Propene	A	5.00	4.52	0.6361434	0.5755502		-9.5	30
Styrene	A	5.00	4.66	0.7628957	0.711175		-6.8	30
1,1,2,2-Tetrachloroethane	A	5.00	4.32	0.8809722	0.7602901		-13.7	30
Tetrachloroethylene	A	5.00	5.23	0.4242595	0.4439111		4.6	30
Tetrahydrofuran	A	5.00	4.09	0.3396931	0.2778746		-18.2	30
Toluene	A	5.00	4.53	1.090895	0.987766		-9.5	30
1,2,4-Trichlorobenzene	A	5.00	5.79	0.4270306	0.4942588		15.7	30
1,1,1-Trichloroethane	A	5.00	4.94	0.5251361	0.5189745		-1.2	30
1,1,2-Trichloroethane	A	5.00	4.56	0.3833148	0.3493821		-8.9	30
Trichloroethylene	A	5.00	4.40	0.3926852	0.345877		-11.9	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.70	1.358779	1.276299		-6.1	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	4.45	1.403446	1.249804		-10.9	30
1,2,4-Trimethylbenzene	A	5.00	4.78	1.072009	1.023898		-4.5	30
1,3,5-Trimethylbenzene	A	5.00	4.82	1.094949	1.055845		-3.6	30
Vinyl Acetate	A	5.00	3.46	1.219501	0.8443431		-30.8	30 *
Vinyl Chloride	A	5.00	3.92	0.6993653	0.5488814		-21.5	30
m&p-Xylene	A	10.0	9.52	1.02777	0.9785344		-4.8	30
o-Xylene	A	5.00	4.73	1.052547	0.9961219		-5.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

[illegible]



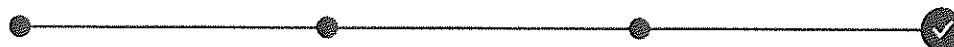
TRACK ANOTHER SHIPMENT

775456025494



ADD NICKNAME

Delivered
Wednesday, 1/5/2022 at 12:51 pm

**DELIVERED**

Signed for by: APIERSHEWSKI

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

BRENTWOOD, NY US

TO

East Longmeadow, MA US



Travel History

TIME ZONE

Local Scan Time



Wednesday, January 5,
2022

12:51 PM	East Longmeadow, MA	Delivered
7:15 AM	WINDSOR, CT	On FedEx vehicle for delivery
7:08 AM	WINDSOR, CT	At local FedEx facility
4:39 AM	MIDDLETOWN, CT	Departed FedEx location
1:28 AM	MIDDLETOWN, CT	Arrived at FedEx location

Tuesday, January 4,
2022

9:49 PM	HOLBROOK, NY	Left FedEx origin facility
7:41 PM	HOLBROOK, NY	Arrived at FedEx location
5:09 PM	HOLBROOK, NY	Picked up
4:15 PM	HAUPPAUGE, NY	In FedEx possession Tendered at FedEx location

**I Have Not Confirmed Sample Container
Numbers With Lab Staff Before
Relinquishing Over
Samples_____**



Doc# 278 Rev 6 2017

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Aecm

Received By	<u>RLJ</u>	Date	<u>11/22</u>	Time	<u>1351</u>
How were the samples received?	In Cooler		On Ice		No Ice
	In Box	<u>T</u>	Ambient		Melted Ice
Were samples within Temperature Compliance? 2-6°C	<u>NA</u>	By Gun #		Actual Temp -	
		By Blank #		Actual Temp -	
Was Custody Seal Intact?	<u>NA</u>		Were Samples Tampered with?		<u>NA</u>
Was COC Relinquished ?	<u>T</u>		Does Chain Agree With Samples?		<u>T</u>
Are there any loose caps/valves on any samples?		<u>F</u>			
Is COC in ink/ Legible?	<u>T</u>				
Did COC Include all Pertinent Information?	Client	<u>T</u>	Analysis	<u>T</u>	Sampler Name
	Project	<u>T</u>	ID's	<u>T</u>	Collection Dates/Times
Are Sample Labels filled out and legible?		<u>T</u>			
Are there Rushes?	<u>F</u>		Who was notified?		
Samples are received within holding time?		<u>T</u>			
Proper Media Used?	<u>T</u>		Individually Certified Cans?	<u>F</u>	
Are there Trip Blanks?	<u>F</u>		Is there enough Volume?	<u>T</u>	

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans	3	60L	3	0.5 min	Nut/Ferrule	3	IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s					Tedlar			

[illegible]**Comments:**



ANALYTICAL REPORT

Lab Number:	L2215966
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Matthew Pearsall
Phone:	(860) 263-5763
Project Name:	ENDZONE
Project Number:	Not Specified
Report Date:	04/11/22

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



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2215966-01	EFF COMB	SOIL_VAPOR	ENDZONE S. OZONE PARK	03/28/22 10:30	03/28/22
L2215966-02	SSD EFF	SOIL_VAPOR	ENDZONE S. OZONE PARK	03/28/22 11:45	03/28/22
L2215966-03	SVE EFF	SOIL_VAPOR	ENDZONE S. OZONE PARK	03/28/22 11:15	03/28/22

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on March 24, 2022. The canister certification results are provided as an addendum.

L2215966-03D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

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

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 04/11/22

AIR

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-01
 Client ID: EFF COMB
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 10:30
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 04/08/22 18:44
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.294	0.200	--	1.45	0.989	--		1
Chloromethane	0.230	0.200	--	0.475	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	10.7	0.200	--	42.4	0.793	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-01
 Client ID: EFF COMB
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 10:30
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.434	0.200	--	2.12	0.977	--		1
Tetrahydrofuran	0.547	0.500	--	1.61	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.274	0.200	--	1.03	0.754	--		1
1,2-Dichloroethene (total)	10.7	0.200	--	42.4	0.793	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-01
 Client ID: EFF COMB
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 10:30
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	0.244	0.200	--	1.20	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	97		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-02
 Client ID: SSD EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:45
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 04/08/22 19:24
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.440	0.200	--	2.18	0.989	--		1
Chloromethane	0.355	0.200	--	0.733	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-02
 Client ID: SSD EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:45
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	2.86	0.200	--	15.4	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.232	0.200	--	0.874	0.754	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-02
 Client ID: SSD EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:45
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	0.265	0.200	--	1.80	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-03 D
 Client ID: SVE EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:15
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 04/08/22 20:39
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	0.833	--	ND	4.12	--		4.167
Chloromethane	ND	0.833	--	ND	1.72	--		4.167
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.833	--	ND	5.82	--		4.167
Vinyl chloride	ND	0.833	--	ND	2.13	--		4.167
1,3-Butadiene	ND	0.833	--	ND	1.84	--		4.167
Bromomethane	ND	0.833	--	ND	3.23	--		4.167
Chloroethane	ND	0.833	--	ND	2.20	--		4.167
Ethyl Alcohol	ND	20.8	--	ND	39.2	--		4.167
Vinyl bromide	ND	0.833	--	ND	3.64	--		4.167
Acetone	ND	4.17	--	ND	9.91	--		4.167
Trichlorofluoromethane	ND	0.833	--	ND	4.68	--		4.167
iso-Propyl Alcohol	ND	2.08	--	ND	5.11	--		4.167
1,1-Dichloroethene	ND	0.833	--	ND	3.30	--		4.167
tert-Butyl Alcohol	ND	2.08	--	ND	6.31	--		4.167
Methylene chloride	ND	2.08	--	ND	7.23	--		4.167
3-Chloropropene	ND	0.833	--	ND	2.61	--		4.167
Carbon disulfide	ND	0.833	--	ND	2.59	--		4.167
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.833	--	ND	6.38	--		4.167
trans-1,2-Dichloroethene	ND	0.833	--	ND	3.30	--		4.167
1,1-Dichloroethane	ND	0.833	--	ND	3.37	--		4.167
Methyl tert butyl ether	ND	0.833	--	ND	3.00	--		4.167
2-Butanone	ND	2.08	--	ND	6.13	--		4.167
cis-1,2-Dichloroethene	49.8	0.833	--	197	3.30	--		4.167



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-03 D
 Client ID: SVE EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:15
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	2.08	--	ND	7.50	--		4.167
Chloroform	1.60	0.833	--	7.81	4.07	--		4.167
Tetrahydrofuran	ND	2.08	--	ND	6.13	--		4.167
1,2-Dichloroethane	ND	0.833	--	ND	3.37	--		4.167
n-Hexane	ND	0.833	--	ND	2.94	--		4.167
1,1,1-Trichloroethane	ND	0.833	--	ND	4.54	--		4.167
Benzene	0.892	0.833	--	2.85	2.66	--		4.167
Carbon tetrachloride	ND	0.833	--	ND	5.24	--		4.167
Cyclohexane	ND	0.833	--	ND	2.87	--		4.167
1,2-Dichloropropane	ND	0.833	--	ND	3.85	--		4.167
Bromodichloromethane	ND	0.833	--	ND	5.58	--		4.167
Xylene (Total)	ND	0.833	--	ND	3.62	--		4.167
1,4-Dioxane	ND	0.833	--	ND	3.00	--		4.167
Trichloroethene	336	0.833	--	1810	4.48	--		4.167
2,2,4-Trimethylpentane	ND	0.833	--	ND	3.89	--		4.167
Heptane	ND	0.833	--	ND	3.41	--		4.167
cis-1,3-Dichloropropene	ND	0.833	--	ND	3.78	--		4.167
4-Methyl-2-pentanone	ND	2.08	--	ND	8.52	--		4.167
trans-1,3-Dichloropropene	ND	0.833	--	ND	3.78	--		4.167
1,1,2-Trichloroethane	ND	0.833	--	ND	4.54	--		4.167
Toluene	ND	0.833	--	ND	3.14	--		4.167
1,2-Dichloroethene (total)	49.8	0.833	--	197	3.30	--		4.167
2-Hexanone	ND	0.833	--	ND	3.41	--		4.167
1,3-Dichloropropene, Total	ND	0.833	--	ND	3.78	--		4.167
Dibromochloromethane	ND	0.833	--	ND	7.10	--		4.167
1,2-Dibromoethane	ND	0.833	--	ND	6.40	--		4.167



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

SAMPLE RESULTS

Lab ID: L2215966-03 D
 Client ID: SVE EFF
 Sample Location: ENDZONE S. OZONE PARK

Date Collected: 03/28/22 11:15
 Date Received: 03/28/22
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tetrachloroethene	57.5	0.833	--	390	5.65	--		4.167
Chlorobenzene	ND	0.833	--	ND	3.84	--		4.167
Ethylbenzene	ND	0.833	--	ND	3.62	--		4.167
p/m-Xylene	ND	1.67	--	ND	7.25	--		4.167
Bromoform	ND	0.833	--	ND	8.61	--		4.167
Styrene	ND	0.833	--	ND	3.55	--		4.167
1,1,2,2-Tetrachloroethane	ND	0.833	--	ND	5.72	--		4.167
o-Xylene	ND	0.833	--	ND	3.62	--		4.167
4-Ethyltoluene	ND	0.833	--	ND	4.10	--		4.167
1,3,5-Trimethylbenzene	ND	0.833	--	ND	4.10	--		4.167
1,2,4-Trimethylbenzene	ND	0.833	--	ND	4.10	--		4.167
Benzyl chloride	ND	0.833	--	ND	4.31	--		4.167
1,3-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,4-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,2-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,2,4-Trichlorobenzene	ND	0.833	--	ND	6.18	--		4.167
Hexachlorobutadiene	ND	0.833	--	ND	8.89	--		4.167

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/08/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1625290-4								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/08/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1625290-4								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/08/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1625290-4								
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl Acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/08/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1625290-4								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane (C10)	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 04/08/22 16:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1625290-4								
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1625290-3								
Chlorodifluoromethane	89		-		70-130	-		
Propylene	93		-		70-130	-		
Propane	90		-		70-130	-		
Dichlorodifluoromethane	86		-		70-130	-		
Chloromethane	95		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	96		-		70-130	-		
Methanol	81		-		70-130	-		
Vinyl chloride	100		-		70-130	-		
1,3-Butadiene	106		-		70-130	-		
Butane	81		-		70-130	-		
Bromomethane	97		-		70-130	-		
Chloroethane	105		-		70-130	-		
Ethyl Alcohol	89		-		40-160	-		
Dichlorofluoromethane	83		-		70-130	-		
Vinyl bromide	91		-		70-130	-		
Acrolein	89		-		60-113	-		
Acetone	80		-		40-160	-		
Acetonitrile	81		-		70-130	-		
Trichlorofluoromethane	85		-		70-130	-		
iso-Propyl Alcohol	93		-		40-160	-		
Acrylonitrile	104		-		70-130	-		
Pentane	92		-		70-130	-		
Ethyl ether	89		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1625290-3								
1,1-Dichloroethene	96		-		70-130	-		
tert-Butyl Alcohol	92		-		70-130	-		
Methylene chloride	101		-		70-130	-		
3-Chloropropene	99		-		70-130	-		
Carbon disulfide	95		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	98		-		70-130	-		
trans-1,2-Dichloroethene	97		-		70-130	-		
1,1-Dichloroethane	98		-		70-130	-		
Methyl tert butyl ether	91		-		70-130	-		
Vinyl acetate	76		-		70-130	-		
2-Butanone	90		-		70-130	-		
cis-1,2-Dichloroethene	101		-		70-130	-		
Ethyl Acetate	107		-		70-130	-		
Chloroform	98		-		70-130	-		
Tetrahydrofuran	92		-		70-130	-		
2,2-Dichloropropane	79		-		70-130	-		
1,2-Dichloroethane	80		-		70-130	-		
n-Hexane	110		-		70-130	-		
Isopropyl Ether	100		-		70-130	-		
Ethyl-Tert-Butyl-Ether	95		-		70-130	-		
1,2-Dichloroethene (total)	99		-			-		
1,2-Dichloroethene (total)	99		-			-		
1,1,1-Trichloroethane	87		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1625290-3								
1,1-Dichloropropene	96		-		70-130	-		
Benzene	96		-		70-130	-		
Carbon tetrachloride	88		-		70-130	-		
Cyclohexane	111		-		70-130	-		
Tertiary-Amyl Methyl Ether	92		-		70-130	-		
Dibromomethane	95		-		70-130	-		
1,2-Dichloropropane	107		-		70-130	-		
Bromodichloromethane	99		-		70-130	-		
1,4-Dioxane	104		-		70-130	-		
Trichloroethene	108		-		70-130	-		
2,2,4-Trimethylpentane	111		-		70-130	-		
Methyl Methacrylate	96		-		40-160	-		
Heptane	100		-		70-130	-		
cis-1,3-Dichloropropene	105		-		70-130	-		
4-Methyl-2-pentanone	99		-		70-130	-		
trans-1,3-Dichloropropene	87		-		70-130	-		
1,1,2-Trichloroethane	104		-		70-130	-		
Toluene	103		-		70-130	-		
1,3-Dichloropropane	97		-		70-130	-		
2-Hexanone	105		-		70-130	-		
Dibromochloromethane	112		-		70-130	-		
1,2-Dibromoethane	105		-		70-130	-		
Butyl Acetate	96		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1625290-3								
Octane	103		-		70-130	-		
Tetrachloroethene	110		-		70-130	-		
1,1,1,2-Tetrachloroethane	102		-		70-130	-		
Chlorobenzene	110		-		70-130	-		
Ethylbenzene	110		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
Bromoform	116		-		70-130	-		
Styrene	109		-		70-130	-		
1,1,2,2-Tetrachloroethane	115		-		70-130	-		
o-Xylene	111		-		70-130	-		
1,2,3-Trichloropropane	99		-		70-130	-		
Nonane (C9)	99		-		70-130	-		
Isopropylbenzene	104		-		70-130	-		
Bromobenzene	101		-		70-130	-		
o-Chlorotoluene	104		-		70-130	-		
n-Propylbenzene	106		-		70-130	-		
p-Chlorotoluene	107		-		70-130	-		
4-Ethyltoluene	106		-		70-130	-		
1,3,5-Trimethylbenzene	107		-		70-130	-		
tert-Butylbenzene	106		-		70-130	-		
1,2,4-Trimethylbenzene	111		-		70-130	-		
Decane (C10)	112		-		70-130	-		
Benzyl chloride	102		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1625290-3								
1,3-Dichlorobenzene	114		-		70-130	-		
1,4-Dichlorobenzene	109		-		70-130	-		
sec-Butylbenzene	104		-		70-130	-		
p-Isopropyltoluene	102		-		70-130	-		
1,2-Dichlorobenzene	111		-		70-130	-		
n-Butylbenzene	110		-		70-130	-		
1,2-Dibromo-3-chloropropane	92		-		70-130	-		
Undecane	117		-		70-130	-		
Dodecane (C12)	116		-		70-130	-		
1,2,4-Trichlorobenzene	110		-		70-130	-		
Naphthalene	110		-		70-130	-		
1,2,3-Trichlorobenzene	106		-		70-130	-		
Hexachlorobutadiene	116		-		70-130	-		

Lab Duplicate Analysis Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1625290-5 QC Sample: L2215966-02 Client ID: SSD EFF						
Dichlorodifluoromethane	0.440	0.455	ppbV	3		25
Chloromethane	0.355	0.359	ppbV	1		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	ND	ND	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	ND	ND	ppbV	NC		25
Trichlorofluoromethane	ND	ND	ppbV	NC		25
iso-Propyl Alcohol	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1625290-5 QC Sample: L2215966-02 Client ID: SSD EFF						
2-Butanone	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25
Chloroform	ND	ND	ppbV	NC		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	ND	ND	ppbV	NC		25
Carbon tetrachloride	ND	ND	ppbV	NC		25
Cyclohexane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Xylene (Total)	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	2.86	2.82	ppbV	1		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1625290-5 QC Sample: L2215966-02 Client ID: SSD EFF						
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Toluene	0.232	0.225	ppbV	3		25
1,2-Dichloroethene (total)	ND	ND	ppbV	NC		25
2-Hexanone	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,3-Dichloropropene, Total	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	0.265	0.259	ppbV	2		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25

Lab Duplicate Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1625290-5 QC Sample: L2215966-02 Client ID: SSD EFF						
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: ENDZONE

Serial_No:04112216:20
Lab Number: L2215966

Project Number:

Report Date: 04/11/22

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2215966-01	EFF COMB	956	6.0L Can	03/24/22	381502	L2214641-02	Pass	-29.3	1.3	-	-	-	-
L2215966-02	SSD EFF	2698	6.0L Can	03/24/22	381502	L2214641-03	Pass	-29.6	3.2	-	-	-	-
L2215966-03	SVE EFF	2565	6.0L Can	03/24/22	381502	L2214641-02	Pass	-29.6	3.2	-	-	-	-

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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-02
Client ID: CAN 1669 SHELF 41
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 03/22/22 21:20
Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-02
Client ID: CAN 1669 SHELF 41
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-02
Client ID: CAN 1669 SHELF 41
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2214641**Project Number:** CANISTER QC BAT**Report Date:** 04/11/22**Air Canister Certification Results****Lab ID:** L2214641-02**Date Collected:** 03/21/22 20:00**Client ID:** CAN 1669 SHELF 41**Date Received:** 03/22/22**Sample Location:****Field Prep:** Not Specified**Sample Depth:**

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2214641**Project Number:** CANISTER QC BAT**Report Date:** 04/11/22**Air Canister Certification Results**

Lab ID: L2214641-02

Date Collected: 03/21/22 20:00

Client ID: CAN 1669 SHELF 41

Date Received: 03/22/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

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

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	94		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	94		60-140

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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-02
Client ID: CAN 1669 SHELF 41
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 03/22/22 21:20
Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-02
Client ID: CAN 1669 SHELF 41
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2214641**Project Number:** CANISTER QC BAT**Report Date:** 04/11/22**Air Canister Certification Results**

Lab ID: L2214641-02

Date Collected: 03/21/22 20:00

Client ID: CAN 1669 SHELF 41

Date Received: 03/22/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	93		60-140



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 03/22/22 21:59
Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2214641**Project Number:** CANISTER QC BAT**Report Date:** 04/11/22**Air Canister Certification Results**

Lab ID: L2214641-03

Date Collected: 03/21/22 20:00

Client ID: CAN 611 SHELF 42

Date Received: 03/22/22

Sample Location:

Field Prep: Not Specified

Sample Depth:

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

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	96		60-140

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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 03/22/22 21:59
Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



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

Lab Number: L2214641
Report Date: 04/11/22

Air Canister Certification Results

Lab ID: L2214641-03
Client ID: CAN 611 SHELF 42
Sample Location:

Date Collected: 03/21/22 20:00
Date Received: 03/22/22
Field Prep: Not Specified

Sample Depth:

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	94		60-140



Project Name: ENDZONE**Lab Number:** L2215966**Project Number:** Not Specified**Report Date:** 04/11/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

N/A Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2215966-01A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2215966-02A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L2215966-03A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

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

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

Data Qualifiers

the identification is based on a mass spectral library search.

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2215966
Report Date: 04/11/22

REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D/8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

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

Mansfield Facility

SM 2540D: TSS

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

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

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

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

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

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

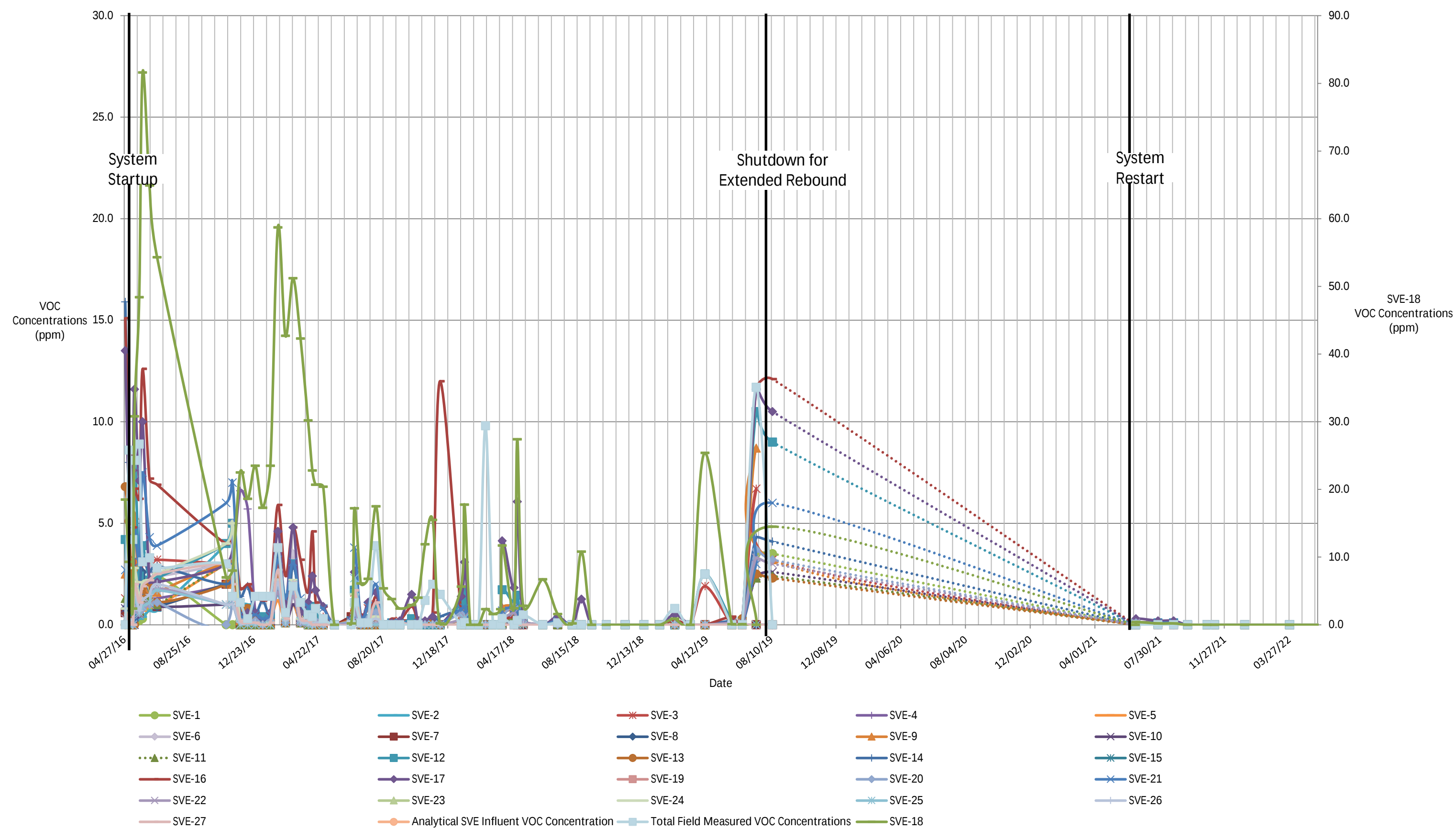
EPA 245.1 Hg.

SM2340B

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

Appendix C
Graphs depicting VOCs Screening and Lab Results – SSD and SVE
Systems

Influent SVE VOC Concentrations (ppm) - field screening and laboratory results



Influent SSD VOC Concentrations (ppm) - field screening and laboratory results

