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Former Ozone Industries, Inc. Site, Ozone Park, Queens New York

NYSDEC Site Number: 2-41-033

July 2023 Progress Report: June 2022 through May 2023 (12-months)



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1. Introduction

On behalf of Endzone Inc. (Endzone), AECOM has prepared this annual (12-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 12-month period of June 2022 through May 2023.

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 New York State Department of Health (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 SSD) 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 12-month progress report summarizing system operations (since system restart in June 2021) is 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 bi-monthly O&M visits and sampling events reported herein were conducted by Clean Globe Environmental (Clean Globe) under subcontract 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 (one round during this 12-month period) and the field data collected during each of the O&M site visits during this period (June 2022 through May 2023). 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 July 26, September 26, and December 20, 2022 and February 6, and May 3, 2023. Upon arrival of the O&M subcontractor, during the May event, the overhead door to the bay where the system mechanical equipment is housed was unable to be opened due to damage to the exterior opening mechanism and a full O&M event was unable to be completed. AECOM is currently working with local subcontractors to fix the bay door to regain access to the system so additional O&M events have not been completed since May; however, the daily reports sent out to the engineering team have shown that both the SSD and SVE systems are operating as intended.

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 photoionization detector (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 286 standard cubic feet per minute (SCFM) (with a range between 282 SCFM and 292 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 35.0 SCFM to a maximum of 65.1 SCFM, all above the minimum designed 30 SCFM.

Influent volatile organic compounds (VOCs) were measured with a calibrated 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 349 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 4.6 IWC which is consistent with past operational conditions. If during O&M events there were issues with the monitoring equipment onsite used to measure vacuum and flowrates from the individual legs, manual methods were used to confirm that vacuum was present at each location. It is estimated that the vacuum at each location was similar to those recorded during other events since all other system readings were similar to those which have historically been observed.

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 were 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 were 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 'NM' ("Not Measurable") noted as their measurement. As previously mentioned, during O&M events when equipment was malfunctioning (and measuring 0.00 IWC at the monitoring points), vacuum was manually observed at each location. Other system parameters which were able to be measured were similar to historic readings and suggest that the vacuum at the monitoring points would be similar to those previously observed as well.

During the July 2022 monitoring event, consistent vacuum influence was observed across all accessible shallow points at an average of 0.28 IWC and remained above 0.05 IWC for the duration of the monitoring period, 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 0.51 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

One round of air samples from the system were collected on July 26th, 2022 from the SVE influent, SSD influent (both before carbon treatment), and the total combined effluent (following carbon treatment). Per compliance requirements established in a memorandum issued by the NYSDEC on February 28, 2003 (Substantive Compliance with Air Requirements), the emission 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 0.0045 lbs/hr, whereas; the mass removal from the SSD system is approximately 0.0006 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 0.0075 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 in 2016.

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.

It is expected that the necessary door repairs to the bay containing the system mechanical equipment will occur in summer 2023 and that an O&M event will be completed once access is gained. Until then, the daily operation status emails will continue to be checked to make sure that both systems are running as intended.

Future Actions

Due to the consistency of the performance of the system, the O&M events will continue at a bi-monthly (every two months) basis once the overhead door is repaired. AECOM will also continue to perform sporadic site visits throughout the next twelve-month period to ensure that the storage bays have not been tampered or damaged. Air samples be taken at the SVE influent and total effluent following carbon treatment on a semi-annual basis (Summer 2023 and Winter 2024), while the system is operational. SSD influent and effluent samples will be suspended once approval from NYSDEC is received to suspend temporarily the operation of the SSD. See below Section for more details. The results of the monitoring will be provided in the annual (12-month) report to NYSDEC in July 2024.

SSD Suspension – Approval Request to NYSDEC

The SSD was installed with the intention of mitigating the subsurface vapors from potentially entering occupied bays used for commercial purposes, but with such low concentrations being observed in the subsurface and the inactive status of the bays, it is recommended that this system is turned off. In addition, a vapor barrier was installed in the bays at the completion of remedial actions and prior to new concrete floors being installed. Furthermore, ambient air sampling in the bays previously reported did not indicate that vapor intrusion was occurring (regardless, the bays are not occupied). Lastly, the suspension of the SSD will also prevent potential mechanical issues with the equipment in the future once the bays are occupied and the SSD is deemed necessary.

During recent conversations with NYSDEC (May 22, 2023, conference call), the representative from the NY Department of Citywide Administrative Services (DCAS) indicated that there has been a change in the intended future use of the bays on site where monitoring is currently occurring (bays 8 through 15 as shown on Figure 2). When installed, the original intention was that these bays would eventually be rented out by local businesses and would be occupied by personnel at times; however, it is now AECOM’s understanding that these bays will not be rented out to the public and that they will remain vacant. Without current (or potential future) occupants in these bay, the primary function of the SSD system, to create a slight vacuum beneath the slab and mitigate vapors from potentially entering the bays, is moot (plus, as noted above, there is a very robust existing vapor barrier present).

Therefore, this report also serves as a formal petition to NYSDEC to turn off the site SSD system until a future date, if and when the bays become occupied, and the SSD is deemed to be needed. This shutdown would only affect the bays which are currently a part of the monitoring plan and would not change the conditions beneath surrounding bays. The SSD system can be restarted if the occupancy status of the bays were to change in the future. Please note that the SVE system is to remain operating to provide continued remediation of the subsurface. Additionally, the operation

of this system will also provide a continued vacuum beneath the slab of the bays where the SSD system had been operating as it continues to potentially improve the subsurface conditions.

TABLES

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	SVE EFF	SSD INFLUENT 062121	SSD INF	SSD EFF	SSD EFF	SSD EFF	TOTAL EFFLUENT 062121	EFF TOTAL	Eff Com	EFF COMB	EFF COMB
	SAMPLING DATE	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022
	LAB SAMPLE ID	L2134418-01	L2150935-03	22A0162-03	L2215966-03	L2239902-03	L2134418-02	L2150935-02	22A0162-02	L2215966-02	L2239902-02	L1906089-05	L2150935-01	22A0162-01	L2215966-01	L2239902-01
ANALYTE	Flow Rate (CFM)	370	468	410	380	341	324	299	295	291	292	694	767	705	671	633
VOCs TO-15	Units															
1,1,1-Trichloroethane	lbs/hr	0.000004	0.000000	0.000002	0.000003	0.000007	0.000001	0.000000	0.000001	0.000001	0.000001	0.000001	0.000000	0.000001	0.000001	0.000008
1,2,4-Trimethylbenzene	lbs/hr	0.000003	0.000000	0.000007	0.000003	0.000086	0.000001	0.000000	0.000004	0.000001	0.000034	0.000001	0.000000	0.000001	0.000003	0.000007
1,4-Dichlorobenzene	lbs/hr	0.000004	0.000000	0.000001	0.000004	0.000008	0.000001	0.000000	0.000001	0.000001	0.000001	0.000002	0.000000	0.000002	0.000002	0.000009
2,2,4-Trimethylpentane	lbs/hr	0.000003	0.000000	0.000000	0.000003	0.000207	0.000001	0.000000	0.000000	0.000001	0.000042	0.000001	0.000000	0.000000	0.000001	0.000007
2-Butanone (MEK)	lbs/hr	0.000000	0.000000	0.000018	0.000004	0.000009	0.000000	0.000000	0.000013	0.000001	0.000003	0.000002	0.000000	0.000032	0.000002	0.000011
Acetone	lbs/hr	0.000008	0.000000	0.000015	0.000007	0.000015	0.000003	0.000000	0.000010	0.000001	0.000001	0.000003	0.000000	0.000025	0.000003	0.000018
Benzene	lbs/hr	0.000002	0.000000	0.000005	0.000004	0.000037	0.000001	0.000000	0.000001	0.000000	0.000034	0.000002	0.000000	0.000001	0.000001	0.000005
Carbon Disulfide	lbs/hr	0.000002	0.000000	0.000005	0.000002	0.000004	0.000000	0.000000	0.000003	0.000000	0.000000	0.000001	0.000000	0.000000	0.000001	0.000005
Chloroform	lbs/hr	0.000009	0.000000	0.000006	0.000011	0.000015	0.000001	0.000000	0.000001	0.000001	0.000001	0.000005	0.000000	0.000010	0.000005	0.000030
Chloromethane	lbs/hr	0.000001	0.000000	0.000001	0.000001	0.000003	0.000001	0.000000	0.000000	0.000001	0.000001	0.000002	0.000000	0.000001	0.000001	0.000003
cis-1,2-Dichloroethene	lbs/hr	0.000231	0.000282	0.000135	0.000280	0.000218	0.000006	0.000004	0.000002	0.000000	0.000005	0.000259	0.000730	0.000164	0.000107	0.000451
Dichlorodifluoromethane	lbs/hr	0.000003	0.000000	0.000003	0.000003	0.000006	0.000003	0.000000	0.000002	0.000002	0.000002	0.000006	0.000000	0.000005	0.000004	0.000007
Ethanol	lbs/hr	0.000033	0.000000	0.000012	0.000028	0.000060	0.000006	0.000000	0.000022	0.000005	0.000051	0.000025	0.000000	0.000020	0.000012	0.000070
Isopropyl Alcohol	lbs/hr	0.000004	0.000000	0.000015	0.000004	0.000001	0.000001	0.000000	0.000011	0.000001	0.000001	0.000002	0.000000	0.000026	0.000002	0.000009
Methylene Chloride	lbs/hr	0.000006	0.000000	0.000005	0.000005	0.000011	0.000001	0.000000	0.000004	0.000001	0.000002	0.000002	0.000000	0.000009	0.000002	0.000013
n-Hexane	lbs/hr	0.000002	0.000000	0.000022	0.000002	0.000558	0.000000	0.000000	0.000015	0.000000	0.000066	0.000004	0.000000	0.000037	0.000001	0.000005
Tertiary butyl Alcohol	lbs/hr	0.000011	0.000000	0.000000	0.000004	0.000010	0.000001	0.000000	0.000000	0.000001	0.000001	0.000002	0.000000	0.000000	0.000002	0.000011
Tetrachloroethene	lbs/hr	0.000244	0.000600	0.000292	0.000555	0.000364	0.000006	0.000027	0.000017	0.000002	0.000041	0.000005	0.000002	0.000002	0.000002	0.000030
Tetrahydrofuran	lbs/hr	0.000005	0.000000	0.000005	0.000004	0.000009	0.000001	0.000000	0.000012	0.000001	0.000001	0.000002	0.000000	0.000008	0.000004	0.000011
Toluene	lbs/hr	0.000003	0.000000	0.000004	0.000002	0.000137	0.000002	0.000000	0.000005	0.000001	0.000221	0.000001	0.000000	0.000001	0.000003	0.000016
trans-1,2-Dichloroethene	lbs/hr	0.000003	0.000005	0.000001	0.000002	0.000005	0.000000	0.000000	0.000000	0.000000	0.000000	0.000009	0.000008	0.000001	0.000001	0.000006
Trichloroethene	lbs/hr	0.002550	0.004014	0.001843	0.002576	0.002746	0.000100	0.000113	0.000007	0.000017	0.000131	0.000029	0.000002	0.000001	0.000001	0.006713
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	0.000000	0.000000	0.000000
Trichlorofluoromethane	lbs/hr	0.000004	0.000000	0.000003	0.000003	0.000007	0.000001	0.000000	0.000002	0.000001	0.000001	0.000005	0.000000	0.000006	0.000001	0.000008
Total Mass Removal Rate	lbs/hr	0.00314	0.00490	0.00240	0.00351	0.00452	0.00014	0.00015	0.00014	0.00004	0.00064	0.00037	0.00074	0.00036	0.00016	0.00745

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

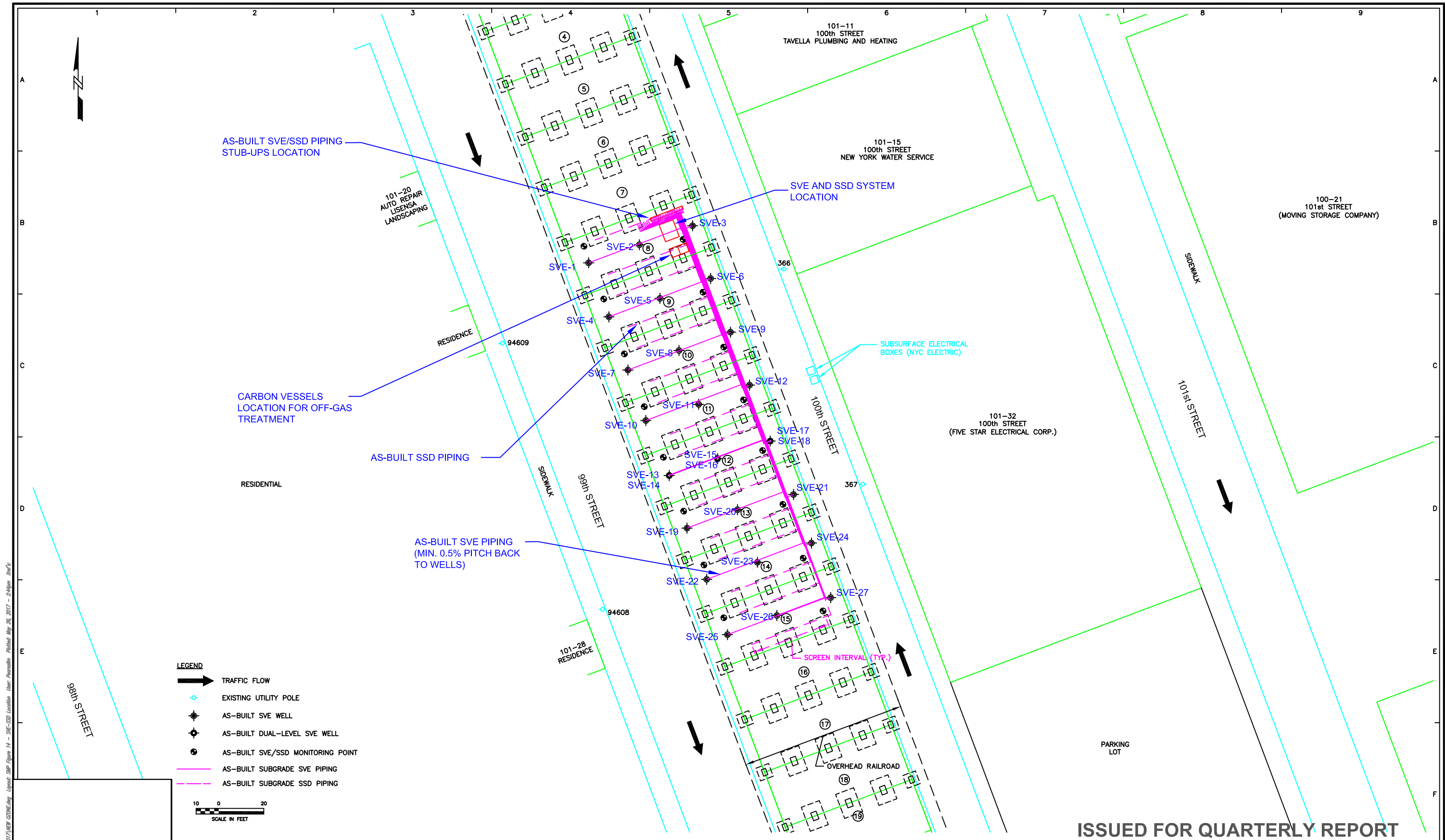
Table 1- Summary O&M Air Sample Analytical Data
Former Ozone Industries, Inc. Site, Ozone Park,
Queens, NY

ANALYTE	LOCATION	SVE Influent					SSD Influent					Total Effluent				
	SAMPLE NAME	SVE INFLUENT 062121	SVE INF	SVE EFF ¹	SVE EFF ²	SVE EFF ³	SSD INFLUENT 062121	SSD INF	SSD EFF ¹	SSD EFF ²	SSD EFF ³	TOTAL EFFLUENT_062121	EFF TOTAL	EFF COM	EFF COMB	EFF COMB
	SAMPLING DATE	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022	6/21/2021	9/20/2021	12/28/2021	3/28/2022	7/26/2022
		After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event	2022 Q3 Sampling Event	After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event	2022 Q3 Sampling Event	After system restart 5 days later	2021 Q3 Sampling Event	2021 Q4 Sampling Event	2022 Q1 Sampling Event	2022 Q3 Sampling Event
	LAB SAMPLE ID	L2134418-01	L2150935-03	22A0162-03	L2215966-03	L2239902-03	L2134418-02	L2150935-02	22A0162-02	L2215966-02	L2239902-02	L1906089-05	L2150935-01	22A0162-01	L2215966-01	L2239902-01
	PID READING(ppm)	1.4	ND	ND	ND	ND	0.7	ND	ND	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	<10.9	NS	<1.1	<1.09	<1.09	<1.09	NS	<1.1	<1.09	<6.82
	1,2,4-Trimethylbenzene	ug/m ³	<4.92	NS	3.40	<4.1	67.4	<0.983	NS	3.9	<0.983	31.4	<0.983	NS	<0.98	1.2
	1,4-Dichlorobenzene	ug/m ³	<6.01	NS	<1.2	<5.01	<12.0	NS	<1.2	<1.2	<1.2	<1.2	NS	<1.2	<1.2	<7.52
	2,2,4-Trimethylpentane	ug/m ³	<4.67	NS	NS	<3.89	162	<0.934	NS	NS	<0.934	38.6	<0.934	NS	<0.934	<5.84
	2-Butanone (MEK)	ug/m ³	NS	NS	<24	<6.13	<14.7	NS	<24	<1.47	2.85	<1.47	NS	<24	<1.47	<9.20
	Acetone*	ug/m ³	<11.9	NS	<19	<9.91	<23.8	2.52	NS	<19	<2.38	<2.38	NS	<19	<2.38	<14.8
	Benzene	ug/m ³	<3.19	NS	3.30	2.85	28.6	0.99	NS	1.1	<0.639	31.3	0.64	NS	<0.64	<0.639
	Carbon Disulfide*	ug/m ³	<3.11	NS	<6.2	<2.59	<6.23	<0.623	NS	<6.2	<0.623	<0.623	NS	<6.2	<0.623	<3.89
	Chloroform	ug/m ³	6.64	NS	3.90	7.81	12	<0.977	NS	<0.98	<0.977	1.88	NS	3.6	2.12	12.6
	Chloromethane	ug/m ³	<2.07	NS	<0.83	<1.72	<4.13	0.85	NS	<0.83	0.733	0.69	0.71	NS	<0.83	0.475
	cis-1,2-Dichloroethene	ug/m ³	167	161	88	197	171	4.80	3.89	1.8	<0.793	4.6	99.5	254	62	42.4
	Dichlorodifluoromethane	ug/m ³	<4.94	NS	2.20	<4.12	<9.89	2.24	NS	2.2	2.18	2.24	2.36	NS	1.8	1.45
	Ethanol	ug/m ³	<47.1	NS	<15	<39.2	<94.2	<9.42	NS	20	<9.42	46.7	9.52	NS	<15	<9.42
	Isopropyl Alcohol	ug/m ³	<6.15	NS	<20	<5.11	<1.23	<1.23	NS	<20	<1.23	<1.23	<1.23	NS	<20	<1.23
	Methylene Chloride	ug/m ³	<8.69	NS	<6.9	<7.23	<17.4	<1.74	NS	<6.9	<1.74	2.13	<1.74	NS	<6.9	<1.74
	n-Hexane	ug/m ³	<3.52	NS	<28	<2.84	437	<0.705	NS	<28	<0.705	60.6	1.71	NS	<28	<0.705
	Tertiary butyl Alcohol	ug/m ³	7.58	NS	NS	<6.31	<15.2	<1.52	NS	NS	<1.52	<1.52	<1.52	NS	NS	<1.52
	Tetrachloroethene	ug/m ³	176	342	190	390	285	5.34	24.3	15	1.8	37.4	1.78	<1.36	<1.4	<1.36
	Tetrahydrofuran	ug/m ³	<7.37	NS	<5.9	<6.13	<14.7	<1.47	NS	11	<1.47	<1.47	<1.47	NS	<5.9	1.61
	Toluene	ug/m ³	<3.77	NS	2.50	<3.14	107	1.84	NS	4.7	0.874	202	<0.754	NS	<0.75	1.03
	trans-1,2-Dichloroethene	ug/m ³	<3.96	<5.67	<0.79	<3.3	<7.93	<0.793	<0.793	<0.79	<0.793	<0.793	3.45	2.62	<0.79	<0.793
	Trichloroethene	ug/m ³	1,840	2,290	1,200	1810	2150	82.20	101	6.3	15.4	120	11.0	<1.07	<1.1	<1.07
	Naphthalene	ug/m ³	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Trichlorofluoromethane	ug/m ³	<5.62	NS	<4.5	<4.68	<11.2	<1.12	NS	<4.5	<1.12	1.16	1.84	NS	<4.5	<1.12
	Total VOCs	ug/m ³	2,949	4,640	2,185	3,025	3,960	113	130	123	36	587	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

FIGURES

File: A:\Projects\New_Ozone_Park\Drawings\2017\NEW_OZONE.dwg Layout: SMP Figure 14 - SVE/SSD Location User: Peralta Date: May 25, 2017 - 2:46pm Scale: 1"=20'



- LEGEND**
- TRAFFIC FLOW
 - EXISTING UTILITY POLE
 - AS-BUILT SVE WELL
 - AS-BUILT DUAL-LEVEL SVE WELL
 - AS-BUILT SVE/SSD MONITORING POINT
 - AS-BUILT SUBGRADE SVE PIPING
 - AS-BUILT SUBGRADE SSD PIPING



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		

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

PROJ. NUMBER: 60221764

DATE: 05/25/17

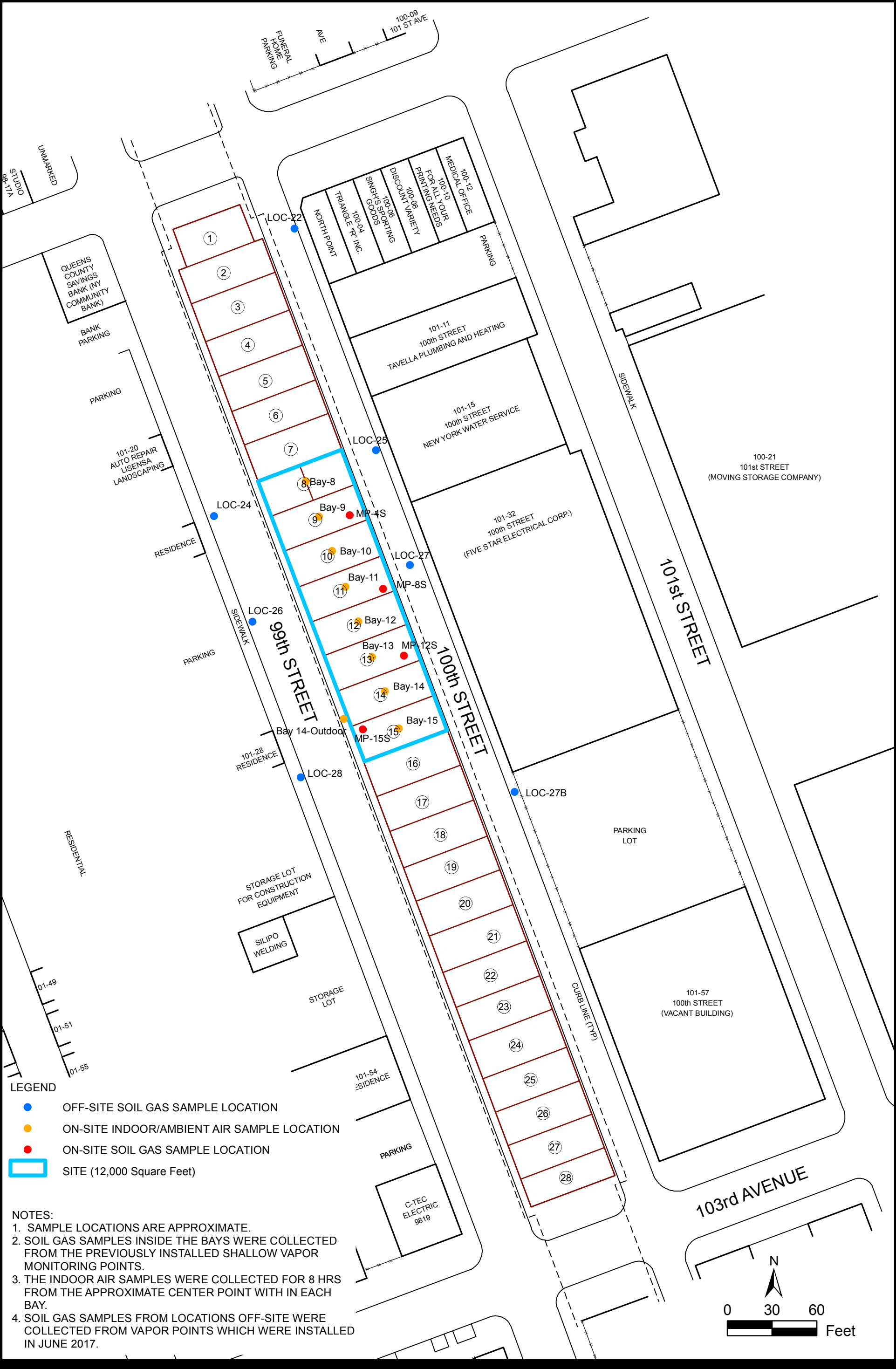
**LOCATION OF SOIL VAPOR EXTRACTION
AND SUB SLAB DEPRESSURIZATION
TREATMENT SYSTEMS**

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

Appendix A

System Summary Tables

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	07/26/22	09/26/22	12/20/22	02/06/23	05/03/23
TYPE OF SYSTEM CHECK	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full	Site Visit
FIELD TECHNICIAN	MP	CG	CG	CG	CG	CG	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	0.00	0.00	0.00	0.00	NM
MP-1D	-0.31	-0.20	-0.20	-0.05	-0.05	-0.05	0.00	0.00	0.00	-0.10	0.00	0.00	0.00	NM
MP-2S	-0.24	-0.05	-0.05	0.00	-0.05	-0.05	-0.10	-0.10	-0.10	-0.20	0.00	0.00	0.00	NM
MP-2D	-0.53	-0.05	-0.05	-0.05	-0.60	-0.60	-0.50	-0.50	-0.40	-0.60	0.00	0.00	0.00	NM
MP-3S	NM	NM	-0.05	-0.50	-0.50	-0.50	-0.40	-0.40	-0.30	-0.40	NM	NM	NM	NM
MP-3D	NM	NM	-0.05	-0.90	-0.90	-0.80	-0.50	-0.50	-0.50	-0.50	NM	NM	NM	NM
MP-4S	NM	NM	-0.05	-0.05	-0.05	-0.05	0.00	0.00	0.00	0.00	NM	NM	NM	NM
MP-4D	NM	NM	-0.10	-0.05	-0.05	-0.05	-0.10	-0.10	-0.10	-0.10	NM	NM	NM	NM
MP-5S	-0.27	-0.05	-0.05	-0.05	-0.05	-0.05	0.00	0.00	0.00	0.00	NM	NM	0.00	NM
MP-5D	-0.24	-0.05	-0.05	-0.05	-0.05	-0.05	-0.10	-0.10	-0.20	-0.10	NM	NM	0.00	NM
MP-6S	-0.28	-0.05	-0.05	-0.05	-0.05	-0.05	0.00	-0.10	-0.20	-0.20	NM	NM	0.00	NM
MP-6D	-0.54	-0.05	-0.05	-0.80	-0.80	-0.70	-0.50	-0.50	-0.60	-0.50	NM	NM	0.00	NM
MP-7S	-0.25	-0.05	-0.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-7D	-0.11	-0.05	-0.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-8S	-0.43	-0.05	-0.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-8D	-0.76	-0.10	-0.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-9S	-0.43	-0.05	-0.05	-0.60	-0.60	-0.50	-0.40	-0.40	-0.50	-0.40	0.00	0.00	0.00	NM
MP-9M	-0.48	-0.05	-0.05	-1.30	-1.30	-1.30	-1.00	-1.00	-1.10	-1.00	0.00	0.00	0.00	NM
MP-9D	-0.79	-0.10	-0.10	-1.10	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	0.00	0.00	0.00	NM
MP-10S	-0.44	-0.05	-0.05	-0.90	-0.80	-0.80	-0.80	-0.80	-0.80	-1.00	0.00	0.00	0.00	NM
MP-10M	-0.74	-0.05	-0.05	-0.60	-0.60	-0.60	-0.50	-0.50	-0.60	-1.10	0.00	0.00	0.00	NM
MP-10D	-0.83	-0.10	-0.10	-1.10	-1.10	-1.00	-0.90	-0.90	-1.00	-1.20	0.00	0.00	0.00	NM
MP-11S	-0.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-11D	-0.84	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-12S	-0.24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-12D	-0.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MP-13S	-0.32	-0.10	-0.10	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-13D	-0.40	-0.20	-0.20	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-14S	-0.32	-0.05	-0.05	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-14D	-0.42	-0.10	-0.10	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-15S	-0.22	-0.05	-0.05	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-15D	-0.24	-0.10	-0.10	NM	NM	NM	NM	NM	NM	NM	0.10	0.10	0.10	NM
MP-16S	-0.20	-0.05	-0.05	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM
MP-16D	-0.36	-0.10	-0.10	NM	NM	NM	NM	NM	NM	NM	0.00	0.00	0.00	NM

Notes

NM - Not Measureable (Due to faulty monitoring equipment, inaccessability, etc.)
"H₂O - Inches of water column

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

DATE OF O&M VISIT		11/09/21	01/04/22	03/28/22	05/23/22	07/26/22	09/26/22	12/20/22	02/06/23	05/03/23
SSD System Status (Up / Down / Off)										
	Status On Arrival	Up	Up	Down	Down	Up	Up	Up	Up	Up
	Overall Up Time Since Restart	87%	91%	93%	81%	84%	86%	88%	89%	NM
System Operation Status Between O&M Events										
	On Arrival									
	% Up Time	100%	100%	100%	20%	100%	100%	100%	100%	100%
Sub Slab Depression Blower (B-2)										
	Days Between O&M Events	14	56	83	56	64	62	85	48	NM
	Days Of Operations	146	202	285	341	405	467	552	600	NM
SSD Blower Operation										
	Hour Meter (hrs)	24,713.1	26,060.6	28,048.0	28,320.5	29,858.1	31,343.7	33,385.8	34,535.7	NM
	Hours Between Events	278.5	1,347.5	1,987.4	272.5	1,537.6	1,485.6	2,042.1	1,149.9	NM
	Time Between Events (hrs)	333.3	1,343.6	1,992.9	1,343.5	1,535.6	1,488.5	2,038.9	1,152.6	NM
	Time Since Start Up (hrs)	3,503.3	4,846.8	6,839.8	8,183.3	9,718.8	11,207.4	13,246.3	14,398.8	NM
	VFD Frequency (Hz)	59.9	59.9	59.9	59.0	59.4	59.0	59.0	59.9	NM
	VFD Load (Amps)	16.0	16.3	16.2	15.8	15.4	15.6	16.4	16.5	NM
Pressure ("H ₂ O)										
	SSD-1	-2.4	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.0	NM
	SSD-2	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-2.3	NM
	SSD-3	-3.4	-3.5	-3.5	-3.4	-3.4	-3.4	-3.4	-3.0	NM
	SSD-4	-3.7	-3.5	-3.5	-3.4	-3.4	-3.4	-3.4	-3.2	NM
	SSD-5	-3.8	-3.6	-3.5	-3.5	-3.5	-3.5	-3.5	-3.0	NM
	SSD-6	-3.9	-3.8	-3.8	-3.8	-3.8	-3.8	-3.8	-3.1	NM
	SSD-7	-3.9	-3.8	-3.8	-3.8	-3.8	-3.8	-3.8	-3.2	NM
	SSD-8	-3.9	-3.8	-3.8	-3.8	-3.8	-3.8	-3.8	-3.4	NM
Soil Vapor Velocity (ft/min)										
	SSD-1	2,889	2,710	2,643	2,613	2,627	1,107	2,952	2,986	NM
	SSD-2	2,705	2,689	2,589	2,555	2,561	1,063	2,183	2,814	NM
	SSD-3	2,798	2,751	2,731	2,725	2,735	1,070	2,833	2,692	NM
	SSD-4	2,938	2,813	2,800	2,786	2,746	992	2,320	2,669	NM
	SSD-5	2,400	2,410	2,400	2,410	2,433	953	2,492	2,392	NM
	SSD-6	2,241	2,253	2,230	2,221	2,239	830	2,401	768	NM
	SSD-7	2,015	2,019	2,100	2,157	2,168	760	2,580	1,652	NM
	SSD-8	1,973	1,810	1,800	1,811	1,901	714	1,972	998	NM
Soil Vapor Flow Rate (ft ³ /min)										
	SSD-1	63.03	59.12	57.66	57.01	57.31	54.34	64.40	65.14	NM
	SSD-2	59.01	58.66	56.48	55.74	55.87	52.18	47.63	61.39	NM
	SSD-3	61.04	60.02	59.58	59.45	59.67	52.52	61.81	58.73	NM
	SSD-4	64.10	61.37	61.09	60.78	59.91	48.69	50.61	58.23	NM
	SSD-5	52.36	52.58	52.36	52.58	53.08	46.78	54.37	52.19	NM
	SSD-6	48.89	49.15	48.65	48.45	48.85	40.74	52.38	16.76	NM
	SSD-7	43.96	44.05	45.81	47.06	47.30	37.31	56.29	36.04	NM
	SSD-8	43.04	39.49	39.27	39.51	41.47	35.05	43.02	21.77	NM
VOCs (ppm _v)										
	SSD-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SSD-8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
SSD Sample Ports										
	VOCs (ppm _v)									
	SSD-SP01	2.0	2.0	1.4	1.9	0.5	0.2	0.2	15.8	NM
	SSD-SP04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	NM

- 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) NM - Not Measureable (Due to faulty monitoring equipment, inaccessability, etc.)

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

DATE OF O&M VISIT		11/09/21	01/04/22	03/28/22	05/23/22	07/26/22	09/26/22	12/20/22	02/06/23	05/03/23
SVE System Status (Up / Down / Off)										
	Status On Arrival	UP	UP	Down	Down	Up	Up	Down	Up	Up
	Overall Up Time Since Start Up	100%	100%	100%	100%	100%	100%	100%	100%	NM
System Status Between O&M Events										
	On Arrival									
	% Up Time	100%	100%	91%	20%	100%	100%	21%	100%	NM
Soil Vapor Extraction Blower (B-1)										
	Days Between O&M Events	14	56	83	56	64	62	85	48	NM
	Days Of Operations	146	202	285	341	405	467	552	600	NM
	SVE Blower Operation									
	Hour Meter (hrs)	19,637.0	20,984.0	22,802.5	23,074.9	24,612.4	26,098.1	26,522.9	27,674.0	NM
	Hours Between Events	278.9	1,347.0	1,818.5	272.4	1,537.5	1,485.7	424.8	1,151.1	NM
	Time Between Events (hrs)	333.5	1,343.5	1,993.0	1,343.6	1,535.4	1,488.6	2,038.7	1,152.8	NM
	Time Since Restart (hrs)	3,504.5	4,848.0	6,841.0	8,184.6	9,720.0	11,208.6	13,247.3	14,400.0	NM
	VFD Frequency (Hz)	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	NM
	VFD Load (Amps)	54.6	56.5	55.7	53.1	51.8	51.9	55.2	55.0	NM
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	-3.0	-3.0	-3.0	-3.1	-3.1	NM	NM	NM	NM
	SVE-10	-3.0	-3.0	-3.0	-3.1	-3.1	NM	NM	NM	NM
	SVE-15	-5.1	-4.9	-4.7	-4.8	-4.9	NM	NM	NM	NM
	SVE-13	-4.4	-4.7	-4.7	-4.8	-4.9	NM	NM	NM	NM
	SVE-14	-9.2	-9.0	-5.0	-5.0	-4.9	NM	NM	NM	NM
	SVE-16	-3.5	-3.6	-3.5	-3.6	-3.5	NM	NM	NM	NM
	SVE-18	-3.2	-3.2	-3.4	-3.5	-3.4	NM	NM	NM	NM
	SVE-17	-2.0	-2.0	-2.0	-2.0	-2.0	NM	NM	NM	NM
	SVE-12	-9.3	-4.0	-4.0	-6.1	-4.0	NM	NM	NM	NM
	SVE-9	-9.2	-9.1	-9.0	-9.0	-8.9	NM	NM	NM	NM
	SVE-21	-8.1	-8.6	-8.5	-8.4	-8.4	NM	NM	NM	NM
	SVE-3	-3.5	-3.7	-3.7	-3.7	-3.8	NM	NM	NM	NM
	SVE-1	-10.8	-10.8	-10.5	-10.3	-10.0	NM	NM	NM	NM
	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	-9.5	-8.5	-8.5	-8.2	-8.0	NM	NM	NM	NM
	SVE-19	-2.2	-2.0	-2.0	-2.0	-2.0	NM	NM	NM	NM
	SVE-23	-1.5	-1.0	-1.0	-1.0	-1.2	NM	NM	NM	NM
	SVE-22	-0.7	-0.9	-0.9	-0.9	-1.0	NM	NM	NM	NM
	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	1599	1251	1240	1235	1250	1587.6	1368	1437	NM
	SVE-10	1999	1996	1939	1951	1975	1999.2	1211	1563	NM
	SVE-15	1585	1480	1456	1459	1465	1575.84	1499	1575	NM
	SVE-13	2700	2531	2520	2539	2542	2719.5	2495	2722	NM
	SVE-14	1500	1598	1556	1561	1552	1249.5	110	980	NM
	SVE-16	1293	1295	1275	1279	1281	1117.2	1047	1115	NM
	SVE-18	498	500	490	510	598	761.46	673	698	NM
	SVE-17	2031	2097	1998	2013	2067	1969.8	1769	1537	NM
	SVE-12	3535	3584	3483	3507	3585	3519.18	3030	3538	NM
	SVE-9	3019	3000	2995	3004	3016	3822	3028	3942	NM
	SVE-21	1478	2511	2498	2687	2691	1705.2	1386	1456	NM
	SVE-3	4398	4097	4007	4019	4023	5562.48	4674	4955	NM
	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	2839	2533	2510	2505	2610	3125.22	3018	3215	NM
	SVE-19	1010	1002	997	1012	1047	984.9	915	1010	NM
	SVE-23	658	700	695	718	828	696.78	605	492	NM
	SVE-22	267	310	304	331	354	255.78	264	282	NM
	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		11/09/21	01/04/22	03/28/22	05/23/22	07/26/22	09/26/22	12/20/22	02/06/23	05/03/23
SVE System Status (Up / Down / Off)										
	Status On Arrival	UP	UP	Down	Down	Up	Up	Down	Up	Up
	Overall Up Time Since Start Up	100%	100%	100%	100%	100%	100%	100%	100%	NM
	Soil Vapor Flow Rate (ft ³ /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	34.9	27.3	27.1	26.9	27.3	34.6	29.8	31.4	NM
	SVE-10	43.6	43.5	42.3	42.6	43.1	43.6	26.4	34.1	NM
	SVE-15	34.6	32.3	31.8	31.8	32.0	34.4	32.7	34.4	NM
	SVE-13	58.9	55.2	55.0	55.4	55.5	59.3	54.4	59.4	NM
	SVE-14	32.7	34.9	33.9	34.1	33.9	27.3	2.4	21.4	NM
	SVE-16	28.2	28.3	27.8	27.9	27.9	24.4	22.8	24.3	NM
	SVE-18	10.9	10.9	10.7	11.1	13.0	16.6	14.7	15.2	NM
	SVE-17	44.3	45.7	43.6	43.9	45.1	43.0	38.6	33.5	NM
	SVE-12	77.1	78.2	76.0	76.5	78.2	76.8	66.1	77.2	NM
	SVE-9	65.9	65.4	65.3	65.5	65.8	83.4	66.1	86.0	NM
	SVE-21	32.2	54.8	54.5	58.6	58.7	37.2	30.2	31.8	NM
	SVE-3	95.9	89.4	87.4	87.7	87.8	121.4	102.0	108.1	NM
	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	61.9	55.3	54.8	54.7	56.9	68.2	65.8	70.1	NM
	SVE-19	22.0	21.9	21.8	22.1	22.8	21.5	20.0	22.0	NM
	SVE-23	14.4	15.3	15.2	15.7	18.1	15.2	13.2	10.7	NM
	SVE-22	5.8	6.8	6.6	7.2	7.7	5.6	5.8	6.2	NM
	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
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	SVE-22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
	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										
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	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	10.0	0.8	0.7	8.6	NM
	SVE-SP04	NM	NM	NM	NM	5.4	0.5	0.5	13.0	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) NA - Not Appliacable (Point removed from monitoring program), NM - Not Measureable (Due to faulty monitoring equipment, inaccessability, etc.)

Appendix B
System Air Sample Lab Results – July 2022



ANALYTICAL REPORT

Lab Number:	L2239902
Client:	AECOM 250 Apollo Drive Chelmsford, MA 01824
ATTN:	Matthew Pearsall
Phone:	(860) 263-5763
Project Name:	ENDZONE
Project Number:	Not Specified
Report Date:	08/05/22

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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: L2239902
Report Date: 08/05/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2239902-01	EFF COMBINE	SOIL_VAPOR	OZONE PARK	07/26/22 10:20	07/26/22
L2239902-02	SSD EFF	SOIL_VAPOR	OZONE PARK	07/26/22 10:50	07/26/22
L2239902-03	SVE EFF	SOIL_VAPOR	OZONE PARK	07/26/22 11:20	07/26/22

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

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: L2239902
Report Date: 08/05/22

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on July 14, 2022. The canister certification results are provided as an addendum.

L2239902-01D and -03D: The samples have elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the samples.

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

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 08/05/22

AIR

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-01 D
 Client ID: EFF COMBINE
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:20
 Date Received: 07/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 08/05/22 02:20
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	1.25	--	ND	6.18	--		6.25
Chloromethane	ND	1.25	--	ND	2.58	--		6.25
Freon-114	ND	1.25	--	ND	8.74	--		6.25
Vinyl chloride	ND	1.25	--	ND	3.20	--		6.25
1,3-Butadiene	ND	1.25	--	ND	2.77	--		6.25
Bromomethane	ND	1.25	--	ND	4.85	--		6.25
Chloroethane	ND	1.25	--	ND	3.30	--		6.25
Ethanol	ND	31.2	--	ND	58.8	--		6.25
Vinyl bromide	ND	1.25	--	ND	5.47	--		6.25
Acetone	ND	6.25	--	ND	14.8	--		6.25
Trichlorofluoromethane	ND	1.25	--	ND	7.02	--		6.25
Isopropanol	ND	3.12	--	ND	7.67	--		6.25
1,1-Dichloroethene	ND	1.25	--	ND	4.96	--		6.25
Tertiary butyl Alcohol	ND	3.12	--	ND	9.46	--		6.25
Methylene chloride	ND	3.12	--	ND	10.8	--		6.25
3-Chloropropene	ND	1.25	--	ND	3.91	--		6.25
Carbon disulfide	ND	1.25	--	ND	3.89	--		6.25
Freon-113	ND	1.25	--	ND	9.58	--		6.25
trans-1,2-Dichloroethene	ND	1.25	--	ND	4.96	--		6.25
1,1-Dichloroethane	ND	1.25	--	ND	5.06	--		6.25
Methyl tert butyl ether	ND	1.25	--	ND	4.51	--		6.25
2-Butanone	ND	3.12	--	ND	9.20	--		6.25
cis-1,2-Dichloroethene	48.0	1.25	--	190	4.96	--		6.25



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-01 D
 Client ID: EFF COMBINE
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:20
 Date Received: 07/26/22
 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	3.12	--	ND	11.2	--		6.25
Chloroform	2.59	1.25	--	12.6	6.10	--		6.25
Tetrahydrofuran	ND	3.12	--	ND	9.20	--		6.25
1,2-Dichloroethane	ND	1.25	--	ND	5.06	--		6.25
n-Hexane	ND	1.25	--	ND	4.41	--		6.25
1,1,1-Trichloroethane	ND	1.25	--	ND	6.82	--		6.25
Benzene	ND	1.25	--	ND	3.99	--		6.25
Carbon tetrachloride	ND	1.25	--	ND	7.86	--		6.25
Cyclohexane	1.56	1.25	--	5.37	4.30	--		6.25
1,2-Dichloropropane	ND	1.25	--	ND	5.78	--		6.25
Bromodichloromethane	ND	1.25	--	ND	8.37	--		6.25
1,4-Dioxane	ND	1.25	--	ND	4.50	--		6.25
Trichloroethene	527	1.25	--	2830	6.72	--		6.25
2,2,4-Trimethylpentane	ND	1.25	--	ND	5.84	--		6.25
Heptane	ND	1.25	--	ND	5.12	--		6.25
cis-1,3-Dichloropropene	ND	1.25	--	ND	5.67	--		6.25
4-Methyl-2-pentanone	ND	3.12	--	ND	12.8	--		6.25
trans-1,3-Dichloropropene	ND	1.25	--	ND	5.67	--		6.25
1,1,2-Trichloroethane	ND	1.25	--	ND	6.82	--		6.25
Toluene	1.76	1.25	--	6.63	4.71	--		6.25
2-Hexanone	ND	1.25	--	ND	5.12	--		6.25
Dibromochloromethane	ND	1.25	--	ND	10.6	--		6.25
1,2-Dibromoethane	ND	1.25	--	ND	9.61	--		6.25
Tetrachloroethene	1.84	1.25	--	12.5	8.48	--		6.25
Chlorobenzene	ND	1.25	--	ND	5.76	--		6.25
Ethylbenzene	ND	1.25	--	ND	5.43	--		6.25



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-01 D
 Client ID: EFF COMBINE
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:20
 Date Received: 07/26/22
 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								
p/m-Xylene	ND	2.50	--	ND	10.9	--		6.25
Bromoform	ND	1.25	--	ND	12.9	--		6.25
Styrene	ND	1.25	--	ND	5.32	--		6.25
1,1,2,2-Tetrachloroethane	ND	1.25	--	ND	8.58	--		6.25
o-Xylene	ND	1.25	--	ND	5.43	--		6.25
4-Ethyltoluene	ND	1.25	--	ND	6.15	--		6.25
1,3,5-Trimethylbenzene	ND	1.25	--	ND	6.15	--		6.25
1,2,4-Trimethylbenzene	ND	1.25	--	ND	6.15	--		6.25
Benzyl chloride	ND	1.25	--	ND	6.47	--		6.25
1,3-Dichlorobenzene	ND	1.25	--	ND	7.52	--		6.25
1,4-Dichlorobenzene	ND	1.25	--	ND	7.52	--		6.25
1,2-Dichlorobenzene	ND	1.25	--	ND	7.52	--		6.25
1,2,4-Trichlorobenzene	ND	1.25	--	ND	9.28	--		6.25
Hexachlorobutadiene	ND	1.25	--	ND	13.3	--		6.25

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	96		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	93		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-02
 Client ID: SSD EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:50
 Date Received: 07/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 08/05/22 02:59
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.452	0.200	--	2.24	0.989	--		1
Chloromethane	0.334	0.200	--	0.690	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.226	0.200	--	0.500	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	24.8	5.00	--	46.7	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	0.206	0.200	--	1.16	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	0.612	0.500	--	2.13	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
2-Butanone	0.968	0.500	--	2.85	1.47	--		1
cis-1,2-Dichloroethene	1.16	0.200	--	4.60	0.793	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-02
 Client ID: SSD EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:50
 Date Received: 07/26/22
 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	17.2	0.200	--	60.6	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	9.79	0.200	--	31.3	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	4.27	0.200	--	14.7	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	22.4	0.200	--	120	1.07	--		1
2,2,4-Trimethylpentane	8.26	0.200	--	38.6	0.934	--		1
Heptane	13.9	0.200	--	57.0	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	53.5	0.200	--	202	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	5.52	0.200	--	37.4	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	13.0	0.200	--	56.5	0.869	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-02
 Client ID: SSD EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 10:50
 Date Received: 07/26/22
 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								
p/m-Xylene	31.6	0.400	--	137	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	12.8	0.200	--	55.6	0.869	--		1
4-Ethyltoluene	1.81	0.200	--	8.90	0.983	--		1
1,3,5-Trimethylbenzene	1.72	0.200	--	8.46	0.983	--		1
1,2,4-Trimethylbenzene	6.39	0.200	--	31.4	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	98		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	96		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-03 D
 Client ID: SVE EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 11:20
 Date Received: 07/26/22
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 48,TO-15
 Analytical Date: 08/05/22 03:35
 Analyst: TS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
Freon-114	ND	2.00	--	ND	14.0	--		10
Vinyl chloride	ND	2.00	--	ND	5.11	--		10
1,3-Butadiene	ND	2.00	--	ND	4.42	--		10
Bromomethane	ND	2.00	--	ND	7.77	--		10
Chloroethane	ND	2.00	--	ND	5.28	--		10
Ethanol	ND	50.0	--	ND	94.2	--		10
Vinyl bromide	ND	2.00	--	ND	8.74	--		10
Acetone	ND	10.0	--	ND	23.8	--		10
Trichlorofluoromethane	ND	2.00	--	ND	11.2	--		10
Isopropanol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
Tertiary butyl Alcohol	ND	5.00	--	ND	15.2	--		10
Methylene chloride	ND	5.00	--	ND	17.4	--		10
3-Chloropropene	ND	2.00	--	ND	6.26	--		10
Carbon disulfide	ND	2.00	--	ND	6.23	--		10
Freon-113	ND	2.00	--	ND	15.3	--		10
trans-1,2-Dichloroethene	ND	2.00	--	ND	7.93	--		10
1,1-Dichloroethane	ND	2.00	--	ND	8.09	--		10
Methyl tert butyl ether	ND	2.00	--	ND	7.21	--		10
2-Butanone	ND	5.00	--	ND	14.7	--		10
cis-1,2-Dichloroethene	43.2	2.00	--	171	7.93	--		10



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-03 D
 Client ID: SVE EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 11:20
 Date Received: 07/26/22
 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	5.00	--	ND	18.0	--		10
Chloroform	2.45	2.00	--	12.0	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	124	2.00	--	437	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	8.94	2.00	--	28.6	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	17.9	2.00	--	61.6	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	400	2.00	--	2150	10.7	--		10
2,2,4-Trimethylpentane	34.6	2.00	--	162	9.34	--		10
Heptane	30.5	2.00	--	125	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	28.4	2.00	--	107	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	42.1	2.00	--	285	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	6.50	2.00	--	28.2	8.69	--		10



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

SAMPLE RESULTS

Lab ID: L2239902-03 D
 Client ID: SVE EFF
 Sample Location: OZONE PARK

Date Collected: 07/26/22 11:20
 Date Received: 07/26/22
 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								
p/m-Xylene	19.6	4.00	--	85.1	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	7.79	2.00	--	33.8	8.69	--		10
4-Ethyltoluene	3.47	2.00	--	17.1	9.83	--		10
1,3,5-Trimethylbenzene	3.47	2.00	--	17.1	9.83	--		10
1,2,4-Trimethylbenzene	13.7	2.00	--	67.4	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	99		60-140
Bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/04/22 15:03

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: WG1671422-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
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



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/04/22 15:03

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: WG1671422-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/04/22 15:03

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: WG1671422-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

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: WG1671422-3								
Dichlorodifluoromethane	84		-		70-130	-		
Chloromethane	87		-		70-130	-		
Freon-114	92		-		70-130	-		
Vinyl chloride	99		-		70-130	-		
1,3-Butadiene	87		-		70-130	-		
Bromomethane	100		-		70-130	-		
Chloroethane	91		-		70-130	-		
Ethanol	82		-		40-160	-		
Vinyl bromide	83		-		70-130	-		
Acetone	94		-		40-160	-		
Trichlorofluoromethane	82		-		70-130	-		
Isopropanol	80		-		40-160	-		
1,1-Dichloroethene	90		-		70-130	-		
Tertiary butyl Alcohol	83		-		70-130	-		
Methylene chloride	110		-		70-130	-		
3-Chloropropene	92		-		70-130	-		
Carbon disulfide	81		-		70-130	-		
Freon-113	93		-		70-130	-		
trans-1,2-Dichloroethene	84		-		70-130	-		
1,1-Dichloroethane	90		-		70-130	-		
Methyl tert butyl ether	75		-		70-130	-		
2-Butanone	82		-		70-130	-		
cis-1,2-Dichloroethene	93		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

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: WG1671422-3								
Ethyl Acetate	96		-		70-130	-		
Chloroform	91		-		70-130	-		
Tetrahydrofuran	79		-		70-130	-		
1,2-Dichloroethane	79		-		70-130	-		
n-Hexane	86		-		70-130	-		
1,1,1-Trichloroethane	85		-		70-130	-		
Benzene	86		-		70-130	-		
Carbon tetrachloride	91		-		70-130	-		
Cyclohexane	86		-		70-130	-		
1,2-Dichloropropane	94		-		70-130	-		
Bromodichloromethane	87		-		70-130	-		
1,4-Dioxane	87		-		70-130	-		
Trichloroethene	95		-		70-130	-		
2,2,4-Trimethylpentane	88		-		70-130	-		
Heptane	86		-		70-130	-		
cis-1,3-Dichloropropene	93		-		70-130	-		
4-Methyl-2-pentanone	86		-		70-130	-		
trans-1,3-Dichloropropene	79		-		70-130	-		
1,1,2-Trichloroethane	98		-		70-130	-		
Toluene	94		-		70-130	-		
2-Hexanone	83		-		70-130	-		
Dibromochloromethane	97		-		70-130	-		
1,2-Dibromoethane	95		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

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: WG1671422-3								
Tetrachloroethene	94		-		70-130	-		
Chlorobenzene	93		-		70-130	-		
Ethylbenzene	100		-		70-130	-		
p/m-Xylene	100		-		70-130	-		
Bromoform	102		-		70-130	-		
Styrene	98		-		70-130	-		
1,1,2,2-Tetrachloroethane	107		-		70-130	-		
o-Xylene	101		-		70-130	-		
4-Ethyltoluene	86		-		70-130	-		
1,3,5-Trimethylbenzene	97		-		70-130	-		
1,2,4-Trimethylbenzene	99		-		70-130	-		
Benzyl chloride	88		-		70-130	-		
1,3-Dichlorobenzene	106		-		70-130	-		
1,4-Dichlorobenzene	105		-		70-130	-		
1,2-Dichlorobenzene	103		-		70-130	-		
1,2,4-Trichlorobenzene	81		-		70-130	-		
Hexachlorobutadiene	77		-		70-130	-		

Project Name: ENDZONE

Serial_No:08052214:15
Lab Number: L2239902

Project Number:

Report Date: 08/05/22

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
L2239902-01	EFF COMBINE	1695	6.0L Can	07/14/22	393109	L2235999-05	Pass	-28.8	-1.1	-	-	-	-
L2239902-02	SSD EFF	693	6.0L Can	07/14/22	393109	L2235999-05	Pass	-28.8	0.0	-	-	-	-
L2239902-03	SVE EFF	952	6.0L Can	07/14/22	393109	L2231336-10	Pass	-28.9	-1.3	-	-	-	-

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

Lab Number: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 06/15/22 23:54
Analyst: NL

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: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
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: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
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: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
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:** L2231336**Project Number:** CANISTER QC BAT**Report Date:** 08/05/22**Air Canister Certification Results**

Lab ID: L2231336-10

Date Collected: 06/14/22 09:00

Client ID: CAN 593 SHELF 58

Date Received: 06/14/22

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	91		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	88		60-140

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

Lab Number: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 06/15/22 23:54
Analyst: NL

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: L2231336
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2231336-10
Client ID: CAN 593 SHELF 58
Sample Location:

Date Collected: 06/14/22 09:00
Date Received: 06/14/22
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:** L2231336**Project Number:** CANISTER QC BAT**Report Date:** 08/05/22**Air Canister Certification Results**

Lab ID: L2231336-10

Date Collected: 06/14/22 09:00

Client ID: CAN 593 SHELF 58

Date Received: 06/14/22

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	90		60-140
bromochloromethane	95		60-140
chlorobenzene-d5	89		60-140

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

Lab Number: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 07/07/22 20:30
Analyst: RY

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: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
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: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
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: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
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
Project Number: CANISTER QC BAT

Lab Number: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
 Client ID: CAN 3578 SHELF 57
 Sample Location:

Date Collected: 07/06/22 18:00
 Date Received: 07/07/22
 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								

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

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

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

Lab Number: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 07/07/22 20:30
Analyst: RY

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: L2235999
Report Date: 08/05/22

Air Canister Certification Results

Lab ID: L2235999-05
Client ID: CAN 3578 SHELF 57
Sample Location:

Date Collected: 07/06/22 18:00
Date Received: 07/07/22
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:** L2235999**Project Number:** CANISTER QC BAT**Report Date:** 08/05/22**Air Canister Certification Results**

Lab ID: L2235999-05

Date Collected: 07/06/22 18:00

Client ID: CAN 3578 SHELF 57

Date Received: 07/07/22

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	97		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	96		60-140

Project Name: ENDZONE**Lab Number:** L2239902**Project Number:** Not Specified**Report Date:** 08/05/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

NA Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2239902-01A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2239902-02A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2239902-03A	Canister - 6 Liter	NA	NA			Y	Absent		TO15-LL(30)

Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

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: L2239902
Report Date: 08/05/22

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.

Chlordane: 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.)

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'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

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.

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.

Report Format: Data Usability Report



Project Name: ENDZONE
Project Number: Not Specified

Lab Number: L2239902
Report Date: 08/05/22

Data Qualifiers

- 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 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: L2239902
Report Date: 08/05/22

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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 19

Published Date: 4/2/2021 1:14:23 PM

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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,

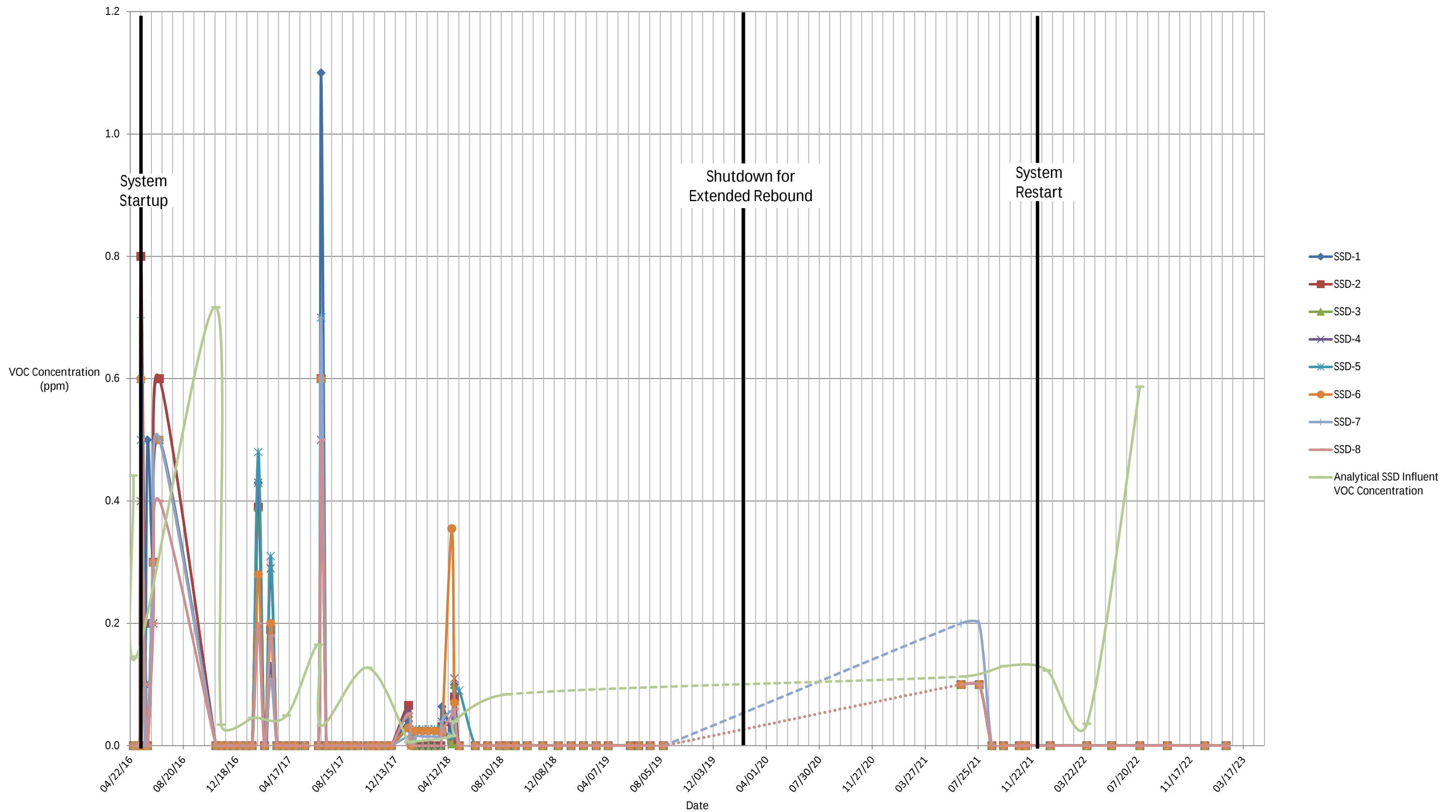
Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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



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

