AECOM

Prepared for:
Endzone, Inc.
Ozone Park, NY

Prepared by:
AECOM
Chelmsford, MA
60270935
January 2019

Former Ozone Industries, Inc. Site, Ozone Park, Queens New York
NYSDEC Site Number: 2-41-033

1st Semi-Annual Progress Report: April through October 2018 (3rd year of remedial system operation)

AECOM

Prepared for:
Endzone, Inc.
Ozone Park, NY

Prepared by:
AECOM
Chelmsford, MA
60270935
January 2019

Former Ozone Industries, Inc. Site, Ozone Park, Queens New York
NYSDEC Site Number: 2-41-033

1st Semi-Annual Progress Report: April through October 2018 (3rd year of remedial system operation)

Prepared By Matthew Pearsall

Reviewed By Raimundo Matos

Reviewed By David Austin

Contents

List of Tables

List of Figures

List of Appendices

1.0 Introduction

On behalf of Endzone Inc. (Endzone), AECOM has prepared this 1st Semi-Annual Progress Report for April through October 2018, 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 first six month period within the third year of system operation between April 27, 2018 and October 31, 2018. Previous reports were submitted roughly on a quarterly basis.

In addition to the O&M results for this period, this Progress Report also provides the following:

1. Results of three system air samples collected on August 23, 2018 from the SVE influent, SSD influent, and total combined effluent.

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 **Figure 1**). The site is located across the street from 101-32 101st Street, the location of the former Ozone Industries facility.

2.0 SVE/SSD Operation and Maintenance

This section presents the evaluation of the system influent and effluent analytical air sampling data and the field data collected during each of the O&M site visits during the first six-month period during the third year of operation between April 27, 2018 and October 31, 2018. The O&M events were reduced to a monthly basis as proposed in the last Progress Report (July 2018). **Figure 2** depicts the Bays and systems.

2.1 O&M Events

Monthly O&M events were conducted on May 7, June 12, July 10, August 6, August 23, September 12, and October 8. The following information was primarily gathered during the O&M events:

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

2.1.1 SSD

When the SSD system was in operation, it maintained an average flowrate of 290.70 cubic feet per minute (SCFM) (with a range between 282.13 SCFM and 301.16 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 of potential subsurface vapor migration as outlined in the ISMP. 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 34.69 SCFM to a maximum of 69.64 SCFM, all above the designed 30 SCFM.

Influent volatile organic compounds (VOCs) were measured with a calibrated photoionization detector (PID) in parts per billion (ppb) from each of the SSD legs during each event. During this period, VOC readings from each individual SSD leg were generally non-detect and the detections were all below 0.10 parts per million (ppm). 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.

2.1.2 SVE

The SVE system maintained an average total flowrate of 460.00 SCFM during this period. Like the SSD system, the vacuum applied to each of the 22 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 ranged from 0.79 to 12.61IWC.

Influent VOCs from each of the SVE legs were measured with a calibrated PID during each event. VOC readings from individual SVE legs during this period ranged from non-detect to a maximum of 10.8 ppm. The highest PID readings recorded during the O&M events continue to be reported from SVE-18, the deep well in the center of Bay 8. The VOC concentrations in this well did not decrease significantly from week to week, but have remained low when compared to earlier rounds. Refer to **Appendix A** for monthly O&M summary tables.

2.1.3 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 and PID, respectively.

Consistent vacuum influence was observed across all shallow points at an average of 0.29 IWC and has remained above 0.15 IWC for the duration of the monitoring period this quarter in most points, 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 0.55 IWC and has remained above 0.20 IWC in subsequent monitoring events in the majority of points indicating the installed SVE system achieves the predicted influence throughout the site or Bays. Because adequate measureable 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.

2.2 Laboratory Analyses of Air Samples – Quarterly System Samples

The system was restarted on April 20, 2018 following a three week rebound period (documented in the last Progress Report, dated July 2018), and quarterly air samples from the system were collected on August 23, 2018 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 emissions from the system is not to exceed 0.5 lbs/hr. The results of the completed air sampling events are shown in **Table 1**.

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

Upon review of the August 2018 laboratory data, it was noticed that the concentration of the total VOCs at the effluent indicated a result which was a magnitude higher than any other previous sampling event. Furthermore, the effluent concentrations measured were similar to the influent SVE concentrations; therefore, it was assumed that breakthrough in the carbon had occurred. The data was reviewed and it was estimated that the effluent emissions were still below the requirement established prior to system start up. In the original ISMP, a removal efficiency of 95% was proposed, which was being exceeded based upon the August 2018 sample results. Although it was below the effluent emission limit, AECOM was able to shut down the SVE portion of the system remotely as a

precautionary measure. NYSDEC was notified of the system (SVE) system shut down on September 6, 2018.

Currently, the SVE system remains shut off with no immediate plans to restart it because of pending groundwater and soil gas sampling (discussed below). As mentioned previously, the VOC concentrations measured from this system have approached asymptotic levels and the extent of any more treatment by the SVE system is limited. The spent carbon in the SVE vessels was replaced on October 30, 2018 by Carbon Filtration Systems (CFS) of Johnston, Rhode Island in the event that the SVE system will need to be restarted.

The carbon following the SSD system did not exhibit breakthrough and the system has remained in operation since it was restarted following the last rebound test (April 2018). Based on the results from the last sampling event, it is not likely that the carbon achieved breakthrough. The August 2018 laboratory data for the SVE influent, SSD influent, and total effluent are summarized as follows:

- As noted on **Table 1,** the total VOC concentration (3,860 ug/m^3) for the SVE influent was comparable to the most recent previous total VOC concentration which was collected 6 days after the last rebound test was completed. Compounds which have been historically detected in the SVE vapor stream (cis-1,2-Dichlroethene, trichloroethene, and tetrachloroethene) were again detected during this event. The similarity in these results suggests that the concentrations are reaching asymptotic levels and that the SVE system is reaching its limits of effectiveness.

- The total VOC concentration (84 ug/m^3) for the SSD-influent sample was similar to previous post-rebound restart samples. Although several compounds were detected above laboratory reporting limits, the compounds detected had all been detected in previous sampling events and the concentrations continued to proceed in decreasing trend. Levels of two compounds, trichloroethene and tetrachloroethene, increased slightly from the last sampling event in April 2018, but these were still below the initial concentrations observed during system start up in 2016.

- The Total Effluent VOC concentration collected following carbon treatment indicated carbon breakthrough as noted above, and the SVE system was shut off and the carbon replaced.

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 0.00437 lbs/hr whereas; the mass removal from the SSD system is approximately 0.00015 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 0.00971 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. In the influent SVE chart, well SVE-18 continues to be the point with the highest VOC concentrations. These levels have remained relatively consistent over the course of the reporting period and significant changes were not observed during post-rebound (April 2018) monitoring. As mentioned earlier, several wells have been closed in order to focus the vacuum to the areas where the highest VOC concentrations have been observed. These wells continue to

show an either decreasing or stagnant level of VOCs detected. The SSD chart continues to show that VOC concentrations are typically non-detect during routine O&M events. Analytical results are still well below the initial concentration observed at the startup of the systems.

3.0 Summary and Future Actions

The remedial system has operated as designed and intended, except for the SVE system carbon breakthrough which was corrected with a carbon change out. The SVE and SSD influent levels from this reporting period are similar or "flat" after decreasing from higher levels in 2016.

The O&M events will occur on a monthly basis. One additional set of system air samples were collected in December 2018 which will be used to evaluate the SVE system.

In addition, groundwater and soil gas sampling will be completed per correspondences with NYSDEC in October 2018 and a NYSDEC approved work plan submitted in November 2018. The first round is expected to be completed in January 2019.

System operation will be documented in a report provided in April 2019 to cover November – May 2019 (6 months).

Figures

Figure Number: 1

Sheet Number: 1

GROUNDWATER MONITORING WELL NETWORK

FORMER OZONE INDUSTRIES, INC.
OZONE PARK, NEW YORK, NY

Scale:	Date:	Project Number:
1" = 60'	02/12/2018	60270935.7

AECOM Environment
250 APOLLO DRIVE
CHELMSFORD, MA 01824
(978) 905-2100
www.aecom.com

Designed By:	Revisions			
	No.:	Description:	Date:	By:
Drawn By:				
J.E.B.				
Checked By:				
R.M.				
Approved By:				
D.A.				

N W E S

Path: \\USCHL1FP001\Data\Projects\Jobs\Indl_Service\Project Files\Endzone, Inc\Ozone - Queens, NY\400 Technical\403 - GIS\Projects\SMP\Fig_1_GW_Monitoring_Well_Network.mxd

AS-BUILT SVE/SSD PIPING STUB-UPS LOCATION

SVE AND SSD SYSTEM LOCATION

CARBON VESSELS LOCATION FOR OFF-GAS TREATMENT

AS-BUILT SSD PIPING

AS-BUILT SVE PIPING (MIN. 0.5% PITCH BACK TO WELLS)

SUBSURFACE ELECTRICAL BOXES (NYC ELECTRIC)

SCREEN INTERVAL (TYP.)

101-11
100th STREET
TAVELLA PLUMBING AND HEATING

101-15
100th STREET
NEW YORK WATER SERVICE

100-21
101st STREET
(MOVING STORAGE COMPANY)

101-20
AUTO REPAIR
LISENSA
LANDSCAPING

101-32
100th STREET
(FIVE STAR ELECTRICAL CORP.)

101-28
RESIDENCE

RESIDENCE

RESIDENTIAL

PARKING LOT

OVERHEAD RAILROAD

SIDEWALK

98th STREET

99th STREET

100th STREET

101st STREET

94609

94608

366

367

SVE-1 SVE-2 SVE-3 SVE-4 SVE-5 SVE-6 SVE-7 SVE-8 SVE-9 SVE-10 SVE-11 SVE-12 SVE-13 SVE-14 SVE-15 SVE-16 SVE-17 SVE-18 SVE-19 SVE-20 SVE-21 SVE-22 SVE-23 SVE-24 SVE-25 SVE-26 SVE-27

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

10 0 20
SCALE IN FEET

ISSUED FOR QUARTERLY REPORT

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
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

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

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

PROJ. NUMBER: 60221764

DATE: 05/25/17

LOCATION OF SOIL VAPOR EXTRACTION AND SUB SLAB DEPRESSURIZATION TREATMENT SYSTEMS

101-61 99 ST, QUEENS, NY
GROUND FLOOR

DRAWING NUMBER: 2

SHEET NUMBER: 2 of 2

REVISION 0

Tables

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

	LOCATION	SVE Influent													
	SAMPLE NAME	SVE INFLUENT_042916	SVE INFLUENT_050616	SVEINFLU_110216	SVE-EFFLUENT_111416[7]	SVE-INFLU_012417	SVE-INFLU_041117	SVE-INFLUENT_062217	SVE-INFLUENT_062817	SVE-INFLUENT_0101217	SVE-INFLUENT_011218	SVE-INFLUENT_011818	SVE INFLUENT_042018	SVE INFLUENT_042618	SVE INFLUENT_082318
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/15/2017	6/22/2017	6/28/2017	10/12/2017	1/12/2018	1/18/2018	4/20/185	4/26/2018	8/23/2018
				After system start-up - same day	After system start-up - 12 days later			After system start-up - same day	After system start-up - 6 days later	After system start-up - same day	After system start up - same day	After system start up - 6 days later	After system start up - same day	After system start up - 6 days later	
	LAB SAMPLE ID	SC20863-01	L1614057-01	SC27978-03	L1637012-03	L1702565-02	L1711688-02	L1721409-03	L1722128-01	L1736952-01	L1802191-01	L1802191-04	L1814277-01	L1815307	L1833818-01
ANALYTE	PID READING(ppm)	ND	8.6	3.0	1.4	1.4	0.4	NA	1.1	0.1	1.4	3.1	2.1	2.0	2.0
VOCs TO-15	Units														
Acetone*	ug/m^3	**3,683.23**	<47.3	**4,895.13**	<23.8	<23.8	<11.9	<23.8	<23.8	<47.3	NS	NS	NS	<23.8	<23.8
Ethanol	ug/m^3	<65.61	<188	**976.68**	<94.2	<94.2	<47.1	<94.2	<94.2	<188	NS	NS	NS	<94.2	<94.2
Isopropyl Alcohol	ug/m^3	<85.40	<24.5	<142.33	<12.3	<12.3	<6.15	<12.3	<12.3	<24.5	NS	NS	NS	<12.3	<12.3
Tertiary butyl Alcohol	ug/m^3	--	<30.2	--	<15.2	<15.2	<7.58	<15.2	<15.2	<30.2	NS	NS	NS	<15.2	<15.2
2-Butanone (MEK)	ug/m^3	<102.62	<29.4	**365.66**	<14.7	<14.7	<7.37	<14.7	<14.7	<29.9	NS	NS	NS	<14.7	<14.7
Methylene Chloride	ug/m^3	<120.84	<34.6	<201.40	<8.69	**12.60**	<8.69	<17.4	<17.4	<34.6	NS	NS	NS	<17.4	<17.4
Carbon Disulfide*	ug/m^3	<108.31	<12.4	<180.52	<6.23	<6.23	<3.11	<6.23	<6.23	<12.4	NS	NS	NS	<6.23	<6.23
trans-1,2-Dichlroethene	ug/m^3	<137.9	<15.8	<229.98	<7.93	<3.96	<3.96	<7.93	<7.93	<15.8	<3.96	<3.96	<2.64	<7.93	<7.93
Dichlorodifluoromethane	ug/m^3	<172.08	<19.7	<286.80	<9.86	<9.86	<4.94	<9.89	<9.89	<19.7	NS	NS	NS	<9.89	<9.89
Chloromethane	ug/m^3	<71.88	<8.24	<119.80	<4.13	<4.13	<2.07	<4.13	<4.13	<8.22	NS	NS	NS	<4.13	<4.13
Trichlorofluoromethane	ug/m^3	<195.58	<22.4	<325.94	<11.2	<11.2	<5.62	<11.2	<11.2	<22.4	NS	NS	NS	<11.2	<11.2
cis-1,2-Dichloroethene	ug/m^3	**408.42**	**630.00**	**404.45**	**420.00**	**190.00**	**149.00**	**144.00**	**209.00**	**312.00**	**80.50**	**124.00**	**92.00**	**186.00**	**223.00**
n-Hexane	ug/m^3	--	<14.1	--	<7.05	<7.05	<3.52	<7.05	<7.05	<14.0	NS	NS	NS	<7.05	<7.05
1,1,1-Trichloroethane	ug/m^3	<189.87	<21.8	**1,374.92**	<10.9	<10.9	<5.46	<10.9	<10.9	<21.7	NS	NS	NS	<10.9	<10.9
Chloroform	ug/m^3	<169.37	<19.5	<282.29	--	**16.90**	**6.06**	<9.77	<9.77	<19.4	NS	NS	NS	<9.77	<9.77
Tetrahydrofuran	ug/m^3	<102.62	<29.4	<171.03	<14.7	<14.7	<7.37	<14.7	<14.7	<29.4	NS	NS	NS	<14.7	<14.7
Benzene	ug/m^3	<1,112.02	<12.7	<185.03	<6.39	<6.39	<3.19	<6.39	<6.39	<12.7	NS	NS	NS	<6.39	<6.39
Trichloroethene	ug/m^3	**21,281.96**	**10,000.00**	**9,888.60**	**4,990.00**	**1,680.00**	**1,980.00**	**2,730.00**	**2,860.00**	**6,340.00**	**1,130.00**	**1,400.00**	**1,170.00**	**2,190.00**	**3,530.00**
2,2,4-Trimethylpentane	ug/m^3	--	<18.6	--	<9.34	<9.34	<4.67	<9.34	<9.34	<18.6	NS	NS	NS	<9.34	<9.34
Toluene	ug/m^3	<130.94	<15.0	<218.24	<7.54	<7.54	<3.77	<7.54	<7.54	<15.0	NS	NS	NS	<7.54	<7.54
Tetrachloroethene	ug/m^3	**874.77**	**585.00**	**435.35**	**268.00**	**290.00**	**319.00**	**280.00**	**199.00**	**273.00**	**121.00**	**149.00**	**160.00**	**204.00**	**229.00**
1,4-Dichlorobenzene	ug/m^3	<209.23	<24.0	**244.10**	<12.0	<12.0	<6.01	<12.0	<12.0	<23.9	NS	NS	NS	<12.0	<12.0
Naphthalene	ug/m^3	<182.18	--	<303.64	--	--	--	--	--	--	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ug/m^3	<171.08	<29.6	<285.14	<9.83	<9.83	<4.92	<14.8	<9.83	<19.6	NS	NS	NS	<9.83	<9.83
Total VOCs	**ug/m^3**	**27,912**	**11,524**	**20,051**	**5,821**	**2,326**	**2,528**	**3,309**	**3,420**	**24,323**	**2,465**	**3,574**	**1,683**	**3,116**	**3,860**

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) ND = Not Detected

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

7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port

8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port

9) 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

	LOCATION	SSD Influent													
	SAMPLE NAME	SSD INFLUENT_042916	SSD INFLUENT_050616	SSDINFLU_110216	SSD-EFFLUENT_111416[8]	SSD-INFLU_012417	SSD-INFLU_041117	SSD-INFLUENT_062217	SSD-INFLUENT_062817	SSD INFLUENT_101217	SSD INFLUENT_011218	SSD INFLUENT_011818	SSD INFLUENT_042018	SSD INFLUENT_042618	SSD INFLUENT_082318
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/11/2017	6/22/2017	6/28/2017	10/12/2017	1/12/2018	1/18/2018	4/20/2018	4/26/2018	8/23/2018
				After system start-up - same day	After system start-up - 12 days later			After system start-up - same day	After system start-up - 6 days later	After system start-up - same day	After system start-up - same day	After system start-up - 6 days later	After system start-up - same day	After system start-up - 6 days later	
	LAB SAMPLE ID	SC20863-02	L1614057-02	SC27978-01	L1637012-02	L1702565-01	L1711688-01	L1721409-02	L1722128-01	L1736952-02	L1802191-02	L1802191-05	L1814277-02	L1815307-02	L1833818-02
ANALYTE	PID READING(ppm)	ND	ND	0.8	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs TO-15	Units														
Acetone*	ug/m^3	**8.79**	<2.38	**13.31**	<2.38	<2.38	**4.85**	**18.3**	**5.2**	**16.1**	NS	NS	NS	**10.10**	**11.20**
Ethanol	ug/m^3	<1.89	<9.42	<3.77	<9.42	<9.42	<9.42	<9.42	<9.42	<9.42	NS	NS	NS	<9.42	<9.42
Isopropyl Alcohol	ug/m^3	<2.45	<1.23	<4.91	**1.23**	<1.23	<1.23	**1.82**	**1.49**	<1.23	NS	NS	NS	**1.40**	<1.23
Tertiary butyl Alcohol	ug/m^3	--	<1.52	--	**4.34**	<1.52	<1.52	<1.52	<1.52	<1.52	NS	NS	NS	**4.27**	<1.52
2-Butanone (MEK)	ug/m^3	<2.95	<1.47	<5.90	<1.47	<1.47	<1.47	**3.33**	<1.47	**1.48**	NS	NS	NS	**2.35**	<1.47
Methylene Chloride	ug/m^3	<3.47	<1.74	<6.94	<1.74	<1.74	<1.74	**13.7**	<1.74	**2.24**	NS	NS	NS	**1.74**	<1.74
Carbon Disulfide*	ug/m^3	<3.11	<0.623	<6.22	<0.623	<0.623	<0.623	<0.623	<0.623	**0.825**	NS	NS	NS	<0.623	<0.623
trans-1,2-Dichloroethene	ug/m^3	<3.97	<0.793	<7.93	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793
Dichlorodifluoromethane	ug/m^3	<4.94	**2.03**	<9.89	**2.14**	**2.05**	**1.58**	**2.37**	**2.32**	**2.26**	NS	NS	NS	**2.27**	**2.13**
Chloromethane	ug/m^3	<2.07	**0.81**	<4.13	**0.69**	**0.74**	**0.62**	**0.85**	**0.68**	**0.91**	NS	NS	NS	**0.748**	**0.642**
Trichlorofluoromethane	ug/m^3	<5.62	**1.14**	<11.24	**1.31**	**1.40**	**1.34**	**1.58**	**1.25**	<1.12	NS	NS	NS	<1.12	<1.12
cis-1,2-Dichloroethene	ug/m^3	**4.60**	**5.31**	**19.75**	<0.793	<0.793	**1.27**	**6.38**	<0.793	**2.27**	<0.793	<0.793	<0.793	<0.793	**1.30**
n-Hexane	ug/m^3	--	<0.705	--	**1.08**	<0.705	<0.705	<0.705	<0.705	**0.779**	NS	NS	NS	<0.705	**0.77**
1,1,1-Trichloroethane	ug/m^3	<5.46	<1.09	<10.91	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	NS	NS	NS	<1.09	<1.09
Chloroform	ug/m^3	<4.87	<9.77	<9.73	<0.977	<0.977	<0.977	<0.977	<0.977	<0.977	NS	NS	NS	<0.977	<0.977
Tetrahydrofuran	ug/m^3	**5.60**	<1.47	<5.90	<1.47	<1.47	<1.47	**2.95**	<1.47	<1.47	NS	NS	NS	<1.47	<1.47
Benzene	ug/m^3	<3.19	**1.16**	<6.38	**1.97**	**1.16**	**0.901**	<0.639	<0.639	**10.9**	NS	NS	NS	<0.639	**1.00**
Trichloroethene	ug/m^3	**325.68**	**98.30**	**558.2**	**6.34**	**13.2**	**18.9**	**97.8**	**6.99**	**45.2**	**4.37**	**3.18**	**8.81**	**3.74**	**39.80**
2,2,4-Trimethylpentane	ug/m^3	--	<0.934	--	**0.99**	<0.934	**1.11**	<0.934	<0.934	**1.34**	NS	NS	NS	<0.934	**1.05**
Toluene	ug/m^3	<3.76	**1.48**	<7.53	**2.14**	**6.18**	**3.24**	**2.23**	**1.11**	**2.03**	NS	NS	NS	**1.45**	**4.71**
Tetrachloroethene	ug/m^3	**33.36**	**17.20**	**42.86**	<1.36	**7.19**	**3.98**	**4.17**	**2.02**	**31.3**	<1.36	**2.42**	**6.10**	**1.43**	**9.49**
1,4-Dichlorobenzene	ug/m^3	<6.01	<1.20	**11.18**	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	NS	NS	NS	<1.20	<1.20
Naphthalene	ug/m^3	<5.24	--	**15.97**	--	--	--	--	--	--	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ug/m^3	<4.92	**1.27**	<9.83	<0.983	<0.983	<0.983	<1.48	<0.983	<0.983	NS	NS	NS	<0.983	<0.983
Total VOCs	**ug/m^3**	**442**	**146**	**717**	**34**	**46**	**49**	**165**	**33**	**128**	**6**	**6**	**16**	**40**	**84**

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) ND = Not Detected

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

7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port

8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port

9) 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

	LOCATION	Total Effluent													
	SAMPLE NAME	TOTAL EFFLUENT_042916	TOTAL EFFLUENT_050616	TOTALEFFLU_110216	Effluent-111416	TOTAL-EFFLU_012417	TOTAL_EFFLU_041117	EFFLUENT_062217	EFFLUENT_062817	EFFLUENT_101217	EFFLUENT_011218	EFFLUENT_011818	TOTAL EFFLUENT_042018	TOTAL EFFLUENT_042618	TOTAL EFFLUENT_082318
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/11/2017	6/22/2017	6/28/2017	10/12/2017	1/12/2018	1/18/2018	4/20/2018	4/26/2018	8/23/2018
				After system start-up - same day	After system start-up - 12 days later			After system start-up - same day	After system start-up - 6 days later	After system start-up - same day	After system start-up - Same day	After system start-up - 6 days later	After system start-up - Same day	After system start-up - 6 days later	
	LAB SAMPLE ID	SC20863-03	L1614057-03	SC27978-02	L1637012-01	L1702565-03	L1711688-03	L1721409-01	L1722128-03	L1736952-03	L1802191-03	L1802191-06	L1814277-03	L1815307-03	L1833818-03
ANALYTE	PID READING(ppm)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VOCs TO-15	Units														
Acetone*	ug/m^3	**38.97**	<2.38	**11.50**	<2.38	<2.38	<4.75	**2.40**	<4.75	<2.38	NS	NS	NS	2.99	<23.8
Ethanol	ug/m^3	**6.94**	<9.42	**24.51**	<9.42	<9.42	<18.8	<9.42	<18.8	<9.42	NS	NS	NS	<9.42	<94.2
Isopropyl Alcohol	ug/m^3	**2.01**	<1.23	**2.04**	<1.23	<1.23	<2.46	**1.29**	<2.46	<1.23	NS	NS	NS	<1.23	<12.3
Tertiary butyl Alcohol	ug/m^3	--	<1.52	--	<1.52	<1.52	<3.03	<1.52	<3.03	<1.52	NS	NS	NS	5.85	<15.2
2-Butanone (MEK)	ug/m^3	**3.36**	<1.47	**11.35**	<1.47	<1.47	<2.95	<1.47	<2.95	<1.47	NS	NS	NS	<1.47	<14.7
Methylene Chloride	ug/m^3	<1.74	<1.74	<1.74	<1.74	**1.77**	<3.47	**3.27**	<3.47	<1.74	NS	NS	NS	<1.74	<17.4
Carbon Disulfide*	ug/m^3	<1.56	<0.623	<1.56	<0.623	<0.623	<1.25	<0.623	<1.25	<0.623	NS	NS	NS	<0.623	<6.23
trans-1,2-Dichlroethene	ug/m^3	<1.98	<0.793	<1.98	<0.793	<0.793	**7.89**	**2.84**	**4.60**	**1.55**	<0.793	**0.829**	<0.793	1.59	<7.93
Dichlorodifluoromethane	ug/m^3	<2.47	**1.43**	<2.47	**1.77**	**1.55**	<1.98	**1.69**	**2.06**	**1.34**	NS	NS	NS	2.09	<9.89
Chloromethane	ug/m^3	<1.03	<0.413	<1.03	**0.46**	<0.413	<0.826	<0.413	<0.826	<0.413	NS	NS	NS	<0.413	<4.13
Trichlorofluoromethane	ug/m^3	<2.81	<1.12	<2.81	**1.25**	<1.12	<2.25	<1.12	<2.25	<1.12	NS	NS	NS	1.37	<11.2
cis-1,2-Dichloroethene	ug/m^3	<1.98	**0.92**	<1.98	<0.793	<0.793	**551**	**268**	**488**	**173**	**66.6**	**95.9**	**1.79**	**231**	**163**
n-Hexane	ug/m^3	--	<0.705	--	<0.705	<0.705	<1.41	<0.705	<1.41	<0.705	NS	NS	NS	<0.705	<7.05
1,1,1-Trichloroethane	ug/m^3	<2.73	<1.09	<2.73	<1.09	<1.09	<2.18	<1.09	<2.18	<1.09	NS	NS	NS	10.6	<10.9
Chloroform	ug/m^3	<2.43	<0.977	<2.43	<0.977	**1.35**	**2.33**	**3.48**	**7.52**	**6.20**	NS	NS	NS	6.98	<9.77
Tetrahydrofuran	ug/m^3	<1.47	<1.47	**6.40**	<1.47	<1.47	**2.98**	<1.47	<2.95	<1.47	NS	NS	NS	<1.47	<14.7
Benzene	ug/m^3	<1.60	<0.639	<1.60	<0.639	<0.639	<1.28	<0.639	<1.28	<0.639	NS	NS	NS	<0.639	<6.39
Trichloroethene	ug/m^3	**18.54**	**25.20**	<2.69	<1.07	<1.07	<2.15	<1.07	<2.15	**1.97**	**8.71**	**12.6**	**1.96**	**376**	**3120**
2,2,4-Trimethylpentane	ug/m^3	--	<0.934	--	<0.934	<0.934	<1.87	<0.934	<1.87	<0.934	NS	NS	NS	<0.934	<9.34
Toluene	ug/m^3	<1.88	<0.754	<1.88	<0.754	<0.754	<1.51	<0.754	<1.51	<0.754	NS	NS	NS	<0.754	<7.54
Tetrachloroethene	ug/m^3	<3.39	**5.14**	<3.39	<1.36	<1.36	<2.71	<1.36	<2.71	<1.36	<1.36	<1.36	**1.53**	<1.36	<13.6
1,4-Dichlorobenzene	ug/m^3	<3.01	<1.20	<3.01	<1.20	<1.20	<2.40	<1.20	<2.40	<1.20	NS	NS	NS	<1.20	<12.0
Naphthalene	ug/m^3	<2.62	--	**5.81**	--	--	--	--	--	--	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	ug/m^3	<2.46	<0.983	**6.88**	<0.983	<0.983	<1.97	<1.48	<1.97	<0.983	NS	NS	NS	<0.983	<14.8
Total VOCs	**ug/m^3**	**87**	**62**	**84**	**19**	**20**	**594**	**296**	**532**	**199**	**76**	**110**	**6**	**650**	**3,445**

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) ND = Not Detected

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

7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port

8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port

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

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

	LOCATION	SVE Influent														
	SAMPLE NAME	SVE INFLUENT_042916	SVE INFLUENT_050616	SVEINFLU_110216	SVE-EFFLUENT_111416[7]	SVE-INFLU_012417	SVE-INFLU_041117	SVE-INFLUENT_062217	SVE-INFLUENT_062817	SVE-INFLUENT_0101217	SVE-INFLUENT_011218	SVE-INFLUENT_011818	SVE INFLUENT_042018	SVE INFLUENT_042618	SVE INFLUENT_082318	
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/11/2017	6/22/2017	6/28/2017	10/12/2017	1/12/2018	1/18/2018	4/20/185	4/26/2018	8/23/2018	
	LAB SAMPLE ID	SC20863-01	L1614057-01	SC27978-03	L1637012-03	L1702565-02	L1711688-02	L1721409-03	L1722128-01	L1736952-01	L1802191-01	L1802191-04	L1814277-01	L1815307	L1833818-01	
ANALYTE	**Flow Rate (CFM)**	**664**	**593**	**613**	**589**	**570**	**563**	**535**	**585**	**535**	**549**	**574**	**357**	**357**	**282**	
VOCs TO-15	**Units**															
Acetone	lbs/hr	0.009161	0.000053	0.011240	0.000026	0.000025	0.000013	0.000024	0.000026	0.000047	0.000000	0.000000	0.000000	0.000016	0.000013	
Ethanol	lbs/hr	0.000082	0.000209	0.002243	0.000104	0.000101	0.000050	0.000094	0.000103	0.000188	0.000000	0.000000	0.000000	0.000063	0.000050	
Isopropyl Alcohol	lbs/hr	0.000106	0.000027	0.000163	0.000014	0.000013	0.000006	0.000012	0.000013	0.000025	0.000000	0.000000	0.000000	0.000008	0.000006	
Tertiary butyl Alcohol	lbs/hr	0.000000	0.000034	0.000000	0.000017	0.000016	0.000008	0.000015	0.000017	0.000030	0.000000	0.000000	0.000000	0.000010	0.000008	
2-Butanone (MEK)	lbs/hr	0.000128	0.000033	0.000840	0.000016	0.000016	0.000008	0.000015	0.000016	0.000030	0.000000	0.000000	0.000000	0.000010	0.000008	
Methylene Chloride	lbs/hr	0.000150	0.000038	0.000231	0.000010	0.000027	0.000009	0.000017	0.000019	0.000035	0.000000	0.000000	0.000000	0.000012	0.000009	
Carbon Disulfide	lbs/hr	0.000135	0.000014	0.000207	0.000007	0.000007	0.000003	0.000006	0.000007	0.000012	0.000000	0.000000	0.000000	0.000004	0.000003	
trans-1,2-Dichlroethene	lbs/hr	0.000171	0.000018	0.000264	0.000009	0.000004	0.000004	0.000008	0.000009	0.000016	0.000004	0.000004	0.000002	0.000005	0.000004	
Dichlorodifluoromethane	lbs/hr	0.000214	0.000022	0.000329	0.000011	0.000011	0.000005	0.000010	0.000011	0.000020	0.000000	0.000000	0.000000	0.000007	0.000005	
Chloromethane	lbs/hr	0.000089	0.000009	0.000138	0.000005	0.000004	0.000002	0.000004	0.000005	0.000008	0.000000	0.000000	0.000000	0.000003	0.000002	
Trichlorofluoromethane	lbs/hr	0.000243	0.000025	0.000374	0.000012	0.000012	0.000006	0.000011	0.000012	0.000022	0.000000	0.000000	0.000000	0.000007	0.000006	
cis-1,2-Dichloroethene	lbs/hr	0.001016	0.001399	0.000929	0.000927	0.000406	0.000314	0.000289	0.000458	0.000625	0.000166	0.000267	0.000123	0.000249	0.000236	
n-Hexane	lbs/hr	0.000000	0.000016	0.000000	0.000008	0.000008	0.000004	0.000007	0.000008	0.000014	0.000000	0.000000	0.000000	0.000005	0.000004	
1,1,1-Trichloroethane	lbs/hr	0.000236	0.000024	0.003157	0.000012	0.000012	0.000006	0.000011	0.000012	0.000022	0.000000	0.000000	0.000000	0.000007	0.000006	
Chloroform	lbs/hr	0.000211	0.000022	0.000324	0.000000	0.000036	0.000013	0.000010	0.000011	0.000019	0.000000	0.000000	0.000000	0.000007	0.000005	
Tetrahydrofuran	lbs/hr	0.000128	0.000033	0.000196	0.000016	0.000016	0.000008	0.000015	0.000016	0.000029	0.000000	0.000000	0.000000	0.000010	0.000008	
Benzene	lbs/hr	0.001383	0.000014	0.000212	0.000007	0.000007	0.000003	0.000006	0.000007	0.000013	0.000000	0.000000	0.000000	0.000004	0.000003	
Trichloroethene	lbs/hr	0.052931	0.022212	0.022705	0.011009	0.003587	0.004175	0.005471	0.006267	0.012705	0.002324	0.003010	0.001565	0.002928	0.003729	
2,2,4-Trimethylpentane	lbs/hr	0.000000	0.000021	0.000000	0.000010	0.000010	0.000005	0.000009	0.000010	0.000019	0.000000	0.000000	0.000000	0.000006	0.000005	
Toluene	lbs/hr	0.000163	0.000017	0.000251	0.000008	0.000008	0.000004	0.000008	0.000008	0.000015	0.000000	0.000000	0.000000	0.000005	0.000004	
Tetrachloroethene	lbs/hr	0.002176	0.001299	0.001000	0.000591	0.000619	0.000673	0.000561	0.000436	0.000547	0.000249	0.000320	0.000214	0.000273	0.000242	
1,4-Dichlorobenzene	lbs/hr	0.000260	0.000027	0.000560	0.000013	0.000013	0.000006	0.000012	0.000013	0.000024	0.000000	0.000000	0.000000	0.000008	0.000006	
Naphthalene	lbs/hr	0.000227	0.000000	0.000349	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
1,2,4-Trimethylbenzene	lbs/hr	0.000213	0.000033	0.000327	0.000011	0.000010	0.000005	0.000015	0.000011	0.000020	0.000000	0.000000	0.000000	0.000007	0.000005	
Total Mass Removal Rate	lbs/hr	**0.06942**	**0.02560**	**0.04604**	**0.01284**	**0.00497**	**0.00533**	**0.00663**	**0.00749**	**0.01449**	**0.00274**	**0.00360**	**0.00190**	**0.00365**	**0.00437**	

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) ND = Not Detected
6) **Bold =** Analyte detected in sample
7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port
8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port
9) Effluent samples were taken from the total effluent of both systems

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

	LOCATION	SSD Influent														
	SAMPLE NAME	SSD INFLUENT_042916	SSD INFLUENT_050616	SSDINFLU_110216	SSD-EFFLUENT_111416[8]	SSD-INFLU_012417	SSD-INFLU_041117	SSD-INFLUENT_062217	SSD-INFLUENT_062817	SSD INFLUENT_101217	SSD INFLUENT_011218	SSD INFLUENT_011818	SSD INFLUENT_042018	SSD INFLUENT_042618	SSD INFLUENT_082318	
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/11/2017	6/22/2017	6/28/2017	10/12/2017	1/12/2018	1/18/2018	4/20/2018	4/26/2018	8/23/2018	
	LAB SAMPLE ID	SC20863-02	L1614057-02	SC27978-01	L1637012-02	L1702565-01	L1711688-01	L1721409-02	L1722128-01	L1736952-02	L1802191-02	L1802191-05	L1814277-02	L1815307-02	L1833818-02	
ANALYTE	**Flow Rate (CFM)**	**159**	**297**	**269**	**302**	**313**	**302**	**285**	**284**	**282**	**293**	**310**	**305**	**305**	**471**	
VOCs TO-15	**Units**															
Acetone	lbs/hr	0.000005	0.000001	0.000013	0.000001	0.000001	0.000005	0.000020	0.000006	0.000017	0.000000	0.000000	0.000000	0.000012	0.000020	
Ethanol	lbs/hr	0.000001	0.000005	0.000002	0.000005	0.000006	0.000005	0.000005	0.000005	0.000005	0.000000	0.000000	0.000000	0.000005	0.000008	
Isopropyl Alcohol	lbs/hr	0.000001	0.000001	0.000002	0.000001	0.000001	0.000001	0.000002	0.000002	0.000001	0.000000	0.000000	0.000000	0.000002	0.000001	
Tertiary butyl Alcohol	lbs/hr	0.000000	0.000001	0.000000	0.000005	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000005	0.000001	
2-Butanone (MEK)	lbs/hr	0.000002	0.000001	0.000003	0.000001	0.000001	0.000001	0.000004	0.000001	0.000002	0.000000	0.000000	0.000000	0.000003	0.000001	
Methylene Chloride	lbs/hr	0.000002	0.000001	0.000003	0.000001	0.000001	0.000001	0.000015	0.000001	0.000002	0.000000	0.000000	0.000000	0.000002	0.000002	
Carbon Disulfide	lbs/hr	0.000002	0.000000	0.000003	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000001	
trans-1,2-Dichlroethene	lbs/hr	0.000002	0.000000	0.000004	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	
Dichlorodifluoromethane	lbs/hr	0.000003	0.000002	0.000005	0.000002	0.000002	0.000002	0.000003	0.000002	0.000002	0.000000	0.000000	0.000000	0.000003	0.000004	
Chloromethane	lbs/hr	0.000001	0.000001	0.000002	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Trichlorofluoromethane	lbs/hr	0.000003	0.000001	0.000006	0.000001	0.000002	0.000002	0.000002	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
cis-1,2-Dichloroethene	lbs/hr	0.000003	0.000006	0.000020	0.000000	0.000000	0.000001	0.000007	0.000000	0.000002	0.000000	0.000000	0.000000	0.000000	0.000002	
n-Hexane	lbs/hr	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000001	
1,1,1-Trichloroethane	lbs/hr	0.000003	0.000001	0.000005	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Chloroform	lbs/hr	0.000003	0.000005	0.000005	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Tetrahydrofuran	lbs/hr	0.000003	0.000001	0.000003	0.000001	0.000001	0.000001	0.000003	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Benzene	lbs/hr	0.000002	0.000001	0.000003	0.000002	0.000001	0.000001	0.000000	0.000000	0.000012	0.000000	0.000000	0.000000	0.000000	0.000002	
Trichloroethene	lbs/hr	0.000194	0.000109	0.000562	0.000007	0.000015	0.000021	0.000104	0.000007	0.000048	0.000005	0.000004	0.000010	0.000004	0.000070	
2,2,4-Trimethylpentane	lbs/hr	0.000000	0.000001	0.000000	0.000001	0.000001	0.000001	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000001	0.000002	
Toluene	lbs/hr	0.000002	0.000002	0.000004	0.000002	0.000007	0.000004	0.000002	0.000001	0.000002	0.000000	0.000000	0.000000	0.000002	0.000008	
Tetrachloroethene	lbs/hr	0.000020	0.000019	0.000043	0.000001	0.000008	0.000005	0.000004	0.000002	0.000033	0.000001	0.000003	0.000007	0.000002	0.000017	
1,4-Dichlorobenzene	lbs/hr	0.000004	0.000001	0.000011	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Naphthalene	lbs/hr	0.000003	0.000000	0.000016	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
1,2,4-Trimethylbenzene	lbs/hr	0.000003	0.000001	0.000005	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	
Total Mass Removal Rate	lbs/hr	**0.00026**	**0.00016**	**0.00072**	**0.00004**	**0.00005**	**0.00006**	**0.00018**	**0.00004**	**0.00013**	**0.00001**	**0.00001**	**0.00002**	**0.00005**	**0.00015**	

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) ND = Not Detected
6) **Bold =** Analyte detected in sample
7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port
8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port
9) Effluent samples were taken from the total effluent of both systems

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

	LOCATION	Total Effluent														
	SAMPLE NAME	TOTAL EFFLUENT_042916	TOTAL EFFLUENT_050616	TOTALEFFLU_110216	Effluent-111416	TOTAL-EFFLU_012417	TOTAL_EFFLU_041117	TOTAL_EFFLU_062217	TOTAL_EFFLU_062817	EFFLUENT_101217	TOTAL_EFFLU_062818	EFFLUENT_011818	TOTAL EFFLUENT_042018	TOTAL EFFLUENT_042618	TOTAL EFFLUENT_082318	
	SAMPLING DATE	4/29/2016	5/6/2016	11/2/2016	11/14/2016	1/24/2017	4/11/2017	6/22/2017	6/28/2017	10/12/2017	6/29/2017	1/18/2018	4/20/2018	4/26/2018	8/23/2018	
	LAB SAMPLE ID	SC20863-03	L1614057-03	SC27978-02	L1637012-01	L1702565-03	L1711688-03	L1721409-01	L1722128-03	L1736952-03	L1722128-04	L1802191-06	L1814277-03	L1815307-03	L1833818-03	
ANALYTE	**Flow Rate (CFM)**	**914**	**971**	**882**	**891**	**883**	**865**	**820**	**869**	**817**	**842**	**884**	**662**	**662**	**753**	
VOCs TO-15	**Units**															
Acetone	lbs/hr	0.000133	0.000009	0.000038	0.000004	0.000004	0.000008	0.000007	0.000008	0.000004	0.000000	0.000000	0.000000	0.000007	0.000034	
Ethanol	lbs/hr	0.000024	0.000034	0.000081	0.000016	0.000016	0.000030	0.000014	0.000031	0.000014	0.000000	0.000000	0.000000	0.000012	0.000133	
Isopropyl Alcohol	lbs/hr	0.000007	0.000004	0.000007	0.000002	0.000002	0.000004	0.000004	0.000004	0.000002	0.000000	0.000000	0.000000	0.000002	0.000017	
Tertiary butyl Alcohol	lbs/hr	0.000000	0.000006	0.000000	0.000003	0.000003	0.000005	0.000002	0.000005	0.000002	0.000000	0.000000	0.000000	0.000015	0.000021	
2-Butanone (MEK)	lbs/hr	0.000012	0.000005	0.000037	0.000002	0.000002	0.000005	0.000002	0.000005	0.000002	0.000000	0.000000	0.000000	0.000002	0.000021	
Methylene Chloride	lbs/hr	0.000003	0.000006	0.000003	0.000003	0.000006	0.000006	0.000010	0.000006	0.000003	0.000000	0.000000	0.000000	0.000002	0.000025	
Carbon Disulfide	lbs/hr	0.000003	0.000002	0.000003	0.000001	0.000001	0.000002	0.000001	0.000002	0.000001	0.000000	0.000000	0.000000	0.000001	0.000009	
trans-1,2-Dichlroethene	lbs/hr	0.000003	0.000003	0.000003	0.000001	0.000001	0.000026	0.000009	0.000015	0.000005	0.000001	0.000003	0.000001	0.000004	0.000011	
Dichlorodifluoromethane	lbs/hr	0.000004	0.000005	0.000004	0.000006	0.000005	0.000003	0.000005	0.000007	0.000004	0.000000	0.000000	0.000000	0.000005	0.000014	
Chloromethane	lbs/hr	0.000002	0.000002	0.000002	0.000002	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000001	0.000006	
Trichlorofluoromethane	lbs/hr	0.000005	0.000004	0.000005	0.000004	0.000002	0.000004	0.000002	0.000004	0.000002	0.000000	0.000000	0.000000	0.000003	0.000016	
cis-1,2-Dichloroethene	lbs/hr	0.000003	0.000003	0.000003	0.000001	0.000001	0.001785	0.000823	0.001588	0.000529	0.000210	0.000318	0.000004	0.000573	0.000460	
n-Hexane	lbs/hr	0.000000	0.000003	0.000000	0.000001	0.000001	0.000002	0.000001	0.000002	0.000001	0.000000	0.000000	0.000000	0.000001	0.000010	
1,1,1-Trichloroethane	lbs/hr	0.000005	0.000004	0.000005	0.000002	0.000002	0.000004	0.000002	0.000004	0.000002	0.000000	0.000000	0.000000	0.000026	0.000015	
Chloroform	lbs/hr	0.000004	0.000004	0.000004	0.000002	0.000004	0.000008	0.000011	0.000024	0.000019	0.000000	0.000000	0.000000	0.000017	0.000014	
Tetrahydrofuran	lbs/hr	0.000003	0.000005	0.000021	0.000002	0.000002	0.000010	0.000002	0.000005	0.000002	0.000000	0.000000	0.000000	0.000002	0.000021	
Benzene	lbs/hr	0.000003	0.000002	0.000003	0.000001	0.000001	0.000002	0.000001	0.000002	0.000001	0.000000	0.000000	0.000000	0.000001	0.000009	
Trichloroethene	lbs/hr	0.000063	0.000092	0.000004	0.000002	0.000002	0.000003	0.000002	0.000003	0.000006	0.000027	0.000042	0.000005	0.000932	0.008800	
2,2,4-Trimethylpentane	lbs/hr	0.000000	0.000003	0.000000	0.000002	0.000002	0.000003	0.000001	0.000003	0.000001	0.000000	0.000000	0.000000	0.000001	0.000013	
Toluene	lbs/hr	0.000003	0.000003	0.000003	0.000001	0.000001	0.000002	0.000001	0.000002	0.000001	0.000000	0.000000	0.000000	0.000001	0.000011	
Tetrachloroethene	lbs/hr	0.000006	0.000019	0.000006	0.000002	0.000002	0.000004	0.000002	0.000004	0.000002	0.000002	0.000002	0.000004	0.000002	0.000019	
1,4-Dichlorobenzene	lbs/hr	0.000005	0.000004	0.000005	0.000002	0.000002	0.000004	0.000002	0.000004	0.000002	0.000000	0.000000	0.000000	0.000001	0.000017	
Naphthalene	lbs/hr	0.000004	0.000000	0.000019	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	
1,2,4-Trimethylbenzene	lbs/hr	0.000004	0.000004	0.000023	0.000002	0.000002	0.000003	0.000002	0.000003	0.000002	0.000000	0.000000	0.000000	0.000001	0.000021	
Total Mass Removal Rate	lbs/hr	**0.00030**	**0.00023**	**0.00028**	**0.00006**	**0.00007**	**0.00192**	**0.00091**	**0.00173**	**0.00061**	**0.00024**	**0.00036**	**0.00001**	**0.00161**	**0.00972**	

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) ND = Not Detected
6) **Bold =** Analyte detected in sample
7) SVE-Effluent-111416 was mislabeled in the field and was actually taken from the SVE influent port
8) SSD-Effluent-111416 was mislabeled in the field and was actually taken from the SSD influent sample port
9) Effluent samples were taken from the total effluent of both systems

Appendix A

System O&M Field Sheets

DATE OF O&M VISIT			05/07/18	06/12/18	07/10/18	08/06/18	08/23/18	09/11/18	10/08/18	11/12/18
SVE System Status (Up / Down / Off)										
	Status On Arrival		Up	Up	Up	Up	Up	Up	Up	Up
	Overall Up Time Since Start Up		68%	70%	71%	72%	72%	80%	76%	72%
	System Operation Status Between O&M Events									
		On Arrival								
		% Up Time	100%	100%	100%	100%	100%	100%	100%	100%
		% Down Time	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
		% Off Time	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Soil Vapor Extraction Blower (B-1)										
	Days Between O&M Events		11	36	81	102	108	91	90	98
	Days Of Operations		739	775	803	830	847	866	893	928
	SVE Blower Operation									
		Hour Meter (hrs)	12,093.6	12,955.2	13,628.0	14,272.2	14,682.1	16,625.7	16,382.8	16,135.0
		Hours Between Events	404.6	861.6	1,939.0	2,583.2	2,588.5	3,670.5	2,754.8	1,862.8
		Time Between Events (hrs)	264.1	863.2	1,940.5	2,443.1	2,591.4	2,182.8	2,159.8	2,354.2
		Time Since Start Up (hrs)	17,738.1	18,601.3	19,270.5	19,917.1	20,329.5	20,784.0	21,430.3	22,271.3
		VFD Frequency (Hz)	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.9
		VFD Load (Amps)	16.9	16.4	16.1	16.4	15.8	16.0	15.7	15.7
	Pressure ("H_2O)									
		SSD-1	-2.2	-2.0	-2.0	-2.2	-2.3	-1.5	-2.1	-2.2
		SSD-2	-2.8	-2.6	-2.4	-2.5	-3.0	-2.5	-2.8	-2.4
		SSD-3	-3.4	-3.0	-2.8	-2.8	-3.6	-3.2	-3.4	-2.9
		SSD-4	-3.8	-3.5	-2.8	-2.6	-3.9	-3.6	-3.8	-2.8
		SSD-5	-3.7	-3.4	-2.9	-2.8	-3.9	-3.3	-3.8	-2.8
		SSD-6	-3.7	-3.4	-2.9	-2.7	-3.4	-3.5	-3.8	-2.9
		SSD-7	-3.8	-3.6	-2.8	-2.8	-3.9	-3.5	-3.8	-2.9
		SSD-8	-3.7	-3.2	-2.8	-2.8	-3.8	-3.5	-3.6	-2.9
	Soil Vapor Velocity (ft/min)									
		SSD-1	2640	3075	3110	3090	2730	2897	2878	2469
		SSD-2	2640	3192	3190	3077	2560	2841	2855	2371
		SSD-3	2460	3033	3057	3088	2460	2787	2373	2962
		SSD-4	2306	2566	2881	2996	2410	2681	2667	2267
		SSD-5	1980	2959	2760	2801	2010	2307	2380	2135
		SSD-6	2160	2486	2563	2667	2030	2362	2337	2175
		SSD-7	1770	2547	2616	2598	1590	1978	1997	1960
		SSD-8	1880	1893	1917	2004	1590	1851	1859	1780
	Soil Vapor Flow Rate (ft^3/min)									
		SSD-1	57.60	67.09	67.85	67.41	59.56	63.20	62.79	53.87
		SSD-2	57.60	69.64	69.60	67.13	55.85	61.98	62.29	51.73
		SSD-3	53.67	66.17	66.69	67.37	53.67	60.80	51.77	64.62
		SSD-4	50.31	55.98	62.85	65.36	52.58	58.49	58.18	49.46
		SSD-5	43.20	64.56	60.21	61.11	43.85	50.33	51.92	46.58
		SSD-6	47.12	54.24	55.92	58.18	44.29	51.53	50.99	47.45
		SSD-7	38.62	55.57	57.07	56.68	34.69	43.15	43.57	42.76
		SSD-8	41.02	41.30	41.82	43.72	34.69	40.38	40.56	38.83
	VOCs (ppm_v)									
		SSD-1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVE Sample Ports										
	VOCs (ppm_v)									
		SSD-SP01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		SSD-SP04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

DATE OF O&M VISIT			05/07/18	06/12/18	07/10/18	08/06/18	08/23/18	09/11/18	10/08/18	11/12/18
SVE System Status (Up / Down / Off)										
	Status On Arrival		Up	Up	Up	Up	Up	OFF	OFF	OFF
	Overall Up Time Since Start Up		68%	69%	67%	64%	65%	OFF	OFF	OFF
	System Operation Status Between O&M Events									
		On Arrival								
		% Up Time	100%	100%	100%	100%	100%	#N/A	#N/A	#N/A
		% Down Time	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
		% Off Time	#N/A	#N/A	#N/A	#N/A	#N/A	100%	100%	100%
Soil Vapor Extraction Blower (B-1)										
	Days Between O&M Events		39	75	81	102	108	91	90	98
	Days Of Operations		739	775	803	830	847	866	893	928
	SVE Blower Operation									
		Hour Meter (hrs)	11,883.5	12,668.6	12,719.1	12,722.2	13,129.0	NA	NA	NA
		Hours Between Events	413.5	1,198.6	1,249.1	578.2	1,245.5	NR	NR	NR
		Time Between Events (hrs)	937.0	1,800.2	1,940.6	2,442.0	2,590.5	NR	NR	NR
		Time Since Start Up (hrs)	17,546.0	18,409.2	19,078.6	19,725.0	20,136.5	NR	NR	NR
		VFD Frequency (Hz)	60.0	60.0	60.0	60.0	60.0	NA	NA	NA
		VFD Load (Amps)	55.1	54.7	55.3	56.4	55.1	NA	NA	NA
	Vacuum ("H_2O)									
		SVE-8	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-7	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-11	-6.0	-5.8	-6.0	-5.0	-4.2	NA	NA	NA
		SVE-10	-8.2	-9.1	-8.5	-7.2	-5.9	NA	NA	NA
		SVE-15	-5.6	-6.2	-6.2	-5.9	-5.2	NA	NA	NA
		SVE-13	-9.1	-9.0	-9.5	-9.0	-9.9	NA	NA	NA
		SVE-14	-5.0	-5.0	-5.2	-5.0	-4.2	NA	NA	NA
		SVE-16	-11.0	-10.0	-10.4	-9.9	-3.9	NA	NA	NA
		SVE-18	-8.2	-8.4	-9.1	-9.0	-2.4	NA	NA	NA
		SVE-17	-8.3	-9.2	-9.2	-9.0	-7.5	NA	NA	NA
		SVE-12	-9.5	-6.0	-6.2	-6.0	-9.4	NA	NA	NA
		SVE-9	-9.2	-9.2	-8.9	-8.5	-9.6	NA	NA	NA
		SVE-21	-6.1	-6.8	-7.1	-6.9	-4.2	NA	NA	NA
		SVE-3	-9.2	-9.5	-8.8	-8.1	-12.6	NA	NA	NA
		SVE-1	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-4	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-2	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-5	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-20	-9.1	-9.0	-9.2	-9.8	-9.4	NA	NA	NA
		SVE-19	-1.5	-2.2	-2.5	-2.5	-2.7	NA	NA	NA
		SVE-23	-1.2	-2.3	-2.5	-2.5	-1.7	NA	NA	NA
		SVE-22	-1.4	-1.9	-2.0	-2.0	-0.8	NA	NA	NA
		SVE-25	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-26	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-27	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-24	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-6	NR	NR	NR	NR	NR	NA	NA	NA
	Soil Vapor Velocity (ft/min)									
		SVE-8	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-7	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-11	1597	1611	1718	1510	1418	NA	NA	NA
		SVE-10	1689	1713	1797	1559	1760	NA	NA	NA
		SVE-15	2130	2233	2139	1980	1410	NA	NA	NA
		SVE-13	2851	2895	2817	2187	2450	NA	NA	NA
		SVE-14	1431	1511	1633	1100	1240	NA	NA	NA
		SVE-16	1610	1684	1611	1290	1340	NA	NA	NA
		SVE-18	1962	1907	1899	1780	910	NA	NA	NA
		SVE-17	2218	2133	2125	2005	2250	NA	NA	NA
		SVE-12	2103	2216	2310	2200	2990	NA	NA	NA
		SVE-9	1289	1702	1813	1760	3370	NA	NA	NA
		SVE-21	1713	1751	1801	1731	1160	NA	NA	NA
		SVE-3	1865	1896	1914	1850	5280	NA	NA	NA
		SVE-1	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-4	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-2	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-5	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-20	3178	3201	3198	3000	2240	NA	NA	NA
		SVE-19	3217	3229	3117	2870	1120	NA	NA	NA
		SVE-23	1003	998	1102	980	700	NA	NA	NA
		SVE-22	1146	1097	1193	780	230	NA	NA	NA
		SVE-25	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-26	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-27	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-24	NR	NR	NR	NR	NR	NA	NA	NA
		SVE-6	NR	NR	NR	NR	NR	NA	NA	NA

Soil Vapor Flow Rate (ft^3/min)									
	SVE-8	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-7	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-11	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-10	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-15	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-13	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-14	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-16	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-18	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-17	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-12	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-9	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-21	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-3	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-1	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-4	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-2	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-5	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-20	69.3	69.8	69.8	65.4	48.9	NR	NR	NR
	SVE-19	70.2	70.4	68.0	62.6	24.4	NR	NR	NR
	SVE-23	21.9	21.8	24.0	21.4	15.3	NR	NR	NR
	SVE-22	25.0	23.9	26.0	17.0	5.0	NR	NR	NR
	SVE-25	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-26	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-27	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-24	NR	NR	NR	NR	NR	NR	NR	NR
	SVE-6	NR	NR	NR	NR	NR	NR	NR	NR
VOCs (ppm_v)									
	SVE-8	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-7	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-11	0.1	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-10	0.1	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-15	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-13	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-14	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-16	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-18	2.8	6.7	1.6	0.2	10.8	NA	NA	NA
	SVE-17	0.4	0.0	0.4	0.0	1.3	NA	NA	NA
	SVE-12	0.2	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-9	0.1	0.0	0.2	0.0	0.0	NA	NA	NA
	SVE-21	0.1	0.0	0.2	0.0	0.0	NA	NA	NA
	SVE-3	0.1	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-1	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-4	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-2	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-5	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-20	0.1	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-19	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-23	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-22	0.1	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-25	0.0	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-26	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-27	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-24	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
	SVE-6	0.0	0.0	0.0	0.0	0.0	NA	NA	NA
SVE Sample Ports									
		0.4	0.0	0.4	0.0	1.3	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	0.5	0.0	0.1	0.0	0.0	NA	NA	NA
	SVE-SP04	0.9	0.0	2.1	1.3	3.0	NA	NA	NA

Notes:

1) Soil Vapor Velocity taken form individual SVE Wells is from a 2.0-inch diameter pipe.
2) Soil Vapor Velocity taken with pitot tube assuming soil vapor temp of 65 deg F, from SVE-SP-03, which is from a 4.0-inch diameter pipe.
3) Soil Vapor Velocity taken form SVE-SP-04 is from a 3.0-inch diameter pipe.
4) Dilution is calculated by subtracting Blower Inlet and Discharge Soil Vapor Flow Rate.
5) Mass removal based following calculation: #/hr = Flow Rate x 111 (MW of Benzene) x VOC x 1.53x10^-7) .
6) NR= Not Recorded, #N/A = Not recorded placeholder for calculation purposes.

Appendix B

System Air Sample Lab Results – August 2018

ANALYTICAL REPORT

Lab Number:	L1833818
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	Raimundo Matos
Phone:	(978) 905-2100
Project Name:	OZONE PARK
Project Number:	60527976
Report Date:	09/05/18

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: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1833818-01	SVE INFLUENT_082318	SOIL_VAPOR	QUEENS, NY	08/23/18 11:35	08/27/18
L1833818-02	SSD INFLUENT_082318	SOIL_VAPOR	QUEENS, NY	08/23/18 11:45	08/27/18
L1833818-03	TOTAL EFFLUENT_082318	SOIL_VAPOR	QUEENS, NY	08/23/18 11:55	08/27/18
L1833818-04	UNUSED CAN #2463	SOIL_VAPOR	QUEENS, NY		08/27/18
L1833818-05	UNUSED CAN #1573	SOIL_VAPOR	QUEENS, NY		08/27/18
L1833818-06	UNUSED CAN #985	SOIL_VAPOR	QUEENS, NY		08/27/18

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

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

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

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

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on August 16, 2018. The canister certification results are provided as an addendum.

L1833818-01: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1833818-03 The presence of Acetone could not be determined in this sample due to a non-target compound interfering with the identification and quantification of this compound.

L1833818-03: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

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

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 09/05/18

AIR

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-01 D
Client ID: SVE INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:35
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 09/04/18 23:36
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	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
iso-Propyl Alcohol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
tert-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
1,1,2-Trichloro-1,2,2-Trifluoroethane	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	56.3	2.00	--	223	7.93	--		10

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-01 D
Client ID: SVE INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:35
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	2.26	2.00	--	11.0	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	657	2.00	--	3530	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	ND	2.00	--	ND	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	ND	2.00	--	ND	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	33.8	2.00	--	229	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	ND	2.00	--	ND	8.69	--		10

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-01 D
Client ID: SVE INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:35
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	4.00	--	ND	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	ND	2.00	--	ND	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	85		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	85		60-140

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-02
Client ID: SSD INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:45
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 09/04/18 22:24
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.430	0.200	--	2.13	0.989	--		1
Chloromethane	0.311	0.200	--	0.642	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.70	1.00	--	11.2	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	0.328	0.200	--	1.30	0.793	--		1

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-02
Client ID: SSD INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:45
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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	0.219	0.200	--	0.772	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	0.313	0.200	--	1.00	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	7.40	0.200	--	39.8	1.07	--		1
2,2,4-Trimethylpentane	0.225	0.200	--	1.05	0.934	--		1
Heptane	0.269	0.200	--	1.10	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	1.25	0.200	--	4.71	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	1.40	0.200	--	9.49	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-02
Client ID: SSD INFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:45
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

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

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	86		60-140
chlorobenzene-d5	89		60-140

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-03 D
Client ID: TOTAL EFFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:55
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 09/04/18 23:00
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.00	--	ND	9.89	--		10
Chloromethane	ND	2.00	--	ND	4.13	--		10
1,2-Dichloro-1,1,2,2-tetrafluoroethane	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
Ethyl Alcohol	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
iso-Propyl Alcohol	ND	5.00	--	ND	12.3	--		10
1,1-Dichloroethene	ND	2.00	--	ND	7.93	--		10
tert-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
1,1,2-Trichloro-1,2,2-Trifluoroethane	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	41.0	2.00	--	163	7.93	--		10

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-03 D
Client ID: TOTAL EFFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:55
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	5.00	--	ND	18.0	--		10
Chloroform	ND	2.00	--	ND	9.77	--		10
Tetrahydrofuran	ND	5.00	--	ND	14.7	--		10
1,2-Dichloroethane	ND	2.00	--	ND	8.09	--		10
n-Hexane	ND	2.00	--	ND	7.05	--		10
1,1,1-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Benzene	ND	2.00	--	ND	6.39	--		10
Carbon tetrachloride	ND	2.00	--	ND	12.6	--		10
Cyclohexane	ND	2.00	--	ND	6.88	--		10
1,2-Dichloropropane	ND	2.00	--	ND	9.24	--		10
Bromodichloromethane	ND	2.00	--	ND	13.4	--		10
1,4-Dioxane	ND	2.00	--	ND	7.21	--		10
Trichloroethene	581	2.00	--	3120	10.7	--		10
2,2,4-Trimethylpentane	ND	2.00	--	ND	9.34	--		10
Heptane	ND	2.00	--	ND	8.20	--		10
cis-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
4-Methyl-2-pentanone	ND	5.00	--	ND	20.5	--		10
trans-1,3-Dichloropropene	ND	2.00	--	ND	9.08	--		10
1,1,2-Trichloroethane	ND	2.00	--	ND	10.9	--		10
Toluene	ND	2.00	--	ND	7.54	--		10
2-Hexanone	ND	2.00	--	ND	8.20	--		10
Dibromochloromethane	ND	2.00	--	ND	17.0	--		10
1,2-Dibromoethane	ND	2.00	--	ND	15.4	--		10
Tetrachloroethene	ND	2.00	--	ND	13.6	--		10
Chlorobenzene	ND	2.00	--	ND	9.21	--		10
Ethylbenzene	ND	2.00	--	ND	8.69	--		10

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

SAMPLE RESULTS

Lab ID: L1833818-03 D
Client ID: TOTAL EFFLUENT_082318
Sample Location: QUEENS, NY

Date Collected: 08/23/18 11:55
Date Received: 08/27/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	4.00	--	ND	17.4	--		10
Bromoform	ND	2.00	--	ND	20.7	--		10
Styrene	ND	2.00	--	ND	8.52	--		10
1,1,2,2-Tetrachloroethane	ND	2.00	--	ND	13.7	--		10
o-Xylene	ND	2.00	--	ND	8.69	--		10
4-Ethyltoluene	ND	2.00	--	ND	9.83	--		10
1,3,5-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
1,2,4-Trimethylbenzene	ND	2.00	--	ND	9.83	--		10
Benzyl chloride	ND	2.00	--	ND	10.4	--		10
1,3-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,4-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2-Dichlorobenzene	ND	2.00	--	ND	12.0	--		10
1,2,4-Trichlorobenzene	ND	2.00	--	ND	14.8	--		10
Hexachlorobutadiene	ND	2.00	--	ND	21.3	--		10

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	84		60-140

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 09/04/18 14:26

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1153445-4								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 09/04/18 14:26

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1153445-4								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-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
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 09/04/18 14:26

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1153445-4								
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

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 09/04/18 14:26

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1153445-4								
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane (C10)	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1

Project Name: OZONE PARK
Project Number: 60527976
Lab Number: L1833818
Report Date: 09/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 09/04/18 14:26

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1153445-4								
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

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: WG1153445-3								
Chlorodifluoromethane	88		-		70-130	-		
Propylene	110		-		70-130	-		
Propane	90		-		70-130	-		
Dichlorodifluoromethane	94		-		70-130	-		
Chloromethane	105		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	99		-		70-130	-		
Methanol	89		-		70-130	-		
Vinyl chloride	88		-		70-130	-		
1,3-Butadiene	104		-		70-130	-		
Butane	93		-		70-130	-		
Bromomethane	87		-		70-130	-		
Chloroethane	85		-		70-130	-		
Ethyl Alcohol	102		-		70-130	-		
Dichlorofluoromethane	108		-		70-130	-		
Vinyl bromide	83		-		70-130	-		
Acrolein	82		-		70-130	-		
Acetone	102		-		70-130	-		
Acetonitrile	81		-		70-130	-		
Trichlorofluoromethane	80		-		70-130	-		
iso-Propyl Alcohol	112		-		70-130	-		
Acrylonitrile	91		-		70-130	-		
Pentane	92		-		70-130	-		
Ethyl ether	86		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

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: WG1153445-3								
1,1-Dichloroethene	85		-		70-130	-		
tert-Butyl Alcohol	79		-		70-130	-		
Methylene chloride	106		-		70-130	-		
3-Chloropropene	102		-		70-130	-		
Carbon disulfide	92		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	86		-		70-130	-		
trans-1,2-Dichloroethene	84		-		70-130	-		
1,1-Dichloroethane	85		-		70-130	-		
Methyl tert butyl ether	94		-		70-130	-		
Vinyl acetate	108		-		70-130	-		
2-Butanone	100		-		70-130	-		
cis-1,2-Dichloroethene	87		-		70-130	-		
Ethyl Acetate	91		-		70-130	-		
Chloroform	88		-		70-130	-		
Tetrahydrofuran	105		-		70-130	-		
2,2-Dichloropropane	71		-		70-130	-		
1,2-Dichloroethane	83		-		70-130	-		
n-Hexane	95		-		70-130	-		
Isopropyl Ether	89		-		70-130	-		
Ethyl-Tert-Butyl-Ether	82		-		70-130	-		
1,1,1-Trichloroethane	90		-		70-130	-		
1,1-Dichloropropene	97		-		70-130	-		
Benzene	98		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

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: WG1153445-3								
Carbon tetrachloride	89		-		70-130	-		
Cyclohexane	97		-		70-130	-		
Tertiary-Amyl Methyl Ether	90		-		70-130	-		
Dibromomethane	87		-		70-130	-		
1,2-Dichloropropane	98		-		70-130	-		
Bromodichloromethane	99		-		70-130	-		
1,4-Dioxane	102		-		70-130	-		
Trichloroethene	95		-		70-130	-		
2,2,4-Trimethylpentane	95		-		70-130	-		
Methyl Methacrylate	103		-		70-130	-		
Heptane	117		-		70-130	-		
cis-1,3-Dichloropropene	107		-		70-130	-		
4-Methyl-2-pentanone	120		-		70-130	-		
trans-1,3-Dichloropropene	89		-		70-130	-		
1,1,2-Trichloroethane	100		-		70-130	-		
Toluene	96		-		70-130	-		
1,3-Dichloropropane	95		-		70-130	-		
2-Hexanone	121		-		70-130	-		
Dibromochloromethane	104		-		70-130	-		
1,2-Dibromoethane	101		-		70-130	-		
Butyl Acetate	98		-		70-130	-		
Octane	88		-		70-130	-		
Tetrachloroethene	94		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

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: WG1153445-3								
1,1,1,2-Tetrachloroethane	89		-		70-130	-		
Chlorobenzene	100		-		70-130	-		
Ethylbenzene	99		-		70-130	-		
p/m-Xylene	100		-		70-130	-		
Bromoform	106		-		70-130	-		
Styrene	103		-		70-130	-		
1,1,2,2-Tetrachloroethane	109		-		70-130	-		
o-Xylene	103		-		70-130	-		
1,2,3-Trichloropropane	100		-		70-130	-		
Nonane (C9)	109		-		70-130	-		
Isopropylbenzene	97		-		70-130	-		
Bromobenzene	97		-		70-130	-		
o-Chlorotoluene	92		-		70-130	-		
n-Propylbenzene	94		-		70-130	-		
p-Chlorotoluene	94		-		70-130	-		
4-Ethyltoluene	106		-		70-130	-		
1,3,5-Trimethylbenzene	112		-		70-130	-		
tert-Butylbenzene	99		-		70-130	-		
1,2,4-Trimethylbenzene	112		-		70-130	-		
Decane (C10)	100		-		70-130	-		
Benzyl chloride	114		-		70-130	-		
1,3-Dichlorobenzene	108		-		70-130	-		
1,4-Dichlorobenzene	106		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

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: WG1153445-3								
sec-Butylbenzene	100		-		70-130	-		
p-Isopropyltoluene	93		-		70-130	-		
1,2-Dichlorobenzene	109		-		70-130	-		
n-Butylbenzene	110		-		70-130	-		
1,2-Dibromo-3-chloropropane	108		-		70-130	-		
Undecane	105		-		70-130	-		
Dodecane (C12)	105		-		70-130	-		
1,2,4-Trichlorobenzene	120		-		70-130	-		
Naphthalene	102		-		70-130	-		
1,2,3-Trichlorobenzene	104		-		70-130	-		
Hexachlorobutadiene	109		-		70-130	-		

Lab Duplicate Analysis
Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1153445-5 QC Sample: L1834041-02 Client ID: DUP Sample						
Dichlorodifluoromethane	0.603	0.660	ppbV	9		25
Chloromethane	0.338	0.358	ppbV	6		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	3.84	4.21	ppbV	9		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	59.6	67.9	ppbV	13		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	34.3	37.3	ppbV	8		25
Trichlorofluoromethane	0.227	0.246	ppbV	8		25
iso-Propyl Alcohol	24.3	27.9	ppbV	14		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
tert-Butyl Alcohol	0.728	0.838	ppbV	14		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	3.62	3.93	ppbV	8		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1153445-5 QC Sample: L1834041-02 Client ID: DUP Sample						
2-Butanone	33.0	35.9	ppbV	8		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25
Chloroform	2.77	2.99	ppbV	8		25
Tetrahydrofuran	0.973	1.04	ppbV	7		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	13.0	12.5	ppbV	4		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	10.7	10.5	ppbV	2		25
Carbon tetrachloride	ND	ND	ppbV	NC		25
Cyclohexane	2.54	2.50	ppbV	2		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	3.17	3.15	ppbV	1		25
Heptane	10.7	10.6	ppbV	1		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	1.29	1.32	ppbV	2		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1153445-5 QC Sample: L1834041-02 Client ID: DUP Sample						
Toluene	60.9	62.0	ppbV	2		25
2-Hexanone	4.56	4.64	ppbV	2		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	9.15	8.95	ppbV	2		25
p/m-Xylene	29.5	28.9	ppbV	2		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	0.247	0.241	ppbV	2		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	8.56	8.37	ppbV	2		25
4-Ethyltoluene	1.45	1.81	ppbV	22		25
1,3,5-Trimethylbenzene	1.54	1.53	ppbV	1		25
1,2,4-Trimethylbenzene	5.81	5.74	ppbV	1		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	0.443	0.448	ppbV	1		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: OZONE PARK

Project Number: 60527976

Lab Number: L1833818

Report Date: 09/05/18

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L1833818-01	SVE INFLUENT_082318	1877	6.0L Can	08/16/18	272271	L1831248-03	Pass	-2.1	-3.8	-	-	-	-
L1833818-02	SSD INFLUENT_082318	639	6.0L Can	08/16/18	272271	L1831248-01	Pass	-29.6	-2.5	-	-	-	-
L1833818-03	TOTAL EFFLUENT_082318	1897	6.0L Can	08/16/18	272271	L1831248-01	Pass	-29.6	-2.6	-	-	-	-
L1833818-04	UNUSED CAN #2463	2463	6.0L Can	08/16/18	272271	L1831248-01	Pass	-29.6	-29.6	-	-	-	-
L1833818-05	UNUSED CAN #1573	1573	6.0L Can	08/16/18	272271	L1831248-03	Pass	-29.3	-29.3	-	-	-	-
L1833818-06	UNUSED CAN #985	985	6.0L Can	08/16/18	272271	L1831248-01	Pass	-29.6	-29.6	-	-	-	-

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

Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 08/10/18 18:58
Analyst: RY

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
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	85		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	86		60-140

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

Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 08/10/18 18:58
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		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
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-01
Client ID: CAN 1789 SHELF 53
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
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	84		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	87		60-140

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

Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 08/10/18 20:24
Analyst: RY

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

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
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: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

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

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	83		60-140
Bromochloromethane	84		60-140
chlorobenzene-d5	83		60-140

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

Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 08/10/18 20:24
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		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
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L1831248

Project Number: CANISTER QC BAT **Report Date:** 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L1831248
Report Date: 09/05/18

Air Canister Certification Results

Lab ID: L1831248-03
Client ID: CAN 1537 SHELF 59
Sample Location:

Date Collected: 08/09/18 16:00
Date Received: 08/10/18
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
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	81		60-140
bromochloromethane	86		60-140
chlorobenzene-d5	84		60-140

Project Name: OZONE PARK
Project Number: 60527976

Lab Number: L1833818
Report Date: 09/05/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
N/A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1833818-01A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L1833818-02A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L1833818-03A	Canister - 6 Liter	N/A	NA			Y	Absent		TO15-LL(30)
L1833818-04A	Canister - 6 Liter	N/A	NA			Y	Absent		CLEAN-FEE()
L1833818-05A	Canister - 6 Liter	N/A	NA			Y	Absent		CLEAN-FEE()
L1833818-06A	Canister - 6 Liter	N/A	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	OZONE PARK	**Lab Number:**	L1833818
Project Number:	60527976	**Report Date:**	09/05/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
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.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
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.

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.

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

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

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

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.

Report Format: Data Usability Report

Project Name:	OZONE PARK	**Lab Number:**	L1833818
Project Number:	60527976	**Report Date:**	09/05/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; 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**
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**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, 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.

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

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

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

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

Date Rec'd in Lab: 8/27/18

ALPHA Job #: L833818

Client Information

Client: AECOM
Address: 250 APOLLO DRIVE
CHELMSFORD MA, 01824
Phone: 978-905-2100
Fax: 978-905-2101
Email: raimundo.matos@aecom.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: OZONE PARK
Project Location: QUEENS, NY
Project #: 60527976
Project Manager: RAY MATOS
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☒ Additional Deliverables: EDD FORMAT
Report to: (if different than Project Manager)

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm
NY	STATE	

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☐

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH (Subtract Non-petroleum HCs ☐)	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
33818.01	SVE INFLUENT_082318	8/23/18	1130	1135	-25	-3	SV	MP	6L	1877		X					
.02	SSD INFLUENT_082318	↓	1140	1145	-29	-5	SV	MP	6L	639		X					
.03	TOTAL EFFLUENT_082318	↓	1150	1155	-29	-3	SV	MP	6L	1697		X					
																	VOCs 1573, 985 AND 2463 ONLY

*SAMPLE MATRIX CODES

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

Container Type

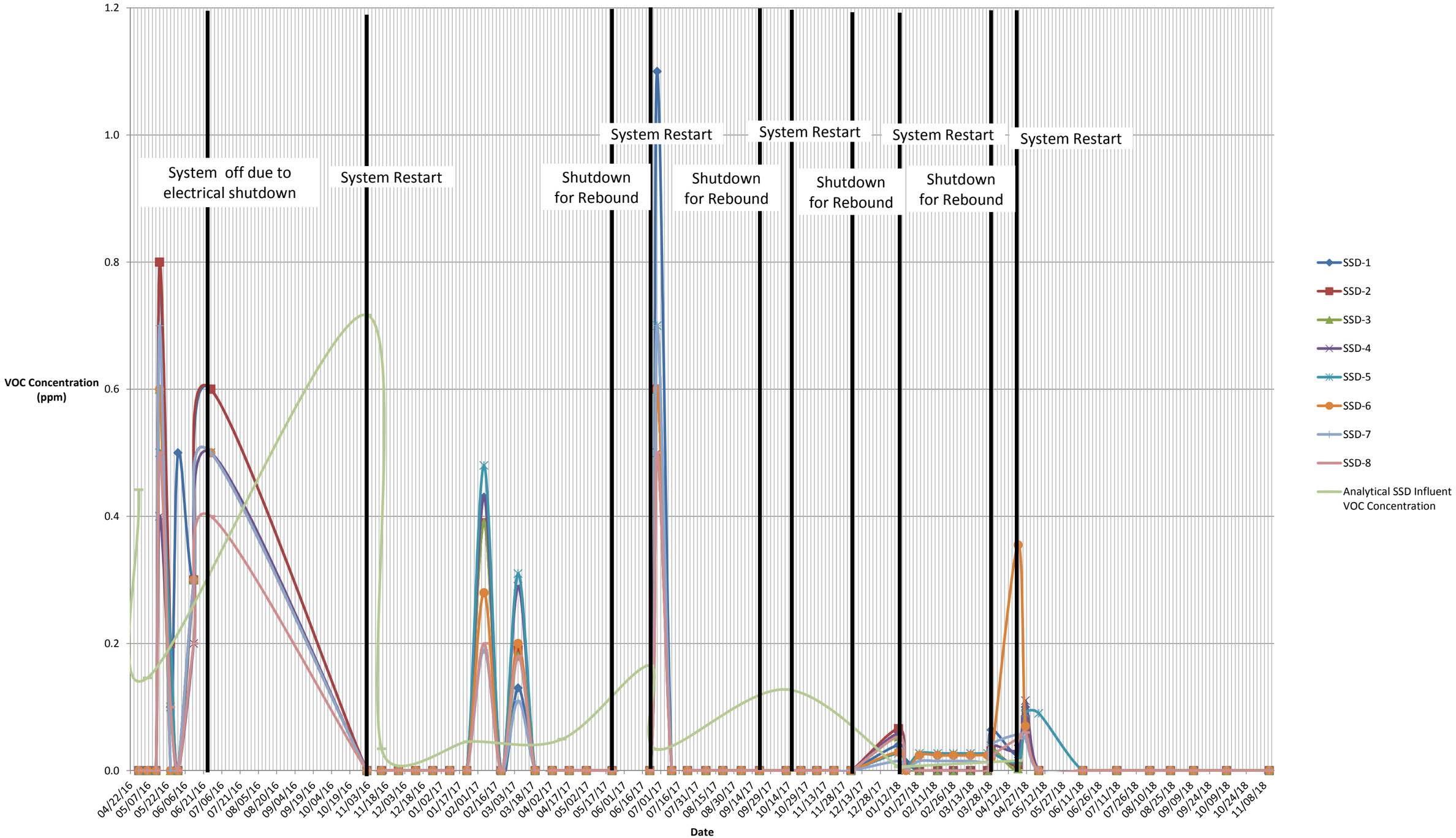
Relinquished By:	Date/Time	Received By:	Date/Time:
T. Hundley III	8/24/18 09:48	T. Hundley III	8/27/18 1305
	8/27/18 1440		8/27/18 1440
	8/27/18 1930		8/27/18 1930

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

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