March 16, 2022

Megan Kuczka, DER Project Manager New York State Department of Environmental Conservation Division of Environmental Remediation, Region 9 270 Michigan Avenue Buffalo, New York 14203

Re: **Monitoring and Sampling Summary (4th Quarter 2021)** Site Management Plan, Post Installation Monitoring & Inspection MOD-PAC CORP. Site, 1801 Elmwood Avenue, Buffalo, New York

Dear Ms. Kuczka:

In accordance with Section 4.4 Post-Remediation Media Monitoring and Sampling of the Site Management Plan (SMP)¹ for NYSDEC Site #C915314, Environmental Advantage, Inc. (EA), has completed the 2021 fourth guarter of the Sub-Slab Depressurization (SSD) systems post-installation inspections, monitoring, sampling/analysis and system maintenance. All information and data collected within the first six months of the SSD systems post-installation activities were summarized and included in the Site's Final Engineering Report² (FER), and served as the basis for the required tasks as identified in the SMP. Additionally, a summary letter report³ was submitted to the Department on March 31, 2020, which provided the results of the post-installation maintenance and monitoring of the SSD systems completed from late-September 2019 through March 2020 by Hazard Evaluations, Inc. (HEI). EA has completed all post-installation maintenance and monitoring since March 2020. EA has prepared this summary letter report which provides the results of the postinstallation maintenance, inspection and monitoring of the SSD systems completed from October 1, 2021 through December 31, 2021. The attachments to this letter report include figures (Attachment A), summary tables (Attachment B), field notes (Attachment C), and analytical laboratory reports (Attachment D).

After discussions with the Department, New York State Department of Health (NYSDOH) representatives, and Matrix Environmental Technologies, Inc. (METI), the engineering firm responsible for the design and annual inspection and certification of the SSD systems, it was determined that monthly gauging and quarterly groundwater sampling of the Site's four groundwater monitoring wells subject to the remedial program was warranted to investigate the apparent seasonal correlation to maintaining a negative pressure of at least 0.002 inches water column (WC) in the sub-slab. To this regard, monthly monitoring well water level gauging commenced in March 2021, and quarterly groundwater sampling commenced in July 2021, three

^{3 &}quot;SSDS Monitoring and Sampling Summary (1st Quarter 2020)" prepared by Hazard Evaluations, Inc. (HEI), dated March 2020.



^{1 &}quot;Site Management Plan for MOD-PAC Site, 1801 Elmwood Avenue, City of Buffalo, Erie County, New York, Site No. C915314" prepared by C&S Engineers, Inc., December 2019.

^{2 &}quot;MOD-PAC Corporation, Erie County, New York, Final Engineering Report, NYSDEC Site Number: C915314" prepared by C&S Engineers, Inc., November 2019.

months after the SMP required annual groundwater sampling event. In addition to monthly gauging and quarterly groundwater sampling, monthly vacuum readings were collected for any vapor monitoring point (VMP) that failed to achieve the minimum negative pressure of at least 0.002 inches WC during quarterly SSD inspections. The monthly non-compliant VMP monitoring is continued for any affected VMP until that VMP achieves the minimum negative pressure as designed. The locations of the groundwater monitoring wells and SSD systems are shown on Figure 1.

SSDS Installation

The SSD systems at the MOD-PAC CORP. (MPC) Site were installed to mitigate potential vapor migration into the building by maintaining a negative pressure of at least 0.002 inches water column (WC) in the sub-slab of three target areas; Area A the finished product storage area, Area B the cold storage garage, and Area C the facility maintenance area, as shown in Figures 2A – 2C provided in Attachment A.

These locations were selected based on elevated sub-slab vapor and/or indoor air sampling results detected during investigations completed in December 2017, April 2018 and May 2018. The SSD systems were installed during September 2019, and all systems were operational and tested by October 25, 2019. Post-installation maintenance, inspection and monitoring were completed in accordance with the NYSDEC-approved Work Plan prepared by METI⁴.

Post-Installation SSD Maintenance and Monitoring

In accordance with the Work Plan prepared by METI, system checks were completed in all areas on a weekly basis for the first month of systems operation (September through October 2019), monthly for the following two months (November and December 2019), and quarterly thereafter (beginning January 2020). Routine monitoring includes the identification and repair of any leaks, operational status checks of blowers and fans, documentation of manifold settings and vacuum point at each vapor extraction point, and documentation of vacuum at each monitoring point. Non-routine maintenance, including carbon change outs, will be completed as necessary based on analytical data of pre- and post-carbon samples. Area-specific findings during the Q4 2021 monitoring event are summarized in Table 1, and historical data are presented in Table 2A for Area A, Table 2B for Area B, and Table 2C for Area C, all of which are provided in Attachment B.

Pre- and post-carbon air samples were collected from Area A on a monthly basis for the initial three months of system operation (October, November, and December 2019) and were reduced to a quarterly frequency thereafter (beginning in January 2020). All samples were submitted for laboratory analysis of volatile organic compounds (VOCs) via Environmental Protection Agency (EPA) Method TO-15. Air sample results for the current monitoring period are summarized in Table 3 provided in Attachment B. In addition, pre- and post-carbon photoionization detector (PID)

^{4 &}quot;Work Plan for Sub-Slab Depressurization Systems" prepared by Matrix Environmental Technologies, Inc., dated February 2019.



readings were collected from Area A, as well as from Areas B and C effluent, on a weekly basis for the first month of systems operation and since that time have been collected on a monthly basis.

SSD Area A – Finished Product Storage Area

During the Q4 2021 monitoring event, carbon replacement was completed on December 10, 2021, prior to the quarterly sample collection. Manometer readings for all VMPs in Area A achieved the minimum negative pressure of at least 0.002 inches WC in the sub-slab. VMP-6A has not been monitored since March 2020 as this VMP has been verified as a dead point, as described in Section 5.1 – 'Area A Testing' of METI's "System Start-up Report and Operation and Maintenance Plan"⁵ as provided within Appendix H – Operation and Maintenance Manual of the SMP. At the request of the Department, monitoring of VMP-6A will resume in the first quarter of 2022.

Within this system, pre-carbon PID readings ranged from 0 to 7.6 ppm, and post-carbon PID readings were consistently 0.0 parts per million (ppm) throughout the monitoring period. Pre- and post-carbon air samples were collected on December 10, 2021 and analyzed for VOCs via EPA Method TO-15. Post-carbon analytical data exhibited lower concentrations of all chlorinated and non-chlorinated compounds when compared to pre-carbon concentrations, with an overall NYSDOH target chlorinated VOC⁶ (cVOC) reduction of 93.91 percent. These air analytical results indicate the fresh carbon is adequately removing the bulk of the VOCs detected. The previous carbon replacement was completed in September 2020, with the system started in October 2019; therefore, the approximate carbon life has consistently been one year over the past 2 years since system start-up. Air sample results for Q4 2021 are summarized in Table 3, with historical air sample results summarized in Table 4, provided in Attachment B. The complete analytical laboratory report is provided in Attachment D.

SSD Area B – Cold Storage Area

During the Q4 2021 monitoring event, manometer readings for all VMPs did achieve the minimum 0.002 inches WC in the sub-slab with the exception of VMP-6B during the December quarterly monitoring event. System effluent PID readings were 0.0 ppm throughout the monitoring period. Based on previous air sampling results obtained, a determination was made that a carbon system did not need to be installed on this emission point.

SSD Area C – Maintenance Area

During the Q4 2021 monitoring event, manometer readings for all VMPs met the minimum 0.002 inches WC in the sub-slab. System effluent PID readings were consistently 0.0 throughout the current monitoring period for EW-2C, and EW-3C.

⁶ NYSDOH Target cVOCs are included in this calcultion, specifically those listed in the NYSDOH "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York", May 2017 Update. Specifically: 1,1,1-Trichloroethane, 1,1-Dichloroethene, Carbon tetrachloride, cis-1,2-Dichloroethene, Methylene chloride, Tetrachloroethene, Trichloroethene, and Vinyl chloride.



⁵ Matrix Environmental Technologies, Inc. 'Sub-Slab Depressurization System Start-up Report and Operation and Maintenance Plan, December 12, 2019.

EW-1C effluent PID readings were 0.0 during the October and November monitoring events and 4.7 during the December quarterly monitoring event.

Groundwater Monitoring

During the Q2 2021 monitoring period, water table elevation measurements collected in April, May and June 2021 ranged from 4.13 feet below grade to 6.80 feet below grade; water table elevations were the highest in April 2021 and the lowest in June 2021. During the Q3 2021 monitoring period, water table elevation measurements collected in July, August and September 2021 ranged from 3.35 feet below grade to 6.95 feet below grade; water table elevations were the highest in September 2021 and the lowest in July 2021. During the current monitoring period water table elevation measurements collected in November and December 2021 ranged from 3.30 feet below grade to 6.30 feet below grade. During this monitoring period, water table elevations were the highest in November 2021 and the lowest in December 2021. Water table elevation measurements were unable to be collected in October 2021 due to the Covid 19 pandemic concerns. Since the monthly collection of water table elevation measurements commenced in March 2021, water levels were the highest in November 2021 and the lowest in July 2021. Please Note: Water table elevations were measured from the top of the riser pipe for each respective well. Historical groundwater monitoring results are summarized in Table 5 provided in Attachment B.

Groundwater samples were collected on November 19, 2021, from the four monitoring wells included in the remedial program: MW - 3, MW - 11, MW - 12, and MW – 13. All samples were submitted for laboratory analysis of Target Compound List (TCL) VOCs via EPA Method 8260. Groundwater sample results are summarized in Table 6 in Attachment B. Five chlorinated VOCs (cVOCs) and one non-chlorinated VOC were detected in the groundwater samples. Cis-1.2dichloroethene, trans-1,2- dichloroethene, trichloroethene (TCE), and vinyl chloride were detected at concentrations that exceed the TOGS 1.1.1 Groundwater Effluent Limitations⁷. 1,1-dichloroethene and benzene were also detected; however, at concentrations below the TOGS 1.1.1 Limitations. In July 2021, MW - 3 and MW -11 exhibited the highest recorded level of TCE since groundwater monitoring was initiated in 2018; however, in July 2021, the groundwater levels were the lowest recorded in both MW – 3 and MW – 11. In November 2021, TCE levels in MW – 3 decreased from the previously recorded July 2021 levels; however, TCE levels in MW-3 are higher than pre-remedy concentrations, exhibiting a 21.43 percent increase in November 2021. MW - 11 and MW - 13 exhibited lower TCE concentrations in November 2021 that had been recorded in July 2021, and both monitoring wells have lower TCE levels than pre-remedy concentrations, a 20 percent and 54.38 percent decrease, respectively, for the November 2021 sampling event. MW – 12 has consistently exhibited non-detect VOCs concentrations as has been characteristic of this particular well. Historical groundwater monitoring and

⁷ NYSDEC "Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" dated June 1998.



sampling data results are summarized in Table 6 in Attachment B. The complete analytical laboratory report is provided in Attachment D.

Corrective Measures

During the July 1, 2021 monthly monitoring event, the fan at EW-2 was observed to be not functioning properly. Both METI and MPC personnel inspected the fan and found that the newly installed timer for the fan was malfunctioning, causing the fan to shut off. The timer was repaired by METI, and as of July 9, 2021 the fan has been operating continuously without interruption.

During the Q4 2021 monitoring event in December, EA noted that vapor trenches for EW-2B, EW-3B, have a leak and should be sealed. Additionally, the vapor trenches for EW-8B and EW-3C have a few minor cracks present. However, there is no evidence of air leakage in the trenches for EW-8B and EW-3C at this time. EA recommended to the to the Site owner re-epoxying the cracks in the vapor trenches.

During the Quarterly Inspections completed on June 11, 2021 and September 8, 2021, all vapor monitoring points (VMPs) met the minimum 0.002 inches WC negative pressure in the sub-slab as required, including VMP-1C and VMP-4C which had exhibited readings of 0.000 inches WC in March 2021, and VMP-5B, which had exhibited a 0.000 inches WC readings in March and April 2021. Fan malfunction was found to be the cause of the non-compliant readings at VMP-1C and VMP-4C, and a new fan was installed at EW-1C on May 19, 2021 as previously reported. Once the new fan was installed at EW-1C, VMP-1C and VMP-4C immediately achieved the minimum negative pressure as designed. During the Quarterly Inspection completed on December 10, 2021, all vapor monitoring points (VMPs) met the minimum 0.002 inches WC negative pressure in the sub-slab as required, with the exception of VMP-6B. A cause has not been determined for the non-compliant readings at VMP-5B in March and April 2021, and VMP-6B in December 2021.

Conclusions and Scheduling

During the Q4 2021 monitoring period, all manometers met the minimum 0.002 inches WC in the sub-slab with the exception of VMP-6B in December 2021 and all of the SSD systems appeared to be functioning properly.

Post-carbon analytical data collected during Q4 2021 exhibited lower concentrations of all VOCs compared to pre-carbon concentrations. Overall total NYSDOH target cVOCs reduction was 93.91 percent. Carbon replacement was completed on December 10, 2021, prior to the quarterly sample collection. Previous carbon replacement was completed on September 23, 2020; therefore carbon life for the treatment system in Area A has been consistent at approximately 1 year. Continued system inspections, monitoring, and sampling will be completed for the first quarter of 2022.

As previously postulated, the apparent seasonal correlation to maintaining a negative pressure of at least 0.002 inches water column (WC) in the sub-slab of the



three target areas is still under investigation. This condition may be associated with changing groundwater levels at the Site, based on historical data. Water table levels monitored in the eastern portion of the Site in April 2020 and 2021 were at an approximate depth of five feet below grade (4.73 feet and 5.18 feet, respectively). Water table levels monitored in June and September 2021 were at an average depth of 5.65 feet and 4.75 feet below grade, respectively, and an average depth of 4.99 feet in December 2021. If the groundwater surface rises to even a limited extent during the winter/early spring months, the vadose zone beneath the SSD systems becomes very limited, which apparently leads to some level of upward draw by the SSD system, possibly creating areas of blockage beneath the building floors. Some continuing evidence for this condition has been provided as all manometer readings collected during the summer and fall months of 2019, 2020 and 2021 met the minimum 0.002 inches WC in the sub-slab zones. EA is still monitoring this relationship for the foreseeable future.

If you have any questions regarding this information presented above, please contact me directly for further information.

Very truly yours, ENVIRONMENTAL ADVANTAGE, INC.

Markedance

C. Mark Hanna, CHMM President

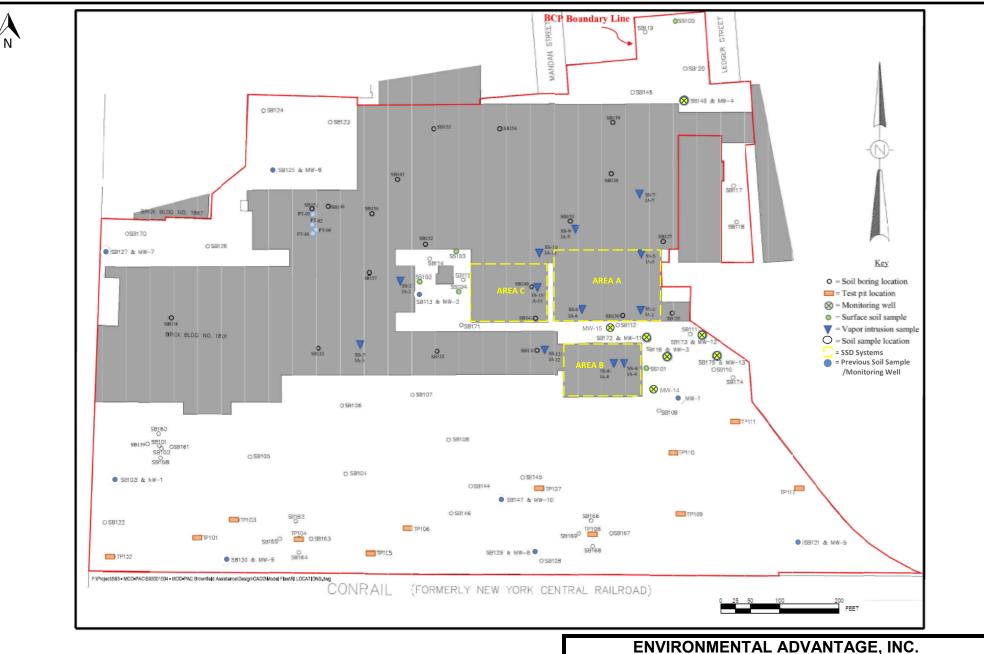
Attachments



ATTACHMENT A

Figures





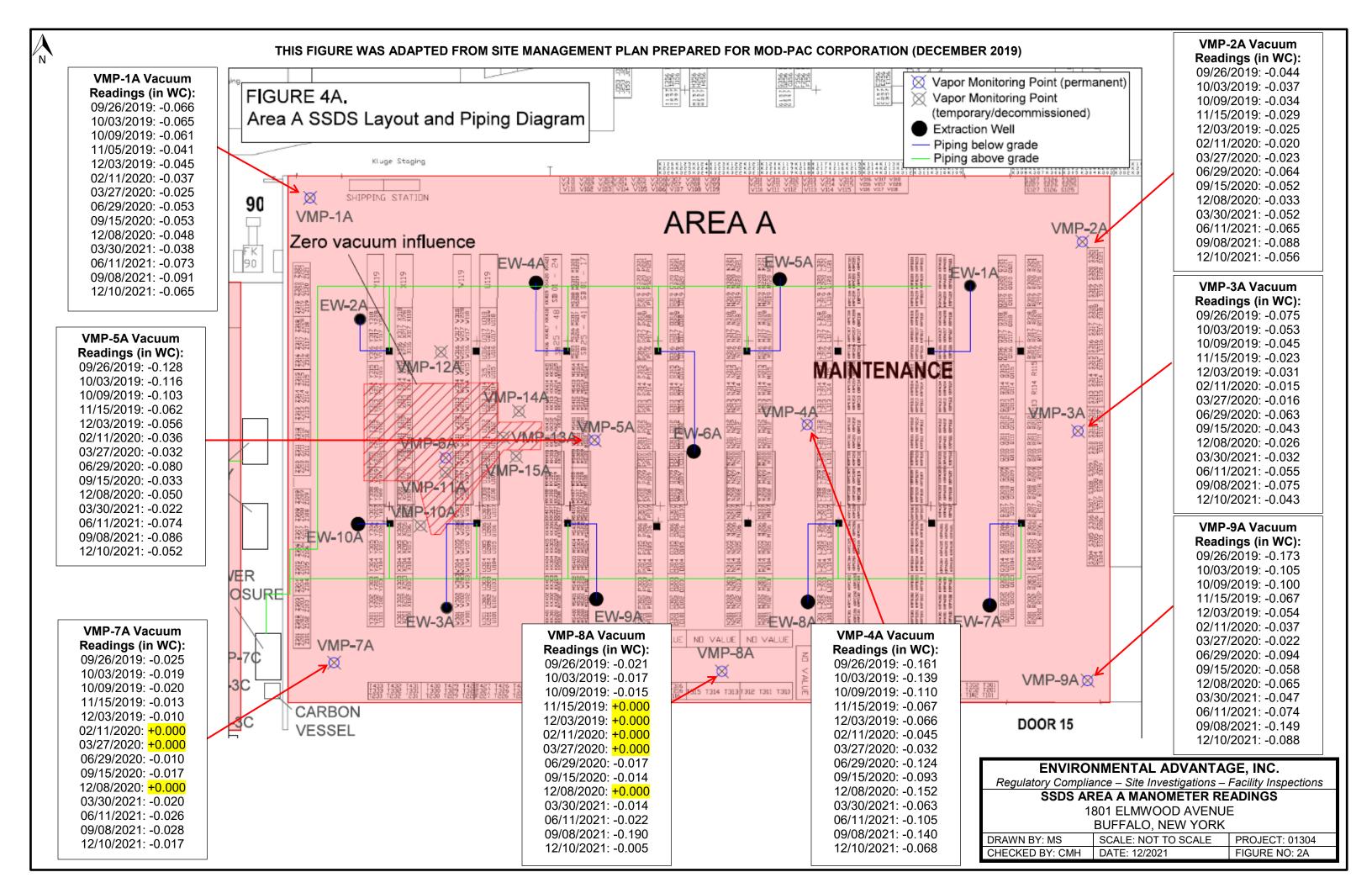
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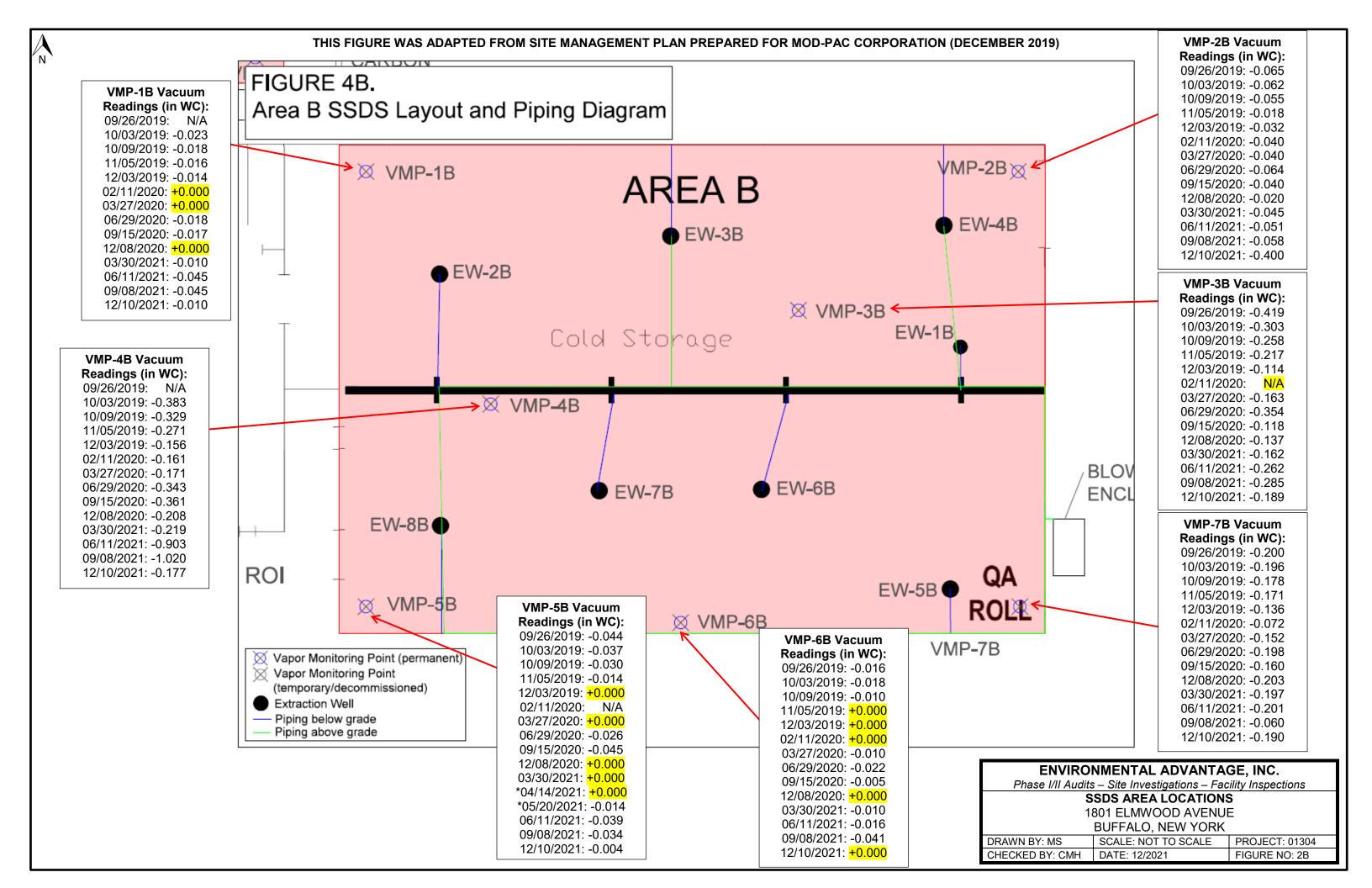
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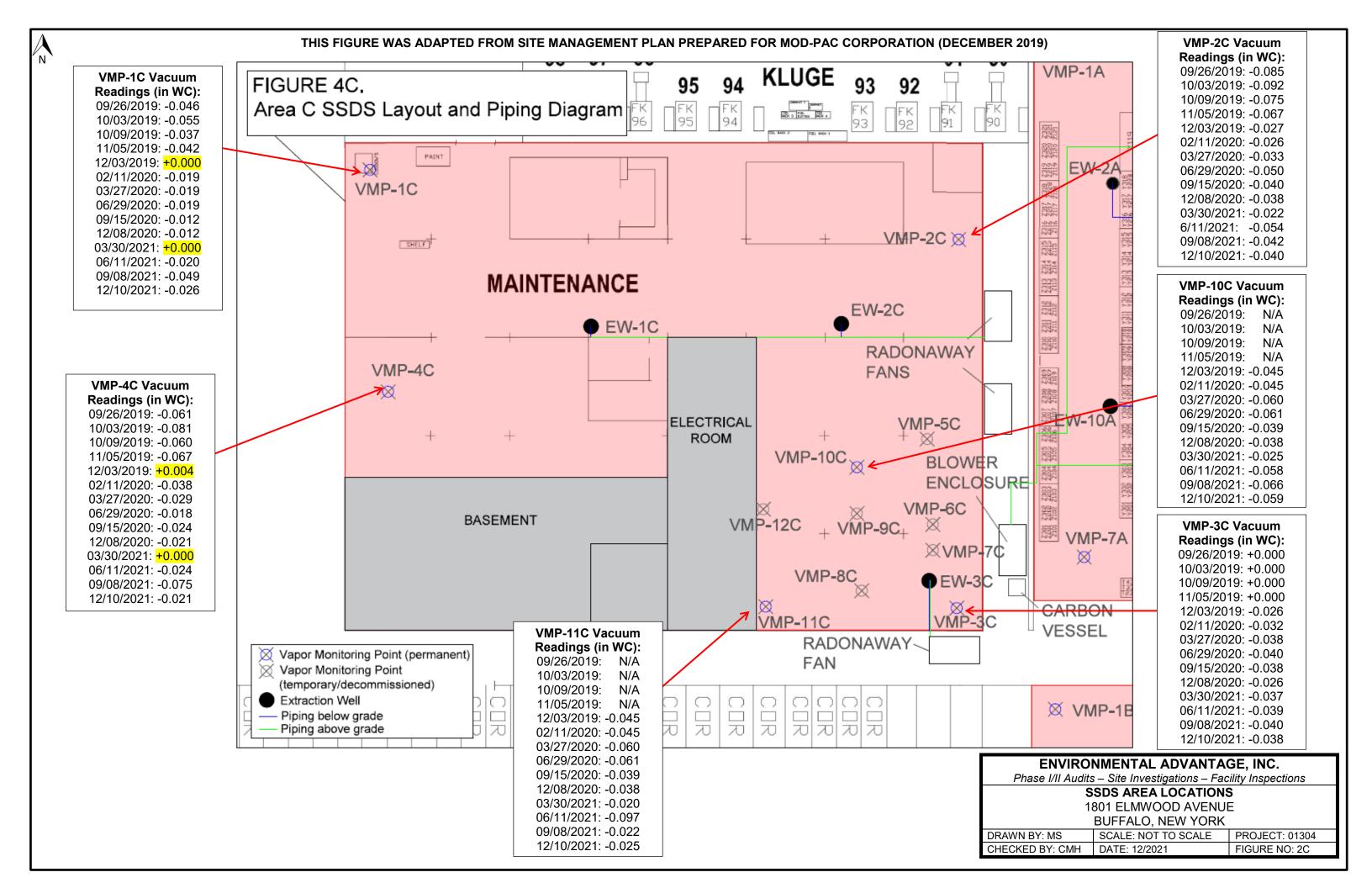
1801 ELMWOOD AVENUE

BUFFALO, NEW YORK								
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Figure adapted from Figure 3 within the Site Management Plan for MOD-PAC BCP Site No. C915314







ATTACHMENT B

Tables



Table 1 MOD-PAC CORP., 1801 Elmwood Ave, Buffalo, NY SSDS Post Installation Monitoring Results Q3 2021 Summary

Area A - Finished Product Storage Area

Dete		Extraction Wells (in WC)										Pre-carbon PID	Post-carbon PID
Date	EW-1A	EW-2A	EW-3A	EW-4A	EW-5A	EW-6A	EW-7A	EW-8A	EW-9A	EW-10A	(in WC)	Reading (ppm)	Reading (ppm)
12/10/2021	16	16	17	16	17	0	17	17	17	17	15	7.6	0.0

Date Vapor Monitoring Points (in WC)									
Date	VMP-1A VMP-2A VMP-3A VMP-4A VMP-5A VMP-7A VMP-8A VMP								
12/10/2021	-0.065	-0.056	-0.043	-0.068	-0.052	-0.017	-0.005	-0.088	

Area B - Cold Storage Garage

Dete		Extraction Wells (in WC)							Blower	System Effluent PID
Date	EW-1B	EW-1B EW-2B EW-3B EW-4B EW-5B EW-6B EW-7B EW-8B								Reading (ppm)
12/10/2021	20	20	21	21	21	21	20	20	16	0.0

Date	Vapor Monitoring Points (in WC)										
Date	VMP-1B	VMP-1B VMP-2B VMP-3B VMP-4B VMP-5B VMP-6B VMP-7B									
12/10/2021	-0.010	-0.400	-0.189	-0.177	-0.004	+0.000	-0.190				

Area C - Maintenance Area

Date	Extrac	tion Wells	(in WC)	System Effluent PID Reading (ppm)				
	EW-1C	EW-2C	EW-3C	EW-1C	EW-2C	EW-3C		
12/10/2021	30	32	30	4.7	0.0	0.0		

Date	Vapor Monitoring Points (in WC)										
Date	VMP-10C	VMP-11C									
12/10/2021	-0.026	-0.040	-0.038	-0.021	-0.059	-0.025					

Note:

1. in WC = inches water column; ppm = parts per million;

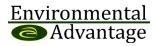


Table 2A MOD-PAC CORP., 1801 Elmwood Ave, Buffalo, NY SSDS Post Installation Monitoring Results Area A - Finished Product Storage Area

Date				E	xtraction V	Vells (in W	C)				Blower	Pre-carbon PID	Post-carbon PID
Date	EW-1A	EW-2A	EW-3A	EW-4A	EW-5A	EW-6A	EW-7A	EW-8A	EW-9A	EW-10A	(in WC)	Reading (ppm)	Reading (ppm)
9/26/2019	14.5	14.5	15.5	14.5	15	1	14.5	15	14.5	15.5	12	3.3	1.5
10/3/2019	14	14	15	14	14	1	14	15	14	15	12	52.6	12.7
10/9/2019	13	13.5	14	13.5	13.5	1	13.5	14	13.5	14.5	13	0.0	0.0
11/5/2019	11.5	12	12.5	11.5	12	1	12	12	11.5	12.5	10	4.7	0.5
12/3/2019	11	11.5	12	11	11.5	1	11.5	11.5	11.5	12	10	1.0	0.1
1/22/2020												0.2	0.0
2/11/2020	10	10.5	11	10.5	11	1	11	11	10.5	11.5	9	0.5	0.0
3/27/2020	10	10	11	10.5	11	1	10.5	10.5	10	11	8	47.8	27.1
6/29/2020	13	13	13.5	13	13	1	13	13	13	13.5	14	0.4	0.4
7/31/2020												0.0	0.0
8/28/2020												0.0	0.0
9/15/2020	13.5	14	14.5	14	14	1	14	14.5	14.5	15	14	2.7	1.1
10/15/2020												7.8	4.6
11/4/2020												0.0	0.0
12/8/2020	12.5	13	13.5	13	13	1	13	14	13	14	12	0.6	0.0
1/4/2021												0.4	0.0
2/18/2021												1.0	0.0
3/30/2021	13	14	14	14	14	0	14	14	14	15	12	0.0	0.0
4/14/2021												0.4	0.0
5/20/2021												0.4	0.0
6/11/2021	16	16	16	16	16	0	16	17	17	17	15	0.1	0.0
7/1/2021											16	0.0	0.0
8/25/2021											18	0.0	0.0
9/8/2021	17	17	18	18	17	0	18	18	18	18	16	0.3	0.0
10/20/2021												0.0	0.0
11/19/2021												0.0	0.0
12/10/2021	16	16	17	16	17	0	17	17	17	17	15	7.6	0.0

Date				Vapor Mon	itoring Poi	nts (in WC)			
Date	VMP-1A	VMP-2A	VMP-3A	VMP-4A	VMP-5A	VMP-6A	VMP-7A	VMP-8A	VMP-9A
9/26/2019	- 0.066	- 0.044	- 0.075	- 0.161	- 0.128	+ 0.000	- 0.025	- 0.021	- 0.173
10/3/2019	- 0.065	- 0.037	- 0.053	- 0.139	- 0.116	+ 0.000	- 0.019	- 0.017	- 0.105
10/9/2019	- 0.061	- 0.034	- 0.045	- 0.110	- 0.103	+ 0.000	- 0.020	- 0.015	- 0.100
11/5/2019	- 0.041	- 0.029	- 0.023	- 0.067	- 0.062	+ 0.010	- 0.013	+ 0.000	- 0.067
12/3/2019	- 0.045	- 0.025	- 0.031	- 0.066	- 0.056	+ 0.020	- 0.010	+ 0.000	- 0.054
2/11/2020	- 0.037	- 0.020	- 0.015	- 0.045	- 0.036	+ 0.015	+ 0.000	+ 0.000	- 0.037
3/27/2020	- 0.025	- 0.023	- 0.016	- 0.032	- 0.032	+ 0.010	+ 0.000	+ 0.000	- 0.022
6/29/2020	- 0.053	- 0.064	- 0.063	- 0.124	- 0.080	Removed	- 0.010	- 0.017	- 0.094
9/15/2020	- 0.053	- 0.052	- 0.043	- 0.093	- 0.033	Removed	- 0.017	- 0.014	- 0.058
12/8/2020	-0.048	-0.033	-0.026	-0.152	-0.05	Removed	+0.000	+0.000	-0.065
3/30/2021	-0.038	-0.052	-0.032	-0.063	-0.022	Removed	-0.020	-0.014	-0.047
6/11/2021	-0.073	-0.065	-0.055	-0.105	-0.074	Removed	-0.026	-0.022	-0.074
9/8/2021	-0.091	-0.088	-0.075	-0.140	-0.086	Removed	-0.028	-0.190	-0.149
12/10/2021	-0.065	-0.056	-0.043	-0.068	-0.052	Removed	-0.017	-0.005	-0.088

Note:

1. Yellow shading indicates that samples did not meet the minimum 0.002 inches WC

2. Blank space indicates that data was not collected

3. in WC = inches water column; ppm = parts per million;

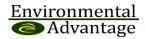


Table 2B MOD-PAC CORP., 1801 Elmwood Ave, Buffalo, NY SSDS Post Installation Monitoring Results Area B - Cold Storage Garage

Date			E	xtraction V	Vells (in W	C)			Blower	System Effluent
Date	EW-1B	EW-2B	EW-3B	EW-4B	EW-5B	EW-6B	EW-7B	EW-8B	(in WC)	PID Reading (ppm)
9/26/2019	13	13.5	13.5	14.5	13.5	14	13	12	10.5	1.3
10/3/2019	13	13.5	13.5	14	13.5	14	13	12	10	1.4
10/9/2019	12.5	13	13	13.5	13	13.5	12	12	10	0.0
11/5/2019	12	13	12.5	13	12.5	13	11.5	11	9	0.5
12/3/2019	11	11	11	11.5	11	11.5	10.5	10	8	0.1
1/22/2020										0.0
2/11/2020	12.5	13	13	13.5	13	13.5	12	11.5	9	0.0
3/27/2020	14	15	14	15	15	15	14	13.5	10	0.0
6/29/2020	16	12	17	12.5	17	17	16	15.5	16	0.0
7/31/2020										0.0
8/28/2020										0.0
9/15/2020	17	18	17	18	18	18	17	16.5	16	2.7
10/15/2020										0.3
11/4/2020										0.0
12/8/2020	16.5	17	17	17	17	17	16.5	16	13	0.4
1/4/2021										0.0
2/18/2021										0.0
3/30/2021	16	17	17	17	17	17	16	16	12	0.0
4/14/2021										0.0
5/20/2021										0.1
6/11/2021	18	18	19	20	19	19	18	18	18	0.0
7/1/2021									18	0.0
8/25/2021									20	0.0
9/8/2021	20	21	22	23	22	22	21	21	19	0.0
10/20/2021										0.0
11/19/2021										0.0
12/10/2021	20	20	21	21	21	21	20	20	16	0.0

Date		,	Vapor Mon	itoring Poi	nts (in WC)		
Date	VMP-1B	VMP-2B	VMP-3B	VMP-4B	VMP-5B	VMP-6B	VMP-7B
9/26/2019	N/A	- 0.065	- 0.419	N/A	- 0.044	- 0.016	- 0.200
10/3/2019	- 0.023	- 0.062	- 0.303	- 0.383	- 0.037	- 0.018	- 0.196
10/9/2019	- 0.018	- 0.055	- 0.258	- 0.329	- 0.030	- 0.010	- 0.178
11/5/2019	- 0.016	- 0.018	- 0.217	- 0.271	- 0.014	+ 0.000	- 0.171
12/3/2019	- 0.014	- 0.032	- 0.114	- 0.156	+ 0.000	+ 0.000	- 0.136
2/11/2020	+ 0.000	- 0.040	N/A	- 0.161	N/A	+ 0.000	- 0.072
3/27/2020	+ 0.000	- 0.040	- 0.163	- 0.171	+ 0.000	- 0.010	- 0.152
6/29/2020	- 0.018	- 0.064	- 0.354	- 0.343	- 0.026	- 0.022	- 0.0198
9/15/2020	- 0.017	- 0.041	- 0.118	- 0.361	- 0.045	- 0.005	- 0.160
12/8/2020	+0.000	-0.02	-0.137	-0.208	+0.000	+0.000	-0.203
3/30/2021	- 0.010	- 0.045	- 0.162	- 0.219	+0.000	- 0.010	- 0.197
4/14/2021	NG	NG	NG	NG	+0.000	NG	NG
5/20/2021	NG	NG	NG	NG	-0.014	NG	NG
6/11/2021	-0.045	-0.051	-0.262	-0.903	-0.039	-0.016	-0.201
9/8/2021	-0.045	-0.058	-0.285	-1.020	-0.034	-0.041	-0.060
12/10/2021	-0.010	-0.40	-0.189	-0.177	-0.004	+0.000	-0.190

Note:

1. Yellow shading indicates that samples did not meet the minimum 0.002 inches WC

2. N/A indicates the VMP was not accessible during the time of the system check

3. Blank space indicates that data was not collected

4. in WC = inches water column; ppm = parts per million;

5. NG = Not Gauged



Table 2C MOD-PAC CORP., 1801 Elmwood Ave, Buffalo, NY SSDS Post Installation Monitoring Results Area C - Maintenance Area

Date	Extrac	ction Wells (i	n WC)	Fan Syster	n Effluent PID	Reading (ppm)
Date	EW-1C	EW-2C	EW-3C	EW-1C	EW-2C	EW-3C
9/26/2019	43	40		1.4	0.7	
10/3/2019	44	45		1.0	4.5	
10/9/2019	44.5	45.5		0.0	0.0	
11/5/2019	44	46		0.0	0.4	
12/3/2019		39	28		1.2	0.4
1/22/2020					0.4	0.0
2/11/2020	31	30	27.5	0.2	0.0	0.0
3/27/2020	29	32	28	0.0	0.0	0.0
6/29/2020	27	31	29	0.0	0.0	0.0
7/31/2020				0.0	0.0	0.0
8/28/2020				0.0	0.0	0.0
9/15/2020	28.5	31	29	0.0	0.0	0.0
10/15/2020				0.0	0.0	0.0
11/4/2020				0.0	0.0	0.0
12/8/2020	31	31	29	0.0	0.0	0.0
1/4/2021				0.0	0.0	0.0
2/18/2021						0.0
3/30/2021		32	30		0.0	0.0
4/14/2021					0.1	0.0
5/20/2021				0.0	0.0	0.0
6/11/2021	23	31	30	0.0	0.0	0.0
7/1/2021				0.0	0.0	0.0
8/25/2021				0.0	0.0	0.0
9/8/2021	29	31	30	0.0	0.0	0.0
10/20/2021				0.0	0.0	0.0
11/19/2021				0.0	0.0	0.0
12/10/2021	30	32	30	4.7	0.0	0.0

Data		N	/apor Monito	ring Points (in WC)	
Date	VMP-1C	VMP-2C	VMP-3C	VMP-4C	VMP-10C	VMP-11C
9/26/2019	- 0.046	- 0.085	+ 0.000	- 0.061		
10/3/2019	- 0.055	- 0.092	+ 0.000	- 0.081		
10/9/2019	- 0.037	- 0.075	+ 0.000	- 0.060		
11/5/2019	- 0.042	- 0.067	+ 0.000	- 0.067		
12/3/2019	+ 0.000	- 0.027	- 0.026	+ 0.004	- 0.045	- 0.018
2/11/2020	- 0.019	- 0.026	- 0.032	- 0.038	- 0.045	- 0.020
3/27/2020	- 0.019	- 0.033	- 0.038	- 0.029	- 0.060	- 0.021
6/29/2020	- 0.019	- 0.050	- 0.040	- 0.018	- 0.061	- 0.044
9/15/2020	- 0.012	- 0.040	- 0.038	- 0.024	- 0.039	- 0.017
12/8/2020	-0.012	-0.038	-0.026	-0.021	-0.038	-0.016
3/30/2021	+ 0.000	- 0.022	- 0.037	+ 0.000	- 0.025	- 0.020
6/11/2021	-0.020	-0.054	-0.039	-0.024	-0.058	-0.097
9/8/2021	-0.049	-0.042	-0.040	-0.075	-0.066	-0.022
12/10/2021	-0.026	-0.040	-0.038	-0.021	-0.059	-0.025

Note:

1. Yellow shading indicates that samples did not meet the minimum 0.002 inches WC

2. Blank space indicates that data was not collected

3. in WC = inches water column; ppm = parts per million;

4. Please note that a blower is not included within the extraction system of Area C and that the extraction system is operated by fans.



Table 3
MOD-PAC, Corp. 1801 Elmwood Avenue, Buffalo, NY
Summary of Air Analytical Testing Results

	December 20	21 - L2168195
Parameter	AREA A-PRE (121021)	AREA A-POST (121021)
Volatile Organic Compounds (ug/m ³)		
1,1,1-Trichloroethane		
1,1,2,2-Tetrachloroethane		
1,1,2-Trichloroethane		
1,1-Dichloroethane		
1,1-Dichloroethene 1,2,4-Trichlorobenzene		
1,2,4-Trimethylbenzene	59	49.2
1,2-Dibromoethane		-
1,2-Dichlorobenzene		
1,2-Dichloroethane		
1,2-Dichloropropane	01.0	47.0
1,3,5-Trimethylbenzene 1,3-Butadiene	21.3	17.2
1,3-Dichlorobenzene		
1,4-Dichlorobenzene	1	
1,4-Dioxane		
2,2,4-Trimethylpentane	1.37	
2-Butanone	2.78	1.68
2-Hexanone 3-Chloropropene		
4-Ethyltoluene	30	21.6
4-Methyl-2-pentanone		21.0
Acetone	108	29.2
Benzene	2.58	1.04
Benzyl chloride		
Bromodichloromethane		
Bromoform Bromomethane		
Carbon disulfide	4.61	2.56
Carbon tetrachloride	4.01	2.00
Chlorobenzene		
Chloroethane		
Chloroform	26.2	1.2
Chloromethane	0.605	0.465
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	3.87	
Cyclohexane	1.61	
Dibromochloromethane		
Dichlorodifluoromethane	2.1	
Ethyl Alcohol	79	23.2
Ethyl Acetate	3.41	2.5
Ethylbenzene Freon-113	7.12	4.17
Freon-114	1	
Heptane	7.09	1
Hexachlorobutadiene		
iso-Propyl Alcohol	256	16.1
Methyl tert butyl ether		
Methylene chloride	17.9	2.07
n-Hexane o-Xylene	17.9	2.07 8.3
p/m-Xylene	33.2	19.8
Styrene		
tert-Butyl Alcohol	11	1.73
Tetrachloroethene		
Tetrahydrofuran	07.7	00.4
Toluene trans-1,2-Dichloroethene	37.7	20.4
trans-1,2-Dichloropene	1	
Trichloroethene	259	16
Trichlorofluoromethane	1.78	
Vinyl bromide		
Vinyl chloride		

Notes:

1. Compounds detected in one or more samples included in this table. For a list of all compounds, refer to analytical report in the Appendix.

2. Analytical testing for VOCs via TO-15 completed by Alpha Analytical.

3. Results present in ug/m³ or microgram per cubic meter.

4. Parameters shaded in red indicate analytes of concern (Target VOCs)

5. Results in red indicate higher post-carbon readings over pre-carbon readings

6. Blank results = No Value Above Detection Limit

7. Carbon changed on 12/21/21 prior to sample collection.



Table 4 MOD-PAC, Corp. 1801 Elmwood Avenue, Buffalo, NY Summary of Air Analytical Testing Results

	Octobe	r 2019 - L1	946093	Novemb	oer 2019 - L	1952487	Decemb	er 2019 - L	1957660	Februa	ry 2020 - L	2006152		2020 - 27736		ber 2020 - 38512	120	Decembe L205		March L211	2021 - 5934		2021 - 31935		oer 2021 - 18116		mber 20 216819	
Parameter	AREA A - PRE	AREA A- POST	AREA B	AREA A- PRE (110519)	AREA A- POST (110519)	AREA-B (110519)	AREA A- PRE (120319)	AREA A- POST (120319)	AREA B (120319)	AREA A- PRE (021120)	AREA A- POST (021120)	AREA B (120319)	AREA A- PRE (063020)	AREA A- POST (063020)	AREA A- PRE		323	REA A- PRE	AREA A- POST	AREA A- PRE (033021)	AREA A- POST	AREA A- PRE (061121)	AREA A- POST	AREA A- PRE		AREA . PRE (12102	A- AR	EA A- OST 21021)
Volatile Organics in Air (ug/m				, ,	, ,		· ,	, ,		· ,	, ,		, ,	· ,	, ,	, ,		,	, ,	, ,	, ,	r, í	, ,	, ,	. /			
1,1,1-Trichloroethane	1.11																_											
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane																												
1.1-Dichloroethane																												
1,1-Dichloroethene	94.8		4.52	35.5			41.6	5.55	0.979																			
1,2,4-Trichlorobenzene										10.5																		
1,2,4-Trimethylbenzene 1,2-Dibromoethane	2.5									48.5	30.2	56	21.8	21.5	64.4	63.4		29.7	23.7	34.4	28.8	46.1	38.9	42.4	53.1	59	4	49.2
1,2-Dichlorobenzene																												
1,2-Dichloroethane																												
1,2-Dichloropropane																												
1,3,5-Trimethylbenzene	1									7.87	4.7	10.2	5.7	4.75	14.5	17.2		8.95	6.44	12.4	9.54	14.2	11.2	10.2	13.6	21.3	1	17.2
1,3-Butadiene 1,3-Dichlorobenzene																												
1,4-Dichlorobenzene																												
1,4-Dioxane																												
2,2,4-Trimethylpentane	0.00		0.07	4.10							0.976	2.98	0.05	0.15	3.13			0.40		0.00		3.14		0.50	1.37	1.37		1.00
2-Butanone	9.88		3.07	4.13			5.28			4.04			6.25	2.45				2.16		2.98		3.89		2.53	⊢ − −	2.78	1	1.68
2-Hexanone 3-Chloropropene				l		<u> </u>										<u> </u>	H					l	-	l			_	
4-Ethyltoluene										14.5	9.49	21.8	4.22	3.87	12.4	10.9		3.95	2.79	6.1	4.46	10.7	8.26	6	8.26	30	2	21.6
4-Methyl-2-pentanone																				9.71		4.47			3.53			
Acetone	59.4	10.5	22.7	49.9		69.8	75.5	4.44	13.3	87.4		53.4	100	10.6	26.6	9.95		195	12.3	73.6	12.5	73.6	20.7	38.2	40.4	108		29.2
Benzene Benzyl chloride	0.891			<u> </u>						5.34	2.5	10.4		0.987	4.79	2.43		1.42	0.69	2.25	1.03	10.7	4.98	2.75	5.46	2.58	1	1.04
Bromodichloromethane			-	9.71																					-			
Bromoform				0.11																								
Bromomethane																												
Carbon disulfide								0.835			21.5		5.82	6.42	4.42	2.21		1.45	0.931	2.42	0.944	7.41	2.68	3.83	12.5	4.61	2	2.56
Carbon tetrachloride Chlorobenzene									1.26								. –									. —	_	
Chloroethane																	5									5		
Chloroform	14.4			9.86			20.3	1.69		17	1.51		16.7	31.8	20.7	17.5	ы́.	27.1	1.35	38.4	12.6	46.7	59.6	31.5	42.7	26.2		1.2
Chloromethane	0.591	0.745						0.603	0.785		0.446	1.21		0.77		0.438		0.626	0.630	0.648	0.766		0.558		0.564	0.605		.465
cis-1,2-Dichloroethene	88.8		4.52	33.5			41.6	5.55	0.979	22.5	12.5		26.1	63	19.2	21.7		15.1		11.2	11.3	11.7	29.1	10.1	13.7	3.87		
cis-1,3-Dichloropropene Cyclohexane	4.23		-	2		2.52				1.61		0.847			2.54	0.823	ž	2.1		1.41		2.42			1 29	Z 1.61		
Dibromochloromethane	1.20			-		2.02				1.01		0.011			2.01	0.020	B	2.1				2.12			1.20	8		
Dichlorodifluoromethane	1.99	1.78	1.98	2.13				2.1	2.93		1.47	1.99		2.15		1.61	AR	2.41	2.38	1.95	2.04	2.06	1.87	2.64	2.14	2.1		
Ethyl Alcohol	14.3	23.4	16	22.2		61.6	43.5	34.5	10.3	63.7	40.9	30.1	143	112	106	81.8	° _	91	57.1	71.6	86.7	87.8	61.6	49.7	64.1	0 79		23.2
Ethyl Acetate Ethylbenzene	1.58		0.973	2.32			3.54			37.6	20	60.4	6.65	5.13	17.9	13.6		16.8	5.08	3.27 15.9	3.13 6.91	4.4 19.1	4.14 11.5	9.64	16.8	3.41		2.5 4.17
Freon-113	1.50		0.973	2.32			3.34			37.0	20	00.4	0.05	3.13	17.5	13.0		10.0	5.00	13.5	0.91	19.1	11.5	5.04	10.0	1.12	~	5.17
Freon-114																												
Heptane	14.3		2.35	9.51		6.27	18.2		1.25	16.6	1.01	14.1	5.7	1.25	6.31	1.31		24.9		7.38	0.836	6.64	1.94	1.98	3.74	7.09		_
Hexachlorobutadiene iso-Propyl Alcohol	44	40.0	28	103		742	275	1.96	7.03	157	9.44	44.2	191	472	83.8	34.4		371	32.9	253	164	95.9	500	38.8	05.0	256	_	16.1
Methyl tert butyl ether	44	40.2	20	103		142	210	1.90	1.03	157	9.44	44.2	191	412	03.0	34.4		3/1	32.9	200	104	90.9	555	30.0	90.9	250		10.1
Methylene chloride	9.21	13.2	9.87	3.68	5.45	5.35		4.45	3.61												1.79	1		6.62				
n-Hexane	6.06	5.08	1.72	5.22	1.89	3.98	28.2	1.2	1.54	20.7	0.948	6.1	12.2	2.59	29.3	3.67		18.1	2.31	33.7	5.15	73.7	14.9	4.12	61.3	17.9		2.07
o-Xylene	1.55	ļ	1.64	2.35	I	2.81	3.14		0.07	46.5 138	26.9	64.7 181	12.1	10.2	33.1	26.6	Ē	25.5	10.5	28.9	14.9	30.9	20.4	20.1	31.3 79.1	13.1		8.3
p/m-Xylene Styrene	5.3		4.34	8.08		9.6	11.7		2.07	138 2.78	77.7	181 0.873	28.1 3.17	23	83.4	65.6 0.856		69.9 2.14	25.4	71.2	33.9	89 1.9	57.8 1.14	48.6 1.29	79.1 1.23	33.2	1	19.8
tert-Butyl Alcohol			1	3.64	1	5.67	7.31			7.64		1.7	11.9			0.000		9.31		5.15		3.58	1.17	2.26	8.94	11	1	1.73
Tetrachloroethene	2.12		77.3		1	31.4		1.97	12.4			10.6	5.78	5.8	4.95	2.3		1.69		4.12		2.63		2.28				
Tetrahydrofuran	47.2		9.53	12.1		4.98	13	7.73		5.84	4.72	2.01	5.43	106		6.55		1.55					2.43	2.14	3.19			
Toluene trans 1.2 Disbloroothono	1.89		1.55	6.1		8.55	12.7		2.07	131	66.3	168	23.2	15.8	65.6	45.2		31.3	11.5	39.2	20.1	93.5	52	36.6	62.2	37.7	2	20.4
trans-1,2-Dichloroethene trans-1,3-Dichloropropene	6.03		1	2							3.33			2.67		1.12		0.852			1.03		1.72		0.841		-	
Trichloroethene	2630		554	978		236	1030	2.48	104	656	10.8	79.5	983	17.2	736	133		508	19.3	378	22	469	29.3	559	1.27	259		16
Trichlorofluoromethane	1.48	3.62	2.69		2.67			3.47	1.42		1.78	1.37	10.2	10.7	3.36	4.40		1.4	2.51	1.69	1.79	3.53	3.47	6.07	4.08	1.78		-
Vinyl bromide				1.78		2.55																						
Vinyl chloride				1.04		1.49																					_	
Total Target VOCs	2,826.04		650.21	1,051.72	5.45	274.24	1,113.20	20.00	123.23	678.50	23.30	90.10	1,014.88	86.00		157.00	Ľ	524.79		393.32	35.09	483.33		578.00	14.97	262.8	7 1	6.00
Percent Decrease Pre to Post Carbon (%)	-99	.53	NA	-99	9.48	NA	-98	3.20	NA	-96	6.57	NA	-91	1.53	-79	9.35		-96	.32	-91	1.08	-87	7.92	-91	7.41		-93.91	
Percent Decrease From Baseline (10/2019 Pre)	N	A	NA	-63	2.78	NA	-60	0.61	NA	-78	5.99	NA	-64	4.09	-7:	3.10		-81	.43	-86	5.08	-82	2.90	-79	9.55		-90.70	

 Notes:

 1. Compounds detected in one or more samples included in this table. For a list of all compounds, refer to analytical report in appendix.

 2. Analytical testing for VOCs via TO-15 completed by Alpha Analytical.

 3. Results present in ugm² or microgram per cubic meter.

 4. Samples were collected during a B-hour sample duration.

 5. Parameters shaded in red indicate analyses of concern (Target VOCs).

 6. Results in red indicate post action result. Inglew Than pre carbon result.

 7. Blank results = No Value Above Detection Limit (ND = Non-detect).

 8. In score instances where the nor-sammle in pre and the noct sample negrets a reportable value. Ihe ND non-sample may be due to sam

8. In some instances where the pre-sample is ND and the post sample presents a reportable value, the ND pre-sample may be due to sample dilution. Refer to analytical reports for dilution factors.



Table 5 Historical Groundwater Monitoring Data Summary MOD-PAC CORP.

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Trichloroethene (μg/L) NY-TOGS-GA (5 μg/L)	% Increase/ Decrease TC
MW - 3	2/5/18 7/16/2019*	600.71 600.71	5.05 NG	595.66 NG	280 ND	Baseline -100.00
	1/10/2019			ections October 1	, 2019 - October 10, 2019	9
	10/24/19	600.71	NG	NG	220	-21.43
	4/15/20	600.71	5.54	595.17	370	32.14
	3/10/21	600.71	6.10	594.61	NT	N/A
	3/30/21	600.71	5.95	594.76	NT	N/A
	4/14/21	600.71	5.98	594.73	340	21.43
	5/20/21 6/11/21	600.71 600.71	<u>6.10</u> 6.12	<u>594.61</u> 594.59	NT NT	N/A N/A
	7/1/21	600.71	6.30	594.59	400	42.86
	8/25/21	600.71	5.80	594.91	NT	N/A
	9/22/21	600.71	5.45	595.26	NT	N/A
	11/19/21	600.71	5.30	595.41	340	21.43
	12/10/21	600.71	5.55	595.16	NT	N/A
NW - 11	2/5/18	600.41	4.66	595.75	40	Baseline
	7/16/2019*	600.41	NG	NG	20	-50.00
		Potassi			, 2019 - October 10, 201	
	10/24/19	600.41	NG	NG	16	-60.00
	4/15/20	600.41	5.27	595.14	45	12.50
	3/10/21	600.41	5.82	594.59	NT	N/A
	3/30/21 4/14/21	600.41 600.41	<u>5.74</u> 5.74	594.67 594.67	NT 16	N/A -60.00
	4/14/21 5/20/21	600.41	5.74	594.67	16 NT	-60.00 N/A
	6/11/21	600.41	5.85	594.57	NT	N/A N/A
	7/1/21	600.41	6.00	594.50	47	17.50
	8/25/21	600.41	5.58	594.83	NT	N/A
	9/22/21	600.41	5.32	595.09	NT	N/A
	11/19/21	600.41	5.15	595.26	32	-20.00
	12/10/21	600.41	5.35	595.06	NT	N/A
/IW - 12	2/5/18	600.50	4.52	595.98	0.44	Baseline
	7/16/2019*	600.50	NG	NG	ND	-100.00
					, 2019 - October 10, 201	
	10/24/19	600.50	NG	NG	ND	-100.00
	4/15/20	600.50	4.41	596.09	ND	-100.00
	3/10/21 3/30/21	600.50 600.50	<u>5.03</u> 4.86	<u>595.47</u> 595.64	NT NT	N/A N/A
	4/14/21	600.50	4.86	595.64	ND	-100.00
	5/20/21	600.50	5.05	595.45	ND	N/A
	6/11/21	600.50	5.10	595.40	NT	N/A
	7/1/21	600.50	5.35	595.15	ND	-100.00
	8/25/21	600.50	4.80	595.70	NT	N/A
	9/22/21	600.50	4.40	596.10	NT	N/A
	11/19/21	600.50	4.10	596.40	ND	N/A
	12/10/21	600.50	4.35	596.15	NT	N/A
NW - 13	2/5/18	600.31	4.44	595.87	160	Baseline
	7/16/2019*	600.31	NG NG	NG	78 2010 October 10, 2010	-51.25
	10/24/19	600.31	NG	NG	, 2019 - October 10, 2019 240	50.00
	4/15/20	600.31	3.70	596.61	140	-12.50
	3/10/21	600.31	4.25	596.06	NT	N/A
	3/30/21	600.31	4.10	596.21	NT	N/A
	4/14/21	600.31	4.13	596.18	95	-40.63
	5/20/21	600.31	4.32	595.99	NT	N/A
	6/11/21	600.31	4.40	595.91	NT	N/A
	7/1/21	600.31	4.60	595.71	150	-6.25
	8/25/21	600.31	4.10	596.21	NT	N/A
	9/22/21	600.31	3.35	596.96	NT 72	N/A
	11/19/21	600.31	3.30	597.01	73	-54.38
A\\\/ 4 4	12/10/21	600.31	3.50	596.81 6.76	NT	N/A
/IW - 14	3/10/21		6.76	-6.76	NT	N/A
	3/30/21		6.72	-6.72	NT	N/A
	4/14/21		6.73	-6.73	NT	N/A
	5/20/21		6.75	-6.75	NT	N/A
	6/11/21		6.80	-6.80	NT	N/A
	7/1/21		6.95	-6.95	NT	N/A
	8/25/21		6.50	-6.50	NT	N/A
	9/22/21		6.15	-6.15	NT	N/A
	11/19/21		6.10	-6.10	NT	N/A
	12/10/21		6.30	-6.30	NT	N/A
IW - 15	3/10/21		5.42	-5.42	NT	N/A
	3/30/21		5.32	-5.32	NT	N/A
	4/14/21		5.34	-5.34	NT	N/A
	5/20/21		5.40	-5.40	NT	N/A
	6/11/21		5.60	-5.60	NT	N/A
	7/1/21		5.60	-5.60	NT	N/A N/A
	8/25/21		5.60	-5.60 -5.18	NT NT	N/A N/A
	9/22/21		3.85	-3.85	NT	N/A
	11/10/01		4.80	-4.80	NT	N/A
	11/19/21 12/10/21		4.90	-4.90	NT	N/A

1. NG = Not Gauged; ND = Non-Detect; NT = Not tested; N/A = Not Applicable

2. Water Levels measured from top of riser

3. Blue Shading = Result exceeds NY-TOGS-GA for TCE

4. **RED BOLDED** = Percent increase of TCE from Baseline

5. * = Sampling completed after initial Potassium Permanganate Injection Pilot Study (June 27 - 28, 2019)



					-	MOD	PAC CORF	·.					
Monitoring Well	Date	Top of Casing (ft)	. ,	GW Elevation (ft)	1,1- Dichloroethene (µg/L)	2-Butanone (µg/L)	Acetone (µg/L)	Benzene (µg/L)	cis-1,2- Dichloroethene (µg/L)	trans-1,2- Dichloroethen e (μg/L)	Trichloroet hene (µg/L)	Vinyl chloride (µg/L)	Tot VO((µg
		NY-TOGS-	GA (µg/L)		5	50	50	1	5	5	5	2	
MW - 3	2/5/18	600.71	5.05	595.66		ND	ND	ND	80	14	280	13	387
	7/16/2019*	600.71	NG	NG	ND	ND	38	ND	ND	ND	ND	ND	38.
l					Potassium Pe					tober 10, 201			
	10/24/19	600.71	NG	NG	ND	ND	ND	ND	30	3	220	ND	253
1	4/15/20	600.71	5.54	595.17	ND	ND	6.40	ND	57	7.3	370	3.7	444
	4/14/21	600.71	5.98	594.73	0.88	ND	ND	ND	82	8.8	340	5.6	440
	7/1/21	600.71	6.30	594.41	2.0	ND	ND	0.41	140	16	400	8.1	566
	11/19/21	600.71	5.30	595.41	0.77	ND	ND	ND	43	4	340	2.9	390
MW - 11	2/5/18	600.41	4.66	595.75		ND	9.4	ND	3.1	2.9	40	5.6	61
	7/16/2019*	600.41	NG	NG	ND Potassium Pe	ND	4.5	ND ND	14	25 tober 10, 201	20	9.8	73.
	10/24/19	600.41	NG	NG	ND			ND	ND	ND	9 16	ND	400
	4/15/20	600.41	5.27	595.14	ND	150 2.2	<u>920</u> 11	0.21	ND 7	10	45	9	108 84
	4/13/20	600.41	5.74	594.67	ND	ND	ND	0.21 ND	8	9.4	45 16	5.7	39.
	7/1/21	600.41	6.00	594.41	0.35	ND	ND	0.25	13	17	47	10	87.
	11/19/21	600.41	5.15	595.26	0.33	ND	ND	0.25	13	30	32	7.8	87.
MW - 12	2/5/18	600.50	4.52	595.98		ND	2.2	ND	ND	ND	0.44	ND	2.6
	7/16/2019*		NG	NG	ND	ND	3	ND	ND	ND	ND	ND	3.0
	1110/2010	000.00			Potassium Pe					tober 10, 201		HB	
	10/24/19	600.50	NG	NG	ND	ND	ND	ND	ND	ND	ND	ND	N
	4/15/20	600.50	4.41	596.09	ND	ND	11	ND	ND	ND	ND	ND	11.
	4/14/21	600.50	4.86	595.64	ND	ND	ND	ND	ND	ND	ND	ND	N
	7/1/21	600.50	5.35	595.15	ND	ND	ND	ND	ND	ND	ND	ND	N
	11/19/21	600.50	4.10	596.40	ND	ND	ND	ND	ND	ND	ND	ND	N
MW - 13	2/5/18	600.31	4.44	595.87	ND	ND	ND	ND	180	4.1	160	25	369
	7/16/2019*	600.31	NG	NG	ND	ND	ND	ND	400	3.9	78	56	537
									r 1, 2019 - Oc	tober 10, 201			
	10/24/19	600.31	NG	NG	ND	ND	28	ND	97	2	240	2	369
	4/15/20	600.31	3.70	596.61	0.73	ND	3.2	ND	200	4.4	140	55	403
	4/14/21	600.31	4.13	596.18		ND	ND	ND	150	1.7	95	70	317
	7/1/21	600.31	4.60	595.71	1.5	ND	ND	0.18	210	3.9	150	88	453
Notos	11/19/21	600.31	3.30	597.01	0.45	ND	ND	ND	50	ND	73	20	143

Table 6 Historical Groundwater Monitoring and Sampling Data Summary MOD-PAC CORP

Notes:

1. NG = Not Gauged; ND = Non-Detect; NT = Not tested; N/A = Not Applicable

2. Water Levels measured from top of riser

3. Blue Shading = Result exceeds NY-TOGS-GA for TCE

4. **RED BOLDED** = Percent increase of TCE from Baseline

5. * = Sampling completed after initial Potassium Permanganate Injection Pilot Study (June 27 - 28, 2019)



otal OCs	% Increase/ Decrease
ıg/L) 87.0	TCE Baseline
8.0	-100.00
53.0	-21.43
44.4	32.14 21.43
40.5	21.43
66.5	42.86
90.7	21.43
61.0 73.3	Baseline
ა.ა	-50.00
96.0	60.00
86.0 4.4	-60.00
94.4	12.50 -60.00
9.1 7.6	17.50
7.3	-20.00
64	Baseline
3.0	-100.00
ND	-100.00
ND 1.0	-100.00 -100.00 -100.00
ND D	-100.00
ND	-100.00
ND	-100.00
<u>69.1</u>	Baseline
37.9	-51.25
<u>69.0</u>	50.00
03.3	-12.50
17.4 53.6	-40.63 -6.25
<u>53.6</u> 43.5	-6.25
+3.3	-04.00

ATTACHMENT C

Field Notes



MOD-PAC Corp., Buffalo, NY Sub-Slab Depressurization System (SSDS) Monthly Monitoring

EA Representative:Mallory BehlmaierDate of Inspection:October 20, 2021

Area A

Monthly Monitoring Checklist:

- 1. Pre-Carbon OVM Reading (ppm): _____0.0
- 2. Post-Carbon OVM Reading (ppm): 0.0

Notes: None

Area B

Monthly Monitoring Checklist:

1. OVM Reading (ppm): 0.0

Notes: None

Area C

Monthly Monitoring Checklist:

- 1. EW-1C OVM Reading (ppm): 0.0
- 2. EW-2C OVM Reading (ppm): 0.0
- 3. EW-3C OVM Reading (ppm): 0.0

Notes: None



MOD-PAC Corp., Buffalo, NY Sub-Slab Depressurization System (SSDS) Monthly Monitoring

EA Representative: Jason Kryszak Date of Inspection: November 19, 2021

Area A

Monthly Monitoring Checklist:

- 1. Pre-Carbon OVM Reading (ppm): _____0.0
- 2. Post-Carbon OVM Reading (ppm): 0.0

Notes: None

Area B

Monthly Monitoring Checklist:

1. OVM Reading (ppm): 0.0

Notes: None

Area C

Monthly Monitoring Checklist:

- 1. EW-1C OVM Reading (ppm): 0.0
- 2. EW-2C OVM Reading (ppm): 0.0
- 3. EW-3C OVM Reading (ppm): 0.0

Notes: May want to bring 2-foot length of small diameter tubing for easier access to sample EW-1C and EW-2C



MOD-PAC Corp., Buffalo, NY Sub-Slab Depressurization System (SSDS) Quarterly Monitoring

EA Representative:	Eric Betzold
Date of Inspection:	December 10, 2021

Area A

Extraction Well Location	EW-1A	EW-2A	EW-3A	EW-4A	EW-5A	EW-6A	EW-7A	EW-8A	EW-9A	EW-10A
Magnehelic Pressure Gauge Reading (InH ₂ 0)	16"	16"	17"	16"	17"	0"	17"	17"	17"	17"

Vapor Monitoring Point Location	VMP-1A	VMP-2A	VMP-3A	VMP-4A	VMP-5A	VMP-7A	VMP-8A	VMP-9A
Manometer Reading (InH ₂ 0)	-0.065"	-0.056"	-0.043"	-0.068"	-0.052"	-0.017"	-0.005"	-0.088"

General Monitoring Checklist:

- 1. Pre-Carbon OVM Reading (ppm): <u>7.6</u>
- 2. Post-Carbon OVM Reading (ppm): 0.0
- 3. Blower Gauge Reading in inches of water (InH₂0): <u>15</u>"
- 4. Lubricate Blower fan bearing (Y/N): Y
- 5. Quarterly pre- and post-carbon Tedlar Bag samples taken (Y/N)? ____Y

General Comments (leaks, defective gauges/fans, positive pressure readings?):

None

Area B

Extraction Well Location	EW-1B	EW-2B	EW-3B	EW-4B	EW-5B	EW-6B	EW-7B	EW-8B
Magnehelic Pressure Gauge Reading (InH ₂ 0)	20"	20"	21"	21"	21"	21"	20"	20"

Vapor Monitoring Point Location	VMP-1B	VMP-2B	VMP-3B	VMP-4B	VMP-5B	VMP-6B	VMP-7B
Manometer Reading (InH ₂ 0)	-0.010"	-0.40"	-0.189"	-0.177"	-0.004"	<mark>+0.000</mark>	-0.190"



General Monitoring Checklist:

- 1. OVM Reading (ppm): 0.0
- Blower Gauge Reading in inches of water (InH₂0): <u>16</u>"
 Lubricate Blower fan bearing (Y/N): <u>Y</u>

General Comments (leaks, defective gauges/fans, positive pressure readings?):

EW-2B and EW-3B vapor trenches have a leak and should be sealed ASAP

Area C

Extraction Well Location	EW-1C	EW-2C	EW-3C
Magnehelic Pressure Gauge Reading (InH ₂ 0)	30"	32"	30"
OVM Reading (ppm)	4.7	0.0	0.0

Vapor Monitoring Point Location	VMP-1C	VMP-2C	VMP-3C	VMP-4C	VMP-10C	VMP-11C
Manometer Reading (InH ₂ 0)	-0.026"	-0.040"	-0.038"	-0.021"	-0.059"	-0.025"

General Comments (leaks, defective gauges/fans, positive pressure readings?):

Slight crack in EW-3C vapor trench



ATTACHMENT D

Analytical Laboratory Reports





ANALYTICAL REPORT

Lab Number:	L2168195
Client:	Environmental Advantage, Inc. 3636 North Buffalo Road
	Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	Q4 2021 SSDS MONITORING
Project Number:	01304
Report Date:	12/27/21

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

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



Project Name:Q4 2021 SSDS MONITORINGProject Number:01304

 Lab Number:
 L2168195

 Report Date:
 12/27/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2168195-01	AREA A-PRE(121021)	SOIL_VAPOR	MPC BUFFALO, NY	12/10/21 13:50	12/10/21
L2168195-02	AREA A-POST(121021)	SOIL_VAPOR	MPC BUFFALO, NY	12/10/21 13:55	12/10/21



Project Name:Q4 2021 SSDS MONITORINGProject Number:01304

 Lab Number:
 L2168195

 Report Date:
 12/27/21

Case Narrative

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

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

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

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

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

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



Project Name:Q4 2021 SSDS MONITORINGProject Number:01304

 Lab Number:
 L2168195

 Report Date:
 12/27/21

Case Narrative (continued)

Volatile Organics in Air

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.

Christopher J. Anderson

Authorized Signature:

Title: Technical Director/Representative

Date: 12/27/21



AIR



Project Name:	Q4 2021 SSDS MONITORING	Lab Number:	L2168195
Project Number:	01304	Report Date:	12/27/21

SAMPLE RESULTS

Lab ID: Client ID: Sample Location:	L2168195-01 AREA A-PRE(1 MPC BUFFALC	,					Collecte Receive Prep:	ed: 12/10	0/21 13:50 0/21 Specified
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Soil_Vapor 48,TO-15 12/23/21 08:13 TS								
-			ppbV		Desults	ug/m3		Ovelifier	Dilution Factor
Parameter	Air Monofield L	Results	RL	MDL	Results	RL	MDL	Qualifier	
Volatile Organics in									
Dichlorodifluoromethane		0.424	0.200		2.10	0.989			1
Chloromethane		0.293	0.200		0.605	0.413			1
Freon-114		ND	0.200		ND	1.40			1
Vinyl chloride		ND	0.200		ND	0.511			1
1,3-Butadiene		ND	0.200		ND	0.442			1
Bromomethane		ND	0.200		ND	0.777			1
Chloroethane		ND	0.200		ND	0.528			1
Ethanol		41.9	5.00		79.0	9.42			1
Vinyl bromide		ND	0.200		ND	0.874			1
Acetone		45.3	1.00		108	2.38			1
Trichlorofluoromethane		0.316	0.200		1.78	1.12			1
Isopropanol		104	0.500		256	1.23			1
1,1-Dichloroethene		ND	0.200		ND	0.793			1
Tertiary butyl Alcohol		3.63	0.500		11.0	1.52			1
Methylene chloride		ND	0.500		ND	1.74			1
3-Chloropropene		ND	0.200		ND	0.626			1
Carbon disulfide		1.48	0.200		4.61	0.623			1
Freon-113		ND	0.200		ND	1.53			1
trans-1,2-Dichloroethene	9	ND	0.200		ND	0.793			1
1,1-Dichloroethane		ND	0.200		ND	0.809			1
Methyl tert butyl ether		ND	0.200		ND	0.721			1
2-Butanone		0.943	0.500		2.78	1.47			1

0.977

0.200

3.87

0.793

--



1

cis-1,2-Dichloroethene

12/10/21 13:50

Not Specified

12/10/21

Project Name:	Q4 2021 SSDS MONITORING
Project Number:	01304

Lab Number: L2168195 Report Date: 12/27/21

Date Collected:

Date Received:

Field Prep:

SAMPLE RESULTS

Lab ID:L2168195-01Client ID:AREA A-PRE(121021)Sample Location:MPC BUFFALO, NY

Sample Depth:

Sample Depth:		ppbV		ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Man	sfield Lab							
Ethyl Acetate	0.945	0.500		3.41	1.80			1
Chloroform	5.37	0.200		26.2	0.977			1
Tetrahydrofuran	ND	0.500		ND	1.47			1
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	5.07	0.200		17.9	0.705			1
1,1,1-Trichloroethane	ND	0.200		ND	1.09			1
Benzene	0.809	0.200		2.58	0.639			1
Carbon tetrachloride	ND	0.200		ND	1.26			1
Cyclohexane	0.469	0.200		1.61	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	48.1	0.200		259	1.07			1
2,2,4-Trimethylpentane	0.294	0.200		1.37	0.934			1
Heptane	1.73	0.200		7.09	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	10.0	0.200		37.7	0.754			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Tetrachloroethene	ND	0.200		ND	1.36			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	1.64	0.200		7.12	0.869			1



12/10/21 13:50

Not Specified

12/10/21

Date Collected:

Date Received:

Field Prep:

Project Name:	Q4 2021 SSDS MONITORING	Lab Number:	L2168195
Project Number:	01304	Report Date:	12/27/21

SAMPLE RESULTS

Lab ID:L2168195-01Client ID:AREA A-PRE(121021)Sample Location:MPC BUFFALO, NY

Sample Depth:

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mans	sfield Lab							
p/m-Xylene	7.64	0.400		33.2	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	3.01	0.200		13.1	0.869			1
4-Ethyltoluene	6.10	0.200		30.0	0.983			1
1,3,5-Trimethylbenzene	4.34	0.200		21.3	0.983			1
1,2,4-Trimethylbenzene	12.0	0.200		59.0	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	95		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	97		60-140



Project Name:	Q4 2021 SSDS MONITORING	Lab Number:	L2168195
Project Number:	01304	Report Date:	12/27/21

SAMPLE RESULTS

Lab ID: Client ID: Sample Location:	L2168195-02 AREA A-POST(121021) MPC BUFFALO, NY				Date Collected: Date Received: Field Prep:		ed: 12/10		
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Soil_Vapor 48,TO-15 12/23/21 08:51 TS								
			ppbV			ug/m3			Dilution Factor
Parameter		Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in	Air - Mansfield La	ıb							
Dichlorodifluoromethane		ND	0.200		ND	0.989			1
Chloromethane		0.225	0.200		0.465	0.413			1
Freon-114		ND	0.200		ND	1.40			1
Vinyl chloride		ND	0.200		ND	0.511			1
1,3-Butadiene		ND	0.200		ND	0.442			1
Bromomethane		ND	0.200		ND	0.777			1
Chloroethane		ND	0.200		ND	0.528			1
Ethanol		12.3	5.00		23.2	9.42			1
Vinyl bromide		ND	0.200		ND	0.874			1
Acetone		12.3	1.00		29.2	2.38			1
Trichlorofluoromethane		ND	0.200		ND	1.12			1
Isopropanol		6.54	0.500		16.1	1.23			1
1,1-Dichloroethene		ND	0.200		ND	0.793			1
Tertiary butyl Alcohol		0.571	0.500		1.73	1.52			1
Methylene chloride		ND	0.500		ND	1.74			1
3-Chloropropene		ND	0.200		ND	0.626			1
Carbon disulfide		0.822	0.200		2.56	0.623			1
Freon-113		ND	0.200		ND	1.53			1
trans-1,2-Dichloroethene		ND	0.200		ND	0.793			1
1,1-Dichloroethane		ND	0.200		ND	0.809			1
Methyl tert butyl ether		ND	0.200		ND	0.721			1
2-Butanone		0.569	0.500		1.68	1.47			1
cis-1,2-Dichloroethene		ND	0.200		ND	0.793			1



L2168195 12/27/21

Project Name:	Q4 2021 SSDS MONITORING	Lab Number:
Project Number:	01304	Report Date:

SAMPLE RESULTS

Lab ID:L2168195-02Client ID:AREA A-POST(121021)Sample Location:MPC BUFFALO, NY

Date Collected:12/10/21 13:55Date Received:12/10/21Field Prep:Not Specified

Sample Depth:

Sample Depth:	ррьV			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Man	sfield Lab							
Ethyl Acetate	0.693	0.500		2.50	1.80			1
Chloroform	0.245	0.200		1.20	0.977			1
Tetrahydrofuran	ND	0.500		ND	1.47			1
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	0.586	0.200		2.07	0.705			1
1,1,1-Trichloroethane	ND	0.200		ND	1.09			1
Benzene	0.326	0.200		1.04	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	2.97	0.200		16.0	1.07			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	5.41	0.200		20.4	0.754			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Tetrachloroethene	ND	0.200		ND	1.36			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	0.961	0.200		4.17	0.869			1



12/10/21 13:55

Not Specified

12/10/21

Date Collected:

Date Received:

Field Prep:

Project Name:	Q4 2021 SSDS MONITORING	Lab Number:	L2168195
Project Number:	01304	Report Date:	12/27/21

SAMPLE RESULTS

Lab ID:L2168195-02Client ID:AREA A-POST(121021)Sample Location:MPC BUFFALO, NY

	ppbV			ug/m3		Dilution	
Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
field Lab							
4.56	0.400		19.8	1.74			1
ND	0.200		ND	2.07			1
ND	0.200		ND	0.852			1
ND	0.200		ND	1.37			1
1.91	0.200		8.30	0.869			1
4.40	0.200		21.6	0.983			1
3.50	0.200		17.2	0.983			1
10.0	0.200		49.2	0.983			1
ND	0.200		ND	1.04			1
ND	0.200		ND	1.20			1
ND	0.200		ND	1.20			1
ND	0.200		ND	1.20			1
ND	0.200		ND	1.48			1
ND	0.200		ND	2.13			1
	field Lab 4.56 ND ND ND 1.91 4.40 3.50 10.0 ND ND ND ND ND ND ND ND	Results RL field Lab 4.56 0.400 ND 0.200 ND 0.200 ND 0.200 ND 0.200 ND 0.200 1.91 0.200 4.40 0.200 3.50 0.200 ND 0.200	Results RL MDL field Lab 4.56 0.400 ND 0.200 ND 0.200 ND 0.200 ND 0.200 ND 0.200 1.91 0.200 4.40 0.200 3.50 0.200 10.0 0.200 ND 0.200	Results RL MDL Results field Lab 4.56 0.400 19.8 ND 0.200 ND 1.91 0.200 8.30 4.40 0.200 21.6 3.50 0.200 17.2 10.0 0.200 ND ND 0.200	Results RL MDL Results RL field Lab 4.56 0.400 19.8 1.74 ND 0.200 ND 2.07 ND 0.200 ND 0.852 ND 0.200 ND 0.852 ND 0.200 ND 1.37 1.91 0.200 8.30 0.869 4.40 0.200 21.6 0.983 3.50 0.200 ND 1.04 ND 0.200 ND 1.20 ND 0.200 ND 1.48	Results RL MDL Results RL MDL field Lab 4.56 0.400 19.8 1.74 ND 0.200 ND 2.07 ND 0.200 ND 0.852 ND 0.200 ND 0.852 ND 0.200 ND 0.852 ND 0.200 ND 0.852 1.91 0.200 ND 1.37 1.91 0.200 8.30 0.869 1.91 0.200 17.2 0.983 3.50 0.200 ND 1.04 ND 0.200 ND 1.20 ND 0.200 ND 1.20 ND 0.200 ND 1.20	Results RL MDL Results RL MDL Qualifier field Lab 4.56 0.400 19.8 1.74 ND 0.200 ND 2.07 ND 0.200 ND 0.852 ND 0.200 ND 0.852 ND 0.200 ND 0.852 1.91 0.200 ND 1.37 1.91 0.200 8.30 0.869 1.91 0.200 17.2 0.983 10.0 0.200 ND 1.04 ND 0.200 ND 1.20 ND 0.200 ND 1.20 - <tr tr=""></tr>

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	95		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	96		60-140



Report Date: 12/27/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15 Analytical Date: 12/22/21 15:54

		ppbV			ug/m3		Dilutior	
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield	Lab for samp	ole(s): 01-	02 Batch	: WG15869	53-4			
Dichlorodifluoromethane	ND	0.200		ND	0.989			1
Chloromethane	ND	0.200		ND	0.413			1
Freon-114	ND	0.200		ND	1.40			1
Vinyl chloride	ND	0.200		ND	0.511			1
1,3-Butadiene	ND	0.200		ND	0.442			1
Bromomethane	ND	0.200		ND	0.777			1
Chloroethane	ND	0.200		ND	0.528			1
Ethanol	ND	5.00		ND	9.42			1
Vinyl bromide	ND	0.200		ND	0.874			1
Acetone	ND	1.00		ND	2.38			1
Trichlorofluoromethane	ND	0.200		ND	1.12			1
Isopropanol	ND	0.500		ND	1.23			1
1,1-Dichloroethene	ND	0.200		ND	0.793			1
Tertiary butyl Alcohol	ND	0.500		ND	1.52			1
Methylene chloride	ND	0.500		ND	1.74			1
3-Chloropropene	ND	0.200		ND	0.626			1
Carbon disulfide	ND	0.200		ND	0.623			1
Freon-113	ND	0.200		ND	1.53			1
trans-1,2-Dichloroethene	ND	0.200		ND	0.793			1
1,1-Dichloroethane	ND	0.200		ND	0.809			1
Methyl tert butyl ether	ND	0.200		ND	0.721			1
2-Butanone	ND	0.500		ND	1.47			1
cis-1,2-Dichloroethene	ND	0.200		ND	0.793			1
Ethyl Acetate	ND	0.500		ND	1.80			1
Chloroform	ND	0.200		ND	0.977			1



Report Date: 12/27/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15 Analytical Date: 12/22/21 15:54

		ppbV			ug/m3		Dilution	
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air	- Mansfield Lab for sam	ple(s): 01-0	02 Batch	: WG15869	53-4			
Tetrahydrofuran	ND	0.500		ND	1.47			1
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	ND	0.200		ND	0.705			1
1,1,1-Trichloroethane	ND	0.200		ND	1.09			1
Benzene	ND	0.200		ND	0.639			1
Carbon tetrachloride	ND	0.200		ND	1.26			1
Cyclohexane	ND	0.200		ND	0.688			1
1,2-Dichloropropane	ND	0.200		ND	0.924			1
Bromodichloromethane	ND	0.200		ND	1.34			1
1,4-Dioxane	ND	0.200		ND	0.721			1
Trichloroethene	ND	0.200		ND	1.07			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	ND	0.200		ND	0.754			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Tetrachloroethene	ND	0.200		ND	1.36			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	ND	0.200		ND	0.869			1
p/m-Xylene	ND	0.400		ND	1.74			1



Report Date: 12/27/21

Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15 Analytical Date: 12/22/21 15:54

		ppbV			ug/m3		Dilution	
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansf	ield Lab for samp	ole(s): 01-	02 Batch	: WG15869	53-4			
Bromoform	ND	0.200		ND	2.07			1
Styrene	ND	0.200		ND	0.852			1
1,1,2,2-Tetrachloroethane	ND	0.200		ND	1.37			1
o-Xylene	ND	0.200		ND	0.869			1
4-Ethyltoluene	ND	0.200		ND	0.983			1
1,3,5-Trimethylbenzene	ND	0.200		ND	0.983			1
1,2,4-Trimethylbenzene	ND	0.200		ND	0.983			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.200		ND	1.20			1
1,4-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2,4-Trichlorobenzene	ND	0.200		ND	1.48			1
Hexachlorobutadiene	ND	0.200		ND	2.13			1



Lab Control Sample Analysis Batch Quality Control

Project Number: 01304

Lab Number: L2168195 Report Date: 12/27/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics in Air - Mansfield Lab Ass	ociated sample(s)	: 01-02	Batch: WG15869	53-3					
Dichlorodifluoromethane	83		-		70-130	-			
Chloromethane	81		-		70-130	-			
Freon-114	96		-		70-130	-			
Vinyl chloride	104		-		70-130	-			
1,3-Butadiene	97		-		70-130	-			
Bromomethane	99		-		70-130	-			
Chloroethane	101		-		70-130	-			
Ethanol	76		-		40-160	-			
Vinyl bromide	86		-		70-130	-			
Acetone	84		-		40-160	-			
Trichlorofluoromethane	86		-		70-130	-			
Isopropanol	89		-		40-160	-			
1,1-Dichloroethene	103		-		70-130	-			
Tertiary butyl Alcohol	110		-		70-130	-			
Methylene chloride	86		-		70-130	-			
3-Chloropropene	88		-		70-130	-			
Carbon disulfide	102		-		70-130	-			
Freon-113	95		-		70-130	-			
trans-1,2-Dichloroethene	86		-		70-130	-			
1,1-Dichloroethane	88		-		70-130	-			
Methyl tert butyl ether	84		-		70-130	-			
2-Butanone	88		-		70-130	-			
cis-1,2-Dichloroethene	93		-		70-130	-			



Lab Control Sample Analysis

Batch Quality Control

Project Number: 01304

Lab Number: L2168195 Report Date: 12/27/21

LCSD LCS %Recovery RPD %Recovery Limits RPD %Recovery Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1586953-3 Ethyl Acetate 95 70-130 --Chloroform 94 70-130 --Tetrahydrofuran 85 70-130 --1,2-Dichloroethane 75 70-130 -n-Hexane 104 70-130 --1,1,1-Trichloroethane 82 70-130 --96 70-130 Benzene --Carbon tetrachloride 86 70-130 --Cyclohexane 106 70-130 _ -95 70-130 1,2-Dichloropropane --Bromodichloromethane 98 70-130 --1,4-Dioxane 118 70-130 --Trichloroethene 101 70-130 --2,2,4-Trimethylpentane 70-130 105 --Heptane 84 70-130 -cis-1,3-Dichloropropene 104 70-130 --4-Methyl-2-pentanone 95 70-130 --70-130 trans-1,3-Dichloropropene 84 --1,1,2-Trichloroethane 70-130 101 --Toluene 95 70-130 --2-Hexanone 99 70-130 _ -Dibromochloromethane 107 70-130 --106 1,2-Dibromoethane 70-130 --



Lab Control Sample Analysis

Batch Quality Control

Project Name: Q4 2021 SSDS MONITORING

Project Number: 01304

Lab Number: L2168195 Report Date: 12/27/21

LCSD LCS %Recovery RPD %Recovery %Recovery Limits RPD Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1586953-3 Tetrachloroethene 100 70-130 --106 70-130 Chlorobenzene --Ethylbenzene 100 70-130 -p/m-Xylene 101 70-130 --Bromoform 110 70-130 --Styrene 70-130 105 --1,1,2,2-Tetrachloroethane 110 70-130 -o-Xylene 103 70-130 --4-Ethyltoluene 99 70-130 --116 70-130 1,3,5-Trimethylbenzene --107 1,2,4-Trimethylbenzene 70-130 --Benzyl chloride 83 70-130 --1,3-Dichlorobenzene 104 70-130 --105 70-130 1,4-Dichlorobenzene --70-130 1,2-Dichlorobenzene 106 --1,2,4-Trichlorobenzene 113 70-130 _ -Hexachlorobutadiene 104 70-130 --



Project Name: Q4 2021 SSDS MONITORING Project Number: 01304

Sample Receipt and Container Information

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container Info	ormation	Initial	Final	Temp		Frozen		
Container ID	Container Type	Cooler	рН	pН	deg C Pres	Seal	Date/Time	Analysis(*)
L2168195-01A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA		Y	Absent		TO15-LL(30)
L2168195-01X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA		Y	Absent		TO15-LL(30)
L2168195-02A	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA		Y	Absent		TO15-LL(30)
L2168195-02X	Tedlar Bag 5 liter-Polypropylene Fitting	NA	NA		Y	Absent		TO15-LL(30)

YES



Serial_No:12272110:59

Project Name: Q4 2021 SSDS MONITORING

Project Number: 01304

Lab Number: L2168195

Report Date: 12/27/21

GLOSSARY

Acronyms

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

Report Format: Data Usability Report



Project Name: Q4 2021 SSDS MONITORING

Project Number: 01304

Lab Number: L2168195

Report Date: 12/27/21

Footnotes

1

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

Terms

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

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

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

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

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

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

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

Data Qualifiers

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

Report Format: Data Usability Report



Serial_No:12272110:59

Project Name: Q4 2021 SSDS MONITORING

Project Number: 01304

Lab Number: L2168195

Report Date: 12/27/21

Data Qualifiers

the identification is based on a mass spectral library search.

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

Report Format: Data Usability Report



Project Name:Q4 2021 SSDS MONITORINGProject Number:01304

 Lab Number:
 L2168195

 Report Date:
 12/27/21

REFERENCES

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

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

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

EPA 625/625.1: alpha-Terpineol

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

EPA 8270D/8270E: <u>NPW:</u> Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine. **SM4500**: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS EPA 8082A: <u>NPW</u>: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187. EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics, EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II.

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs **EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

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

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

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

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

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ANALYTICAL REPORT

Lab Number:	L2164371
Client:	Environmental Advantage, Inc.
	3636 North Buffalo Road
	Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN
Project Number:	01304
Report Date:	12/07/21
-	

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

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name:CY2021 SMP GROUNDWATER SAMPLINProject Number:01304

Lab Number:	L2164371
Report Date:	12/07/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2164371-01	MW-12 (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 12:25	11/19/21
L2164371-02	MW-11 (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 12:40	11/19/21
L2164371-03	MW-11 (111921) DUPLICATE	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 12:40	11/19/21
L2164371-04	MW-3 (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 12:55	11/19/21
L2164371-05	MW-13 (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 13:10	11/19/21
L2164371-06	TRIP BLANK (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 13:20	11/19/21
L2164371-07	RINSATE BLANK (111921)	WATER	MOD-PAC CORP, BUFFALO, NY	11/19/21 13:25	11/19/21

Project Name:CY2021 SMP GROUNDWATER SAMPLINProject Number:01304

 Lab Number:
 L2164371

 Report Date:
 12/07/21

Case Narrative

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

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

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

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

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

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



Project Name:CY2021 SMP GROUNDWATER SAMPLINProject Number:01304

 Lab Number:
 L2164371

 Report Date:
 12/07/21

Case Narrative (continued)

Report Submission

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

Volatile Organics

L2164371-06: The pH of the sample was determined to be greater than 2.

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.

Melissa Sturgis Melissa Sturgis

Authorized Signature:

Title: Technical Director/Representative

Date: 12/07/21



ORGANICS



VOLATILES



		Serial_No	o:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2164371-01 MW-12 (111921) MOD-PAC CORP, BUFFALO, NY	Date Collected: Date Received: Field Prep:	11/19/21 12:25 11/19/21 Not Specified
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260C 12/01/21 09:43 PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	estborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



Serial_No:12072110:16				
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371	
Project Number:	01304	Report Date:	12/07/21	
	SAMPLE RESULTS			
Lab ID:	L2164371-01	Date Collected:	11/19/21 12:25	
Client ID:	MW-12 (111921)	Date Received:	11/19/21	
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	tborough Lab					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	107		70-130	
Toluene-d8	94		70-130	
4-Bromofluorobenzene	92		70-130	
Dibromofluoromethane	109		70-130	



		Serial_No	p:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2164371-02 MW-11 (111921) MOD-PAC CORP, BUFFALO, NY	Date Collected: Date Received: Field Prep:	11/19/21 12:40 11/19/21 Not Specified
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260C 12/01/21 10:03 PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	0.25	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	7.8		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	0.27	J	ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	30		ug/l	2.5	0.70	1
Trichloroethene	32		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1



Serial_No:12072110:16				
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371	
Project Number:	01304	Report Date:	12/07/21	
	SAMPLE RESULTS			
Lab ID:	L2164371-02	Date Collected:	11/19/21 12:40	
Client ID:	MW-11 (111921)	Date Received:	11/19/21	
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified	

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
olatile Organics by GC/MS - Westbor	ough Lab					
I,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
I,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
o/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
sis-1,2-Dichloroethene	17		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
1-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
I,2-Dibromoethane	ND		ug/l	2.0	0.65	1
,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
sopropylbenzene	ND		ug/l	2.5	0.70	1
I,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
I,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
I,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	111		70-130	
Toluene-d8	94		70-130	
4-Bromofluorobenzene	91		70-130	
Dibromofluoromethane	109		70-130	



		Serial_No	0:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-03	Date Collected:	11/19/21 12:40
Client ID:	MW-11 (111921) DUPLICATE	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260C		
Analytical Date:	12/01/21 10:23		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborough Lab							
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	ND		ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	0.25	J	ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	9.3		ug/l	1.0	0.07	1	
Chloroethane	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethene	0.26	J	ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	33		ug/l	2.5	0.70	1	
Trichloroethene	29		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	



Analyst:

PD

		Serial_No	0:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-03	Date Collected:	11/19/21 12:40
Client ID:	MW-11 (111921) DUPLICATE	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
olatile Organics by GC/MS - Westbor	ough Lab					
I,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
I,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
o/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
sis-1,2-Dichloroethene	17		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
1-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
I,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
sopropylbenzene	ND		ug/l	2.5	0.70	1
I,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
I,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Acceptance Qualifier Criteria	
1,2-Dichloroethane-d4	108	70-130	
Toluene-d8	96	70-130	
4-Bromofluorobenzene	93	70-130	
Dibromofluoromethane	108	70-130	



		Serial_No	o:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2164371-04 D MW-3 (111921) MOD-PAC CORP, BUFFALO, NY	Date Collected: Date Received: Field Prep:	11/19/21 12:55 11/19/21 Not Specified
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260C 12/01/21 10:43 PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborough Lab							
Methylene chloride	ND		ug/l	5.0	1.4	2	
1,1-Dichloroethane	ND		ug/l	5.0	1.4	2	
Chloroform	ND		ug/l	5.0	1.4	2	
Carbon tetrachloride	ND		ug/l	1.0	0.27	2	
1,2-Dichloropropane	ND		ug/l	2.0	0.27	2	
Dibromochloromethane	ND		ug/l	1.0	0.30	2	
1,1,2-Trichloroethane	ND		ug/l	3.0	1.0	2	
Tetrachloroethene	ND		ug/l	1.0	0.36	2	
Chlorobenzene	ND		ug/l	5.0	1.4	2	
Trichlorofluoromethane	ND		ug/l	5.0	1.4	2	
1,2-Dichloroethane	ND		ug/l	1.0	0.26	2	
1,1,1-Trichloroethane	ND		ug/l	5.0	1.4	2	
Bromodichloromethane	ND		ug/l	1.0	0.38	2	
trans-1,3-Dichloropropene	ND		ug/l	1.0	0.33	2	
cis-1,3-Dichloropropene	ND		ug/l	1.0	0.29	2	
Bromoform	ND		ug/l	4.0	1.3	2	
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.33	2	
Benzene	ND		ug/l	1.0	0.32	2	
Toluene	ND		ug/l	5.0	1.4	2	
Ethylbenzene	ND		ug/l	5.0	1.4	2	
Chloromethane	ND		ug/l	5.0	1.4	2	
Bromomethane	ND		ug/l	5.0	1.4	2	
Vinyl chloride	2.9		ug/l	2.0	0.14	2	
Chloroethane	ND		ug/l	5.0	1.4	2	
1,1-Dichloroethene	0.77	J	ug/l	1.0	0.34	2	
trans-1,2-Dichloroethene	4.0	J	ug/l	5.0	1.4	2	
Trichloroethene	340		ug/l	1.0	0.35	2	
1,2-Dichlorobenzene	ND		ug/l	5.0	1.4	2	



		Serial_No	o:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-04 D	Date Collected:	11/19/21 12:55
Client ID:	MW-3 (111921)	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
,3-Dichlorobenzene	ND		ug/l	5.0	1.4	2		
,4-Dichlorobenzene	ND		ug/l	5.0	1.4	2		
Nethyl tert butyl ether	ND		ug/l	5.0	1.4	2		
/m-Xylene	ND		ug/l	5.0	1.4	2		
-Xylene	ND		ug/l	5.0	1.4	2		
is-1,2-Dichloroethene	43		ug/l	5.0	1.4	2		
Styrene	ND		ug/l	5.0	1.4	2		
Dichlorodifluoromethane	ND		ug/l	10	2.0	2		
cetone	ND		ug/l	10	2.9	2		
Carbon disulfide	ND		ug/l	10	2.0	2		
-Butanone	ND		ug/l	10	3.9	2		
-Methyl-2-pentanone	ND		ug/l	10	2.0	2		
-Hexanone	ND		ug/l	10	2.0	2		
Bromochloromethane	ND		ug/l	5.0	1.4	2		
,2-Dibromoethane	ND		ug/l	4.0	1.3	2		
,2-Dibromo-3-chloropropane	ND		ug/l	5.0	1.4	2		
sopropylbenzene	ND		ug/l	5.0	1.4	2		
,2,3-Trichlorobenzene	ND		ug/l	5.0	1.4	2		
,2,4-Trichlorobenzene	ND		ug/l	5.0	1.4	2		
Nethyl Acetate	ND		ug/l	4.0	0.47	2		
Syclohexane	ND		ug/l	20	0.54	2		
,4-Dioxane	ND		ug/l	500	120	2		
reon-113	ND		ug/l	5.0	1.4	2		
lethyl cyclohexane	ND		ug/l	20	0.79	2		

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	109		70-130	
Toluene-d8	95		70-130	
4-Bromofluorobenzene	97		70-130	
Dibromofluoromethane	107		70-130	



		Serial_No	p:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-05	Date Collected:	11/19/21 13:10
Client ID:	MW-13 (111921)	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water		
Analytical Method:	1,8260C		
Analytical Date:	12/01/21 11:03		
Analyst:	PD		
Analytical Date:	12/01/21 11:03		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
Methylene chloride	ND		ug/l	2.5	0.70	1		
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1		
Chloroform	ND		ug/l	2.5	0.70	1		
Carbon tetrachloride	ND		ug/l	0.50	0.13	1		
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1		
Dibromochloromethane	ND		ug/l	0.50	0.15	1		
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1		
Tetrachloroethene	ND		ug/l	0.50	0.18	1		
Chlorobenzene	ND		ug/l	2.5	0.70	1		
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1		
I,2-Dichloroethane	ND		ug/l	0.50	0.13	1		
,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1		
Bromodichloromethane	ND		ug/l	0.50	0.19	1		
rans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1		
sis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1		
Bromoform	ND		ug/l	2.0	0.65	1		
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1		
Benzene	ND		ug/l	0.50	0.16	1		
Toluene	ND		ug/l	2.5	0.70	1		
Ethylbenzene	ND		ug/l	2.5	0.70	1		
Chloromethane	ND		ug/l	2.5	0.70	1		
Bromomethane	ND		ug/l	2.5	0.70	1		
Vinyl chloride	20		ug/l	1.0	0.07	1		
Chloroethane	ND		ug/l	2.5	0.70	1		
I,1-Dichloroethene	0.45	J	ug/l	0.50	0.17	1		
rans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1		
Trichloroethene	73		ug/l	0.50	0.18	1		
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1		



		Serial_No	o:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-05	Date Collected:	11/19/21 13:10
Client ID:	MW-13 (111921)	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1		
p/m-Xylene	ND		ug/l	2.5	0.70	1		
o-Xylene	ND		ug/l	2.5	0.70	1		
cis-1,2-Dichloroethene	50		ug/l	2.5	0.70	1		
Styrene	ND		ug/l	2.5	0.70	1		
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1		
Acetone	ND		ug/l	5.0	1.5	1		
Carbon disulfide	ND		ug/l	5.0	1.0	1		
2-Butanone	ND		ug/l	5.0	1.9	1		
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1		
2-Hexanone	ND		ug/l	5.0	1.0	1		
Bromochloromethane	ND		ug/l	2.5	0.70	1		
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1		
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1		
Isopropylbenzene	ND		ug/l	2.5	0.70	1		
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl Acetate	ND		ug/l	2.0	0.23	1		
Cyclohexane	ND		ug/l	10	0.27	1		
1,4-Dioxane	ND		ug/l	250	61.	1		
Freon-113	ND		ug/l	2.5	0.70	1		
Methyl cyclohexane	ND		ug/l	10	0.40	1		

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	110		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	90		70-130	
Dibromofluoromethane	114		70-130	



		Serial_No	p:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2164371-06 TRIP BLANK (111921) MOD-PAC CORP, BUFFALO, NY	Date Collected: Date Received: Field Prep:	11/19/21 13:20 11/19/21 Not Specified
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260C 12/01/21 09:03 PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborough Lab							
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	ND		ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	ND		ug/l	1.0	0.07	1	
Chloroethane	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Trichloroethene	ND		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	



Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-06	Date Collected:	11/19/21 13:20
Client ID:	TRIP BLANK (111921)	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1		
p/m-Xylene	ND		ug/l	2.5	0.70	1		
o-Xylene	ND		ug/l	2.5	0.70	1		
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1		
Styrene	ND		ug/l	2.5	0.70	1		
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1		
Acetone	ND		ug/l	5.0	1.5	1		
Carbon disulfide	ND		ug/l	5.0	1.0	1		
2-Butanone	ND		ug/l	5.0	1.9	1		
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1		
2-Hexanone	ND		ug/l	5.0	1.0	1		
Bromochloromethane	ND		ug/l	2.5	0.70	1		
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1		
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1		
Isopropylbenzene	ND		ug/l	2.5	0.70	1		
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl Acetate	ND		ug/l	2.0	0.23	1		
Cyclohexane	ND		ug/l	10	0.27	1		
1,4-Dioxane	ND		ug/l	250	61.	1		
Freon-113	ND		ug/l	2.5	0.70	1		
Methyl cyclohexane	ND		ug/l	10	0.40	1		

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	105		70-130	
Toluene-d8	94		70-130	
4-Bromofluorobenzene	89		70-130	
Dibromofluoromethane	110		70-130	



Serial_No:12072110:16

		Serial_No	o:12072110:16
Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID: Client ID: Sample Location:	L2164371-07 RINSATE BLANK (111921) MOD-PAC CORP, BUFFALO, NY	Date Collected: Date Received: Field Prep:	11/19/21 13:25 11/19/21 Not Specified
Sample Depth: Matrix: Analytical Method: Analytical Date: Analyst:	Water 1,8260C 12/01/21 09:23 PD		

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborough Lab							
Methylene chloride	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1	
Chloroform	ND		ug/l	2.5	0.70	1	
Carbon tetrachloride	ND		ug/l	0.50	0.13	1	
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1	
Dibromochloromethane	ND		ug/l	0.50	0.15	1	
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1	
Tetrachloroethene	ND		ug/l	0.50	0.18	1	
Chlorobenzene	ND		ug/l	2.5	0.70	1	
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1	
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1	
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1	
Bromodichloromethane	ND		ug/l	0.50	0.19	1	
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1	
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1	
Bromoform	ND		ug/l	2.0	0.65	1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1	
Benzene	ND		ug/l	0.50	0.16	1	
Toluene	ND		ug/l	2.5	0.70	1	
Ethylbenzene	ND		ug/l	2.5	0.70	1	
Chloromethane	ND		ug/l	2.5	0.70	1	
Bromomethane	ND		ug/l	2.5	0.70	1	
Vinyl chloride	ND		ug/l	1.0	0.07	1	
Chloroethane	ND		ug/l	2.5	0.70	1	
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1	
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1	
Trichloroethene	ND		ug/l	0.50	0.18	1	
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1	



Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	SAMPLE RESULTS		
Lab ID:	L2164371-07	Date Collected:	11/19/21 13:25
Client ID:	RINSATE BLANK (111921)	Date Received:	11/19/21
Sample Location:	MOD-PAC CORP, BUFFALO, NY	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor		
Volatile Organics by GC/MS - Westborough Lab								
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1		
p/m-Xylene	ND		ug/l	2.5	0.70	1		
o-Xylene	ND		ug/l	2.5	0.70	1		
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1		
Styrene	ND		ug/l	2.5	0.70	1		
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1		
Acetone	4.0	J	ug/l	5.0	1.5	1		
Carbon disulfide	ND		ug/l	5.0	1.0	1		
2-Butanone	ND		ug/l	5.0	1.9	1		
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1		
2-Hexanone	ND		ug/l	5.0	1.0	1		
Bromochloromethane	ND		ug/l	2.5	0.70	1		
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1		
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1		
Isopropylbenzene	ND		ug/l	2.5	0.70	1		
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1		
Methyl Acetate	ND		ug/l	2.0	0.23	1		
Cyclohexane	ND		ug/l	10	0.27	1		
1,4-Dioxane	ND		ug/l	250	61.	1		
Freon-113	ND		ug/l	2.5	0.70	1		
Methyl cyclohexane	ND		ug/l	10	0.40	1		

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	105		70-130	
Toluene-d8	95		70-130	
4-Bromofluorobenzene	91		70-130	
Dibromofluoromethane	105		70-130	



Serial_No:12072110:16

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Numb
Project Number:	01304	Report Dat

ab Number:	L2164371
Report Date:	12/07/21

Method Blank Analysis Batch Quality Control

Analytical Method:1,8260CAnalytical Date:12/01/21 08:43Analyst:PD

arameter	Result	Qualifier	Units	RL	MDL
olatile Organics by GC/MS - \	Vestborough Lab	for sample	(s): 01-	07 Batch:	WG1578292-5
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70



L2164371 12/07/21

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:
Project Number:	01304	Report Date:

Method Blank Analysis Batch Quality Control

Analytical Method:	1,8260C
Analytical Date:	12/01/21 08:43
Analyst:	PD

arameter	Result	Qualifier Units	RL	MDL
olatile Organics by GC/MS - V	Vestborough Lab	for sample(s): 01-07	Batch:	WG1578292-5
1,4-Dichlorobenzene	ND	ug/l	2.5	0.70
Methyl tert butyl ether	ND	ug/l	2.5	0.70
p/m-Xylene	ND	ug/l	2.5	0.70
o-Xylene	ND	ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND	ug/l	2.5	0.70
Styrene	ND	ug/l	2.5	0.70
Dichlorodifluoromethane	ND	ug/l	5.0	1.0
Acetone	ND	ug/l	5.0	1.5
Carbon disulfide	ND	ug/l	5.0	1.0
2-Butanone	ND	ug/l	5.0	1.9
4-Methyl-2-pentanone	ND	ug/l	5.0	1.0
2-Hexanone	ND	ug/l	5.0	1.0
Bromochloromethane	ND	ug/l	2.5	0.70
1,2-Dibromoethane	ND	ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5	0.70
Isopropylbenzene	ND	ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND	ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND	ug/l	2.5	0.70
Methyl Acetate	ND	ug/l	2.0	0.23
Cyclohexane	ND	ug/l	10	0.27
1,4-Dioxane	ND	ug/l	250	61.
Freon-113	ND	ug/l	2.5	0.70
Methyl cyclohexane	ND	ug/l	10	0.40



Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Lab Number:	L2164371
Project Number:	01304	Report Date:	12/07/21
	Mathed Blank Analysis		

Method Blank Analysis Batch Quality Control

Analytical Method:1,8260CAnalytical Date:12/01/21 08:43Analyst:PD

Parameter	Result	Qualifier	Units	RL	MDL	
Volatile Organics by GC/MS - Wes	tborough La	b for sample	e(s): 01-07	Batch:	WG1578292-5	

		Acceptance			
Surrogate	%Recovery	Qualifier	Criteria		
1,2-Dichloroethane-d4	107		70-130		
Toluene-d8	97		70-130		
4-Bromofluorobenzene	90		70-130		
Dibromofluoromethane	107		70-130		



Lab Control Sample Analysis Batch Quality Control

Project Name: CY2021 SMP GROUNDWATER SAMPLIN

Project Number: 01304

 Lab Number:
 L2164371

 Report Date:
 12/07/21

arameter	LCS %Recovery	Qual		.CSD ecovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
olatile Organics by GC/MS - Westborough I	ab Associated	sample(s):	01-07	Batch:	WG1578292-3	WG1578292-4			
Methylene chloride	99			100		70-130	1		20
1,1-Dichloroethane	100			110		70-130	10		20
Chloroform	100			110		70-130	10		20
Carbon tetrachloride	100			110		63-132	10		20
1,2-Dichloropropane	95			100		70-130	5		20
Dibromochloromethane	96			100		63-130	4		20
1,1,2-Trichloroethane	87			94		70-130	8		20
Tetrachloroethene	110			120		70-130	9		20
Chlorobenzene	97			100		75-130	3		20
Trichlorofluoromethane	120			120		62-150	0		20
1,2-Dichloroethane	89			100		70-130	12		20
1,1,1-Trichloroethane	99			110		67-130	11		20
Bromodichloromethane	100			100		67-130	0		20
trans-1,3-Dichloropropene	82			90		70-130	9		20
cis-1,3-Dichloropropene	92			98		70-130	6		20
Bromoform	98			110		54-136	12		20
1,1,2,2-Tetrachloroethane	87			96		67-130	10		20
Benzene	98			110		70-130	12		20
Toluene	96			100		70-130	4		20
Ethylbenzene	99			100		70-130	1		20
Chloromethane	110			120		64-130	9		20
Bromomethane	100			100		39-139	0		20
Vinyl chloride	100			110		55-140	10		20



Lab Control Sample Analysis Batch Quality Control

Project Name: CY2021 SMP GROUNDWATER SAMPLIN

Project Number: 01304

 Lab Number:
 L2164371

 Report Date:
 12/07/21

rameter	LCS %Recovery	Qual		CSD covery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
platile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-07	Batch:	WG1578292-3	WG1578292-4			
Chloroethane	120			130		55-138	8		20
1,1-Dichloroethene	100			100		61-145	0		20
trans-1,2-Dichloroethene	100			110		70-130	10		20
Trichloroethene	94			100		70-130	6		20
1,2-Dichlorobenzene	97			100		70-130	3		20
1,3-Dichlorobenzene	100			100		70-130	0		20
1,4-Dichlorobenzene	100			100		70-130	0		20
Methyl tert butyl ether	80			93		63-130	15		20
p/m-Xylene	110			110		70-130	0		20
o-Xylene	105			110		70-130	5		20
cis-1,2-Dichloroethene	100			110		70-130	10		20
Styrene	110			115		70-130	4		20
Dichlorodifluoromethane	120			120		36-147	0		20
Acetone	79			98		58-148	21	Q	20
Carbon disulfide	100			110		51-130	10		20
2-Butanone	67			75		63-138	11		20
4-Methyl-2-pentanone	61			72		59-130	17		20
2-Hexanone	66			74		57-130	11		20
Bromochloromethane	100			110		70-130	10		20
1,2-Dibromoethane	92			94		70-130	2		20
1,2-Dibromo-3-chloropropane	88			97		41-144	10		20
Isopropylbenzene	100			110		70-130	10		20
1,2,3-Trichlorobenzene	91			97		70-130	6		20



L2164371

12/07/21

Lab Control Sample Analysis

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Batch Quality Control	Lab Number:
Project Number:	01304		Report Date:

	LCS		LCSD		%Recovery			RPD	
Parameter	%Recovery	Qual	%Recovery	Qual	Limits	RPD	Qual	Limits	
Volatile Organics by GC/MS - Westborough L	ab Associated	sample(s):	01-07 Batch:	WG1578292-3	WG1578292-4				
1,2,4-Trichlorobenzene	99		100		70-130	1		20	
Methyl Acetate	68	Q	80		70-130	16		20	
Cyclohexane	92		100		70-130	8		20	
1,4-Dioxane	102		108		56-162	6		20	
Freon-113	110		120		70-130	9		20	
Methyl cyclohexane	90		100		70-130	11		20	

Surrogate	LCS %Recovery Qual	LCSD %Recovery Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101	101	70-130
Toluene-d8	98	97	70-130
4-Bromofluorobenzene	95	91	70-130
Dibromofluoromethane	108	102	70-130



Matrix Spike Analysis

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Batch Quality Control	Lab Number:	L2164371
Project Number:	01304		Report Date:	12/07/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	/ Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - MW-12 (111921)	- Westborough	Lab Asso	ciated sample(s): 01-07 Q	C Batch ID:	WG15782	292-6 WG157	8292-7	QC Sample	: L216	4371-01	Client ID:
Methylene chloride	ND	10	9.9	99		10	100		70-130	1		20
1,1-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
Chloroform	ND	10	11	110		11	110		70-130	0		20
Carbon tetrachloride	ND	10	11	110		12	120		63-132	9		20
1,2-Dichloropropane	ND	10	9.8	98		10	100		70-130	2		20
Dibromochloromethane	ND	10	10	100		11	110		63-130	10		20
1,1,2-Trichloroethane	ND	10	9.6	96		10	100		70-130	4		20
Tetrachloroethene	ND	10	11	110		11	110		70-130	0		20
Chlorobenzene	ND	10	9.8	98		10	100		75-130	2		20
Trichlorofluoromethane	ND	10	12	120		13	130		62-150	8		20
1,2-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
1,1,1-Trichloroethane	ND	10	11	110		11	110		67-130	0		20
Bromodichloromethane	ND	10	10	100		11	110		67-130	10		20
trans-1,3-Dichloropropene	ND	10	8.3	83		8.4	84		70-130	1		20
cis-1,3-Dichloropropene	ND	10	8.8	88		9.5	95		70-130	8		20
Bromoform	ND	10	10	100		11	110		54-136	10		20
1,1,2,2-Tetrachloroethane	ND	10	9.6	96		9.9	99		67-130	3		20
Benzene	ND	10	10	100		11	110		70-130	10		20
Toluene	ND	10	9.8	98		9.8	98		70-130	0		20
Ethylbenzene	ND	10	9.8	98		10	100		70-130	2		20
Chloromethane	ND	10	11	110		12	120		64-130	9		20
Bromomethane	ND	10	9.6	96		11	110		39-139	14		20
Vinyl chloride	ND	10	11	110		12	120		55-140	9		20



Matrix Spike Analysis

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Batch Quality Control	Lab Number:	L2164371
Project Number:	01304		Report Date:	12/07/21

Parameter	Native Sample	MS Added	MS Found	MS %Recover	MSD y Qual Found	MSD %Recovery		Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/M MW-12 (111921)	S - Westborough	Lab Assoc	iated sample(s): 01-07 G	C Batch ID: WG15782	292-6 WG1578	8292-7	QC Sample	e: L2164	1371-01	Client ID:
Chloroethane	ND	10	13	130	12	120		55-138	8		20
1,1-Dichloroethene	ND	10	10	100	12	120		61-145	18		20
trans-1,2-Dichloroethene	ND	10	11	110	11	110		70-130	0		20
Trichloroethene	ND	10	11	110	11	110		70-130	0		20
1,2-Dichlorobenzene	ND	10	9.9	99	10	100		70-130	1		20
1,3-Dichlorobenzene	ND	10	10	100	10	100		70-130	0		20
1,4-Dichlorobenzene	ND	10	10	100	10	100		70-130	0		20
Methyl tert butyl ether	ND	10	8.9	89	10	100		63-130	12		20
p/m-Xylene	ND	20	21	105	21	105		70-130	0		20
o-Xylene	ND	20	20	100	21	105		70-130	5		20
cis-1,2-Dichloroethene	ND	10	10	100	11	110		70-130	10		20
Styrene	ND	20	22	110	22	110		70-130	0		20
Dichlorodifluoromethane	ND	10	12	120	13	130		36-147	8		20
Acetone	ND	10	9.8	98	9.4	94		58-148	4		20
Carbon disulfide	ND	10	11	110	12	120		51-130	9		20
2-Butanone	ND	10	9.3	93	8.2	82		63-138	13		20
4-Methyl-2-pentanone	ND	10	7.8	78	8.0	80		59-130	3		20
2-Hexanone	ND	10	7.0	70	7.9	79		57-130	12		20
Bromochloromethane	ND	10	11	110	12	120		70-130	9		20
1,2-Dibromoethane	ND	10	9.5	95	9.7	97		70-130	2		20
1,2-Dibromo-3-chloropropane	ND	10	9.5	95	10	100		41-144	5		20
Isopropylbenzene	ND	10	9.8	98	9.9	99		70-130	1		20
1,2,3-Trichlorobenzene	ND	10	9.5	95	10	100		70-130	5		20



Matrix Spike Analysis

Project Name:	CY2021 SMP GROUNDWATER SAMPLIN	Batch Quality Control	Lab Number:	L2164371	
Project Number:	01304		Report Date:	12/07/21	

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	v Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS MW-12 (111921)	- Westborough	Lab Assoc	iated sample(s	s): 01-07 Q	C Batch ID:	WG15782	292-6 WG1578	3292-7	QC Sample	: L2164	4371-01	Client ID:
1,2,4-Trichlorobenzene	ND	10	9.4	94		9.8	98		70-130	4		20
Methyl Acetate	ND	10	8.8	88		8.4	84		70-130	5		20
Cyclohexane	ND	10	9.5J	95		10	100		70-130	5		20
1,4-Dioxane	ND	500	640	128		630	126		56-162	2		20
Freon-113	ND	10	11	110		12	120		70-130	9		20
Methyl cyclohexane	ND	10	8.9J	89		9.2J	92		70-130	3		20

	MS	MSD	Acceptance
Surrogate	% Recovery Qualifier	% Recovery Qualifier	Criteria
- 1,2-Dichloroethane-d4	107	112	70-130
4-Bromofluorobenzene	89	90	70-130
Dibromofluoromethane	109	108	70-130
Toluene-d8	95	93	70-130



Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container Information			Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L2164371-01A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01A1	Vial HCI preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01A2	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01B	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01B1	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01B2	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01C	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-01C1	Vial HCl preserved	А	NA		4.2	Υ	Absent		NYTCL-8260-R2(14)	
L2164371-01C2	Vial HCl preserved	А	NA		4.2	Υ	Absent		NYTCL-8260-R2(14)	
L2164371-02A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-02B	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-02C	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-03A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-03B	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-03C	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-04A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-04B	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-04C	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-05A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-05B	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-05C	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-06A	Vial HCl preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-06B	Vial HCl preserved	А	NA		4.2	Υ	Absent		NYTCL-8260-R2(14)	



Project Name:CY2021 SMP GROUNDWATER SAMPLINProject Number:01304

Container Information			Initial	Final	Temp			Frozen		
Container ID	Container Type	Cooler	рН	рН	deg C	Pres	Seal	Date/Time	Analysis(*)	
L2164371-06C	Vial HCI preserved	NA	NA			Y	Absent		NYTCL-8260-R2(14)	
L2164371-07A	Vial HCI preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	
L2164371-07B	Vial HCI preserved	А	NA		4.2	Υ	Absent		NYTCL-8260-R2(14)	
L2164371-07C	Vial HCI preserved	А	NA		4.2	Y	Absent		NYTCL-8260-R2(14)	



Project Name: CY2021 SMP GROUNDWATER SAMPLIN

Project Number: 01304

Lab Number: L2164371

Report Date: 12/07/21

GLOSSARY

Acronyms

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

Report Format: DU Report with 'J' Qualifiers



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Footnotes

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

Terms

1

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

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

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

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

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

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

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



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Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



Project Name:CY2021 SMP GROUNDWATER SAMPLINLabProject Number:01304Rep

 Lab Number:
 L2164371

 Report Date:
 12/07/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

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

EPA 625/625.1: alpha-Terpineol

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

EPA 8270D/8270E: <u>NPW:</u> Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine. **SM4500**: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS EPA 8082A: <u>NPW</u>: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187. EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics, EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II.

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs **EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

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

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

Non-Potable Water

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

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

Westborough, MA 01581 8 Walkup Dr.	NEW YORK CHAIN OF CUSTODY Mansfield, MA 02048 320 Forbes Blvd	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105 Project Information			Page 1 O			Date Rec'd in Lab		-0121	ALPHA Job # 6 4 Billing Information	37]			
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Preservative Code:	Container Code														
A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH	P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup	Westboro: Certification No: MA935 Mansfield: Certification No: MA015				tainer Type reservative	V B				Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not				
	C = Cube O = Other	Relipquished	By:	Date/	Time		Receive	d By:	1)ate/Time	start until any ambiguit resolved. BY EXECUT				
H = Na ₂ S ₂ O ₃	E = Encore D = BOD Bottle	5 and 12 to		11/19/21	1345	Kyli	8 pu	AAL	1/11 11/20	121 134 121 0015	THIS COC, THE CLIENT HAS READ AND AGREES				
Form No: 01-25 HC (rev. 30-Sept-2013)											(See reverse side.)	~~~~			