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January 11, 2019

Mr. Thomas Biel
New York State Department of Environmental Conservation (NYSDEC)
Region 7 Office
Division of Environmental Remediation
615 Erie Boulevard West
Syracuse, NY 13204

Re: Stauffer Management Company, LLC- Maestri Site
NYSDEC Site No. 7-34-025
900 State Fair Boulevard
Town of Geddes, NY

Mr. Biel,

Enclosed is the October 2018 Semi-Annual Groundwater Monitoring Report for the Maestri Site, prepared by Envirospec Engineering, PLLC on behalf of Stauffer Management Company, LLC (SMC).

Should you have any questions, please do not hesitate to contact me at (518) 453-2203.

Sincerely,

Gianna Aiezza

Gianna Aiezza, P.E.
Principal Engineer

Enc.
Cc: R. Jones, NYSDOH

STAUFFER MANAGEMENT COMPANY
MAESTRI SITE
GEDDES, NEW YORK

SEMI-ANNUAL GROUNDWATER MONITORING REPORT

October 2018 Sampling

POST GROUNDWATER COLLECTION / TREATMENT SYSTEM SHUTDOWN

Prepared for:

Stauffer Management Co.
1800 Concord Pike
Wilmington, DE 19850-5437

Prepared by:

349 Northern Blvd., Suite 3
Albany, NY 12204

Envirospec Engineering Project E18-1803

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DRAWINGS

APPENDIX

1.0 INTRODUCTION

This report addresses the semi-annual groundwater sampling event that was completed on October 25 and 30, 2018 at the Stauffer Management Company (SMC) Maestri Site (the "Site"). Samples from two wells (MW-9 and MW-12) were also sampled and analyzed for PFAS and 1,4-dioxane per NYSDEC's request. These results are discussed in detail in Appendix E.

2.0 SITE BACKGROUND

The groundwater treatment system at the SMC Maestri Site began operation in 1996. On May 8, 2008, SMC submitted a request to the New York State Department of Environmental Conservation (NYSDEC) to shut down the treatment system.

SMC agreed to conduct weekly Site inspections and monthly sampling of eight (8) perimeter monitoring wells for the first three (3) months following shutdown, from June to August 2008. The elevations of Site monitoring wells were also monitored on a monthly basis during this time. After the three (3) month period, sampling and reporting was conducted quarterly from November 2008 to June 2009.

In June 2009, a new monitoring well (PZ-20) was installed downgradient of the Site in the Alhan Parkway residential area (153 Alhan Parkway) to verify that the Site groundwater contamination plume was not migrating towards this residential area. A second downgradient monitoring well (PZ-21) was installed at 151 Alhan Parkway in June 2012. The locations of PZ-20 and PZ-21 are shown on Drawings D-1, D-2, and D-3 attached to this report.

Based on groundwater monitoring results in November 2009, Envirospec requested NYSDEC approval to change the groundwater sampling frequency from quarterly to semi-annual. On November 13, 2009, the NYSDEC granted the request.

3.0 GROUNDWATER SAMPLING – OCTOBER 2018

The 2nd 2018 semi-annual groundwater sampling event was conducted on October 25 and 30, 2018. Prior to monitoring well purging, all Site monitoring wells were gauged for static water level. A table of groundwater elevations from the October 2018 sampling event is included as Table 1. Groundwater contour maps depicting calculated site groundwater elevations are provided as Drawings D-2 and D-3.

Table 1

Groundwater Elevations – October 25, 2018			
Well Number	**Measuring Point Elevation**	**Depth to Water**	**Groundwater Elevation**
MW-9	408.87	15.60	393.27
MW-10	413.82	12.70	401.12
MW-12	418.28	9.80	408.48
MW-14	405.17	16.50	388.67
PZ-2	407.23	9.40	397.83
PZ-3	409.60	17.10	392.5
PZ-4	394.37	7.60	386.77
PZ-5	393.37	6.10	387.27
PZ-6	410.15	17.70	392.45
PZ-7	409.13	17.00	392.13
PZ-9	408.69	16.10	392.59
PZ-10	407.04	15.00	392.04
PZ-12	408.17	13.20	394.97
PZ-13	407.12	11.10	396.02
PZ-14	408.44	10.10	398.34
PZ-15	406.74	15.40	391.34
PZ-18	406.30	17.30	389
PZ-19	406.88	17.10	389.78
PZ-20	386.00	4.60	381.4
PZ-21	386.70	0.80	385.9
MW-2A (formerly RW-2)	406.40	16.90	389.5
RW-3	407.01	17.70	389.31
RW-5	409.18	16.50	392.68
RW-6	393.64	5.90	387.74
RW-7	405.76	16.10	389.66
RW-8	406.81	15.70	391.11

A minimum of three (3) monitoring well volumes were purged from each of the monitoring wells scheduled for sampling except for RW-3, RW-5, and RW-8, which went dry after approximately 1.9, 1.6, and 2.4 well volumes, respectively. Monitoring wells were purged with a two (2)-inch submersible Grundfos pump and poly tubing, a two (2)-inch disposable

polyethylene bailer, or internal well pumps controlled from the treatment shed. Purged water was collected and containerized in a mobile poly tank. The containerized water will be transported off-Site for disposal at a regulated disposal facility. Field data, including pH, temperature, conductivity, turbidity, oxidation/reduction potential, dissolved oxygen, and total dissolved solids (TDS), were recorded after each purged well volume. A summary of the field data and the total volume of groundwater purged are presented in Appendix A. All samples were collected using disposable bailers following well purging activities. The monitoring well sampling field reports are included as Appendix B.

A duplicate sample was collected from MW-2A for laboratory and sampling quality assurance/quality control purposes. The result of the duplicate sample, as shown in Table 3 in Appendix A, was consistent with the original sample. A trip blank was generated to ensure no cross contamination or outside contamination was present.

4.0 GROUNDWATER QUALITY

Samples were sent to Alpha Analytical, Inc. in Westborough, MA, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory, following typical chain of custody procedures for xylene analysis via EPA Method 624. The analytical results are included as Appendix C. A summary of results from this sampling round is presented in Table 2 below as well as in Appendix A.

Table 2 Summary of Xylene Concentration in Groundwater

Well Number	SSCG (ppb)	October 2018 Xylene Concentration (ppb)
RW-3	5	ND < 1.0
RW-5	5	ND < 1.0
RW-6	5	150
RW-7	5	13
RW-8	5	ND < 1.0
MW-2A	5	170 (160)
MW-9	5	410
PZ-4	5	4.5
PZ-20	5	ND < 1.0
PZ-21	5	ND < 1.0
TRIP	5	ND < 1.0

Note: *Duplicate sample represented in (parentheses).*

Xylene concentrations continue to show fluctuations across semi-annual sampling events, specifically in RW-6, MW-2A, and MW-9 as shown on Drawing D-3 attached to this report. Levels detected in October 2018 are consistent with historical results. Although levels onsite are elevated, offsite downgradient wells PZ-20 and PZ-21 continue to be non-detect and there is no indication that the plume is migrating to this area.

5.0 SITE INSPECTIONS

Since August 2008, Site inspections were conducted during each groundwater sampling event. Items reviewed during the Site inspections included Site security, recovery and monitoring well water elevations, general site maintenance, erosion control, condition of neighboring properties and general observations of Site conditions (i.e. appearance of sink holes, odors, vegetation growth, etc). A copy of the Site inspection report completed during the October 2018 sampling event is included as Appendix D. The need for some site maintenance and repairs to the pump in RW-5 were noted.

6.0 SUMMARY

There have been no observed flooding events that have appeared to have compromised the effectiveness of the Engineering Controls (i.e. soil cover and vegetation) in place at the Site since the groundwater treatment system shutdown.

Based on the October 2018 sampling results, Site groundwater quality continues to show seasonal fluctuations in total xylene concentrations, with no migration observed towards the offsite downgradient wells. Sampling was also completed for PFAS and 1,4-dioxane per NYSDEC's request, and the results are discussed in Appendix E to this report.

SMC is proposing to remove RW-3 and RW-5 from the semi-annual sampling requirement given the non-detect results observed for total xylenes for the past several monitoring rounds. RW-3 has been non-detect since the April 2016 sample event, and RW-5 has been non-detect since the June 2013 sample event.

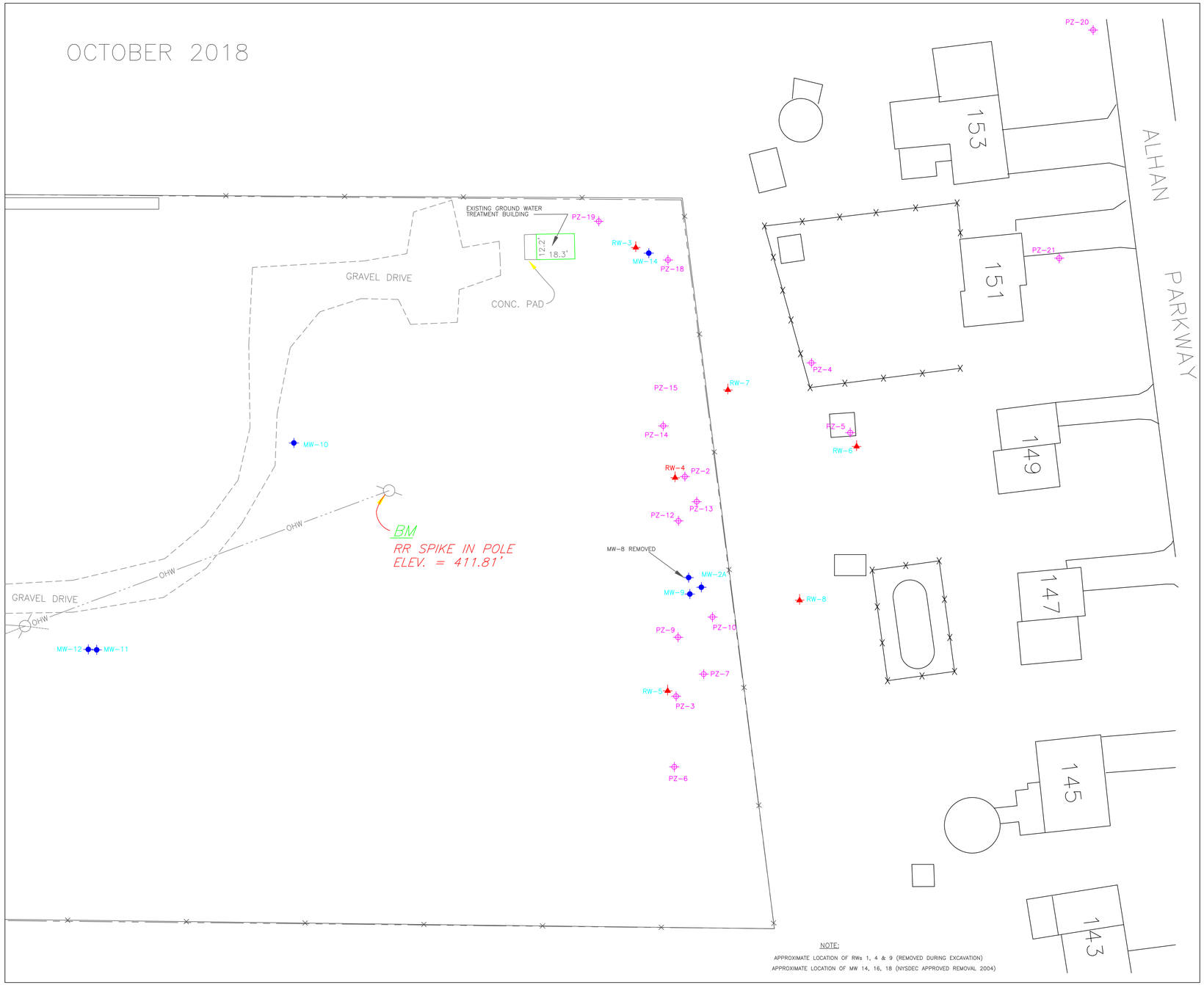
The next semi-annual sampling and Site inspection will be completed during Spring 2019. The NYSDEC will be notified prior to the sampling event.

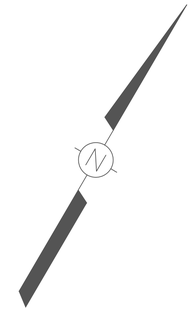
DRAWINGS

DRAWN BY	REVISED	APPROVED BY	DRAWING NUMBER
DEO 7-19-99	KF 12-10-2018	---	OCTOBER 2018

OFFICE	X-REF	IMAGE
ALB	---	---

OCTOBER 2018





LEGEND

- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- MAESTRI SITE PROPERTY BOUNDARY
- 8' HIGH SECURITY FENCE
- ELECTRIC POLE

SCALE

0 30 60 90 FEET

NOTE:

APPROXIMATE LOCATION OF RWs 1, 4 & 9 (REMOVED DURING EXCAVATION)

APPROXIMATE LOCATION OF MW 14, 16, 18 (NYSDEC APPROVED REMOVAL 2004)

CLIENT

STAUFFER
MANAGEMENT COMPANY
BASE MAP PROVIDED BY IT CORPORATION
SURVEY BY CT MALE

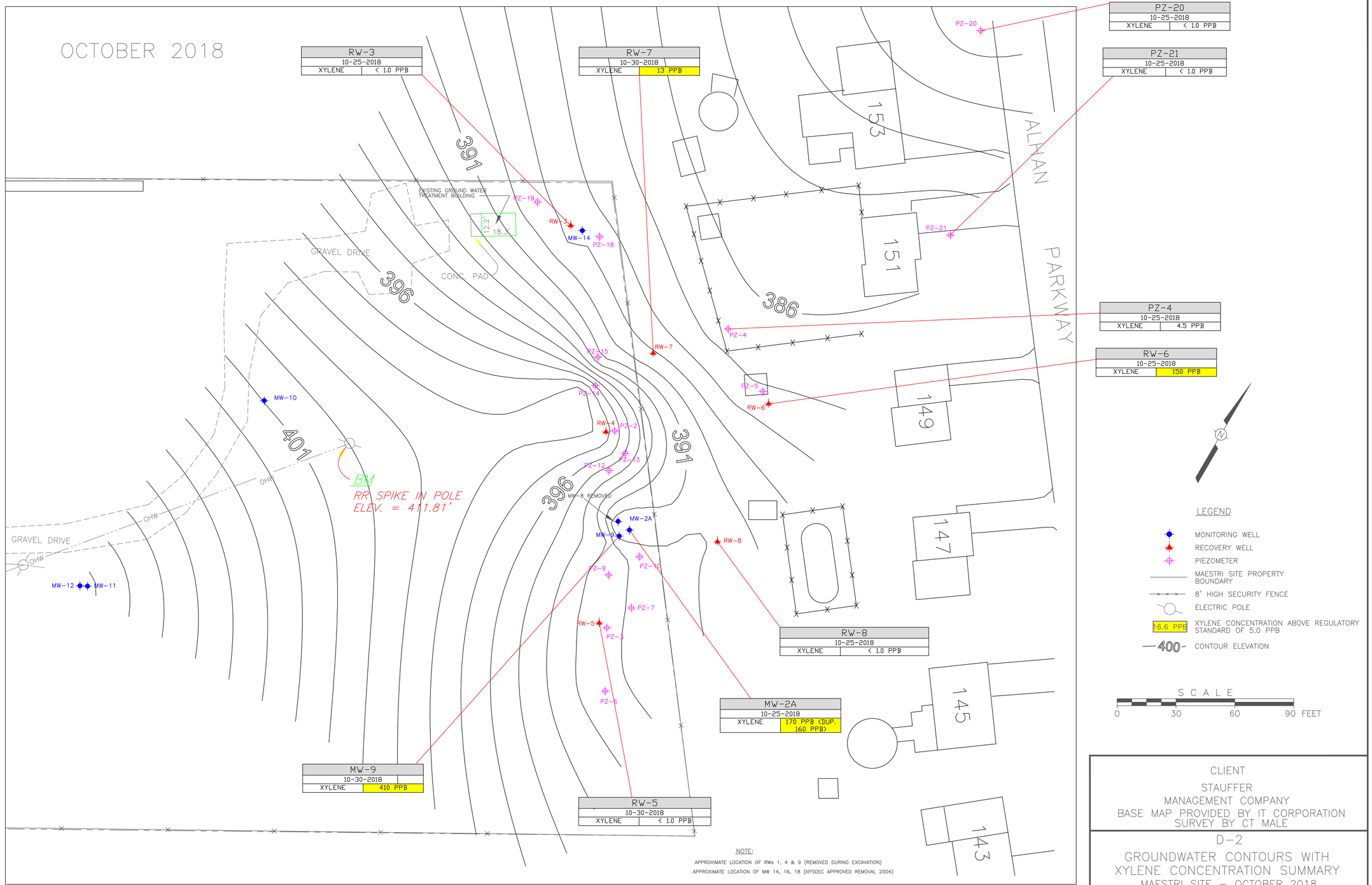
D-1

GROUNDWATER CONTOURS WITH XYLENE CONCENTRATION SUMMARY

MAESTRI SITE-OCTOBER 2018
904 STATE FAIR BLVD.
GEDDES, NEW YORK

IMAGE	X-REF	OFFICE	DRAWN BY	REVISED	APPROVED BY	DRAWING NUMBER
---	---	ALB	DEO 7-19-99	KF 12-10-2018	---	OCTOBER 2018

OCTOBER 2018



NOTE:

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APPROXIMATE LOCATION OF MW 14, 16, 18 (NYSDEC APPROVED REMOVAL 2004)

CLIENT

STAUFFER
MANAGEMENT COMPANY
BASE MAP PROVIDED BY IT CORPORATION
SURVEY BY CT MALE

D-2

GROUNDWATER CONTOURS WITH XYLENE CONCENTRATION SUMMARY
MAESTRI SITE – OCTOBER 2018
904 STATE FAIR BLVD.
GEDDES, NEW YORK

IMAGE	X-REF	OFFICE	DRAWN BY		APPROVED BY		DRAWING NUMBER
---	---	ALB	DEO	7-19-99	---	---	OCTOBER 2018
			REVISED	KF	12-10-2018		

OCTOBER 2018

RW-3	
JUN 2012	< 3.0 PPB
DEC 2012	< 3.0 PPB
JUN 2013	< 3.0 PPB
NOV 2013	< 3.0 PPB
JUN 2014	< 3.0 PPB
OCT 2014	< 3.0 PPB
MAY 2015	< 1.0 PPB
NOV 2015	16.4 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	< 1.0 PPB
NOV 2017	< 3.0 PPB
JUN 2018	< 3.0 PPB
OCT 2018	< 1.0 PPB

RW-7	
JUN 2012	41 PPB
DEC 2012	145 PPB
JUN 2013	< 3.0 PPB
NOV 2013	91 PPB
JUN 2014	8.0 PPB
OCT 2014	184 PPB
MAY 2015	16.6 PPB
NOV 2015	5.2 PPB
APRIL 2016	22.6 PPB (DUP. 23.2 PPB)
OCT 2016	< 1.0 PPB
APRIL 2017	0.4 PPB
NOV 2017	3.0 PPB
JUN 2018	21 PPB
OCT 2018	13 PPB

PZ-20	
JUN 2012	< 3.0 PPB
DEC 2012	< 3.0 PPB
JUN 2013	< 3.0 PPB
NOV 2013	< 3.0 PPB
JUN 2014	< 3.0 PPB
OCT 2014	< 3.0 PPB
MAY 2015	< 1.0 PPB
NOV 2015	< 1.0 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	< 1.0 PPB
NOV 2017	< 3.0 PPB
JUN 2018	< 3.0 PPB
OCT 2018	< 1.0 PPB

PZ-21	
JUN 2012	< 3.0 PPB
DEC 2012	< 3.0 PPB
JUN 2013	< 3.0 PPB
NOV 2013	< 3.0 PPB
JUN 2014	3.5 PPB
OCT 2014	< 3.0 PPB
MAY 2015	< 1.0 PPB (DUP. < 1.0 PPB)
NOV 2015	< 1.0 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	< 1.0 PPB (DUP. < 1.0 PPB)
NOV 2017	< 3.0 PPB
JUN 2018	< 3.0 PPB
OCT 2018	< 1.0 PPB

PZ-4	
JUN 2012	< 3.0 PPB
DEC 2012	< 3.0 PPB
JUN 2013	4.1 PPB
NOV 2013	4.9 PPB
JUN 2014	< 3.0 PPB
OCT 2014	7.1 PPB
MAY 2015	5.3 PPB
NOV 2015	5.3 PPB
APRIL 2016	5.7 PPB
OCT 2016	4.3 PPB
APRIL 2017	6.4 PPB
NOV 2017	4.6 PPB
JUN 2018	10 PPB
OCT 2018	4.5 PPB

RW-6	
JUN 2012	622 PPB
DEC 2012	511 PPB
JUN 2013	14 PPB
NOV 2013	418 PPB
JUN 2014	770 PPB
OCT 2014	466 PPB
MAY 2015	604 PPB
NOV 2015	185 PPB (2018 PPB)
APRIL 2016	707 PPB
OCT 2016	88.9 PPB (94.5 PPB)
APRIL 2017	333 PPB
NOV 2017	< 3.0 PPB
JUN 2018	70 PPB
OCT 2018	150 PPB

MW-9	
JUN 2012	5370 PPB
DEC 2012	NS (DRY)
JUN 2013	< 3.0 PPB
NOV 2013	7.0 PPB
JUN 2014	4,700 PPB
OCT 2014	145 PPB
MAY 2015	< 1.0 PPB
NOV 2015	739 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	3,380 PPB
NOV 2017	< 3.0 PPB
JUN 2018	870 PPB
OCT 2018	410 PPB

RW-5	
JUN 2012	< 3.0 PPB
DEC 2012	13 PPB
JUN 2013	< 3.0 PPB
NOV 2013	< 3.0 PPB
JUN 2014	< 3.0 PPB
OCT 2014	< 3.0 PPB
MAY 2015	< 1.0 PPB
NOV 2015	< 1.0 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	< 1.0 PPB
NOV 2017	< 3.0 PPB
JUN 2018	< 3.0 PPB
OCT 2018	< 1.0 PPB

MW-2A	
JUN 2012	230 PPB
DEC 2012	2903 PPB
JUN 2013	< 3.0 PPB
NOV 2013	2722 PPB
JUN 2014	2,800 PPB
OCT 2014	825 PPB
MAY 2015	407 PPB
NOV 2015	769 PPB
APRIL 2016	261 PPB
OCT 2016	68.3 PPB
APRIL 2017	3,350 PPB
NOV 2017	< 3.0 PPB
JUN 2018	1020 PPB
OCT 2018	170 PPB (DUP. 160 PPB)

RW-8	
JUN 2012	< 3.0 PPB
DEC 2012	7.2 PPB
JUN 2013	< 3.0 PPB
NOV 2013	< 3.0 PPB
JUN 2014	< 3.0 PPB
OCT 2014	< 3.0 PPB
MAY 2015	2.0 PPB
NOV 2015	3.4 PPB
APRIL 2016	< 1.0 PPB
OCT 2016	< 1.0 PPB
APRIL 2017	< 1.0 PPB
NOV 2017	< 3.0 PPB (DUP. < 3.0 PPB)
JUN 2018	< 3.0 PPB (DUP. < 3.0 PPB)
OCT 2018	< 1.0 PPB

NOTE:

APPROXIMATE LOCATION OF RWs 1, 4 & 9 (REMOVED DURING EXCAVATION)

APPROXIMATE LOCATION OF MW 14, 16, 18 (NYSDEC APPROVED REMOVAL 2004)

LEGEND

- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- MAESTRI SITE PROPERTY BOUNDARY
- 8' HIGH SECURITY FENCE
- ELECTRIC POLE
- 400 CONTOUR ELEVATION

SCALE

0 30 60 90 FEET

CLIENT

STAUFFER
MANAGEMENT COMPANY
BASE MAP PROVIDED BY IT CORPORATION
SURVEY BY CT MALE

D-3

HISTORICAL GROUNDWATER
XYLENE CONCENTRATION SUMMARY
MAESTRI SITE – OCTOBER 2018
904 STATE FAIR BLVD.
GEDDES, NEW YORK

APPENDICES

Appendix A	Tables
Appendix B	Monitoring Well Sampling Field Reports
Appendix C	Laboratory Analytical Reports
Appendix D	Site Inspection Report
Appendix E	PFAS and 1,4-Dioxane Sampling

APPENDIX A

Tables

Table 3
Summary of Total Xylene Concentrations (ppb)
Stauffer Management Company
Maestri Site

Sample Date	RW-1	RW-2[2]	RW-3	RW-4	RW-5	RW-6	RW-7	RW-8	MW-2A[2]	MW-9	PZ-4	PZ-20	PZ-21
2-May-06	**	****	<3.0	**	<3.0	58	<30	<3.0	2400	--	--	*****	******
6-Jun-06	**	****	<3.0	**	<3.0	9	102	<3.0	--	--	--	*****	******
4-Jul-06	**	****	<3.0	**	<3.0	34	130	--	665	--	--	*****	******
1-Aug-06	**	****	5	**	<3.0	63	90	<3.0	--	--	--	*****	******
3-Oct-06	**	****	3.3	**	<3.0	3	55	--	<3.0	--	--	*****	******
2-Jan-07	**	****	<3.0	**	<3.0	29	40	--	<3.0	--	--	*****	******
3-Apr-07	**	****	INC	**	<3.0	145	3.7	--	6.4	--	--	*****	******
3-Jul-07	**	****	<3.0	**	<3.0	<3.0	<3.0	--	410	--	--	*****	******
2-Oct-07	**	****	<3.0	**	<3.0	30	6	--	1025	--	--	*****	******
7-Jan-08	**	****	<3.0	**	14	52	<3.0	--	3.0	11	--	*****	******
1-Apr-08	**	****	22	**	<3.0	27	15	--	987	--	--	*****	******
Treatment System Shutdown on May 27th, 2008													
Jun-08	**	****	6.1	**	<3.0	84	119	<3.0	68 (54)	964	< 3.0	*****	******
Jul-08	**	****	4.4	**	<3.0 (< 3.0)	71	124	<3.0	1,700	1,800	< 3.0	*****	******
Aug-08	**	****	4.3	**	<3.0	148	104	<3.0	1,770 (1,200)	1,795	< 3.0	*****	******
Nov-08	**	****	<3.0	**	<3.0	158	73	<3.0	16	73	< 3.0	*****	******
Feb-09	**	****	<3.0	**	<3.0	590	<3.0 (< 3.0)	< 3.0	9.1	< 3.0	< 3.0	*****	******
Jun-09	**	****	<3.0	**	<3.0	641	23	< 3.0	4,635	7,830	< 3.0	<3.0	******
Dec-09	**	****	<3.0	**	<3.0	417	169	<3.0	5780	5,145	<3.0	<3.0	******
May-10	**	****	<3.0	**	<3.0	862	15	<3.0	100 (122)	190	<3.0	<3.0	******
Oct-10	**	****	<3.0	**	<3.0	168 (157)	71	<3.0	32	<3.0	<3.0	<3.0	******
Apr-11	**	****	<3.0	**	<3.0	208	66	<3.0	685	3,598 (3,220)	10	<3.0	******
Jun-11	**	****	NS	**	NS	906	7.7 (7.8)	NS	5352	9,337	<3.0	<3.0	******
Nov-11	**	****	<3.0	**	<3.0	749	<3.0	<3.0	1,560 (1980)	3.8	<3.0	<3.0	******
Jun-12	**	****	< 3.0	**	< 3.0	622	41	< 3.0	230 (179)	5,370	< 3.0	< 3.0	< 3.0
Dec-12	**	****	< 3.0	**	13	511	145	7.2	2,903	NS (DRY)	< 3.0	< 3.0 (<3.0)	< 3.0
Jun-13	**	****	< 3.0	**	< 3.0	14	< 3.0	< 3.0	< 3.0	< 3.0 (<3.0)	4.1	< 3.0	< 3.0
Nov-13	**	****	< 3.0	**	< 3.0	418	91	< 3.0	2,722	7.0	4.9	< 3.0	< 3.0 (<3.0)
Jun-14	**	****	< 3.0	**	< 3.0 (<3.0)	770	8.0	< 3.0	2,800	4700	< 3.0	< 3.0	3.5
Oct-14	**	**	<1.0	**	<1.0	466 (470)	184.0	<1.0	825	145	7.1	<1.0	<1.0
May-15	**	**	< 1.0	**	<1.0	604	16.6	2.0	407	<1.0	5.3	<1.0	< 1.0 (< 1.0)
Nov-15	**	**	15.4	**	<1.1	183 (208)	5.2	3.4	769	739	5.3	<1.0	<1.0
Apr-16	**	**	< 1.0	**	<1.0	707	22.6 (23.2)	< 1.0	261	< 1.0	5.7	<1.0	<1.0
Oct-16	**	**	< 1.0	**	<1.0	88.9 (94.5)	< 1.0	< 1.0	68.3	< 1.0	4.3	<1.0	<1.0
Apr-17	**	**	< 1.0	**	<1.0	333	0.4	< 1.0	3,350	3,380	6.4	<1.0	< 1.0 (< 1.0)
Nov-17	**	**	< 3.0	**	< 3.0	< 3.0	3.0	< 3.0 (< 3.0)	< 3.0	< 3.0	4.6	< 3.0	< 3.0
Jun-18	**	**	<3.0	**	<3.0	70	21	<3.0 (<3.0)	1020	870	10	<3.0	<3.0
Oct-18	**	****	<1.0	**	<1.0	150	13	<1.0	170 (160)	410	4.5	<1.0	<1.0

Shaded boxes indciate result when treatment system was in operation
** - Wells No. 1 and 4 were removed as part of the excavation.
*** - Pump in Well 5 was moved to Well 8.
**** - RW2 changed to monitoring well MW-2A
*****- PZ-20 was installed on June 24, 2009
******- PZ-21 was installed on June 7, 2012
NS = Not Sampled.

[2] RW-2 was changed to a monitoring well (MW-2A) in April 2006
INC - Inconclusive laboratory result
Value in parenthesis is duplicate sample result

Table 4
Summary of October 2018 Groundwater Gauging and Field Water Quality Data

Stauffer Management Company
Maestri Site

Monitoring Well	Date Sampled	Diameter (in)	Total Well Depth (ft bgs)	Top of Casing to Grade (ft)	Depth to Water (ft)	Water Column Height (ft)	Purged Volume (gal)	Final pH	Final Temp (deg C)	Final Conductivity (mS/cm)	Final TDS (ppm)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
MW-9	10/25/2018	2	19.60	1.0	17.2	3.40	1.50	6.63	9.56	1.03	-	-59	0	7
MW-2A (formerly RW-2)	10/25/2018	8	20.64	2.7	17.50	5.84	46.00	7.74	12.35	1.99	-	-86	2.4	10.86
RW-3	10/25/2018	6	25.33	1.0	19.10	7.23	20.00	8.08	11.25	1.99	-	-57	20.6	11.37
RW-5	10/30/2018	6	24.53	1.0	16.50	9.03	21.00	7.06	13	0.694	-	-32.3	296.2	4.08
RW-6	10/25/2018	6	21.86	0.0	7.30	14.56	65.00	7.97	11.03	0	-	-72	260	7.29
RW-7	10/30/2018	6	27.50	1.0	16.10	12.40	55.00	7.7	11.85	1.244	-	8.1	4.9	7.1
RW-8	10/25/2018	6	24.50	1.0	16.35	9.15	32.00	7.64	9.83	0.851	-	-44	551	3.76
PZ-4	10/25/2018	2	19.50	0.0	8.20	11.30	5.50	8.39	8.59	0	-	-32	138	8.05
PZ-20	10/25/2018	2	20.00	0.0	5.10	14.90	7.50	7.21	14.25	1.08	-	-55	6.9	6.13
PZ-21	10/25/2018	2	19.50	0.0	2.00	17.50	9.00	7.47	11.95	0.903	-	-92	663	6.38

APPENDIX B

Monitoring Well Sampling Field Reports

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	MW-9	
		Date(s):	10/30/2018	
		Weather	Temperature	
		Cloudy w/ some rain	High:	50
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	MW-9	Well Location:	Near Back Gate		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	19.6	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	408.87		
C. Depth to Water TOC (ft):	15.6	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	5.3	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	0.86	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	2.59	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/30/2018	Pump/Method:	Bailer
Purge Start Time:	9:25	Approx Flow Rate:	
Purge Stop Time:	9:45	Approx Volume Removed:	2.6 gallons
Did well dry out?	No		

Sampling

Date:	10/30/2018		I	II	III
Time:	9:45	pH:	7.44	7.05	6.94
Sample ID:	MW-9	Temp (ºC):	11.66	12.28	12.32
Sample Method:	Bailer	Conductivity (mS/cm):	1.071	1.058	1.028
		TDS (g/L):			
		ORP (mV):	1.7	-23.5	-23.6
		Tubidity (NTU):	19.8	36.7	20.7
		DO (mg/L):	3.31	2.51	2.84

Appearance

Consistently clear

Comments

Foul odor (seemingly effluent)

envirospec ENGINEERING, PLLC
349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well No:	MW-2A	
Date(s):	10/25/2018	
Weather	Temperature	
Slight rain	High:	40
	Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	MW-2A	Well Location:	Near Back Gate		
Well Diameter (in):	8	Well Condition:			
A. Total Well Depth (ft bgs):	20.64	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	2.7	TOC Elevation (ft):	406.4		
C. Depth to Water TOC (ft):	17.5	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	5.84	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	15.24	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	45.71	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Grundfos Pump
Purge Start Time:	9:00	Approx Flow Rate:	350 mL/Min
Purge Stop Time:	11:00	Approx Volume Removed:	46 gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	11:30	Temp (ºC):			
Sample ID:	MW-2A	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Water is clear initifall. At ~15 gallons purged water has floating white specs. Specs cease and water returns to clear at ~20 gallons.

Comments

Duplicate collected at this well.

envirospec ENGINEERING, PLLC
349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well Sampling Field Record

Well No:	RW-3			
Date(s):	10/25/2018			
Weather		Temperature		
Overcast and light rain		High:	40	
		Low:	32	

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	RW-3	Well Location:	Inside fence, northeast corner side		
Well Diameter (in):	6	Well Condition:	No well cap		
A. Total Well Depth (ft bgs):	25.33	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	407.01		
C. Depth to Water TOC (ft):	19.1	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	7.23	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	10.60	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	31.80	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Grundfos Pump
Purge Start Time:	12:30	Approx Flow Rate:	350 mL/Min
Purge Stop Time:	1:45	Approx Volume Removed:	20 gallons
Did well dry out?	Yes		

Sampling

			I	II	III
Date:	10/25/2018	pH:			
Time:	5:40	Temp (ºC):			
Sample ID:	RW-3	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Clear with a white sheen initially, but solely clear after ~10 gallons

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	RW-5	
		Date(s):	10/30/2018	
		Weather	Temperature	
		Cloudy w/ some rain	High:	50
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	RW-5	Well Location:	Inside fence, South side		
Well Diameter (in):	6	Well Condition:			
A. Total Well Depth (ft bgs):	24.53	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	409.18		
C. Depth to Water TOC (ft):	16.5	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	9.03	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	13.30	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	39.70	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/30/2018	Pump/Method:	Grundfos Pump
Purge Start Time:	10:50	Approx Flow Rate:	
Purge Stop Time:	11:35	Approx Volume Removed:	21 gallons
Did well dry out?	Yes		

Sampling

Date:	10/30/2018	pH:	I: 7.66	II: 7.12	III: 7.06
Time:	12:00	Temp (ºC):	12.15	13.73	13
Sample ID:	RW-5	Conductivity (mS/cm):	0.734	0.677	0.694
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):	-51.1	3.8	-32.3
		Tubidity (NTU):	130.5	45.3	296.2
		DO (mg/L):	2.94	4.78	4.08

Appearance

Water is dark (blackish/gray) at beginning of pumping

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	RW-6	
		Date(s):	10/25/2018	
		Weather	Temperature	
		Slight rain	High:	40
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	RW-6	Well Location:	Backyard of residence		
Well Diameter (in):	6	Well Condition:	Good		
A. Total Well Depth (ft bgs):	21.86	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	zero	TOC Elevation (ft):	393.64		
C. Depth to Water TOC (ft):	7.3	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	14.56	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	21.37	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	64.00	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Pumphouse Pump
Purge Start Time:	5:00	Approx Flow Rate:	
Purge Stop Time:	6:00	Approx Volume Removed:	65 gallons
Did well dry out?	No		

Sampling

Date:	25-Oct	pH:	I	II	III
Time:	6:45	Temp (ºC):			
Sample ID:	RW-6	Conductivity (mS/cm):			
Sample Method:	Pumphouse Pump	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Clear, but strong rotten egg odor

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	RW-7	
		Date(s):	10/30/2018	
		Weather	Temperature	
		Cloudy w/ some rain	High:	50
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	RW-7	Well Location:	Outside fence east side		
Well Diameter (in):	6	Well Condition:			
A. Total Well Depth (ft bgs):	27.5	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	405.76		
C. Depth to Water TOC (ft):	16.1	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	12.4	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	18.20	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	54.60	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/30/2018	Pump/Method:	Grundfos
Purge Start Time:	9:30	Approx Flow Rate:	
Purge Stop Time:	10:20	Approx Volume Removed:	55 Gallons
Did well dry out?	No		

Sampling

			I	II	III
Date:	10/30/2018	pH:			
Time:	10:30	Temp (ºC):			
Sample ID:	RW-7	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Dark grey

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	RW-8	
		Date(s):	10/25/2018	
		Weather	Temperature	
		Slight rain	High:	40
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	RW-8	Well Location:	Outside fence, north side, in path		
Well Diameter (in):	6	Well Condition:			
A. Total Well Depth (ft bgs):	24.5	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	406.81		
C. Depth to Water TOC (ft):	16.35	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	9.15	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	13.40	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	40.30	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Grundfos
Purge Start Time:	4:00	Approx Flow Rate:	250 mL/Min
Purge Stop Time:	5:30	Approx Volume Removed:	32 gallons
Did well dry out?	Yes		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	6:00	Temp (ºC):			
Sample ID:	MW-9	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	PZ-4	
		Date(s):	10/25/2018	
		Weather	Temperature	
		Slight rain	High:	40
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	PZ-4	Well Location:	Backyard of residence		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	19.5	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	zero	TOC Elevation (ft):	394.37		
C. Depth to Water TOC (ft):	8.2	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	11.3	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	1.84	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	5.53	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Bailer
Purge Start Time:	3:45	Approx Flow Rate:	
Purge Stop Time:	16:00	Approx Volume Removed:	5.5 gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	4:00	Temp (ºC):			
Sample ID:	PZ-4	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Comments

envirospec ENGINEERING, PLLC
349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well No:	PZ-20	
Date(s):	10/25/2018	
Weather	Temperature	
Slight rain	High:	40
	Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	PZ-20	Well Location:	Off-site		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	20	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	zero	TOC Elevation (ft):	386		
C. Depth to Water TOC (ft):	5.1	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	14.9	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	2.43	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	7.29	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Bailer
Purge Start Time:	2:30	Approx Flow Rate:	
Purge Stop Time:	3:00	Approx Volume Removed:	7.5 gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	3:00	Temp (ºC):			
Sample ID:	PZ-20	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Comments

Foul odor present

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	PZ-21	
		Date(s):	10/20/2018 , 10/25/2018	
		Weather	Temperature	
			High:	40
			Low:	32

Well Sampling Field Record

Project:	Maestri Site	Project No.	E18-1803 task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	PZ-21	Well Location:	Off-site		
Well Diameter (in):	2	Well Condition:	Good		
A. Total Well Depth (ft bgs):	19.5	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	zero	TOC Elevation (ft):	386.7		
C. Depth to Water TOC (ft):	2	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	17.5	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	2.85	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	8.60	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/20/2018	Pump/Method:	Bailer
Purge Start Time:	3:00	Approx Flow Rate:	
Purge Stop Time:	3:25	Approx Volume Removed:	9 Gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	3:30	Temp (ºC):			
Sample ID:	PZ-21	Conductivity (mS/cm):			
Sample Method:	Bailer	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Water appears clear at first, then yellow/tan after ~3 gallons

Comments

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	MW-12	
		Date(s):	10/25/2018	
		Weather	Temperature	
		Overcast	High:	40ºF
			Low:	32ºF

Well Sampling Field Record

Project:	Maestri Site	Project No.	E18-1803 task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	MW-12	Well Location:	Near Front Gate		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	19.9	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	2	TOC Elevation (ft):	418.28		
C. Depth to Water TOC (ft):	10.9	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	11	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	1.79	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	5.38	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Peristaltic
Purge Start Time:	11:00	Approx Flow Rate:	200 mL/min
Purge Stop Time:	12:10	Approx Volume Removed:	5.3 gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	12:25	Temp (ºC):			
Sample ID:	MW-12	Conductivity (mS/cm):			
Sample Method:	Peristaltic	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Initial color orange with a seemingly think texture and yellow splotches. At 11:10 the water color subsided significantly (~1 gallon).

Comments

Well location MW-12

Date 10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
11:00	6.98	1.08	9.02	1000	10	88	
11:05	6.93	1.07	11.26	750	7.29	93	
11:10	6.98	1.07	11.15	183	6.97	95	
11:15	6.72	0.585	9.11	120	7.71	94	
11:20	7.05	1.08	11.39	86.3	6.8	77	
11:30	7.02	1.09	11.16	34.8	7.1	58	
11:35	7.01	0.902	9.92	19.5	7.6	58	10.8
11:40	7.04	1.11	11.67	9	6.87	45	
11:45	7.04	1.12	11.65	0.6	6.88	42	10.8
11:50	7.06	1.12	11.79	0	6.78	38	
12:00	7.06	1.12	11.55	0	6.88	47	

Well location	MW-2A
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
9:00	7.5	2.11	10.4	32.4	13.08	-85	17.5
9:10	6.94	1.1	11.02	8.5	12.79	-83	
9:20	7.53	2.04	11.3	6.5	12.04	-98	
9:30	7.64	2.06	9.91	7.8	11.88	-85	
9:40	7.63	2.11	9.11	9.5	12.79	-85	
10:00	7.42	1.96	10.85	2.9	11.91	-89	
10:15	7.48	1.99	11.33	14.6	11.52	-84	
10:20	7.47	1.98	11.85	5.2	11.26	-86	
10:25	7.64	1.61	9.42	2.9	12.47	-77	
10:30	7.65	2.01	12.04	6.2	10.79	-79	
10:35	7.67	1.99	11.51	2.9	10.96	-80	
10:40	7.45	1.99	12.19	2.6	10.78	-88	18.5
10:45	7.52	1.99	12.21	7	10.86	-90	
10:50	7.58	1.97	11.88	4.4	11.02	-91	
11:00	7.76	2	11.55	4.2	11.29	-74	
11:05	7.69	1.99	12.05	3.7	10.77	-80	
11:10	7.74	2.01	11.8	2.7	11.11	-83	18.9
11:15	7.74	1.99	12.35	2.4	10.86	-86	

Well location	RW-3
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
12:30	8.31	1.84	9.84	17.2	12.81	-22	19.1
12:40	7.94	1.73	9.85	9.7	12.33	-20	
12:55	7.77	1.44	11.36	9.1	11.52	4	
1:00	7.23	1.31	12.1	6.3	11.39	4	
1:15	7.7	2.02	9.35	56.4	12.6	-26	22.5
1:20	7.47	2.08	9.72	46	12.36	-53	
1:30	7.37	2.02	11.45	29.2	11.31	-65	
1:40	8.08	1.99	11.25	20.6	11.37	-57	
1:45	Well Dry						25.4

Well location RW-5

Date 10/30/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
10:55	7.66	0.734	12.15	130.5	2.94	-51.1	
11:10	7.12	0.677	13.73	45.3	4.78	3.8	23.5
11:25	7.06	0.694	13	296.2	4.08	-32.3	
						Well Dry	24.9
					Water flow stopped, had to pull pump out and fix (high turbidity)		

Well location	RW-6
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
5:18	7.23	1.53	8.64	350	8.84	-154	
5:35	7.81	0.385	9.05	1000	7.5	-126	
5:40	7.92	1.2	10.2	26.5	4.95	-109	
5:50	7.83	0.401	10.31	6.7	9.7	-82	
5:55	7.71	0	10.5	131	8.14	-75	
6:00	7.82	0	10.7	135	7.57	-78	
6:10	7.8	0	10.62	138	7.26	-66	
6:15	7.83	0	10.65	30.1	7.19	-60	
6:20	7.89	0	10.62	152	7.93	-69	
6:25	7.92	0	10.84	133	7.43	-73	
6:30	7.97	0	11.03	260	7.29	-72	

Well location	RW-7
Date	10/30/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
9:35	7.06	1.062	11.72	11.1	3.97	-42.9	16.1
9:45	7.36	0.965	11.59	7.8	7.05	8.4	23.1
10:00	7.5	1.557	11.67	6.5	6.9	3.5	24.2
10:15	7.7	1.244	11.85	4.9	7.1	8.1	25.5

Well location	RW-8
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)	
4:05	9.2	0	9.6	94.1	12.87	-98	16.35	
4:15	7.79	0	10.02	270	12.33	-85		
4:20							18.4	<-- Tubing fell off
4:30	7.91	0	9.6	162	12.35	-86		
4:35	7.74	0	8.96	141	12.59	-80		
4:40	7.72	0	9.27	139	12.37	-83		
Well dry								
5:10	7.64	0.851	9.83	551	3.76	-44		

Well location PZ-4

Date 10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
3:45	6.52	0	7.84	135	10.01	34	
3:50	7.21	1.46	7.84	175	1.9	-29	
3:55	8.06	0	9.01	156	7.94	-52	
4:00	8.39	0	8.59	138	8.05	-32	

Well location PZ-20
Date 10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
2:35	7.46	0.512	13.9	20.9	8.29	-61	
2:40	7.2	1.04	14.76	13.7	6.45	-65	
2:45	7.2	1.08	14.31	7.7	6.26	-61	
2:50	7.21	1.08	14.25	6.9	6.13	-55	

Well location	PZ-21
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
3:00	7.44	0.842	12.15	37.2	7.21	-85	17.5
3:10	7.46	0.88	12.76	279	6.57	-90	
3:15	7.53	0.913	10.99	601	7.04	-93	
3:19	7.47	0.903	11.95	663	6.38	-92	

APPENDIX C

Laboratory Analytical Results

www.alphalab.com

Alpha Analytical

Laboratory Code: 11148

SDG Number: L1843843

Table of Contents

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843843
Report Date: 11/06/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1843843-01	RW-3	WATER	GEDDES, NY	10/25/18 17:40	10/26/18
L1843843-02	RW-6	WATER	GEDDES, NY	10/25/18 18:45	10/26/18
L1843843-03	RW-8	WATER	GEDDES, NY	10/25/18 16:00	10/26/18
L1843843-04	MW-2A	WATER	GEDDES, NY	10/25/18 11:30	10/26/18
L1843843-05	DUP	WATER	GEDDES, NY	10/25/18 11:30	10/26/18
L1843843-06	PZ-4	WATER	GEDDES, NY	10/25/18 16:00	10/26/18
L1843843-07	PZ-20	WATER	GEDDES, NY	10/25/18 15:00	10/26/18
L1843843-08	PZ-21	WATER	GEDDES, NY	10/25/18 15:30	10/26/18
L1843843-09	MW-12	WATER	GEDDES, NY	10/25/18 12:25	10/26/18
L1843843-10	TRIP BLANK	WATER	GEDDES, NY	10/25/18 00:00	10/26/18

Case Narrative

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

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

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

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

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

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

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.

Sample Receipt

L1843843-09: A sample identified as "MW-12" was listed on the Chain of Custody, but not received. This was verified by the client.

L1843843-10: A sample identified as "TRIP BLANK" was received but not listed on the Chain of Custody. This sample was not analyzed.

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

Authorized Signature: Michelle M. Morris Report Date: 11/06/18

Title: Technical Director/Representative

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

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

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. 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).

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

Volatile Organics Instruments

Volatile Organics:

Instrument: Agilent 5975MSD (or equivalent)	Columns (length x ID x df):
Trap: Supelco K Trap (VOACARB 3000)	RTX-VMS 20m x 0.18mm x 1um
Concentrator: EST Encon (or equivalent)	RTX-VMS 30m x 0.25mm x 1.4um
Autosampler: EST Centurion (or equivalent)	RTX-502.2 40m x 0.18mm x 1um
Purge time: 11 min	

Volatile Organics: VPH

Instrument: Agilent 6890 (or equivalent)	Column Type: Restek RTX 502.2
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 105 Meters
Concentrator: EST Encon (or equivalent)	df: 3.00 um
Autosampler: EST Centurion (or equivalent)	ID: 0.53mm

Volatile Organics: PIANO

Instrument: Agilent 7890 GC/5975C MSD	Column Type: DB-VRX
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 60 Meters
Concentrator: Tekmar Velocity / EST Encon	df: 1.40 um
Autosampler: Varian Archon / EST Centurion	ID: 0.25 mm
Purge time: 11 min	Desorb: 1 min

Volatile Organics in Air Instruments

Volatile Organics in Air:
Instruments: Agilent 6890 GC / 5975 MSD Shimadzu QP2010-SE

Concentrator: Entech 7100A or 7200	Column Type: Restek RTX-1
Autosampler: Entech 7016CA or 7016D	Column Length: 60 Meters
	df: 1.00 um
	ID: 0.52 mm or 0.32 mm

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

Semivolatile Organics Instruments - Westborough

Semivolatile Organics (Acid/Base/Neutral Extractables):

Instrument: Agilent 5973N MSD	Injection volume: 1 ul
Column Type: Restek RXI-5SILMS	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Polynuclear Aromatic Hydrocarbons by 8270 SIM:

Instrument: Agilent 5973 MSD	Injection volume: 1 ul
Column Type: Restek RTX-5MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Pesticides/PCB

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-CL/STX-CL	df: 0.32
Column B: Restek RTX/STX-CLPPesticide II	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Herbicides

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-1701	df: 0.25
Column B: Restek RTX-5	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Petroleum

Instrument: Agilent 6890 w/FID / HP 5890 w/ FID	Injection Volume: 1uL
Column: Restek RTX 5	df: 0.25
Column Length: 30 Meters	
ID: 0.32 mm	

EPH

Instrument: Agilent 6890N w/FID	Injection Volume: 1uL
Column: Restek RTX 5	df: 0.25
Column Length: 30 Meters	
ID: 0.32 mm	

Semivolatile Organic Instruments - Mansfield

Semivolatile Organics (ALK-PAH Extractables):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 1 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (8270):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 2 ul
Column Type: ZB-Semivolatiles	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (8270 SIM):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (1,4-Dioxane):

Instrument: Agilent 5973N / 5975 / 5977 MSD	Injection volume: 3 ul
Column Type: RTX-5, RTX-PCB	df: 0.25um, 0.18 um
Column Length: 60 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (209 Congener):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: RTX-5, RTX-PCB	df: 0.25um, 0.18 um
Column Length: 60 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (ECD):

Instrument: Agilent 6890 / 7890	Injection volume: 1 ul
Column Type: RTX-5 / RTX-CLP II	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (SHC Extractables):

Instrument: Agilent 6890	Injection volume: 1 ul
Column Type: RTX-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Sample Delivery Group Summary

Alpha Job Number : L1843843

Received : 26-OCT-2018
Reviewer : John Knoud

Account Name : Envirospec Engineering, PLLC
Project Number :
Project Name : MAESTRI SITE

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	2.9	

Condition Information

1) All samples on COC received? **NO**
Following samples were not received: -09

2) Extra samples received? **YES**
Following additional samples were received: -10

3) Are there any sample container discrepancies? **NO**

4) Are there any discrepancies between sample labels & COC? **NO**

5) Are samples in appropriate containers for requested analysis? **YES**

6) Are samples properly preserved for requested analysis? **YES**

7) Are samples within holding time for requested analysis? **YES**

8) All sampling equipment returned? **NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client? **NO**

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Nov 06 2018, 02:12 pm

Login Number: L1843843
Account: ENVIROSPECEN Envirospec Engineering, PLLC
Received: 26OCT18 Due Date: 06NOV18

Sample #	Client ID	Mat	PR	Collected
L1843843-01	RW-3	S0	1	25OCT18 17:40
624: Report Xylenes only - list built ASP-A Package Due Date: 11/06/18				
624.1,ASP-A				
L1843843-02	RW-6	S0	1	25OCT18 18:45
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-03	RW-8	S0	1	25OCT18 16:00
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-04	MW-2A	S0	1	25OCT18 11:30
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-05	DUP	S0	1	25OCT18 11:30
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-06	PZ-4	S0	1	25OCT18 16:00
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-07	PZ-20	S0	1	25OCT18 15:00
624: Report Xylenes only - list built Package Due Date: 11/06/18				

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Nov 06 2018, 02:12 pm

Login Number: L1843843
Account: ENVIROSPECEN Envirospec Engineering, PLLC
Received: 26OCT18 Due Date: 06NOV18

Sample #	Client ID	Mat	PR	Collected
624.1				
L1843843-08	PZ-21	1	S0	25OCT18 15:30
624: Report Xylenes only - list built Package Due Date: 11/06/18				
624.1				
L1843843-09	MW-12	1	S0	25OCT18 12:25
624: Report Xylenes only - list built Package Due Date: 11/06/18				
HOLD-624				
L1843843-10	TRIP BLANK	1	S0	25OCT18 00:00
624: Report Xylenes only - list built Package Due Date: 11/06/18				
HOLD-624				

Logged By: Brenda Pirinelli

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab: 10/26/18

ALPHA Job #: L1843843

Client Information
Client: Envirospec Engineering
Address: 349 Northern Blvd
Albany, NY 12204
Phone: 518-453-2203
Fax:
Email: rturnure@envirospecny.com

Project Information
Project Name: Maestri Site
Project Location: Geddes, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brenda Pinelli
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☒ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Only Category A needed. No EQUIS needed.
Only report Total xylenes

Please specify Metals or TAL:

ANALYSIS
Total xylenes Method 624

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total xylenes	Sample Specific Comments
43843 - 01	RW-3	10/25/18	5:40			X	
02	RW-6	10/25/18	6:45			X	
03	RW-8	10/25/18	4:00			X	
04	MW-2A	10/25/18	11:35			X	
05	DUP	10/25/18	11:30			X	
06	PZ-4	10/25/18	4:00			X	
07	PZ-20	10/25/18	3:00			X	
08	PZ-21	10/25/18	3:30			X	
09	MW-12	10/25/18	12:25			X	

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	10/26/18 12:03		10-26-18 12:03
	10-26-18 12:03		10/26/18 22x
	10/27/18 0530		10/27/18 05:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Organics

GC/MS 624
Analysis

Volatiles Sample Data

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-01	**Date Collected**	: 10/25/18 17:40
Client ID	: RW-3	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 03:13
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: AD/GT
Lab File ID	: VF181030C18	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-02	**Date Collected**	: 10/25/18 18:45
Client ID	: RW-6	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 04:27
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: AD/GT
Lab File ID	: VF181030C20	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	150	2.0	0.30	
95-47-6	o-xylene	4.6	1.0	0.34	
1330-20-7	Xylenes, Total	150	1.0	0.30	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-03	**Date Collected**	: 10/25/18 16:00
Client ID	: RW-8	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 03:50
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: AD/GT
Lab File ID	: VF181030C19	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-04	**Date Collected**	: 10/25/18 11:30
Client ID	: MW-2A	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 14:50
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A10	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	170	2.0	0.30	
95-47-6	o-xylene	1.0	1.0	0.34	
1330-20-7	Xylenes, Total	170	1.0	0.30	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-05	**Date Collected**	: 10/25/18 11:30
Client ID	: DUP	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 15:26
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A11	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	160	2.0	0.30	
95-47-6	o-xylene	1.1	1.0	0.34	
1330-20-7	Xylenes, Total	160	1.0	0.30	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-06	**Date Collected**	: 10/25/18 16:00
Client ID	: PZ-4	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 16:03
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A12	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	3.3	2.0	0.30	
95-47-6	o-xylene	1.2	1.0	0.34	
1330-20-7	Xylenes, Total	4.5	1.0	0.30	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-07	**Date Collected**	: 10/25/18 15:00
Client ID	: PZ-20	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 16:39
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A13	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1843843-08	**Date Collected**	: 10/25/18 15:30
Client ID	: PZ-21	**Date Received**	: 10/26/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 10/31/18 17:15
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A14	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: WG1174505-8	**Date Collected**	: NA
Client ID	: WG1174505-8BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 10/30/18 19:18
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: AD/GT
Lab File ID	: VF181030C05	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1843843
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: WG1174870-4	**Date Collected**	: NA
Client ID	: WG1174870-4BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 10/31/18 11:41
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: GT
Lab File ID	: VF181031A05	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

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Alpha Analytical

Laboratory Code: 11148

SDG Number: L1844255

Table of Contents

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1844255
Report Date: 11/12/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1844255-01	MW-9	WATER	GEDDES, NY	10/30/18 09:45	10/30/18
L1844255-02	RW-7	WATER	GEDDES, NY	10/30/18 10:30	10/30/18
L1844255-03	RW-5	WATER	GEDDES, NY	10/30/18 12:00	10/30/18
L1844255-04	TRIP BLANK	WATER	GEDDES, NY	10/30/18 00:00	10/30/18

Case Narrative

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

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

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

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

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

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

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.

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

Authorized Signature: Report Date: 11/12/18

Title: Technical Director/Representative

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

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

Report Format: DU Report with 'J' Qualifiers

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. 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).

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

Volatile Organics Instruments

Volatile Organics:

Instrument: Agilent 5975MSD (or equivalent)	Columns (length x ID x df):
Trap: Supelco K Trap (VOACARB 3000)	RTX-VMS 20m x 0.18mm x 1um
Concentrator: EST Encon (or equivalent)	RTX-VMS 30m x 0.25mm x 1.4um
Autosampler: EST Centurion (or equivalent)	RTX-502.2 40m x 0.18mm x 1um
Purge time: 11 min	

Volatile Organics: VPH

Instrument: Agilent 6890 (or equivalent)	Column Type: Restek RTX 502.2
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 105 Meters
Concentrator: EST Encon (or equivalent)	df: 3.00 um
Autosampler: EST Centurion (or equivalent)	ID: 0.53mm

Volatile Organics: PIANO

Instrument: Agilent 7890 GC/5975C MSD	Column Type: DB-VRX
Trap: Supelco K Trap (VOACARB 3000)	Column Length: 60 Meters
Concentrator: Tekmar Velocity / EST Encon	df: 1.40 um
Autosampler: Varian Archon / EST Centurion	ID: 0.25 mm
Purge time: 11 min	Desorb: 1 min

Volatile Organics in Air Instruments

Volatile Organics in Air:
Instruments: Agilent 6890 GC / 5975 MSD Shimadzu QP2010-SE

Concentrator: Entech 7100A or 7200	Column Type: Restek RTX-1
Autosampler: Entech 7016CA or 7016D	Column Length: 60 Meters
	df: 1.00 um
	ID: 0.52 mm or 0.32 mm

Trap 1: Glass Bead: manufacturer-Entech: 20 cm packing material
Trap 2: Tenax: manufacturer-Entech: 20 cm packing material

Semivolatile Organics Instruments - Westborough

Semivolatile Organics (Acid/Base/Neutral Extractables):

Instrument: Agilent 5973N MSD	Injection volume: 1 ul
Column Type: Restek RXI-5SILMS	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Polynuclear Aromatic Hydrocarbons by 8270 SIM:

Instrument: Agilent 5973 MSD	Injection volume: 1 ul
Column Type: Restek RTX-5MS	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Pesticides/PCB

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-CL/STX-CL	df: 0.32
Column B: Restek RTX/STX-CLPPesticide II	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Herbicides

Instrument: Agilent 6890 w/Dual Micro ECDs	Injection Volume: 1uL
Column A: Restek RTX-1701	df: 0.25
Column B: Restek RTX-5	df: 0.25
Column Length: 30 Meters	ID: 0.32 mm

Petroleum

Instrument: Agilent 6890 w/FID / HP 5890 w/ FID	Injection Volume: 1uL
Column: Restek RTX 5	df: 0.25
Column Length: 30 Meters	
ID: 0.32 mm	

EPH

Instrument: Agilent 6890N w/FID	Injection Volume: 1uL
Column: Restek RTX 5	df: 0.25
Column Length: 30 Meters	
ID: 0.32 mm	

Semivolatile Organic Instruments - Mansfield

Semivolatile Organics (ALK-PAH Extractables):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 1 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (8270):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 2 ul
Column Type: ZB-Semivolatiles	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (8270 SIM):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: ZB-5	df: 0.25 um
Column Length: 30 Meters	ID: 0.25 mm

Semivolatile Organics (1,4-Dioxane):

Instrument: Agilent 5973N / 5975 / 5977 MSD	Injection volume: 3 ul
Column Type: RTX-5, RTX-PCB	df: 0.25um, 0.18 um
Column Length: 60 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (209 Congener):

Instrument: Agilent 5973N / 5975 MSD	Injection volume: 3 ul
Column Type: RTX-5, RTX-PCB	df: 0.25um, 0.18 um
Column Length: 60 Meters	ID: 0.25um, 0.18 mm

Semivolatile Organics (ECD):

Instrument: Agilent 6890 / 7890	Injection volume: 1 ul
Column Type: RTX-5 / RTX-CLP II	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Semivolatile Organics (SHC Extractables):

Instrument: Agilent 6890	Injection volume: 1 ul
Column Type: RTX-5	df: 0.25 um
Column Length: 60 Meters	ID: 0.25 mm

Sample Delivery Group Summary

Alpha Job Number : L1844255

Account Name : Envirospec Engineering, PLLC
Project Number :
Project Name : MAESTRI SITE

Received : 30-OCT-2018
Reviewer : Ryan Morrissey

Delivery Information

Samples Delivered By : Alpha Courier

Chain of Custody : Present

Cooler Information

Cooler	Seal/Seal#	Preservation	Temperature(°C)	Additional Information
A	Absent/	Ice	4.7	

Condition Information

1) All samples on COC received?	**YES**
2) Extra samples received?	**NO**
3) Are there any sample container discrepancies?	**NO**
4) Are there any discrepancies between sample labels & COC?	**NO**
5) Are samples in appropriate containers for requested analysis?	**YES**
6) Are samples properly preserved for requested analysis?	**YES**
7) Are samples within holding time for requested analysis?	**YES**
8) All sampling equipment returned?	**NA**

Volatile Organics/VPH

1) Reagent Water Vials Frozen by Client?	**NO**

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Nov 12 2018, 01:35 pm

Login Number: L1844255
Account: ENVIROSPECEN Envirospec Engineering, PLLC
Received: 30OCT18 Due Date: 13NOV18

Sample #	Client ID	Mat	PR	Collected
L1844255-01	MW-9	S0	1	30OCT18 09:45
624: report xylenes only - list built ASP-A Package Due Date: 11/13/18				
624.1,ASP-A				
L1844255-02	RW-7	S0	1	30OCT18 10:30
624: report xylenes only - list built Package Due Date: 11/13/18				
624.1				
L1844255-03	RW-5	S0	1	30OCT18 12:00
624: report xylenes only - list built Package Due Date: 11/13/18				
624.1				
L1844255-04	TRIP BLANK	S0	1	30OCT18 00:00
624: report xylenes only - list built Package Due Date: 11/13/18				
624.1				

Logged By: Ryan Morrissey

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 10/31/18

ALPHA Job #: L1844255

Client Information
Client: Envirospec Engineering
Address: 349 Northern Blvd
Albany, NY 12204
Phone: 518-453-2203
Fax:
Email: rfarnum@envirospeceng.com

Project Information
Project Name: Maestri Site
Project Location: Geddes, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brenda Pirinelli
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☒ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Only Category A needed. No EQuIS needed. Only report Total Xylenes.

Please specify Metals or TAL.

ANALYSIS
Total Xylenes Method 624

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total Xylenes	Sample Specific Comments
L1844255 01	MW-9	10/30/18	9:45			X	
02	RW-7	10/30/18	10:30			X	
03	RW-5	10/30/18	12:00			X	
04	Trip Blank	10/30/18					

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type								
Preservative								

Relinquished By:	Date/Time	Received By: AAL	Date/Time
Kasey French	10/30/18 1:05		10/30/18 1400
	10/30/18 1400		10/31/18 0820

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Organics

GC/MS 624
Analysis

Volatiles Sample Data

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1844255
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1844255-01D	**Date Collected**	: 10/30/18 09:45
Client ID	: MW-9	**Date Received**	: 10/30/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 11/03/18 00:38
Sample Matrix	: WATER	**Dilution Factor**	: 2
Analytical Method	: 128,624.1	**Analyst**	: NLK
Lab File ID	: VF181102N11	**Instrument ID**	: FLANDERS
Sample Amount	: 2.5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	410	4.0	0.61	
95-47-6	o-xylene	3.5	2.0	0.68	
1330-20-7	Xylenes, Total	410	2.0	0.61	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1844255
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1844255-02	**Date Collected**	: 10/30/18 10:30
Client ID	: RW-7	**Date Received**	: 10/30/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 11/03/18 00:01
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: NLK
Lab File ID	: VF181102N10	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	7.7	2.0	0.30	
95-47-6	o-xylene	5.7	1.0	0.34	
1330-20-7	Xylenes, Total	13	1.0	0.30	

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1844255
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1844255-03	**Date Collected**	: 10/30/18 12:00
Client ID	: RW-5	**Date Received**	: 10/30/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 11/02/18 23:24
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: NLK
Lab File ID	: VF181102N09	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1844255
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: L1844255-04	**Date Collected**	: 10/30/18 00:00
Client ID	: TRIP BLANK	**Date Received**	: 10/30/18
Sample Location	: GEDDES, NY	**Date Analyzed**	: 11/02/18 22:47
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: NLK
Lab File ID	: VF181102N08	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

Form 1
VOA

Client	: Envirospec Engineering, PLLC	**Lab Number**	: L1844255
Project Name	: MAESTRI SITE	**Project Number**	:
Lab ID	: WG1176112-8	**Date Collected**	: NA
Client ID	: WG1176112-8BLANK	**Date Received**	: NA
Sample Location	:	**Date Analyzed**	: 11/02/18 21:32
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 128,624.1	**Analyst**	: NLK
Lab File ID	: VF181102N06	**Instrument ID**	: FLANDERS
Sample Amount	: 5 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
179601-23-1	p/m-Xylene	ND	2.0	0.30	U
95-47-6	o-xylene	ND	1.0	0.34	U
1330-20-7	Xylenes, Total	ND	1.0	0.30	U

APPENDIX D

Site Inspection Report

envirospec ENGINEERING, PLLC
349 Northern Blvd. Suite 3
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Date: 10/25/2018
Time: 4:30 PM

Site Inspection Report

Weather	Temperature
Cloudy	High 40ºF Low 30 ºF

Client	Stauffer Management Company LLC	Project No.	E18-1803
Location	Maestri Site, 904 State Fair Blvd, Geddes, NY	Inspected By:	Kasey French

Please note any deficiencies, issues, or actions taken at the bottom of the page or on continuation pages

Site Security	*Circle one*			Comments/Action Required
1. Was gate closed and locked when arriving at site?	(Y)	N	NA	
2. Are there any holes or breaks in the fencing?	Y	(N)	NA	
3. Was the door to the treatment shed locked?	(Y)	N	NA	
4. Is the back gate closed and locked?	(Y)	N	NA	
5. Are there any signs of vandalism or unauthorized entry (odd tire tracks, damage to fence, strange debris [bottles, cans, etc])?	Y	(N)	NA	
5a. If so, explain below and notify SMC and Envirospec immediately				
Wells				
6. Are wells intact? *(except PZ-10 which has been damaged)*	Y	(N)	NA	Removed broken pump from RW-5
7. Are all wells covered (with lid or cap)? *(except wells noted below)*	Y	(N)	NA	See next page
8. Are all wells locked? *(except wells noted below)*	Y	(N)	NA	See next page
Site Maintenance				
9. Is there any garbage or debris? If so, please remove/discard.	Y	(N)	NA	
10. Is there visible dust?	Y	(N)	NA	
11. Does the grass need to be mowed?	Y	(N)	NA	
12. Do any areas need to be weeded or shrub cleared?	Y	(N)	NA	
13. Are there any bald spots in grassy areas?	Y	(N)	NA	
14. Are the access roads clear?	(Y)	N	NA	
15. Do any areas (site roads or access to wells) need to be plowed?	Y	(N)	NA	
16. Are there any sink holes throughout the site?	Y	(N)	NA	
17. Any odors onsite?	Y	(N)	NA	
18. Are site signs still up and visible?	(Y)	N	NA	
Erosion Control				
19. Is silt fence still intact and upright?	Y	(N)	NA	
19a. If areas need repair or erosion control installed, indicate below and contact Abscope for repairs.				
20. Is there any evidence of runoff? (i.e. water flow paths on ground)	Y	(N)	NA	
21. Is there any standing, ponded, or pools of water?	Y	(N)	NA	
22. Are there any signs of runoff at the northeast corner? *(stone area)*	Y	(N)	NA	
23. Is there currently any surface water runoff?	Y	(N)	NA	
23a. If so, describe where, approximate flow, and appearance of water below.				
Treatment System				
24. Are the breakers for the pumps still in the off position?	(Y)	N	NA	
25. Does effluent totalizer on the wall for still read 2846902?	Y	N	(NA)	Changed due to sump emptying
25a. If not, contact Envirospec or SMC immediately and check that effluent valve is closed. *Still pumping from RW 5, 6 and 8.*				
26. Are all critical valves in the closed position?	(Y)	N	NA	
27. Are there any system status alarms on the computer?	Y	N	(NA)	Computer not working
27a. If so, describe below how they have been handled. *(this does not include well level alarms)*				
28. Are all flow values on computer "zero"?	Y	N	(NA)	
("Flow to sewer," "Tot flow to sewer," "tot daily flow," and "TGAL" for each well should each be "zero")				
28. Check level of sump. Does sump need to be pumped out?	Y	(N)	NA	
29. List water level for each recovery well as shown on computer: (total depth of well is shown in brackets)				

RW-7 [27.5']	N/A	RW-5 [24.5']	N/A
RW-2 (not online)	N/A	RW-8 [24.5']	N/A
RW-3 [25.3']	N/A	RW-6 [21.8']	N/A

30. Are any recovery wells at close to overtopping? (ref total depth above)	Y	(N)	NA	
Upon leaving the site, check the following;				
31. Is the treatment shed locked?	(Y)	N	NA	
32. Were the gates closed and locked after leaving site?	(Y)	N	NA	

Note: Some wells cannot be locked including PZ-10, RW-3, RW-4, and RW-5.

Signature of Inspector:

Include General Site Observations and Follow-Up Actions on the Reverse

envirospec ENGINEERING, PLLC
349 Northern Blvd. Suite 3
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Date: 10/25/2018

Time: 4:30PM

Site Inspection Report

Continuation Page(s)

Client	Stauffer Management Company LLC	Project No.	E18-1803
Location	Maestri Site, 904 State Fair Blvd, Geddes, NY	Inspected By:	Kasey French

General Site Observations:

PZ-9 does not have a lock.

RW-7 and RW-8's casing caps are damaged. Locks are ineffective.

Pumps for RW-5 were discovered to be broken at last sampling event. The pump was removed from the well before this sampling event. The broken pump was placed inside the pump house.

Follow-up: *Indicate actions required, person(s) contacted, and dates for completion*

Light fixture in pump house is broken and dangling from the ceiling (safety hazard).

Signature of Inspector:

APPENDIX E

PFAS and 1,4-Dioxane Sampling

STAUFFER MANAGEMENT COMPANY
MAESTRI SITE
GEDDES, NEW YORK

EMERGING CONTAMINANTS SAMPLING REPORT

October 2018

POST GROUNDWATER COLLECTION /
TREATMENT SYSTEM SHUTDOWN

Prepared for:

Stauffer Management Co.
1800 Concord Pike
Wilmington, DE 19850-5437

Prepared by:

349 Northern Blvd., Suite 3
Albany, NY 12204

Envirospec Engineering Project E18-1803

TABLE OF CONTENTS

DRAWINGS

APPENDIX

1.0 INTRODUCTION

This report addresses the emerging contaminants sampling event that was completed on October 25th, 2018 at the Stauffer Management Company (SMC) Maestri Site (the "Site").

2.0 EMERGING CONTAMINANTS

Sampling for PFAS and 1,4-dioxane was completed on October 25, 2018 in response to the request in NYSDEC's letter dated April 4, 2018. The scope of the emerging contaminant sampling was provided to Thomas Biel on June 5, 2018 via email. Two wells, MW-12 and MW-9, were sampled and analyzed for PFAS and 1,4-dioxane, including duplicate, MS, and MSD samples. The location of these wells can be found on the site map in Drawing D-1.

3.0 GROUNDWATER SAMPLING

Sampling was completed in accordance with NYSDEC's "Collection of Groundwater Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) from Monitoring Wells Sample Protocol" (June 2016) and "Groundwater Sampling for Emerging Contaminants" (April 2018).

A minimum of three (3) monitoring well volumes were purged from each of the monitoring wells. Monitoring wells were purged with a peristaltic pump using a short piece of silicone tubing in the pump head and HDPE tubing in the well. Purged water was collected and containerized in a mobile poly tank. The containerized water will be transported off-Site for disposal at a regulated disposal facility. Field data, including pH, temperature, conductivity, turbidity, oxidation/reduction potential, dissolved oxygen, and total dissolved solids (TDS), were recorded every ten (10) minutes. Samples were also collected with the peristaltic pump. The monitoring well sampling field reports are included as Appendix A.

A duplicate sample, MS, and MSD were collected from MW-12 for laboratory and sampling quality assurance/quality control purposes.

4.0 ANALYTICAL METHODS

Samples were sent to Alpha Analytical, Inc. in Westborough, MA, a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory, following typical chain of custody procedures. PFAS were analyzed using modified EPA method 537. Analysis for 1,4-dioxane was completed using EPA 8270D SIM.

5.0 RESULTS

A summary of results from this sampling round is presented in Table 1 in Appendix B. The

analytical report from the lab is provided in Appendix C. 1,4-dioxane was not detected in either well. Very low detections of PFAS were observed in both wells. The results of the duplicate sample was consistent with the original sample at MW-12.

6.0 DATA USABILITY SUMMARY REPORT (DUSR)

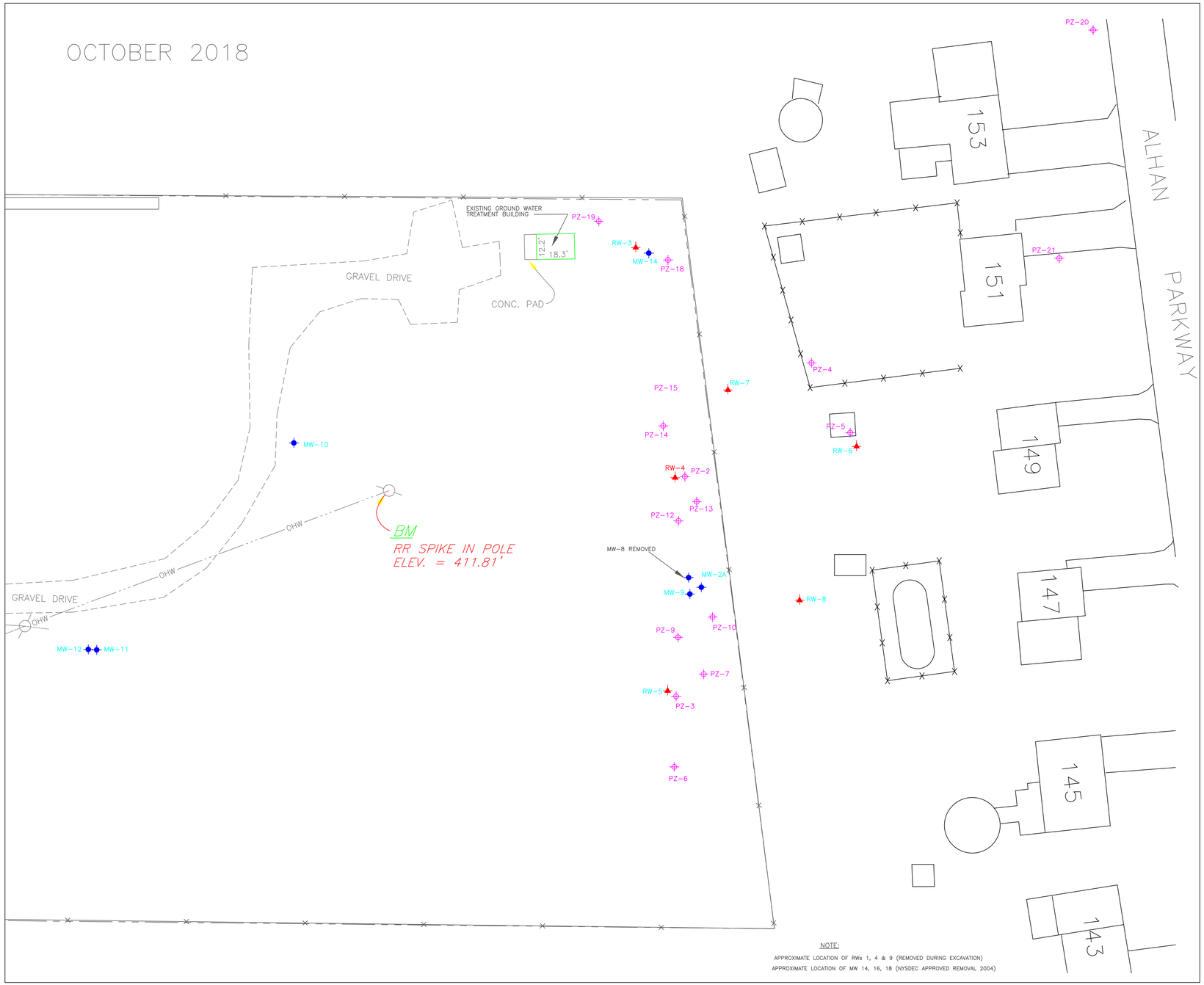
A Data Usability Summary Report (DUSR) was completed by Environmental Data Services, Inc. using the most recent methods and criteria from the USEPA. The DUSR assessed sample analytical data, duplicates, and laboratory control samples and evaluated the completeness of the analytical package. The DUSR is provided as Appendix D to this report. There were no rejections of data as a result of this assessment.

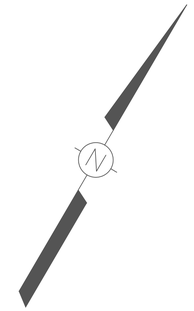
DRAWINGS

DRAWN BY	REVISED	APPROVED BY	DRAWING NUMBER
DEO 7-19-99	KF 12-10-2018	---	OCTOBER 2018

OFFICE	X-REF	IMAGE
ALB	---	---

OCTOBER 2018





LEGEND

- MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- MAESTRI SITE PROPERTY BOUNDARY
- 8' HIGH SECURITY FENCE
- ELECTRIC POLE

SCALE

0 30 60 90 FEET

NOTE:

APPROXIMATE LOCATION OF RWs 1, 4 & 9 (REMOVED DURING EXCAVATION)

APPROXIMATE LOCATION OF MW 14, 16, 18 (NYSDEC APPROVED REMOVAL 2004)

CLIENT

STAUFFER
MANAGEMENT COMPANY
BASE MAP PROVIDED BY IT CORPORATION
SURVEY BY CT MALE

D-1

GROUNDWATER CONTOURS WITH XYLENE CONCENTRATION SUMMARY

MAESTRI SITE-OCTOBER 2018
904 STATE FAIR BLVD.
GEDDES, NEW YORK

APPENDICES

Appendix A	Monitoring Well Sampling Field Reports
Appendix B	Tables
Appendix C	Laboratory Analytical Reports
Appendix D	Data Usability Summary Report (DUSR)

APPENDIX A

Monitoring Well Field Reports

envirospec ENGINEERING, PLLC
349 Northern Blvd
Albany, NY 12204
Phone: 518.453.2203
Fax: 518.689.4800

Well Sampling Field Record

Well No:	MW-9		
Date(s):	10/25/2018		
Weather		Temperature	
Cloudy w/ some rain		High:	40
		Low:	

Project:	Maestri Site	Project No.	18-1803 Task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	MW-9	Well Location:	Near Back Gate		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	19.6	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	1	TOC Elevation (ft):	408.87		
C. Depth to Water TOC (ft):	15.6	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	5.3	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	0.86	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	2.59	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Peristaltic Pump
Purge Start Time:	9:10	Approx Flow Rate:	200 mL/min
Purge Stop Time:	10:00	Approx Volume Removed:	2 gallons
Did well dry out?	Yes		

Sampling

			9:15	9:25	9:35
Date:	10/25/2018	pH:	5.66	6.76	6.63
Time:	4:30	Temp (ºC):	5.84	9.46	9.56
Sample ID:	MW-9	Conductivity (mS/cm):	1	1.04	1.03
Sample Method:	Peristaltic Pump	TDS (g/L):			
		ORP (mV):	253	-110	-59
		Tubidity (NTU):	36.9	0.9	
		DO (mg/L):	10	6.9	7.09

Appearance

Consistently clear

Comments

Foul odor (seemingly effluent)

envirospec ENGINEERING, PLLC	349 Northern Blvd Albany, NY 12204 Phone: 518.453.2203 Fax: 518.689.4800	Well No:	MW-12	
		Date(s):	10/25/2018	
		Weather	Temperature	
		Overcast	High:	40ºF
			Low:	32ºF

Well Sampling Field Record

Project:	Maestri Site	Project No.	E18-1803 task 001M
Location:	904 State Fair Blvs, Syracuse, NY 13209		

Well Info

Well #:	MW-12	Well Location:	Near Front Gate		
Well Diameter (in):	2	Well Condition:			
A. Total Well Depth (ft bgs):	19.9	Depth to Bedrock (ft):	NA		
B. TOC to Grade (ft):	2	TOC Elevation (ft):	418.28		
C. Depth to Water TOC (ft):	10.9	G. Well Volume Factors:	1" = 0.041	5" = 1.02	9" = 3.31
D. Water Column Height (ft):	11	= (A + B) - C	2" = 0.163	6" = 1.47	10" = 4.08
E. Total Well Volume (gal):	1.79	= D*G	3" = 0.367	7" = 1.99	11" = 4.93
F. Purge (3 volumes) (gal):	5.38	= E*3	4" = 0.653	8" = 2.61	12" = 5.88

Purge

Purge Date:	10/25/2018	Pump/Method:	Peristaltic
Purge Start Time:	11:00	Approx Flow Rate:	200 mL/min
Purge Stop Time:	12:10	Approx Volume Removed:	5.3 gallons
Did well dry out?	No		

Sampling

Date:	10/25/2018	pH:	I	II	III
Time:	12:25	Temp (ºC):			
Sample ID:	MW-12	Conductivity (mS/cm):			
Sample Method:	Peristaltic	TDS (g/L):			
		ORP (mV):			
		Tubidity (NTU):			
		DO (mg/L):			

Appearance

Initial color orange with a seemingly think texture and yellow splotches. At 11:10 the water color subsided significantly (~1 gallon).

Comments

Well location	MW-9
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
9:15	5.66	0	5.84	36.9	10	253	
9:25	6.76	1.04	9.46	0.9	6.9	-110	
9:35	6.63	1.03	9.56	0	7.09	-59	18.2

Well location	MW-9
Date	10/30/2018

9:25	7.44	1.071	11.66	19.8	3.31	1.7	
9:30	7.05	1.058	12.28	36.7	2.51	-23.5	
9:35	6.94	1.028	12.32	20.7	2.84	-28.6	

Well location	MW-12
Date	10/25/2018

Time (min)	pH	Specific Conductance (mS/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	ORP	Depth to Water (ft)
11:00	6.98	1.08	9.02	1000	10	88	
11:05	6.93	1.07	11.26	750	7.29	93	
11:10	6.98	1.07	11.15	183	6.97	95	
11:15	6.72	0.585	9.11	120	7.71	94	
11:20	7.05	1.08	11.39	86.3	6.8	77	
11:30	7.02	1.09	11.16	34.8	7.1	58	
11:35	7.01	0.902	9.92	19.5	7.6	58	10.8
11:40	7.04	1.11	11.67	9	6.87	45	
11:45	7.04	1.12	11.65	0.6	6.88	42	10.8
11:50	7.06	1.12	11.79	0	6.78	38	
12:00	7.06	1.12	11.55	0	6.88	47	

APPENDIX B

Tables

Table 1. PFAS and 1,4-Dioxane Results.

	SAMPLE ID:	MW-9		MW-12		MW-12 DUP	
	COLLECTION DATE:	10/25/2018		10/25/2018		10/25/2018	
ANALYTE	CAS	Result	Detection Limit	Result	Detection Limit	Result	Detection Limit
1,4 DIOXANE BY 8270D-SIM							
1,4-Dioxane	123-91-1	ND	0.0765	ND	0.0798	ND	0.0798
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION							
Perfluorobutanoic Acid (PFBA)	375-22-4	0.00478	0.000386	0.0119	0.000364	0.0125	0.000369
Perfluoropentanoic Acid (PFPeA)	2706-90-3	ND	0.000479	0.00391	0.000453	0.00426	0.000458
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.000793 J	0.000392	0.00134 J	0.000371	0.00125 J	0.000375
Perfluorohexanoic Acid (PFHxA)	307-24-4	0.00196 J	0.000508	0.00363	0.00048	0.004	0.000486
Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.00486	0.000384	0.00212	0.000363	0.00245	0.000368
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	ND	0.00045	0.00168 J	0.000426	0.00196 J	0.000431
Perfluorooctanoic Acid (PFOA)	335-67-1	0.00551	0.000475	0.006	0.000449	0.00633	0.000454
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	ND	0.0002	ND	0.000189	0.00114 J	0.000192
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	ND	0.000537	ND	0.000508	ND	0.000514
Perfluorononanoic Acid (PFNA)	375-95-1	0.000636 J	0.00045	ND	0.000426	ND	0.000431
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.00115 J	0.000578	0.00401	0.000547	0.00401	0.000553
Perfluorodecanoic Acid (PFDA)	335-76-2	ND	0.00064	ND	0.000605	ND	0.000613
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	ND	0.0003	ND	0.000284	ND	0.000287
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9	ND	0.000259	ND	0.000244	ND	0.000247
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	ND	0.000438	ND	0.000414	ND	0.000419
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	ND	0.000399	ND	0.000377	ND	0.000381
Perfluorooctanesulfonamide (FOSA)	754-91-6	ND	0.000574	ND	0.000543	ND	0.000549
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	ND	0.000385	ND	0.000364	ND	0.000368
Perfluorododecanoic Acid (PFDoA)	307-55-1	ND	0.000612	ND	0.000578	ND	0.000585
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	ND	0.000324	ND	0.000307	ND	0.00031
Perfluorotetradecanoic Acid (PFTA)	376-06-7	ND	0.00102	ND	0.000965	ND	0.000976

All units are in ug/L.
ND = Not Detected
J = Estimated Value

APPENDIX C

Laboratory Analytical Results

ANALYTICAL REPORT

Lab Number:	L1843833
Client:	Envirospec Engineering, PLLC 349 Northern Blvd. Ste. 3 Albany, NY 12204
ATTN:	Rachel Farnum
Phone:	(518) 453-2203
Project Name:	MAESTRI SITE
Project Number:	Not Specified
Report Date:	11/06/18

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).

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

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1843833-01	MW-9	WATER	GEDDES, NY	10/25/18 16:30	10/26/18
L1843833-02	MW-12	WATER	GEDDES, NY	10/25/18 12:25	10/26/18
L1843833-03	DUP	WATER	GEDDES, NY	10/25/18 12:25	10/26/18

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Case Narrative

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

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

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

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

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

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

Project Name: MAESTRI SITE **Lab Number:** L1843833
Project Number: Not Specified **Report Date:** 11/06/18

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.

Perfluorinated Alkyl Acids by Isotope Dilution

WG1175925-4: The continuing calibration standard, associated with L1843833 as well as the associated QC, had the response for L1843833 (155%) above the acceptance criteria for the method. The associated samples were non-detect, therefore no further action was taken.

WG1175925-4: The continuing calibration standard, associated with L1843833 as well as the associated QC, had the response for the extracted internal standard 1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS) (40.9%) and 1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS) (48.7%) outside the acceptance criteria for the method. The associated starget analytes were within acceptance criteria, therefore no further action was taken.

L1843833: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

The WG1174715-2 LCS recovery, associated with L1843833-01 through -03, is above the acceptance criteria for perfluorodecanesulfonic acid (pfds) (160%); however, the associated samples are non-detect to the RL for these target analytes. The results of the original analysis are reported.

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

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/06/18

ORGANICS

SEMIVOLATILES

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-01
Client ID: MW-9
Sample Location: GEDDES, NY

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 19:23
Analyst: MA

Date Collected: 10/25/18 16:30
Date Received: 10/26/18
Field Prep: Not Specified

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	153	76.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-01
Client ID: MW-9
Sample Location: GEDDES, NY

Date Collected: 10/25/18 16:30
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 02:17
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	4.78		ng/l	2.07	0.386	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.07	0.479	1
Perfluorobutanesulfonic Acid (PFBS)	0.793	J	ng/l	2.07	0.392	1
Perfluorohexanoic Acid (PFHxA)	1.96	J	ng/l	2.07	0.508	1
Perfluoroheptanoic Acid (PFHpA)	4.86		ng/l	2.07	0.384	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.07	0.450	1
Perfluorooctanoic Acid (PFOA)	5.51		ng/l	2.07	0.475	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.07	0.200	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.07	0.537	1
Perfluorononanoic Acid (PFNA)	0.636	J	ng/l	2.07	0.450	1
Perfluorooctanesulfonic Acid (PFOS)	1.15	J	ng/l	2.07	0.578	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.07	0.640	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.07	0.300	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.07	0.259	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.07	0.438	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.07	0.399	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.07	0.574	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.07	0.385	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.07	0.612	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.07	0.324	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.07	1.02	1

Project Name: MAESTRI SITE
Lab Number: L1843833
Project Number: Not Specified
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-01
Client ID: MW-9
Sample Location: GEDDES, NY
Date Collected: 10/25/18 16:30
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	109		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	82		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	72		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	114		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	105		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	163		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	104		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	96		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	102		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	72		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	103		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	71		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	56		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	83		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	88		33-143

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-02
Client ID: MW-12
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 19:48
Analyst: MA

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	160	79.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	28		15-110

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-02
Client ID: MW-12
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 02:33
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	11.9		ng/l	1.95	0.364	1
Perfluoropentanoic Acid (PFPeA)	3.91		ng/l	1.95	0.453	1
Perfluorobutanesulfonic Acid (PFBS)	1.34	J	ng/l	1.95	0.371	1
Perfluorohexanoic Acid (PFHxA)	3.63		ng/l	1.95	0.480	1
Perfluoroheptanoic Acid (PFHpA)	2.12		ng/l	1.95	0.363	1
Perfluorohexanesulfonic Acid (PFHxS)	1.68	J	ng/l	1.95	0.426	1
Perfluorooctanoic Acid (PFOA)	6.00		ng/l	1.95	0.449	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.95	0.189	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.95	0.508	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.95	0.426	1
Perfluorooctanesulfonic Acid (PFOS)	4.01		ng/l	1.95	0.547	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.95	0.605	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.95	0.284	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.95	0.244	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.95	0.414	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.95	0.377	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.95	0.543	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.95	0.364	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.95	0.578	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.95	0.307	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.95	0.965	1

Project Name: MAESTRI SITE
Lab Number: L1843833
Project Number: Not Specified
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-02
Client ID: MW-12
Sample Location: GEDDES, NY
Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	105		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	110		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	97		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	88		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	107		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	104		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	77		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	95		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	77		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	52		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	96		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	39		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	44		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	78		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		33-143

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-03
Client ID: DUP
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 22:04
Analyst: MA

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	160	79.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-03
Client ID: DUP
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 03:23
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	12.5		ng/l	1.98	0.369	1
Perfluoropentanoic Acid (PFPeA)	4.26		ng/l	1.98	0.458	1
Perfluorobutanesulfonic Acid (PFBS)	1.25	J	ng/l	1.98	0.375	1
Perfluorohexanoic Acid (PFHxA)	4.00		ng/l	1.98	0.486	1
Perfluoroheptanoic Acid (PFHpA)	2.45		ng/l	1.98	0.368	1
Perfluorohexanesulfonic Acid (PFHxS)	1.96	J	ng/l	1.98	0.431	1
Perfluorooctanoic Acid (PFOA)	6.33		ng/l	1.98	0.454	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	1.14	J	ng/l	1.98	0.192	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.98	0.514	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.98	0.431	1
Perfluorooctanesulfonic Acid (PFOS)	4.01		ng/l	1.98	0.553	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.98	0.613	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.98	0.287	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.98	0.247	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.98	0.419	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.98	0.381	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.98	0.549	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.98	0.368	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.98	0.585	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.98	0.310	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.98	0.976	1

Project Name: MAESTRI SITE
Lab Number: L1843833
Project Number: Not Specified
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-03
Client ID: DUP
Sample Location: GEDDES, NY
Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	50		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	54		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	47		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	42		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	50		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	55		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	48		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	39		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	45		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	46		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	41		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	38		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	25		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	42		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	20		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**22**	Q	23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	40		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	40		33-143

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 11/05/18 16:44
Analyst: MA

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1174693-1					
1,4-Dioxane	ND		ng/l	150	75.0

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	30		15-110

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 122,537(M)
Analytical Date: 11/05/18 19:56
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-03 Batch: WG1174715-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.373
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.464
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.380
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.492
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.372
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.436
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.460
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	1.92	J	ng/l	2.00	0.194
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.520
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.436
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.560
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.620
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	0.291
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.250
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.424
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.386
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.556
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	0.444	J	ng/l	2.00	0.373
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.592
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.314
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.988

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 122,537(M)
Analytical Date: 11/05/18 19:56
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-03 Batch: WG1174715-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	117		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	112		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	107		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	114		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	133		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	115		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	53		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	102		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	111		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	102		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	55		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	80		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	110		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	67		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	82		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	102		33-143

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAESTRI SITE

Project Number: Not Specified

Lab Number: L1843833

Report Date: 11/06/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab	Associated sample(s): 01-03		Batch: WG1174693-2		WG1174693-3			
1,4-Dioxane	110		111		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	31		33		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-03 Batch: WG1174715-2 WG1174715-3								
Perfluorobutanoic Acid (PFBA)	120		106		67-148	12		30
Perfluoropentanoic Acid (PFPeA)	122		110		63-161	10		30
Perfluorobutanesulfonic Acid (PFBS)	128		113		65-157	12		30
Perfluorohexanoic Acid (PFHxA)	127		113		69-168	12		30
Perfluoroheptanoic Acid (PFHpA)	112		100		58-159	11		30
Perfluorohexanesulfonic Acid (PFHxS)	127		105		69-177	19		30
Perfluorooctanoic Acid (PFOA)	117		105		63-159	11		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	127		111		49-187	13		30
Perfluoroheptanesulfonic Acid (PFHpS)	132		116		61-179	13		30
Perfluorononanoic Acid (PFNA)	124		111		68-171	11		30
Perfluorooctanesulfonic Acid (PFOS)	97		91		52-151	6		30
Perfluorodecanoic Acid (PFDA)	121		111		63-171	9		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	118		107		56-173	10		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	110		115		60-166	4		30
Perfluoroundecanoic Acid (PFUnA)	114		96		60-153	17		30
Perfluorodecanesulfonic Acid (PFDS)	**160**	Q	134		38-156	18		30
Perfluorooctanesulfonamide (FOSA)	113		97		46-170	15		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	111		96		45-170	14		30
Perfluorododecanoic Acid (PFDoA)	120		108		67-153	11		30
Perfluorotridecanoic Acid (PFTrDA)	106		97		48-158	9		30
Perfluorotetradecanoic Acid (PFTA)	128		119		59-182	7		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MAESTRI SITE

Project Number: Not Specified

Lab Number: L1843833

Report Date: 11/06/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab	Associated sample(s): 01-03		Batch: WG1174715-2 WG1174715-3					

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	100		104		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	85		88		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	92		101		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	90		89		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	99		100		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102		122		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	98		98		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	49		59		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88		87		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96		103		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	93		94		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	58		63		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		80		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	100		102		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68		73		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	76		81		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	97		99		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	94		96		33-143

Matrix Spike Analysis

Batch Quality Control

Project Name: MAESTRI SITE

Project Number: Not Specified

Lab Number: L1843833

Report Date: 11/06/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab	Associated sample(s): 01-03		QC Batch ID: WG1174693-6			WG1174693-7		QC Sample: L1843833-02		Client ID: MW-12		
1,4-Dioxane	ND	5560	6140	111		5540	109		40-140	10		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	26		26		15-110

Matrix Spike Analysis

Batch Quality Control

Project Name: MAESTRI SITE

Project Number: Not Specified

Lab Number: L1843833

Report Date: 11/06/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1174715-6 WG1174715-7 QC Sample: L1843833-02 Client ID: MW-12												
Perfluorobutanoic Acid (PFBA)	11.9	40.5	56.3	110		57.8	111		67-148	3		30
Perfluoropentanoic Acid (PFPeA)	3.91	40.5	49.0	111		50.9	114		63-161	4		30
Perfluorobutanesulfonic Acid (PFBS)	1.34J	40.5	47.4	117		48.8	118		65-157	3		30
Perfluorohexanoic Acid (PFHxA)	3.63	40.5	51.2	117		52.3	118		69-168	2		30
Perfluoroheptanoic Acid (PFHpA)	2.12	40.5	42.5	100		44.9	104		58-159	5		30
Perfluorohexanesulfonic Acid (PFHxS)	1.68J	40.5	44.5	110		45.5	110		69-177	2		30
Perfluorooctanoic Acid (PFOA)	6.00	40.5	49.5	107		51.6	110		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	40.5	46.5	115		47.0	114		49-187	1		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	40.5	51.1	126		45.6	110		61-179	11		30
Perfluorononanoic Acid (PFNA)	ND	40.5	44.8	111		44.4	107		68-171	1		30
Perfluorooctanesulfonic Acid (PFOS)	4.01	40.5	40.3	90		39.0	85		52-151	3		30
Perfluorodecanoic Acid (PFDA)	ND	40.5	46.0	114		46.7	113		63-171	2		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	40.5	40.2	99		45.4	110		56-173	12		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	40.5	43.8	108		44.8	108		60-166	2		30
Perfluoroundecanoic Acid (PFUnA)	ND	40.5	41.6	103		41.9	101		60-153	1		30
Perfluorodecanesulfonic Acid (PFDS)	ND	40.5	39.1	97		40.3	98		38-156	3		30
Perfluorooctanesulfonamide (FOSA)	ND	40.5	40.7	101		42.3	102		46-170	4		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	40.5	41.1	102		37.2	90		45-170	10		30
Perfluorododecanoic Acid (PFDoA)	ND	40.5	42.3	104		45.7	111		67-153	8		30
Perfluorotridecanoic Acid (PFTrDA)	ND	40.5	42.5	105		41.5	100		48-158	2		30
Perfluorotetradecanoic Acid (PFTA)	ND	40.5	46.9	116		47.9	116		59-182	2		30

Matrix Spike Analysis

Batch Quality Control

Project Name: MAESTRI SITE

Project Number: Not Specified

Lab Number: L1843833

Report Date: 11/06/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1174715-6 WG1174715-7 QC Sample: L1843833-02 Client ID: MW-12												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	82		85		7-170
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	76		82		1-244
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	43		52		23-146
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	47		58		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87		101		40-144
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	86		92		38-144
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	83		83		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	102		99		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	111		116		47-153
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	76		86		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	83		86		33-143
Perfluoro[13C4]Butanoic Acid (MPFBA)	103		100		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	107		106		16-173
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	49		53		1-87
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93		105		42-146
Perfluoro[13C8]Octanoic Acid (M8PFOA)	101		99		36-149
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88		93		34-146
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	93		99		31-159

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1843833-01A	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-01B	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-01C	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-01D	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02A	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02B	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02C	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02D	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02E	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02F	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-02G	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02H	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02I	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02J	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02K	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-02L	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-03A	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-03B	Amber 500ml unpreserved	B	7	7	2.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L1843833-03C	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L1843833-03D	2 Plastic/1 Plastic/1 H20 Plastic	A	NA		3.0	Y	Absent		A2-NY-537-ISOTOPE(14)

*Values in parentheses indicate holding time in days

Project Name:	MAESTRI SITE	**Lab Number:**	L1843833
Project Number:	Not Specified	**Report Date:**	11/06/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

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

Report Format: DU Report with 'J' Qualifiers

Project Name:	MAESTRI SITE	**Lab Number:**	L1843833
Project Number:	Not Specified	**Report Date:**	11/06/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. 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).

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

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

122 Determination of Selected Perfluorintated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537, EPA/600/R-08/092. Version 1.1, September 2009.

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
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

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

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

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

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.

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.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab: 10/27/18

ALPHA Job #: L1843833

Client Information
Client: Enviroscience Engineering
Address: 349 Northern Blvd
Albany, NY 12204
Phone: 518-[redacted]453-2553
Fax:
Email: rfarnum@enviroscienceny.com

Project Information
Project Name: Maestri Site
Project Location: Geddes, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brenda Pirinelli
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☒ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☒ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Need Category B deliverable and NY EQUIS file
For 8270 SIM method, only report 1,4-dioxane

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS Method 537	1,4-dioxane 8270 SIM	Total Bottle	Sample Specific Comments
3833-01	MW-9	10/25/18	4:30			X	X		
-02	MW-12	10/25/18	12:25			X	X		
-03	DUP[redacted]	10/25/18	12:25			X	X		Time labeled as 12:30, should be 12:25
-02	MS	10/25/18	12:25			X	X		Time labeled as 13:05, should be 12:25
-02	MSD	10/25/18	12:25			X	X		Time labeled as 13:30, should be 12:25

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type											
Preservative											

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/26/18 12:03 PM	[signature] AHL	10-26-18 12:03
Robert Hayes	10-26-18 12:03	[signature]	10/26/18 2227
[signature]	10/27/18 0530	[signature]	10/27/18 05:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX D

Data Usability Summary Report

ENVIRONMENTAL
Data Services, Inc.

DATA USABILITY SUMMARY REPORT
MAESTRI, GEDDES, NEW YORK

Client: Envirospec Engineering, LLC, Albany, New York
SDG: L1843833
Laboratory: Alpha Analytical, Westborough, Massachusetts
Site: Maestri, Geddes, New York
Date: November 12, 2018

SVOCs/PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-9	L1843833-01	Water
2	MW-12	L1843833-02	Water
2MS	MW-12MS	L1843833-02MS	Water
2MSD	MW-12MSD	L1843833-02MSD	Water
3	DUP	L1843833-03	Water

A Data Usability Summary Review was performed on the analytical data for three water samples collected on October 25, 2018 by Envirospec Engineering at the Maestri site in Geddes, New York. The samples were analyzed under Environmental Protection Agency (USEPA) "Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions" and the USEPA Method "Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
SVOC (1,4-Dioxane)	USEPA SW-846 Method 8270D-SIM
PFCs	USEPA Method 537

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, USEPA Region II Data Review Standard Operating Procedures (SOPs), and the USEPA National Functional Guidelines for Organic Data Review as follows:

- SOP Number HW-35A, Revision 1, September 2016: Semivolatile Data Validation;
- The USEPA "Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review," January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation

- Holding times
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

Data Usability Assessment

There were no rejections of data.

Overall the data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

Semivolatile Organic Compounds (1,4-Dioxane)

Holding Times

- All samples were extracted within 7 days for water samples and analyzed within 40 days.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- The initial calibrations exhibited acceptable %RSD and/or correlation coefficients and mean RRF values.

Continuing Calibration

- The continuing calibrations exhibited acceptable %D and RRF values.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries (%R).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	MW-12 ng/L	DUP ng/L	RPD	Qualifier
1,4-Dioxane	ND	ND	-	-

Perfluorinated Compounds (PFCs)

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD), %R and/or coefficient of determination criteria were met.

Continuing Calibration

- All percent recovery (%R) criteria were met except for the following.

CCAL Date	Compound	%R	Qualifier	Affected Samples
11/05/18	6:2 FTS	40.9%	J/UJ	All Samples
	8:2 FTS	48.7%	J/UJ	All Samples

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were not collected.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except for the following.

EDS Sample ID	Surrogate	%R	Qualifier
3	d5-NEtFOSAA	22%	UJ - Associated Compound

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS/LCSD samples exhibited acceptable percent recoveries (%R) and RPD values except for the following.

LCS ID	Compound	LCS %R/LCSD %R/RPD	Qualifier	Affected Samples
WG1174715-2/3	PFDS	160%/OK/OK	None	All Associated ND

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	MW-12 ng/L	DUP ng/L	RPD	Qualifier
PFBA	11.9	12.5	5%	None
PFPeA	3.91	4.26	9%	
PFBS	1.34	1.25	7%	
PFHxA	3.63	4.00	10%	
PFHpA	2.12	2.45	14%	
PFHxS	1.68	1.96	15%	
PFOA	6.00	6.33	5%	
6:2FTS	1.95U	1.14	NC	
PFOS	4.01	4.01	0%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 11/13/18

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-01
Client ID: MW-9
Sample Location: GEDDES, NY

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 19:23
Analyst: MA

Date Collected: 10/25/18 16:30
Date Received: 10/26/18
Field Prep: Not Specified

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	153	76.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

NW 11/2/18

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833 2
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-02
Client ID: MW-12
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 19:48
Analyst: MA

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	160	79.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	28		15-110

NW 11/12/18

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-03
Client ID: DUP
Sample Location: GEDDES, NY

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 11/02/18 22:04
Analyst: MA

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Extraction Method: EPA 3510C
Extraction Date: 11/01/18 08:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	160	79.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-01
Client ID: MW-9
Sample Location: GEDDES, NY

Date Collected: 10/25/18 16:30
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 02:17
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	4.78		ng/l	2.07	0.386	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.07	0.479	1
Perfluorobutanesulfonic Acid (PFBS)	0.793	J	ng/l	2.07	0.392	1
Perfluorohexanoic Acid (PFHxA)	1.96	J	ng/l	2.07	0.508	1
Perfluoroheptanoic Acid (PFHpA)	4.86		ng/l	2.07	0.384	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.07	0.450	1
Perfluorooctanoic Acid (PFOA)	5.51		ng/l	2.07	0.475	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	~~ND~~ UJ		ng/l	2.07	0.200	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.07	0.537	1
Perfluorononanoic Acid (PFNA)	0.636	J	ng/l	2.07	0.450	1
Perfluorooctanesulfonic Acid (PFOS)	1.15	J	ng/l	2.07	0.578	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.07	0.640	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	~~ND~~ UJ		ng/l	2.07	0.300	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.07	0.259	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.07	0.438	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.07	0.399	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.07	0.574	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.07	0.385	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.07	0.612	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.07	0.324	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.07	1.02	1

NW 11/2/18

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-02
Client ID: MW-12
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 02:33
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	11.9		ng/l	1.95	0.364	1
Perfluoropentanoic Acid (PFPeA)	3.91		ng/l	1.95	0.453	1
Perfluorobutanesulfonic Acid (PFBS)	1.34	J	ng/l	1.95	0.371	1
Perfluorohexanoic Acid (PFHxA)	3.63		ng/l	1.95	0.480	1
Perfluoroheptanoic Acid (PFHpA)	2.12		ng/l	1.95	0.363	1
Perfluorohexanesulfonic Acid (PFHxS)	1.68	J	ng/l	1.95	0.426	1
Perfluorooctanoic Acid (PFOA)	6.00		ng/l	1.95	0.449	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND UJ		ng/l	1.95	0.189	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.95	0.508	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.95	0.426	1
Perfluorooctanesulfonic Acid (PFOS)	4.01		ng/l	1.95	0.547	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.95	0.605	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND UJ		ng/l	1.95	0.284	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.95	0.244	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.95	0.414	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.95	0.377	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.95	0.543	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.95	0.364	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.95	0.578	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.95	0.307	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.95	0.965	1

11/12/18

Project Name: MAESTRI SITE
Project Number: Not Specified

Lab Number: L1843833
Report Date: 11/06/18

SAMPLE RESULTS

Lab ID: L1843833-03
Client ID: DUP
Sample Location: GEDDES, NY

Date Collected: 10/25/18 12:25
Date Received: 10/26/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 122,537(M)
Analytical Date: 11/06/18 03:23
Analyst: AJ

Extraction Method: EPA 537
Extraction Date: 11/01/18 08:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	12.5		ng/l	1.98	0.369	1
Perfluoropentanoic Acid (PFPeA)	4.26		ng/l	1.98	0.458	1
Perfluorobutanesulfonic Acid (PFBS)	1.25	J	ng/l	1.98	0.375	1
Perfluorohexanoic Acid (PFHxA)	4.00		ng/l	1.98	0.486	1
Perfluoroheptanoic Acid (PFHpA)	2.45		ng/l	1.98	0.368	1
Perfluorohexanesulfonic Acid (PFHxS)	1.96	J	ng/l	1.98	0.431	1
Perfluorooctanoic Acid (PFOA)	6.33		ng/l	1.98	0.454	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	1.14	J	ng/l	1.98	0.192	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.98	0.514	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.98	0.431	1
Perfluorooctanesulfonic Acid (PFOS)	4.01		ng/l	1.98	0.553	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.98	0.613	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	UJ	ng/l	1.98	0.287	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.98	0.247	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.98	0.419	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.98	0.381	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.98	0.549	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	UJ	ng/l	1.98	0.368	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.98	0.585	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.98	0.310	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.98	0.976	1

NJ 11/12/18