February 17, 2023

Mr. Stanley Radon, CPG
New York State Dept. of Environmental Conservation
Division of Solid and Hazardous Materials, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Supplemental Groundwater Investigation Summary Report for Operable Unit No. 4 (OU-4)
Tecumseh Redevelopment Site #915009 – Lackawanna, NY

Dear Mr. Radon:

On behalf of Tecumseh Redevelopment, Inc., TurnKey Environmental Restoration, LLC (TurnKey) in association with Benchmark Civil/Environmental Engineering & Geology, PLLC (Benchmark) has prepared this Supplemental Groundwater Investigation Summary Report for the former Coke Plant By-Products Sub-Area of the Lackawanna, New York site.

BACKGROUND

Tecumseh and the New York State Department of Environmental Conservation (NYSDEC) executed an Order on Consent (File No. 16-55) on September 19, 2017, to implement the final groundwater remedy for OU-4 consistent with the March 31, 2017, Statement of Basis issued by the NYSDEC as well as the August 2016 Benchmark/TurnKey Engineering Report entitled "Evaluation of Groundwater Corrective Measures- Operable Unit 4". The final groundwater OU-4 remedy consists of two independent groundwater collection, conveyance, and treatment systems. The south system initially consisted of groundwater collection wells and treatment units including an oil/water separator, bag filtration, chemical feed, low-profile air stripper, flow meter with totalizer and PLC monitoring and control system. The north system consists of groundwater collection wells and treatment units including bag filtration, chemical feed, low-profile air stripper, granular activated carbon (GAC) filtration, flow meter with totalizer and PLC monitoring and control system. The treatment units are housed in a single building. Subsequent to treatment system modifications completed in July 2021, the partially treated combined effluents from both the north and south system flow through the north treatment system GAC to an infiltration gallery to recharge site groundwater.

The initial construction of OU-4 groundwater remediation facilities was substantially completed and began operation in March 2019. As required in the (April 2020) Operation, Maintenance and Monitoring (OM&M) Plan, the *2020 Annual Summary Report for OU-4 and Benzol Yard Area Source Control ICM* was initially submitted to NYSDEC in June 2020 documenting remedial systems performance during the first year of operation. There were several rounds of comments and revisions culminating with the Revised 2020 Annual Report (October 2020) that was approved by the NYSDEC in November 2020. The NYSDEC final approval letter called for a *Supplemental Work Plan* which was submitted to and approved by the NYSDEC in November 2020. A Summary Report for the Supplemental Work Plan dated February 2021 recommended the installation of five new recovery wells, installation of two wells that could become recovery wells, and modifying the

south treatment system so that its effluent goes through the existing north system granular activated carbon (GAC) filters before discharge to the infiltration gallery. The recommended modifications were approved by NYSDEC and completed in August 2021. The groundwater sampling results from the two wells (RWN-28 and RWN-29) were submitted to the NYSDEC in a September 2022 email that proposed these two wells also be converted to recovery wells that pump to the treatment system. Based upon the groundwater results from RWN-28 and RWN-29 the NYSDEC requested an additional supplemental work plan in an October 25, 2021 letter. This Supplemental Work Plan, which recommended the installation of three additional wells, was submitted to the NYSDEC on December 22, 2021 and approved by the NYSDEC with modified well locations on February 24, 2022. In June 2022 RWN-30, RWN-31, and RWN-32 were installed and sampled. Based on the groundwater sample analytical results installation of an additional four wells was recommended in the June 24, 2022 Summary Report.

INVESTIGATION FINDINGS

On December 7, 2022, SJB Services, Inc (drilling subcontractor) began the installation of four additional wells. A photo log documenting the field activities is provided in Attachment 1. Each boring/well was assigned a temporary name pending the investigation findings and intended use going forward. The temporary names given to the boring/well to the west was B-4, with the middle location B-5, the east well B-6, and the north location B-7 (Figure 1). The new wells were constructed using 8-1/4-inch hollow stem augers to allow construction of 6-inch diameter schedule 80 PVC wells. Each well was constructed with 10-foot-long screens installed above a 2-foot sump at the bottom of the well. Well installation logs are provided in Attachment 2. A Community Air Monitoring Station was setup and operated during all intrusive work; there were no exceedances of community air monitoring thresholds for organic vapors or particulates recorded; the data is provided in Attachment 3. Following the well installations, each well was developed to remove sediment in the sand pack around the well screen to improve the hydraulic connection between the well and water bearing zone. An air lift was used during well development to remove water and sediment from the well. The air lift was employed for sufficient time to remove at least 5.5 well volumes. Development water was collected in a portable poly tank, and then transferred to the OU-4 south treatment system for treatment. Well development was completed on December 14, 2022. Groundwater from all four wells was sampled on January 5, 2023 for analysis of CP-51 list VOCs (including naphthalene), phenolic compounds, and the list of 21 PFAS compounds. Groundwater sampling field sheets are provided in Attachment 4.

The groundwater analytical results are summarized in Table1 with their associated concentration and NYSDEC Groundwater Quality Standard (NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values, June 1998) for comparison. Guidance Values are presented where Standards have not been established for a specific compound. Concentrations exceeding NYSDEC Groundwater Quality Standards/Guidance Values (GWQS/GV) are shaded. Generally, the groundwater concentrations at wells B-5, B-6, and B-7 exceed GWQS/GV for BTEX compounds, phenolic compounds, and naphthalene. The groundwater concentrations at well B-4 were less than GWQS/GV. The laboratory analytical data is provided in Attachment 5. The highest exceedances of GWQS/GVs were observed at the B-5 well location. The groundwater concentrations at wells B-6 and B-7 are significantly lower that those observed at well B-5, indicating wells B-6 and B-7 are not located in the source area of the groundwater impacts.

RECOMMENDATIONS

We recommend connecting well B-5 to the treatment system and well B-5 be renamed recovery well RWN-33. Wells B-4, B-6, and B-7 are proposed for use as monitoring wells. We recommend that well B-4 be renamed MWN-98, B-6 be renamed MWN-96, and B-7 be renamed MWN-97. Based on the groundwater results we believe that we have identified the limits of the source groundwater impacts.

If the DEC agrees that no further groundwater investigation is warranted in this area, we will make arrangements to connect recovery wells RWN-30 through RWN-33 to the OU-4 treatment system. Specifically, we will secure funding from the client, procure supplies, and schedule subcontractors required for this work, which will be completed consistent with the previous expansion work undertaken in 2021 at OU-4. This will involve excavation of utility trenches to the new recovery wells; installation of new force main piping and new electrical conduit; installation of electrical and communication cables; backfilling the trenches; installation of a new control panel at RWN-27; and modification of the control panel at RWN-20 and the main control panel at the treatment building. When intrusive earth work is underway community air monitoring will be employed. The new recovery wells will be operated based on groundwater elevation with setpoints adjustable at the main control panel. These new recovery wells will be monitored and operated in the same manner as the other recovery wells already connected to the treatment system.

SCHEDULE

We intend on completing the installation and startup of the additional recovery wells by August 31, 2023 provided we receive DEC approval by March 3, 2023. Submittal of a construction completion report within 60 days following the startup (August 31, 2023) of the additional recovery wells. If significant delays are encountered, we will notify the NYSDEC and modify this schedule.

Please contact us if you have any questions or require additional information.

Sincerely,
TurnKey Environmental Restoration, LLC

Brock Greene
Project Environmental Scientist

EC S. Moeller, P. Werthman, A. Zwack, L. Riker, S. Bogardus, T. Forbes, K. Nagel

TABLES

TABLE 1

GROUNDWATER ANALYTICAL SUMMARY

OU4 REPORT
Tecumseh Redevelopment Inc.
Lackawann, New York

PARAMETER [1]	GWQS/GV [2]	Units	Monitoring Well Location and Sample Date			
			B-4/MWN-98 — Slag/Fill	B-5/RWN-33 — Slag/Fill	B-6/MWN-96 — Slag/Fill	B-7/MWN-97 — Slag/Fill
			Jan-2023	Jan-2023	Jan-2023	Jan-2023
VOCs (Method 8260B) - ug/L						
1,2,4-Trimethylbenzene	5	ug/l	ND	**8.6 DJ**	0.98 J	**6.1**
1,3,5-Trimethylbenzene	**5**	**ug/l**	ND	ND	ND	1.1 J
Benzene	**1**	**ug/l**	0.17 J	**1200 D**	**15**	**49**
Ethylbenzene	**5**	**ug/l**	ND	**44 D**	0.84 J	5
Isopropylbenzene	**5**	**ug/l**	ND	ND	ND	1.1 J
Toluene	**5**	**ug/l**	ND	ND	ND	0.76 J
Xylenes, Total	**5**	**ug/l**	ND	**33 DJ**	1.86 J	**11.1**
TOTAL BTEX	**NA**	**ug/l**	**0.17 J**	**1277 DJ**	**17.7 J**	**65.86 J**
SVOCs (Method 8270D) - ug/L						
2,4-Dimethylphenol	**See Note 4**	**ug/l**	ND	3.6 J	ND	2.1 J
2-Methylphenol	**See Note 4**	**ug/l**	ND	ND	0.89 J	ND
3,4 -Methylphenol (m,p-Cresol)	**See Note 4**	**ug/l**	ND	ND	ND	ND
Naphthalene	**10**	**ug/l**	ND	**62**	**45**	**59**
Phenol	**See Note 4**	**ug/l**	ND	19	ND	0.69 J
Total Phenolic Compounds - ug/L						
Phenolic compounds (total phenols) [3,5]	**1**	**ug/l**	**ND**	**22.6 D**	**0.89 J**	**2.79 D**
Perfluorinated Alkyl Acids (Modified 537) - ng/L						
Perfluorobutanoic Acid (PFBA)	**-**	-	7.68	23.4	8.33	8.7
Perfluoropentanoic Acid (PFPeA)	**-**	-	2.9	7.57	6.55	9.03
Perfluorobutanesulfonic Acid (PFBS)	**-**	-	0.874 J	1.7 J	0.694 J	0.87 J
Perfluorohexanoic Acid (PFHxA)	**-**	-	2.58	4.22	3.59	5.58
Perfluoroheptanoic Acid (PFHpA)	**-**	-	1.83	2.44	2.9	4.16
Perfluorohexanesulfonic Acid (PFHxS)	**-**	-	0.418 J	0.543 JF	0.651 JF	0.378 J
Perfluorooctanoic Acid (PFOA)	**10**	**ng/L**	4.45	8.72	**12**	9.3
Perfluorononanoic Acid (PFNA)	**-**	-	0.314 J	0.848 J	1.08 J	0.683 J
Perfluorooctanesulfonic Acid (PFOS)	**10**	**ng/L**	1.16 J	5.05	3.94	1.1 J
Perfluorodecanoic Acid (PFDA)	**-**	-	ND	0.312 J	ND	ND
PFOA/PFOS, Total	**70**	**ng/L**	5.61	13.77	15.94	10.4
PFAS, Total	**500**	**ng/L**	27.816	68.573	55.675	50.201
Field Measurements						
Dissolved Oxygen (mg/L)	**-**	**MG/L**	3.19	1.7	3.43	4.27
Field pH (S.U.)	**12.50**	**S.U**	6.82	7.21	7.53	7.00
Redox Potential (mV)	**-**	**mV**	-23	-263	-105	-93
Specific Conductance (umhos/cm)	**-**	**UMHOS/CM**	1033	1607	1483	1151
Temperature (deg C)	**-**	**DEG C**	8.3	8.9	10.0	8.5
Turbidity (NTU)	**-**	**NTU**	13	40.4	10.8	31.9

Notes:
1. Only those compounds detected above the method detection limit at a minimum of one sample location are reported in this table.
2. Groundwater Quality Standards/Guldance Values (GWQS/GV) as per Divison of Water Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - Class GA (TOGS 1.1.1)
3. Phenolic compounds analyzed using EPA Method 8270D, "Semivolatile Organic Copounds by Gas Chromatography/Mass Spectometry (GC/MS)."
4. Refer to GWQS/GV for "Phenolic compounds (total phenols)."
5. GWQS/GV for Phenolic compounds (total phenols) applies to sum of these substances.

Definitions:
SVOCs =Semivolatile Organic Compounds
VOCs = Volatile Organic Compounds
- = Parameter was not analyzed for.
D = Concentration of analyte was quantified from diluted analysis.
F = The ratio of quantifier ion response to quantifier ion falls outside laboratory criteria. Results should be considered an estimated maximum concentration.
J = Estimated value.
ND = Not detected at the method detection limit.

Color Code:

	= concentration is less than or equal to the GWQS/GV (includes non-detect)
Bold	= concentration exceeds the GWQS/GV, but is less than 10 times the GWQS/GV
Bold	= concentration exceeds 10 times the GWQS/GV, but is less than 100 times the GWQS/GV
Bold	= concentration exceeds 100 times the GWQS/GV
Bold	= pH exceeds 12.5

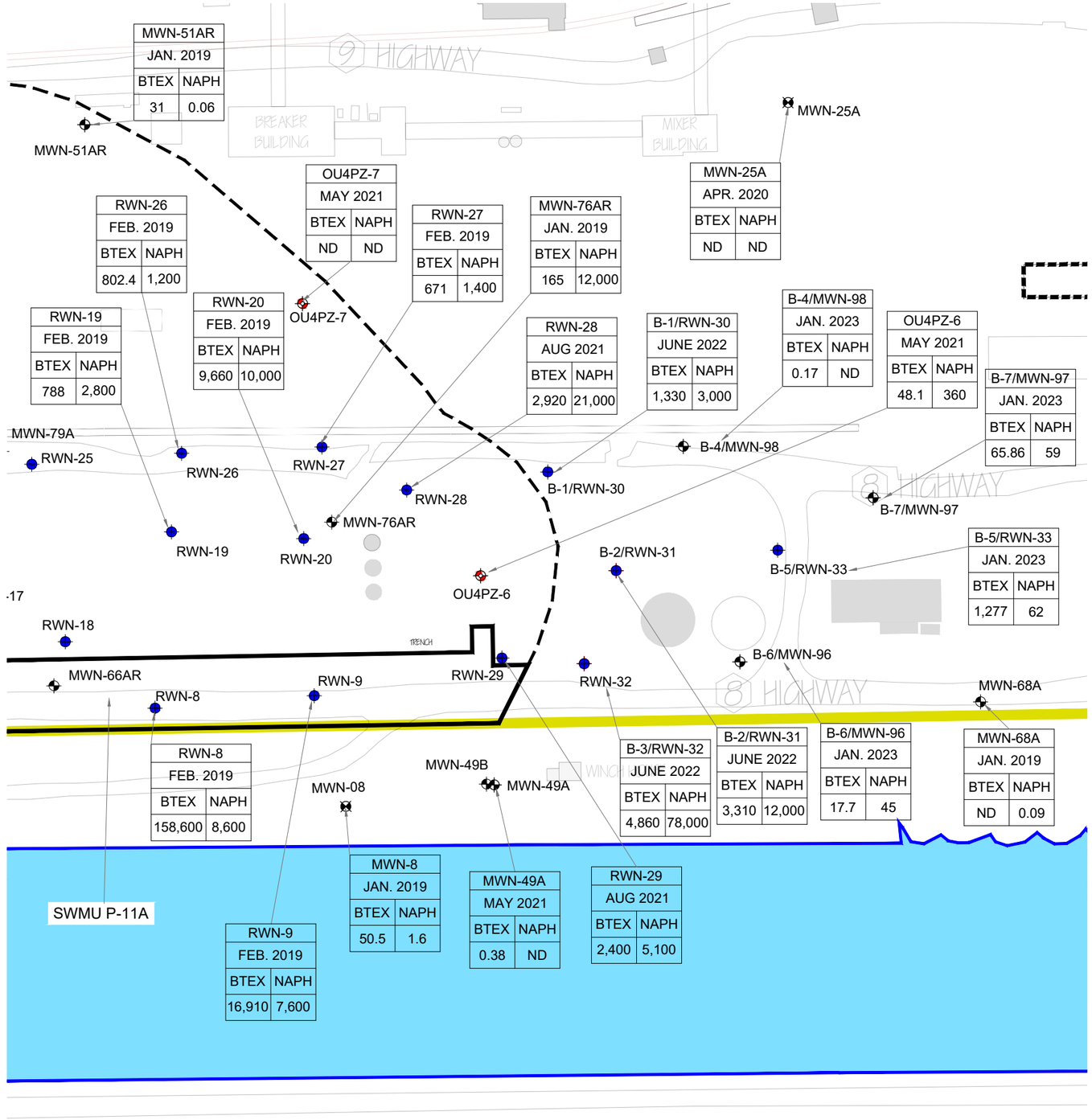
FIGURES

F:\CAD\TurnKey\Tecumseh Redevelopment\Corrective Measures\OU-4 Implementation\2022 GW Investigation Report\Figure 1; OU-4 Boring-Well Locations.dwg, 2/3/2023 10:07:00 AM

LEGEND:

- EXISTING STRUCTURE
- OU-4 BOUNDARY
- SWMU BOUNDARY ONLY P-11 AND P-11A SHOWN
- RWS-2 — GROUNDWATER RECOVERY WELL
- MWN-73A — GROUNDWATER MONITORING WELL
- RWN-20 / FEB. 2019 / 9,660 | 10,000 — WELL NUMBER; GROUNDWATER COLLECTION DATE; NAPHTHALENE CONCENTRATION; BTEX CONCENTRATION
- OU4PZ-1 — CMS - OU-4 PIEZOMETER

NOTES:
1. CONCENTRATIONS IN PARTS PER BILLION (MICROGRAMS PER LITER).
2. BTEX=SUM OF BENZENE, TOLUENE, ETHYLBENZENE AND TOTAL XYLENES.



N

100' 0' 100' 200'

SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

DATE: JUNE 2022
DRAFTED BY: CMC

TurnKey Environmental Restoration, LLC
in association with
Benchmark

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218,
(716) 856-0599

JOB NO.: T0071-021-912

OU-4 BORING/WELL LOCATIONS

SUPPLEMENTAL GROUNDWATER INVESTIGATION SUMMARY REPORT
FORMER BETHLEHEM STEEL SITE
LACKAWANNA, NEW YORK
PREPARED FOR
TECUMSEH REDEVELOPMENT INC.

FIGURE 1

ATTACHMENT 1

PHOTO LOG

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment Inc.	Tecumseh Site (OU-4) - Lackawanna, NY	0071-022-912

Photo No.	Date
1	12/07/22

Direction Photo Taken:
West Northwest

Description:
Setting up the drill rig at B-6/MWN-96 looking west northwest.

Photo No.	Date
2	12/07/22

Direction Photo Taken:
NA

Description:
Split spoon collected from 13-15' at B-6/MWN-96.

Prepared By: *BMG*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment Inc.	Tecumseh Site (OU-4) - Lackawanna, NY	0071-022-912

Photo No.	Date
3	12/07/22

Direction Photo Taken:
West

Description:
Setting up the drill rig at B-5/RWN-33 looking west.

Photo No.	Date
4	12/07/22

Direction Photo Taken:
NA

Description:
Split spoon collected from 9-11' at B-5/RWN-33.

Prepared By: *BMG*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment Inc.	Tecumseh Site (OU-4) - Lackawanna, NY	0071-022-912

Photo No.	Date
5	12/08/22

Direction Photo Taken:
Northeast

Description:
Drill rig set up at B-7/MWN-97 looking northeast.

Photo No.	Date
6	12/08/22

Direction Photo Taken:
NA

Description:
Top Split spoon collected from 7-9' at B-7/MWN-97.

Prepared By: *BMG*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment Inc.	Tecumseh Site (OU-4) - Lackawanna, NY	0071-022-912

Photo No.	Date
7	12/09/22

Direction Photo Taken:
Southwest

Description:
Drill rig set up at B-4/MWN-98 looking southwest.

Photo No.	Date
8	12/09/22

Direction Photo Taken:
NA

Description:
Split spoon collected from 15-17' at B-4/MWN-98.

Prepared By: *BMG*

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Tecumseh Redevelopment Inc.	Tecumseh Site (OU-4) - Lackawanna, NY	0071-022-912

Photo No.	Date
9	12/07/22

Direction Photo Taken:
Southwest

Description:
Typical 6" PVC well construction showing 2-foot sump (bottom left) below a 10-foot screened section. Top of the well in the top right side of photo.

Photo No.	Date
10	12/14/22

Direction Photo Taken:
Northeast

Description:
Well development activities using an air lift.

Prepared By: BMG

ATTACHMENT 2

WELL INSTALLATION LOGS

BOREHOLE/WELL INSTALLATION LOG

Project Name:	Operable Unit 4 (OU-4)	**LOCATION I.D.:**	**B-4/MWN-98**
Project Number:	T0071-022-912	**Well Type:**	☑ Stick-up ☐ Flush-mount
Client:	Tecumseh Redevelopment	**Start Date:**	12/09/22
Drilling Company:	SJB Drilling, Inc.	**End Date:**	12/09/22
Driller:	Art	**Logged By:**	RLD
Helper:		**Drilling Method:**	Hollow Stem Auger
Rig Type:	CME-ATV Mounted	**Sampling Method:**	Split spoon (2')

Elevation (fmsl)	Depth (fbgs)	Sample No.	Recovery (feet)	SAMPLE DESCRIPTION (Visual-Manual Method) Color, Moisture Condition, Primary Soil Type, Secondary Soil Type (<5% Trace, 5-10% Few, 15-25% Little, 30-45% Some), Structure (varved, stratified, thinly bedded, bedded, thickly bedded, laminated, fissured, blocky, lensed, massive), Consistency/Density (Standard Penetration Test, SPT), Weathering/Fracturing, Odor, Fill Materials (if present), Other	PID Scan (ppm)	Blow Counts
582.4	0			0.0 - 5' Black, moist, Fill, coarse to fine sand with some angular slag and trace brick, loose when disturbed	NA	NA
580.4	2					
578.4	4					
576.4	6	S1	0.5	5.0-7.0' Black, wet, Fill, coarse to fine sand with some angular slag and trace brick, loose when disturbed	0.0	6,4, 2,2
574.4	8	S2	1.0	7.0-9.0' Same as above	0.0	NA
572.4	10	S3	0.5	9.0-11.0' Same as above	0.0	1,1, 4,5
570.4	12	S4	0.5	11.0-13.0' Gray, wet, coarse to fine sand with some non-plastic fines, loose, woody debris	0.0	7,1, 3,1
568.4	14	S5	0.5	13.0-15.0' Same as above	0.0	1,1, 1,1
566.4	16	S6	0.5	15.0-17.0' Brown, moist, peat with wood remnants and few fine to medium sand, soft	0.0	NA
564.4	18	S7	1.0	17.0-19.0' Same as above with trace silty clay at 19.0'	0.0	NA
562.4	20	S8	1.0	19.0-20.5' Same as above	0.0	1,1, 1,2
				20.5-21.0' Gray, moist, medium clay		
560.4	22			End of Boring at 21.0 fbgs		

Well Construction Details

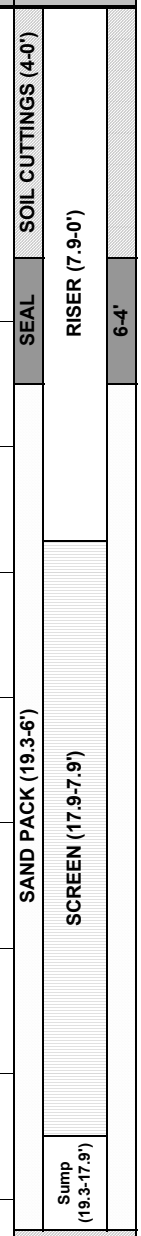
- SOIL CUTTINGS (4-0')
- SEAL
- RISER (8.2-0')
- 6-4'
- SAND PACK (19.4-6')
- SCREEN (18.2-8.2')
- Sump (19.4-18.2')

BOREHOLE/WELL INSTALLATION LOG

Project Name:	Operable Unit 4 (OU-4)	**LOCATION I.D.:**	**B-5/RWN-33**
Project Number:	T0071-022-912	**Well Type:**	☑ Stick-up ☐ Flush-mount
Client:	Tecumseh Redevelopment	**Start Date:**	12/07/22
Drilling Company:	SJB Drilling, Inc.	**End Date:**	12/07/22
Driller:	Art	**Logged By:**	RLD
Helper:		**Drilling Method:**	Hollow Stem Auger
Rig Type:	CME-ATV Mounted	**Sampling Method:**	Split spoon (2')

Elevation (fmsl)	Depth (fbgs)	Sample No.	Recovery (feet)	SAMPLE DESCRIPTION (Visual-Manual Method) Color, Moisture Condition, Primary Soil Type, Secondary Soil Type (<5% Trace, 5-10% Few, 15-25% Little, 30-45% Some), Structure (varved, stratified, thinly bedded, bedded, thickly bedded, laminated, fissured, blocky, lensed, massive), Consistency/Density (Standard Penetration Test, SPT), Weathering/Fracturing, Odor, Fill Materials (if present), Other	PID Scan (ppm)	Blow Counts
582.5	0			0.0 - 5' Black, moist, Fill, coarse to fine sand with some angular slag and trace brick, loose when disturbed	NA	NA
580.5	2					
578.5	4					
576.5	6	S1	0.0	5.0-7.0' No recovery, same as above	NA	NA
574.5	8	S2	0.5	7.0-9.0' Same as above	0.0	1,1, 1,1
572.5	10	S3	0.8	9.0-11.0' Same as above with some woody debris	0.0	9,13, 19,11
570.5	12	S4	1.0	11.0-13.0' Brown, moist, peat with wood remnants and few fine to medium sand, soft	0.0	1,1, 1,2
568.5	14	S5	0.5	13.0-15.0' Same as above with little sandy clay	0.0	3,1, 2,2
566.5	16	S6	0.0	15.0-17.0' No recovery	NA	NA
564.5	18	S7	1.0	17.0-19.0' Gray, wet, sandy clay	0.0	1,3, 2,2
562.5	20	S8	1.0	19.0-21.0' Gray/olive, moist, clay, medium density, high plastiity	0.0	4,4, 5,6
560.5	22			End of Boring at 21.0 fbgs		

Well Construction Details

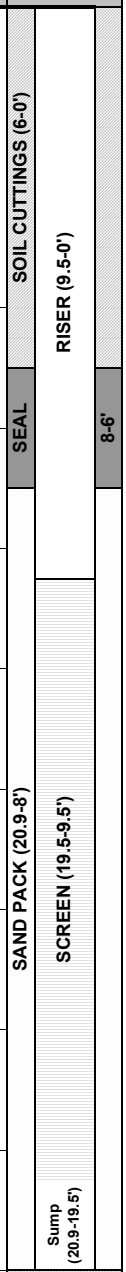


BOREHOLE/WELL INSTALLATION LOG

Project Name:	Operable Unit 4 (OU-4)	**LOCATION I.D.:**	**B-6/MWN-96**
Project Number:	T0071-022-912	**Well Type:**	☑ Stick-up ☐ Flush-mount
Client:	Tecumseh Redevelopment	**Start Date:**	12/07/22
Drilling Company:	SJB Drilling, Inc.	**End Date:**	12/07/22
Driller:	Art	**Logged By:**	RLD
Helper:		**Drilling Method:**	Hollow Stem Auger
Rig Type:	CME-ATV Mounted	**Sampling Method:**	Split spoon (2')

Elevation (fmsl)	Depth (fbgs)	Sample No.	Recovery (feet)	SAMPLE DESCRIPTION (Visual-Manual Method) Color, Moisture Condition, Primary Soil Type, Secondary Soil Type (<5% Trace, 5-10% Few, 15-25% Little, 30-45% Some), Structure (varved, stratified, thinly bedded, bedded, thickly bedded, laminated, fissured, blocky, lensed, massive), Consistency/Density (Standard Penetration Test, SPT), Weathering/Fracturing, Odor, Fill Materials (if present), Other	PID Scan (ppm)	Blow Counts
584.1	0			0.0 - 5' Black, moist, Fill, coarse to fine sand with some angular slag and trace brick, loose when disturbed	NA	NA
582.1	2					
580.1	4					
578.1	6	S1	0.5	5.0-7.0' Dark brown, dry, Fill, sand and gravel	0.0	5,3, 5,7
576.1	8	S2	0.5	7.0-9.0' Dark brown, wet, Fill, medium sand with little slag, loose when disturbed	0.0	2,4, 3,2
574.1	10	S3	0.5	9.0-11.0' Brown, wet, Fill, fine sand with some brick, loose when disturbed	0.0	3,4, 1,1
572.1	12	S4	0.1	11.0-13.0' Same as above	0.0	2,1, 1,2
570.1	14	S5	0.5	13.0-15.0' Gray, wet, coarse to fine sand with some non-plastic fines, soft	0.0	1,2, 1,2
568.1	16	S6	0.0	15.0-17.0' No recovery	0.0	NA
566.1	18	S7	1.0	17.0-19.0' Brown, moist, peat with wood remnants and few fine to medium sand, soft	0.0	1,1, 1,1
564.1	20	S8	1.0	19.0-21.0' Gray/olive, wet, sandy clay, soft	0.0	1,1, 1,1
562.1	22	S9	1.0	21.0-23.0' Gray/olive, wet, clay, soft	0.0	2,4, 5,5
560.1	24			End of Boring at 23.0 fbgs		

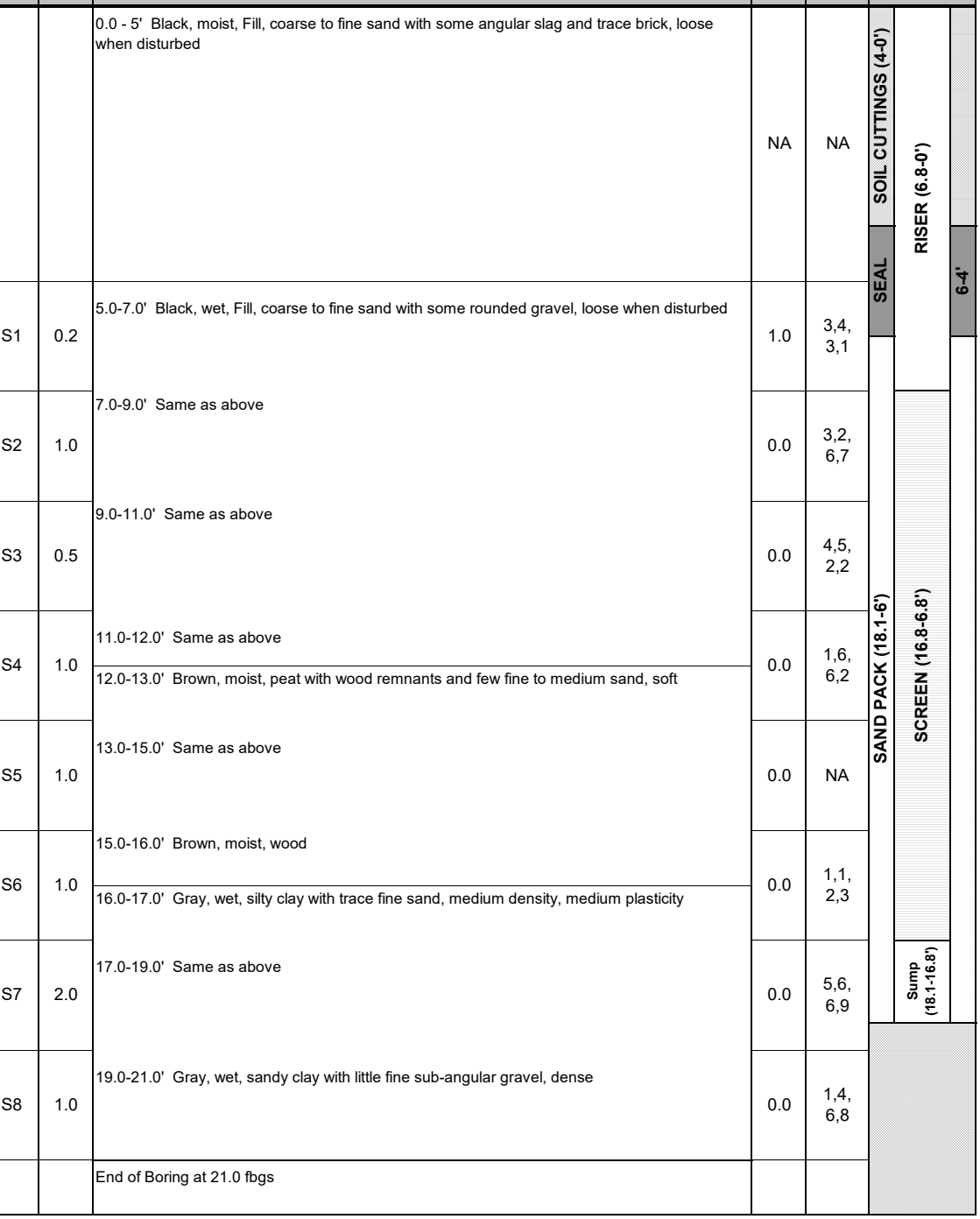
Well Construction Details



BOREHOLE/WELL INSTALLATION LOG

Project Name:	Operable Unit 4 (OU-4)	**LOCATION I.D.:**	**B-7/MWN-97**
Project Number:	T0071-022-912	**Well Type:**	☑ Stick-up ☐ Flush-mount
Client:	Tecumseh Redevelopment	**Start Date:**	12/08/22
Drilling Company:	SJB Drilling, Inc.	**End Date:**	12/08/22
Driller:	Art	**Logged By:**	RLD
Helper:		**Drilling Method:**	Hollow Stem Auger
Rig Type:	CME-ATV Mounted	**Sampling Method:**	Split spoon (2')

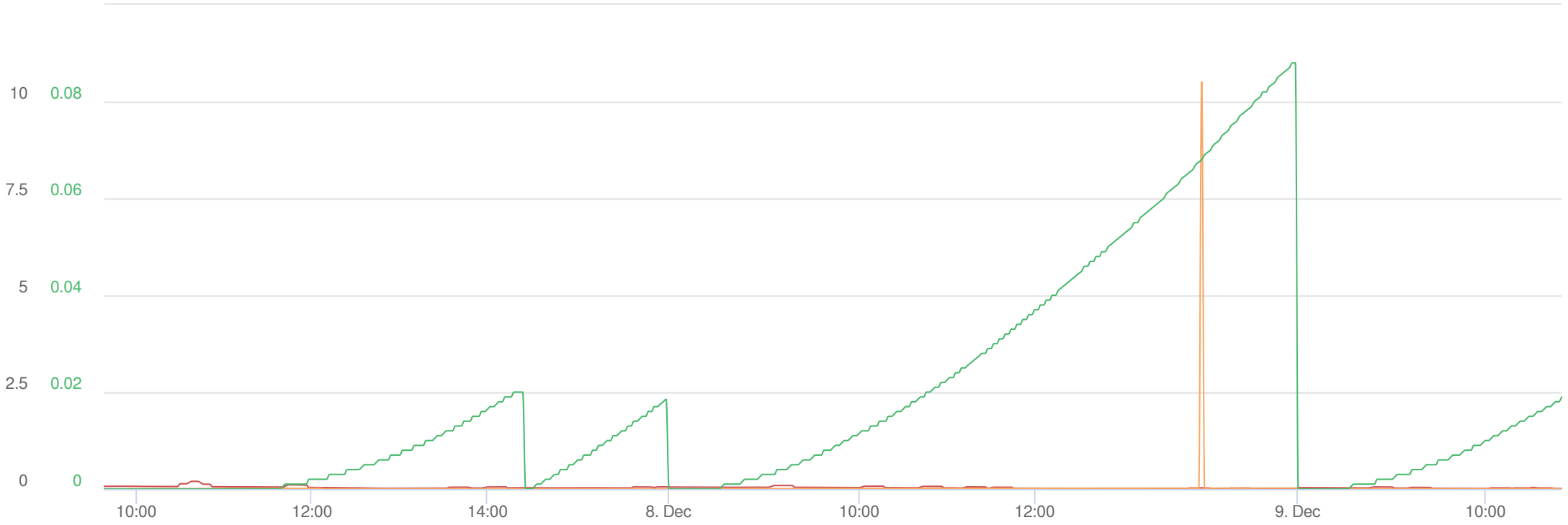
Elevation (fmsl)	Depth (fbgs)	Sample No.	Recovery (feet)	SAMPLE DESCRIPTION (Visual-Manual Method) Color, Moisture Condition, Primary Soil Type, Secondary Soil Type (<5% Trace, 5-10% Few, 15-25% Little, 30-45% Some), Structure (varved, stratified, thinly bedded, bedded, thickly bedded, laminated, fissured, blocky, lensed, massive), Consistency/Density (Standard Penetration Test, SPT), Weathering/Fracturing, Odor, Fill Materials (if present), Other	PID Scan (ppm)	Blow Counts
583.5	0			0.0 - 5' Black, moist, Fill, coarse to fine sand with some angular slag and trace brick, loose when disturbed	NA	NA
581.5	2					
579.5	4					
577.5	6	S1	0.2	5.0-7.0' Black, wet, Fill, coarse to fine sand with some rounded gravel, loose when disturbed	1.0	3,4, 3,1
575.5	8	S2	1.0	7.0-9.0' Same as above	0.0	3,2, 6,7
573.5	10	S3	0.5	9.0-11.0' Same as above	0.0	4,5, 2,2
571.5	12	S4	1.0	11.0-12.0' Same as above 12.0-13.0' Brown, moist, peat with wood remnants and few fine to medium sand, soft	0.0	1,6, 6,2
569.5	14	S5	1.0	13.0-15.0' Same as above	0.0	NA
567.5	16	S6	1.0	15.0-16.0' Brown, moist, wood 16.0-17.0' Gray, wet, silty clay with trace fine sand, medium density, medium plasticity	0.0	1,1, 2,3
565.5	18	S7	2.0	17.0-19.0' Same as above	0.0	5,6, 6,9
563.5	20	S8	1.0	19.0-21.0' Gray, wet, sandy clay with little fine sub-angular gravel, dense	0.0	1,4, 6,8
561.5	22			End of Boring at 21.0 fbgs		



ATTACHMENT 3

COMMUNITY AIR MONITORING DATA

12/04/2022 0:00:00 – 12/09/2022 11:45:24
(GMT-05:00) Eastern Time (US & Canada)



Mass Conc. Total mg/m³ AVG 15m
mg/m³
DustTrak-8530
RS232(C)

MIN	AVG	MAX
0.0089	0.0383	0.1984

Total TWA mg/m³
DustTrak-8530
RS232(C)

MIN	AVG	MAX
0	0.03	21

VOC (TWA) ppm
miniRAE 3000
RS232(A)

MIN	AVG	MAX
0	0.018	0.088

Name	B&T CAMP (FA05352)
S/N	2B021826
Description	FA05352
Location	R4GQ+9J Lackawanna, NY, USA

Device (America/New_York)	Thiamis 2B021826 Location	RAE RS232(A) 2B021826 VOC (TWA) (ppm)	DustTrak RS232(C) 2B021826 Total TWA (mg/m³)	mg/m³ AVG 15m (mg/m³)	VOC ppm AVG 15m (ppm)
12/7/2022 9:39		0	0	0.067	0
12/7/2022 9:40	42.82623;-78.86062	0	0	0.0675	0
12/7/2022 9:41		0	0	0.068	0
12/7/2022 9:42		0	0	0.0683	0
12/7/2022 9:43		0	0	0.0684	0
12/7/2022 9:44		0	0	0.0685	0
12/7/2022 9:45	42.82632;-78.86063	0	0	0.0686	0
12/7/2022 9:46		0	0	0.0686	0
12/7/2022 9:47		0	0	0.0688	0
12/7/2022 9:48		0	0	0.0691	0
12/7/2022 9:49		0	0	0.0692	0
12/7/2022 9:50	42.82624;-78.86055	0	0	0.0692	0
12/7/2022 9:51		0	0	0.0691	0
12/7/2022 9:52		0	0	0.0689	0
12/7/2022 9:53		0	0	0.0687	0
12/7/2022 9:54		0	0.002	0.0687	0
12/7/2022 9:55	42.82633;-78.86059	0	0.002	0.0685	0
12/7/2022 9:56		0	0.002	0.0683	0
12/7/2022 9:57		0	0.003	0.0681	0
12/7/2022 9:58		0	0.003	0.0678	0
12/7/2022 9:59		0	0.003	0.0676	0
12/7/2022 10:00	42.82625;-78.86058	0	0.003	0.0674	0
12/7/2022 10:01		0	0.003	0.0671	0
12/7/2022 10:02		0	0.003	0.0667	0
12/7/2022 10:03		0	0.003	0.0662	0
12/7/2022 10:04		0	0.004	0.0664	0
12/7/2022 10:05	42.82627;-78.86063	0	0.004	0.066	0
12/7/2022 10:06		0	0.004	0.0656	0
12/7/2022 10:07		0	0.004	0.0653	0
12/7/2022 10:08		0	0.004	0.0651	0
12/7/2022 10:09		0	0.004	0.0649	0
12/7/2022 10:10	42.82627;-78.86053	0	0.004	0.0648	0
12/7/2022 10:11		0	0.004	0.0646	0
12/7/2022 10:12		0	0.005	0.0645	0
12/7/2022 10:13		0	0.005	0.0644	0
12/7/2022 10:14		0	0.005	0.0642	0
12/7/2022 10:15	42.82633;-78.86058	0	0.005	0.064	0
12/7/2022 10:16		0	0.005	0.0639	0
12/7/2022 10:17		0	0.005	0.0639	0
12/7/2022 10:18		0	0.005	0.0638	0
12/7/2022 10:19		0	0.006	0.0631	0
12/7/2022 10:20	42.82627;-78.86068	0	0.006	0.063	0
12/7/2022 10:21		0	0.006	0.0631	0
12/7/2022 10:22		0	0.006	0.0631	0
12/7/2022 10:23		0	0.006	0.0631	0
12/7/2022 10:24		0	0.006	0.0632	0
12/7/2022 10:25	42.82625;-78.86057	0	0.006	0.0633	0

12/7/2022 10:26		0	0.006	0.0633	0
12/7/2022 10:27		0	0.007	0.0632	0
12/7/2022 10:28		0	0.007	0.0631	0
12/7/2022 10:29		0	0.007	0.0631	0
12/7/2022 10:30	42.82626;-78.8606	0	0.007	0.1343	0
12/7/2022 10:31		0	0.007	0.1342	0
12/7/2022 10:32		0	0.007	0.1341	0
12/7/2022 10:33		0	0.007	0.134	0
12/7/2022 10:34		0	0.007	0.1339	0
12/7/2022 10:35	42.82625;-78.86059	0	0.008	0.1337	0
12/7/2022 10:36		0	0.008	0.1333	0
12/7/2022 10:37		0	0.008	0.1984	0
12/7/2022 10:38		0	0.008	0.1979	0
12/7/2022 10:39		0	0.008	0.1973	0
12/7/2022 10:40	42.82627;-78.86063	0	0.008	0.1968	0
12/7/2022 10:41		0	0.008	0.1963	0
12/7/2022 10:42		0	0.008	0.1959	0
12/7/2022 10:43		0	0.009	0.1954	0
12/7/2022 10:44		0	0.009	0.1949	0
12/7/2022 10:45	42.82627;-78.8607	0	0.009	0.1233	0
12/7/2022 10:46		0	0.009	0.1229	0
12/7/2022 10:47		0	0.009	0.1225	0
12/7/2022 10:48		0	0.009	0.1221	0
12/7/2022 10:49		0	0.009	0.122	0
12/7/2022 10:50	42.82626;-78.86063	0	0.009	0.1229	0
12/7/2022 10:51		0	0.01	0.1231	0
12/7/2022 10:52		0	0.01	0.0575	0
12/7/2022 10:53		0	0.01	0.0575	0
12/7/2022 10:54		0	0.01	0.0574	0
12/7/2022 10:55	42.82631;-78.86059	0	0.01	0.0574	0.0001
12/7/2022 10:56		0	0.01	0.0573	0.0001
12/7/2022 10:57		0	0.01	0.0573	0.0001
12/7/2022 10:58		0	0.01	0.0571	0.0001
12/7/2022 10:59		0	0.01	0.057	0.0001
12/7/2022 11:00	42.82624;-78.86065	0	0.011	0.0569	0.0002
12/7/2022 11:01		0	0.011	0.0567	0.0003
12/7/2022 11:02		0	0.011	0.0567	0.0005
12/7/2022 11:03		0	0.011	0.0564	0.0009
12/7/2022 11:04		0	0.011	0.0561	0.0015
12/7/2022 11:05	42.82626;-78.86064	0	0.011	0.0549	0.0017
12/7/2022 11:06		0	0.011	0.0544	0.0023
12/7/2022 11:07		0	0.011	0.0543	0.0027
12/7/2022 11:08		0	0.011	0.0543	0.0032
12/7/2022 11:09		0	0.012	0.0542	0.0036
12/7/2022 11:10	42.82624;-78.86063	0	0.012	0.0541	0.004
12/7/2022 11:11		0	0.012	0.0539	0.0041
12/7/2022 11:12		0	0.012	0.0538	0.0045
12/7/2022 11:13		0	0.012	0.0537	0.0049
12/7/2022 11:14		0	0.012	0.0537	0.0055
12/7/2022 11:15	42.82633;-78.86064	0	0.012	0.0536	0.0061
12/7/2022 11:16		0	0.012	0.0536	0.0071

12/7/2022 11:17		0	0.012	0.0535	0.0075
12/7/2022 11:18		0	0.013	0.0535	0.0076
12/7/2022 11:19		0	0.013	0.0535	0.0075
12/7/2022 11:20	42.82632;-78.8606	0	0.013	0.0533	0.0081
12/7/2022 11:21		0	0.013	0.0532	0.0081
12/7/2022 11:22		0	0.013	0.053	0.0085
12/7/2022 11:23		0	0.013	0.0528	0.0089
12/7/2022 11:24		0	0.013	0.0525	0.0095
12/7/2022 11:25	42.82628;-78.86063	0	0.013	0.0523	0.0102
12/7/2022 11:26		0	0.013	0.052	0.0112
12/7/2022 11:27		0	0.014	0.0517	0.0118
12/7/2022 11:28		0	0.014	0.0515	0.0127
12/7/2022 11:29		0	0.014	0.0512	0.013
12/7/2022 11:30	42.82622;-78.86066	0	0.014	0.0509	0.0134
12/7/2022 11:31		0	0.014	0.0506	0.0137
12/7/2022 11:32		0	0.014	0.0503	0.014
12/7/2022 11:33		0	0.014	0.0501	0.0145
12/7/2022 11:34		0	0.014	0.0498	0.0151
12/7/2022 11:35	42.82627;-78.86067	0	0.014	0.0496	0.0155
12/7/2022 11:36		0	0.014	0.0494	0.0163
12/7/2022 11:37		0	0.015	0.0493	0.0168
12/7/2022 11:38		0	0.015	0.0493	0.0175
12/7/2022 11:39		0	0.015	0.0493	0.0181
12/7/2022 11:40	42.82624;-78.86053	0	0.015	0.0493	0.0185
12/7/2022 11:41		0.001	0.015	0.0493	0.0191
12/7/2022 11:42		0.001	0.015	0.0493	0.0197
12/7/2022 11:43		0.001	0.015	0.1046	0.0202
12/7/2022 11:44		0.001	0.015	0.1047	0.0211
12/7/2022 11:45	42.82631;-78.86069	0.001	0.015	0.1047	0.0217
12/7/2022 11:46		0.001	0.015	0.1048	0.0223
12/7/2022 11:47		0.001	0.016	0.1047	0.0233
12/7/2022 11:48		0.001	0.016	0.1046	0.0243
12/7/2022 11:49		0.001	0.016	0.1042	0.0251
12/7/2022 11:50	42.82623;-78.86055	0.001	0.016	0.1038	0.026
12/7/2022 11:51		0.001	0.016	0.1032	0.0266
12/7/2022 11:52		0.001	0.016	0.1025	0.0274
12/7/2022 11:53		0.001	0.016	0.1016	0.0279
12/7/2022 11:54		0.001	0.016	0.1007	0.0285
12/7/2022 11:55	42.82631;-78.86061	0.001	0.016	0.0997	0.0289
12/7/2022 11:56		0.001	0.016	0.0987	0.0295
12/7/2022 11:57		0.001	0.016	0.0977	0.0305
12/7/2022 11:58		0.002	0.016	0.0414	0.031
12/7/2022 11:59		0.002	0.017	0.0403	0.0316
12/7/2022 12:00	42.82626;-78.86064	0.002	0.017	0.0393	0.0319
12/7/2022 12:01		0.002	0.017	0.0383	0.0322
12/7/2022 12:02		0.002	0.017	0.0374	0.0323
12/7/2022 12:03		0.002	0.017	0.0366	0.0326
12/7/2022 12:04		0.002	0.017	0.0361	0.0328
12/7/2022 12:05	42.82627;-78.86053	0.002	0.017	0.0355	0.033
12/7/2022 12:06		0.002	0.017	0.0352	0.0333
12/7/2022 12:07				0.0349	0.0337

12/7/2022 12:07		0.002	0.017		
12/7/2022 12:08		0.002	0	0.0346	0.034
12/7/2022 12:09		0.002	0	0.0344	0.0343
12/7/2022 12:10	42.82634;-78.86071	0.002	0	0.0343	0.0347
12/7/2022 12:11		0.002	0	0.0341	0.0347
12/7/2022 12:12		0.003	0	0.0339	0.0347
12/7/2022 12:13		0.003	0	0.0336	0.0348
12/7/2022 12:14		0.003	0	0.0333	0.0347
12/7/2022 12:15	42.82634;-78.86069	0.003	0	0.0329	0.0352
12/7/2022 12:16		0.003	0	0.0324	0.0356
12/7/2022 12:17		0.003	0	0.0319	0.0363
12/7/2022 12:18		0.003	0	0.0315	0.0368
12/7/2022 12:19		0.003	0	0.031	0.0374
12/7/2022 12:20	42.82626;-78.86063	0.003	0	0.0305	0.038
12/7/2022 12:21		0.003	0	0.0301	0.0382
12/7/2022 12:22		0.003	0	0.0296	0.0385
12/7/2022 12:23		0.003	0.001	0.0292	0.0391
12/7/2022 12:24		0.004	0.001	0.0288	0.0397
12/7/2022 12:25	42.82628;-78.86058	0.004	0.001	0.0283	0.0402
12/7/2022 12:26		0.004	0.001	0.0279	0.0407
12/7/2022 12:27		0.004	0.001	0.0275	0.0411
12/7/2022 12:28		0.004	0.001	0.0272	0.0413
12/7/2022 12:29		0.004	0.001	0.0269	0.0417
12/7/2022 12:30	42.8263;-78.86065	0.004	0.001	0.0266	0.042
12/7/2022 12:31		0.004	0.001	0.0263	0.0425
12/7/2022 12:32		0.004	0.001	0.0259	0.0428
12/7/2022 12:33		0.004	0.001	0.0254	0.0432
12/7/2022 12:34		0.004	0.001	0.0249	0.0437
12/7/2022 12:35	42.82623;-78.86055	0.005	0.002	0.0243	0.0441
12/7/2022 12:36		0.005	0.002	0.0237	0.0448
12/7/2022 12:37		0.005	0.002	0.0231	0.0453
12/7/2022 12:38		0.005	0.002	0.0225	0.0457
12/7/2022 12:39		0.005	0.002	0.0218	0.0459
12/7/2022 12:40	42.82642;-78.86066	0.005	0.002	0.0212	0.0465
12/7/2022 12:41		0.005	0.002	0.0206	0.0471
12/7/2022 12:42		0.005	0.002	0.02	0.0481
12/7/2022 12:43		0.005	0.002	0.0194	0.0488
12/7/2022 12:44		0.005	0.002	0.0188	0.0495
12/7/2022 12:45	42.82627;-78.86061	0.006	0.002	0.0182	0.0501
12/7/2022 12:46		0.006	0.002	0.0177	0.0504
12/7/2022 12:47		0.006	0.002	0.0172	0.0505
12/7/2022 12:48		0.006	0.002	0.0168	0.0507
12/7/2022 12:49		0.006	0.002	0.0165	0.0509
12/7/2022 12:50	42.82633;-78.86055	0.006	0.002	0.0162	0.0513
12/7/2022 12:51		0.006	0.002	0.016	0.0518
12/7/2022 12:52		0.006	0.002	0.0159	0.0521
12/7/2022 12:53		0.006	0.002	0.0157	0.0523
12/7/2022 12:54		0.007	0.002	0.0157	0.0527
12/7/2022 12:55	42.82631;-78.86063	0.007	0.002	0.0157	0.0529
12/7/2022 12:56		0.007	0.002	0.0157	0.0533
12/7/2022 12:57		0.007	0.002	0.0159	0.0535

12/7/2022 12:58		0.007	0.002	0.016	0.0539
12/7/2022 12:59		0.007	0.002	0.0162	0.0542
12/7/2022 13:00	42.82629;-78.86056	0.007	0.002	0.0164	0.0544
12/7/2022 13:01		0.007	0.002	0.0167	0.0551
12/7/2022 13:02		0.008	0.002	0.0169	0.0557
12/7/2022 13:03		0.008	0.003	0.0172	0.0563
12/7/2022 13:04		0.008	0.003	0.0175	0.0571
12/7/2022 13:05	42.82632;-78.8606	0.008	0.003	0.0177	0.0577
12/7/2022 13:06		0.008	0.003	0.0179	0.0582
12/7/2022 13:07			0.003	0.0181	0.0591
12/7/2022 13:08		0.008	0.003	0.0183	0.0598
12/7/2022 13:09		0.008	0.003	0.0185	0.0605
12/7/2022 13:10	42.82632;-78.86053	0.009	0.003	0.0186	0.0609
12/7/2022 13:11		0.009	0.003	0.0188	0.0611
12/7/2022 13:12		0.009	0.003	0.0189	0.0617
12/7/2022 13:13		0.009	0.003	0.019	0.0623
12/7/2022 13:14		0.009	0.003	0.0191	0.063
12/7/2022 13:15	42.82633;-78.86059	0.009	0.003	0.0193	0.0636
12/7/2022 13:16		0.009	0.003	0.0195	0.0639
12/7/2022 13:17		0.009	0.003	0.0195	0.0642
12/7/2022 13:18		0.01	0.003	0.0196	0.0649
12/7/2022 13:19		0.01	0.003	0.0197	0.065
12/7/2022 13:20	42.82626;-78.86064	0.01	0.003	0.0197	0.0651
12/7/2022 13:21		0.01	0.003	0.0198	0.0656
12/7/2022 13:22		0.01	0.003	0.0199	0.0659
12/7/2022 13:23		0.01	0.003	0.0199	0.0665
12/7/2022 13:24		0.01	0.003	0.02	0.0671
12/7/2022 13:25	42.82632;-78.86059	0.011	0.003	0.0201	0.0677
12/7/2022 13:26		0.011	0.003	0.0201	0.0681
12/7/2022 13:27		0.011	0.003	0.0203	0.0686
12/7/2022 13:28		0.011	0.004	0.0203	0.069
12/7/2022 13:29		0.011	0.004	0.0204	0.0697
12/7/2022 13:30	42.82632;-78.86066	0.011	0.004	0.0204	0.0703
12/7/2022 13:31		0.012	0.004	0.0204	0.0711
12/7/2022 13:32		0.012	0.004	0.0205	0.0718
12/7/2022 13:33		0.012	0.004	0.0205	0.0722
12/7/2022 13:34		0.012	0.004	0.0443	0.0726
12/7/2022 13:35	42.82632;-78.86057	0.012	0.004	0.0445	0.0735
12/7/2022 13:36		0.012	0.004	0.0446	0.0735
12/7/2022 13:37		0.012	0.004	0.0447	0.074
12/7/2022 13:38		0.013	0.004	0.0451	0.0743
12/7/2022 13:39		0.013	0.004	0.0453	0.0748
12/7/2022 13:40	42.82627;-78.86062		0.004	0.0453	0.0753
12/7/2022 13:41			0.004	0.0455	0.0757
12/7/2022 13:42		0.013	0.004	0.0456	0.0758
12/7/2022 13:43		0.013	0.004	0.0457	0.0762
12/7/2022 13:44		0.014	0	0.0459	0.0763
12/7/2022 13:45	42.82629;-78.86061	0.014	0	0.046	0.0769
12/7/2022 13:46		0.014	0	0.0461	0.0772
12/7/2022 13:47		0.014	0	0.0463	0.0779
12/7/2022 13:48		0.014	0	0.0464	0.0785

12/7/2022 13:49		0.014	0	0.0228	0.0791
12/7/2022 13:50	42.82626;-78.8606	0.015	0	0.0229	0.0792
12/7/2022 13:51		0.015	0	0.0229	0.0799
12/7/2022 13:52		0.015	0	0.023	0.0802
12/7/2022 13:53		0.015	0	0.0229	0.0807
12/7/2022 13:54		0.015	0	0.0229	0.0811
12/7/2022 13:55	42.82624;-78.86065	0.015	0	0.0229	0.0817
12/7/2022 13:56		0.016	0	0.0231	0.0821
12/7/2022 13:57		0.016	0	0.0232	0.0827
12/7/2022 13:58		0.016	0.001	0.0233	0.083
12/7/2022 13:59		0.016	0.001	0.0505	0.0832
12/7/2022 14:00	42.82626;-78.86057	0.016	0.001	0.0507	0.0833
12/7/2022 14:01		0.017	0.001	0.0509	0.0837
12/7/2022 14:02		0.017	0.001	0.0511	0.084
12/7/2022 14:03		0.017	0.001	0.0512	0.0845
12/7/2022 14:04		0.017	0.001	0.0514	0.0849
12/7/2022 14:05	42.8263;-78.86063	0.017	0.001	0.0517	0.0855
12/7/2022 14:06		0.017	0.001	0.0519	0.0857
12/7/2022 14:07		0.018	0.001	0.0521	0.086
12/7/2022 14:08		0.018	0.001	0.0527	0.0863
12/7/2022 14:09		0.018	0.001	0.0531	0.0867
12/7/2022 14:10	42.82629;-78.8606	0.018	0.001	0.0534	0.087
12/7/2022 14:11		0.018	0.001	0.0537	0.0873
12/7/2022 14:12		0.019	0.002	0.0541	0.0875
12/7/2022 14:13		0.019	0.002	0.0545	0.0879
12/7/2022 14:14		0.019	0.002	0.0278	0.0884
12/7/2022 14:15	42.82626;-78.86059	0.019	0.002	0.0281	0.0885
12/7/2022 14:16		0.019	0.002	0.0284	0.0887
12/7/2022 14:17		0.019	0.002	0.0286	0.0881
12/7/2022 14:18		0.02	0.002	0.0289	0.0873
12/7/2022 14:19		0.02	0.002	0.0291	0.0865
12/7/2022 14:20	42.82625;-78.86061	0.02	0.002	0.0294	0.0859
12/7/2022 14:21		0.02	0.002	0.0301	0.0851
12/7/2022 14:22		0.02	0.002	0.0304	0.084
12/7/2022 14:23		0.02	0.002	0.0304	0.0824
12/7/2022 14:24		0.02		0.0307	
12/7/2022 14:28		0	0		0.0777
12/7/2022 14:29		0	0	0.0311	0.0759
12/7/2022 14:30		0	0	0.0309	0.0745
12/7/2022 14:31		0	0	0.0307	0.0732
12/7/2022 14:32		0	0	0.0305	0.0725
12/7/2022 14:33		0	0	0.0304	0.0722
12/7/2022 14:34		0	0	0.0301	0.0723
12/7/2022 14:35	42.82638;-78.86057	0.001	0	0.0296	0.0721
12/7/2022 14:36		0.001	0	0.0287	0.0725
12/7/2022 14:37		0.001	0	0.0284	0.0731
12/7/2022 14:38		0.001	0	0.0279	0.0748
12/7/2022 14:39		0.001	0	0.0274	0.0754
12/7/2022 14:40	42.82631;-78.86057	0.001	0	0.0273	0.0759
12/7/2022 14:41		0.002	0	0.0272	0.0762
12/7/2022 14:42		0.002	0	0.0271	0.0768

12/7/2022 14:43		0.002	0	0.0271	0.0781
12/7/2022 14:44		0.002	0.001	0.0269	0.0789
12/7/2022 14:45	42.82639;-78.86071	0.002	0.001	0.0268	0.0796
12/7/2022 14:46		0.002	0.001	0.0267	0.0803
12/7/2022 14:47		0.003	0.001	0.0268	0.0813
12/7/2022 14:48		0.003	0.001	0.0269	0.082
12/7/2022 14:49		0.003	0.001	0.0269	0.0825
12/7/2022 14:50	42.82629;-78.8606	0.003	0.001	0.027	0.0832
12/7/2022 14:51		0.003	0.001	0.027	0.084
12/7/2022 14:52		0.004	0.001	0.0271	0.0844
12/7/2022 14:53		0.004	0.001	0.0273	0.0846
12/7/2022 14:54		0.004	0.001	0.0275	0.085
12/7/2022 14:55	42.82634;-78.86049	0.004	0.002	0.0277	0.0852
12/7/2022 14:56		0.004	0.002	0.0279	0.0856
12/7/2022 14:57		0.004	0.002	0.028	0.0858
12/7/2022 14:58		0.005	0.002	0.0282	0.0862
12/7/2022 14:59		0.005	0.002	0.0283	0.087
12/7/2022 15:00	42.82634;-78.8606	0.005	0.002	0.0285	0.0877
12/7/2022 15:01		0.005	0.002	0.0286	0.088
12/7/2022 15:02		0.005	0.002	0.0287	0.0887
12/7/2022 15:03		0.006	0.002	0.0287	0.0891
12/7/2022 15:04		0.006	0.002	0.0289	0.09
12/7/2022 15:05	42.82627;-78.86054	0.006	0.002	0.029	0.0905
12/7/2022 15:06		0.006	0.002	0.0292	0.0907
12/7/2022 15:07		0.006	0.002	0.0295	0.0915
12/7/2022 15:08		0.007	0.002	0.0295	0.0921
12/7/2022 15:09		0.007	0.002	0.0295	0.0929
12/7/2022 15:10	42.82624;-78.86057	0.007	0.002	0.0296	0.0933
12/7/2022 15:11		0.007	0.003	0.0297	0.0936
12/7/2022 15:12		0.007	0.003	0.0298	0.0941
12/7/2022 15:13			0.003	0.0299	0.0941
12/7/2022 15:14			0.003	0.0299	0.0946
12/7/2022 15:15	42.82636;-78.86066	0.008	0.003	0.03	0.0953
12/7/2022 15:16		0.008	0.003	0.0301	0.0957
12/7/2022 15:17		0.008	0.003	0.0301	0.0957
12/7/2022 15:18		0.009	0.003	0.0301	0.0961
12/7/2022 15:19		0.009	0.003	0.0299	0.0963
12/7/2022 15:20	42.82621;-78.86067	0.009	0.003	0.0297	0.0966
12/7/2022 15:21		0.009	0.003	0.0294	0.0968
12/7/2022 15:22		0.009	0.003	0.0291	0.0967
12/7/2022 15:23		0.01	0.003	0.0287	0.0969
12/7/2022 15:24		0.01	0.003	0.0285	0.0969
12/7/2022 15:25	42.82632;-78.86057	0.01	0.003	0.0283	0.0971
12/7/2022 15:26		0.01	0.003	0.028	0.098
12/7/2022 15:27		0.01	0.003	0.0278	0.0983
12/7/2022 15:28		0.011	0.004	0.0276	0.0988
12/7/2022 15:29		0.011	0.004	0.0273	0.0988
12/7/2022 15:30	42.82625;-78.8606	0.011	0.004	0.0271	0.0988
12/7/2022 15:31		0.011	0.004	0.0269	0.0987
12/7/2022 15:32		0.011	0.004	0.0268	0.0989
12/7/2022 15:33		0.012	0.004	0.0268	0.0992

12/7/2022 15:34		0.012	0.004	0.0269	0.0997
12/7/2022 15:35	42.82628;-78.86062	0.012	0.004	0.0269	0.0999
12/7/2022 15:36		0.012	0.004	0.027	0.1004
12/7/2022 15:37		0.012	0.004	0.0269	0.1011
12/7/2022 15:38		0.013	0.004	0.0271	0.1011
12/7/2022 15:39		0.013	0.004	0.027	0.1013
12/7/2022 15:40	42.82618;-78.86061	0.013	0.004	0.0268	0.1019
12/7/2022 15:41		0.013	0.004	0.0266	0.1019
12/7/2022 15:42		0.014	0.004	0.0535	0.1023
12/7/2022 15:43		0.014	0.004	0.0533	0.1026
12/7/2022 15:44				0.0531	0.1029
12/7/2022 15:44		0.014	0.004		
12/7/2022 15:45	42.82628;-78.86065	0.014	0	0.0528	0.1029
12/7/2022 15:46		0.014	0	0.0525	0.1035
12/7/2022 15:47		0.015	0	0.0521	0.104
12/7/2022 15:48		0.015	0	0.0517	0.1039
12/7/2022 15:49		0.015	0	0.0513	0.1035
12/7/2022 15:50	42.82627;-78.8606	0.015	0	0.051	0.1037
12/7/2022 15:51		0.015	0	0.0507	0.1039
12/7/2022 15:52		0.016	0	0.0505	0.1037
12/7/2022 15:53		0.016	0	0.0501	0.1043
12/7/2022 15:54		0.016	0	0.0501	0.1047
12/7/2022 15:55	42.82623;-78.86064	0.016	0	0.0501	0.1047
12/7/2022 15:56		0.017	0	0.0501	0.1048
12/7/2022 15:57		0.017	0	0.0231	0.1051
12/7/2022 15:58		0.017	0	0.0526	0.1053
12/7/2022 15:59		0.017	0	0.0529	0.1057
12/7/2022 16:00	42.82626;-78.86069	0.017	0.001	0.0531	0.1061
12/7/2022 16:01		0.018	0.001	0.0535	0.1065
12/7/2022 16:02		0.018	0.001	0.054	0.1069
12/7/2022 16:03		0.018	0.001	0.0545	0.1072
12/7/2022 16:04		0.018	0.001	0.055	0.1081
12/7/2022 16:05	42.82631;-78.86059	0.019	0.001	0.0555	0.1087

(America/New_York)	Location	VOC (TWA) (ppm)	Total TWA (mg/m³)	mg/m³ AVG 15m (mg/m³)	VOC ppm AVG 15m (ppm)
12/8/2022 7:51		0	0	0.047	0
12/8/2022 7:52		0	0	0.0505	0
12/8/2022 7:53		0	0	0.0493	0
12/8/2022 7:54		0	0	0.0488	0.0005
12/8/2022 7:55	42.8263;-78.86066	0	0	0.0484	0.0006
12/8/2022 7:56		0	0	0.048	0.0005
12/8/2022 7:57		0	0	0.0477	0.0007
12/8/2022 7:58		0	0	0.0484	0.0014
12/8/2022 7:59		0	0	0.0481	0.0018
12/8/2022 8:00	42.82627;-78.86061	0	0	0.0479	0.0023
12/8/2022 8:01		0	0	0.0477	0.0025
12/8/2022 8:02		0	0	0.0476	0.003
12/8/2022 8:03		0	0	0.0474	0.0033
12/8/2022 8:04		0	0	0.0472	0.0036
12/8/2022 8:05	42.82619;-78.86056	0	0	0.0471	0.0041
12/8/2022 8:06		0	0.001	0.0469	0.0051

12/8/2022 8:07		0	0.002	0.0463	0.0059
12/8/2022 8:08		0	0.002	0.0462	0.0066
12/8/2022 8:09		0	0.002	0.0461	0.0075
12/8/2022 8:10	42.82628;-78.8606	0	0.002	0.0459	0.0085
12/8/2022 8:11		0	0.002	0.0464	0.0096
12/8/2022 8:12		0	0.002	0.0463	0.0109
12/8/2022 8:13		0	0.002	0.0458	0.0118
12/8/2022 8:14		0	0.002	0.0457	0.0127
12/8/2022 8:15	42.82621;-78.86057	0	0.002	0.0456	0.0137
12/8/2022 8:16		0	0.002	0.0455	0.0147
12/8/2022 8:17		0	0.002	0.0453	0.0155
12/8/2022 8:18		0	0.003	0.0453	0.0167
12/8/2022 8:19		0	0.003	0.0452	0.0177
12/8/2022 8:20	42.82628;-78.86062	0	0.003	0.0451	0.0182
12/8/2022 8:21		0	0.003	0.045	0.0188
12/8/2022 8:22		0	0.003	0.0449	0.0197
12/8/2022 8:23		0	0.003	0.0447	0.0205
12/8/2022 8:24		0	0.003	0.0446	0.0209
12/8/2022 8:25	42.82615;-78.86057	0	0.003	0.0445	0.0217
12/8/2022 8:26		0	0.003	0.0439	0.0223
12/8/2022 8:27		0.001	0.003	0.0437	0.0231
12/8/2022 8:28		0.001	0.003	0.0436	0.0238
12/8/2022 8:29		0.001	0.004	0.0435	0.0247
12/8/2022 8:30	42.82621;-78.86061	0.001	0.004	0.0434	0.0252
12/8/2022 8:31		0.001	0.004	0.0433	0.026
12/8/2022 8:32		0.001	0.004	0.0432	0.0267
12/8/2022 8:33		0.001	0.004	0.0431	0.0275
12/8/2022 8:34		0.001	0.004	0.0431	0.0283
12/8/2022 8:35	42.82631;-78.86063	0.001	0.004	0.043	0.0295
12/8/2022 8:36		0.001	0.004	0.0429	0.0304
12/8/2022 8:37		0.001	0.004	0.0429	0.031
12/8/2022 8:38		0.001	0.004	0.0429	0.0319
12/8/2022 8:39		0.001	0.004	0.0429	0.033
12/8/2022 8:40	42.82627;-78.86061	0.001	0.005	0.0428	0.0336
12/8/2022 8:41		0.002	0.005	0.0428	0.0343
12/8/2022 8:42		0.002	0.005	0.043	0.0346
12/8/2022 8:43		0.002	0.005	0.0433	0.0351
12/8/2022 8:44		0.002	0.005	0.0435	0.0355
12/8/2022 8:45	42.82623;-78.86053	0.002	0.005	0.0437	0.0361
12/8/2022 8:46		0.002	0.005	0.0438	0.0367
12/8/2022 8:47		0.002	0.005	0.0438	0.0373
12/8/2022 8:48		0.002	0.005	0.0438	0.0377
12/8/2022 8:49		0.002	0.005	0.0438	0.0382
12/8/2022 8:50	42.82627;-78.86064	0.002	0.005	0.0438	0.0385
12/8/2022 8:51		0.002	0.006	0.0439	0.0389
12/8/2022 8:52		0.002	0.006	0.0439	0.0393
12/8/2022 8:53		0.003	0.006	0.0439	0.0394
12/8/2022 8:54		0.003	0.006	0.0438	0.0398
12/8/2022 8:55	42.8263;-78.86062	0.003	0.006	0.0438	0.0401
12/8/2022 8:56		0.003	0.006	0.0438	0.0409
12/8/2022 8:57		0.003	0.006	0.0437	0.0415

12/8/2022 8:58		0.003	0.006	0.0433	0.0421
12/8/2022 8:59		0.003	0.006	0.0433	0.0428
12/8/2022 9:00	42.82627;-78.86063	0.003	0.006	0.0432	0.0435
12/8/2022 9:01		0.003	0.006	0.0894	0.0439
12/8/2022 9:02		0.003	0.007	0.0894	0.0445
12/8/2022 9:03		0.003	0.007	0.0894	0.0449
12/8/2022 9:04		0.004	0.007	0.0893	0.0455
12/8/2022 9:05	42.82634;-78.86062	0.004	0.007	0.0893	0.0461
12/8/2022 9:06		0.004	0.007	0.0893	0.0468
12/8/2022 9:07		0.004	0.007	0.0893	0.0477
12/8/2022 9:08		0.004	0.007	0.0893	0.0485
12/8/2022 9:09		0.004	0.007	0.0895	0.0492
12/8/2022 9:10	42.82623;-78.86061	0.004	0.007	0.0895	0.0498
12/8/2022 9:11		0.004	0.007	0.0895	0.0502
12/8/2022 9:12		0.004	0.007	0.0895	0.0511
12/8/2022 9:13		0.005	0.008	0.0895	0.0518
12/8/2022 9:14		0.005	0.008	0.0892	0.0524
12/8/2022 9:15	42.82627;-78.8606	0.005	0.008	0.0892	0.0529
12/8/2022 9:16		0.005	0.008	0.0429	0.0534
12/8/2022 9:17		0.005	0.008	0.0429	0.0541
12/8/2022 9:18		0.005	0.008	0.0429	0.0551
12/8/2022 9:19		0.005	0.008	0.043	0.0558
12/8/2022 9:20	42.82625;-78.8606	0.005	0.008	0.0431	0.0563
12/8/2022 9:21		0.006	0.008	0.043	0.0568
12/8/2022 9:22		0.006	0.008	0.0429	0.0572
12/8/2022 9:23		0.006	0.008	0.0429	0.0581
12/8/2022 9:24		0.006	0.008	0.0427	0.0587
12/8/2022 9:25	42.82629;-78.86061	0.006	0.009	0.0425	0.0598
12/8/2022 9:26		0.006	0.009	0.0423	0.0607
12/8/2022 9:27		0.006	0.009	0.0422	0.0612
12/8/2022 9:28		0.006	0.009	0.0421	0.0616
12/8/2022 9:29		0.007	0.009	0.042	0.0622
12/8/2022 9:30	42.82613;-78.86063	0.007	0.009	0.0418	0.063
12/8/2022 9:31		0.007	0.009	0.0416	0.0637
12/8/2022 9:32		0.007	0.009	0.0414	0.0642
12/8/2022 9:33		0.007	0.009	0.0411	0.0646
12/8/2022 9:34		0.007	0.009	0.0409	0.065
12/8/2022 9:35	42.82633;-78.86061	0.007	0.009	0.0406	0.0658
12/8/2022 9:36		0.008	0.009	0.0403	0.0662
12/8/2022 9:37		0.008	0.01	0.04	0.067
12/8/2022 9:38		0.008	0.01	0.0397	0.0675
12/8/2022 9:39		0.008	0.01	0.0395	0.0681
12/8/2022 9:40	42.8262;-78.86069	0.008	0.01	0.0394	0.0682
12/8/2022 9:41		0.008	0.01	0.0392	0.0685
12/8/2022 9:42		0.008	0.01	0.0394	0.0685
12/8/2022 9:43		0.009	0.01	0.0391	0.0687
12/8/2022 9:44		0.009	0.01	0.0387	0.0691
12/8/2022 9:45	42.82618;-78.8606	0.009	0.01	0.0385	0.0694
12/8/2022 9:46		0.009	0.01	0.0382	0.0701
12/8/2022 9:47		0.009	0.01	0.0379	0.0709
12/8/2022 9:48		0.009	0.01	0.0377	0.0714

12/8/2022 9:49		0.01	0.01	0.0375	0.0722
12/8/2022 9:50	42.82629;-78.86065	0.01	0.011	0.0373	0.0727
12/8/2022 9:51		0.01	0.011	0.0372	0.0735
12/8/2022 9:52		0.01	0.011	0.037	0.0739
12/8/2022 9:53		0.01	0.011	0.0368	0.0741
12/8/2022 9:54		0.01	0.011	0.0367	0.0748
12/8/2022 9:55	42.82624;-78.86068	0.011	0.011	0.0365	0.0753
12/8/2022 9:56		0.011	0.011	0.0363	0.0755
12/8/2022 9:57		0.011	0.011	0.0357	0.0763
12/8/2022 9:58		0.011	0.011	0.0356	0.077
12/8/2022 9:59		0.011	0.011	0.0355	0.0774
12/8/2022 10:00	42.82625;-78.8606	0.011	0.011	0.0354	0.0779
12/8/2022 10:01		0.012	0.011	0.0353	0.0782
12/8/2022 10:02		0.012	0.011	0.0351	0.0781
12/8/2022 10:03		0.012	0.012	0.0709	0.0785
12/8/2022 10:04		0.012	0.012	0.0707	0.0784
12/8/2022 10:05	42.82631;-78.86057	0.012	0.012	0.0705	0.0785
12/8/2022 10:06		0.012	0.012	0.0705	0.0786
12/8/2022 10:07		0.012	0.012	0.0705	0.079
12/8/2022 10:08		0.013	0.012	0.0705	0.0794
12/8/2022 10:09		0.013	0.012	0.0705	0.0793
12/8/2022 10:10	42.82618;-78.86069	0.013	0.012	0.0706	0.0795
12/8/2022 10:11		0.013	0.012	0.0707	0.0799
12/8/2022 10:12		0.013	0.012	0.0707	0.0798
12/8/2022 10:13		0.013	0.012	0.0708	0.08
12/8/2022 10:14		0.014	0.012	0.071	0.08
12/8/2022 10:15	42.82621;-78.86064	0.014	0.012	0.0711	0.0799
12/8/2022 10:16		0.014	0.012	0.0713	0.08
12/8/2022 10:17		0.014	0.013	0.0715	0.0801
12/8/2022 10:18		0.014	0.013	0.0355	0.0799
12/8/2022 10:19		0.014	0.013	0.0357	0.0802
12/8/2022 10:20	42.82625;-78.8606	0.015	0.013	0.0357	0.0803
12/8/2022 10:21		0.015	0.013	0.0355	0.0804
12/8/2022 10:22		0.015	0.013	0.0354	0.0808
12/8/2022 10:23		0.015	0.013	0.0353	0.0809
12/8/2022 10:24		0.015	0.013	0.0351	0.0814
12/8/2022 10:25	42.82628;-78.86057	0.016	0.013	0.0349	0.0819
12/8/2022 10:26		0.016	0.013	0.0347	0.0825
12/8/2022 10:27		0.016	0.013	0.0345	0.0831
12/8/2022 10:28		0.016	0.013	0.0342	0.0835
12/8/2022 10:29		0.016	0.013	0.0338	0.0843
12/8/2022 10:30	42.82626;-78.86059	0.016	0.013	0.0335	0.0853
12/8/2022 10:31		0.017	0.014	0.0332	0.0861
12/8/2022 10:32		0.017	0.014	0.0329	0.0872
12/8/2022 10:33		0.017	0.014	0.0327	0.0883
12/8/2022 10:34		0.017	0.014	0.0325	0.0887
12/8/2022 10:35	42.82624;-78.86063	0.017	0.014	0.0325	0.0893
12/8/2022 10:36		0.018	0.014	0.0325	0.0898
12/8/2022 10:37		0.018	0.014	0.0324	0.0901
12/8/2022 10:38		0.018	0.014	0.0323	0.0906
12/8/2022 10:39		0.018	0.014	0.0321	0.0911

12/8/2022 10:40	42.82622;-78.86067	0.018	0.014	0.0321	0.0917
12/8/2022 10:41		0.019	0.014	0.0321	0.0921
12/8/2022 10:42		0.019	0.014	0.0319	0.0923
12/8/2022 10:43		0.019	0.014	0.0669	0.0927
12/8/2022 10:44		0.019	0.014	0.0669	0.0931
12/8/2022 10:45	42.82626;-78.86065	0.019	0.014	0.0669	0.0933
12/8/2022 10:46		0.02	0.015	0.0669	0.0933
12/8/2022 10:47		0.02	0.015	0.0668	0.0932
12/8/2022 10:48		0.02	0.015	0.0667	0.0934
12/8/2022 10:49		0.02	0.015	0.0667	0.0938
12/8/2022 10:50	42.82627;-78.86064	0.02	0.015	0.0665	0.0944
12/8/2022 10:51		0.021	0.015	0.0665	0.0949
12/8/2022 10:52		0.021	0.015	0.0664	0.0953
12/8/2022 10:53		0.021	0.015	0.0663	0.0957
12/8/2022 10:54		0.021	0.015	0.0661	0.0958
12/8/2022 10:55	42.82625;-78.86063	0.021	0.015	0.066	0.0957
12/8/2022 10:56		0.022	0.015	0.0658	0.0961
12/8/2022 10:57		0.022	0.015	0.0656	0.0967
12/8/2022 10:58		0.022	0.015	0.0305	0.0972
12/8/2022 10:59		0.022	0.015	0.0303	0.0975
12/8/2022 11:00	42.82626;-78.86067	0.022	0.015	0.0301	0.0977
12/8/2022 11:01		0.023	0.015	0.0302	0.0985
12/8/2022 11:02		0.023	0.015	0.0301	0.099
12/8/2022 11:03		0.023	0.016	0.0299	0.0995
12/8/2022 11:04		0.023	0.016	0.0295	0.1
12/8/2022 11:05	42.82626;-78.86069	0.023	0.016	0.0291	0.1003
12/8/2022 11:06		0.024	0.016	0.0287	0.1005
12/8/2022 11:07		0.024	0.016	0.0282	0.1007
12/8/2022 11:08		0.024	0.016	0.0278	0.1009
12/8/2022 11:09		0.024	0.016	0.0273	0.1013
12/8/2022 11:10	42.82626;-78.86061	0.025	0.016	0.0269	0.1019
12/8/2022 11:11		0.025	0.016	0.0265	0.1026
12/8/2022 11:12		0.025	0.016	0.0263	0.1029
12/8/2022 11:13		0.025	0.016	0.0542	0.1033
12/8/2022 11:14		0.025	0.016	0.0539	0.104
12/8/2022 11:15	42.82622;-78.86057	0.026	0.016	0.0537	0.1044
12/8/2022 11:16		0.026	0.016	0.0531	0.1047
12/8/2022 11:17		0.026	0.016	0.0528	0.1051
12/8/2022 11:18		0.026	0.016	0.0525	0.1056
12/8/2022 11:19		0.027	0.016	0.0522	0.106
12/8/2022 11:20	42.82633;-78.86071	0.027	0.016	0.052	0.1064
12/8/2022 11:21		0.027	0.016	0.0519	0.107
12/8/2022 11:22		0.027	0.016	0.0518	0.1079
12/8/2022 11:23		0.028	0.017	0.0517	0.1085
12/8/2022 11:24		0.028	0.017	0.0516	0.1092
12/8/2022 11:25	42.82622;-78.86067	0.028	0.017	0.0515	0.1097
12/8/2022 11:26		0.028	0.017	0.0514	0.1099
12/8/2022 11:27		0.028	0.017	0.0513	0.1103
12/8/2022 11:28		0.029	0.017	0.0229	0.1106
12/8/2022 11:29		0.029	0.017	0.0227	0.1107
12/8/2022 11:30	42.82625;-78.86068	0.029	0.017	0.0225	0.1111

12/8/2022 11:31		0.029	0.017	0.0447	0.1115
12/8/2022 11:32		0.03	0.017	0.0445	0.1121
12/8/2022 11:33		0.03	0.017	0.0443	0.1127
12/8/2022 11:34		0.03	0.017	0.0444	0.1131
12/8/2022 11:35	42.82625;-78.86067	0.03	0.017	0.0445	0.1135
12/8/2022 11:36		0.031	0.017	0.0443	0.1139
12/8/2022 11:37		0.031	0.017	0.0443	0.1138
12/8/2022 11:38		0.031	0.017	0.0441	0.1142
12/8/2022 11:39		0.031	0.017	0.0441	0.1145
12/8/2022 11:40	42.82624;-78.86068	0.032	0.017	0.0439	0.1149
12/8/2022 11:41		0.032	0.017	0.0438	0.1155
12/8/2022 11:42		0.032	0.017	0.0437	0.1163
12/8/2022 11:43		0.032	0.017	0.0438	0.1166
12/8/2022 11:44		0.033	0.017	0.0438	0.1172
12/8/2022 11:45	42.82624;-78.86069	0.033	0.018	0.0439	0.1176
12/8/2022 11:46		0.033	0.018	0.0213	0.1181
12/8/2022 11:47		0.033	0.018	0.0213	0.1183
12/8/2022 11:48		0.034	0.018	0.0215	0.1183
12/8/2022 11:49		0.034	0.018	0.0212	0.1185
12/8/2022 11:50	42.8263;-78.8606	0.034	0.018	0.0209	0.1188
12/8/2022 11:51		0.034	0.018	0.0208	0.1195
12/8/2022 11:52		0.035	0.018	0.0207	0.1201
12/8/2022 11:53		0.035	0.018	0.0206	0.1204
12/8/2022 11:54		0.035	0.018	0.0205	0.1206
12/8/2022 11:55	42.82627;-78.86069	0.035	0.018	0.0205	0.1209
12/8/2022 11:56		0.036	0.018	0.0203	0.1208
12/8/2022 11:57		0.036	0.018	0.0201	0.1209
12/8/2022 11:58		0.036	0.018	0.0199	0.1214
12/8/2022 11:59		0.036	0.018	0.0198	0.1215
12/8/2022 12:00	42.82635;-78.86063	0.037	0.018	0.0196	0.1218
12/8/2022 12:01		0.037		0.0195	0.1219
12/8/2022 12:02		0.037	0.018	0.0195	0.1225
12/8/2022 12:03		0.037	0.018	0.0192	0.1229
12/8/2022 12:04		0.038	0.018	0.0193	0.1233
12/8/2022 12:05	42.82619;-78.86069	0.038	0.018	0.0192	0.1236
12/8/2022 12:06		0.038	0.018	0.0191	0.1237
12/8/2022 12:07		0.038	0.018	0.019	0.1238
12/8/2022 12:08		0.039	0.018	0.0189	0.1241
12/8/2022 12:09		0.039	0.018	0.0187	0.1241
12/8/2022 12:10	42.82627;-78.86073	0.039	0.018	0.0186	0.1244
12/8/2022 12:11		0.039	0.019	0.0186	0.1247
12/8/2022 12:12		0.04	0.019	0.0185	0.1247
12/8/2022 12:13		0.04	0.019	0.0184	0.1249
12/8/2022 12:14		0.04	0.019	0.0181	0.1251
12/8/2022 12:15	42.82626;-78.86066	0.04	0.019	0.018	0.1252
12/8/2022 12:16		0.041	0.019	0.0179	0.1253
12/8/2022 12:17		0.041	0.019	0.0178	0.1253
12/8/2022 12:18		0.041	0.019	0.0176	0.1255
12/8/2022 12:19		0.042	0.019	0.0173	0.1258
12/8/2022 12:20	42.82626;-78.86068	0.042	0.019	0.0172	0.126
12/8/2022 12:21		0.042	0.019	0.0171	0.1262

12/8/2022 12:22		0.042	0.019	0.0169	0.1266
12/8/2022 12:23		0.043	0.019	0.0169	0.127
12/8/2022 12:24		0.043	0.019	0.0168	0.1273
12/8/2022 12:25	42.82622;-78.86064	0.043	0.019	0.0167	0.1274
12/8/2022 12:26		0.043	0.019	0.0166	0.128
12/8/2022 12:27		0.044	0.019	0.0165	0.1284
12/8/2022 12:28		0.044	0.019	0.0165	0.1285
12/8/2022 12:29		0.044	0.019	0.0164	0.1289
12/8/2022 12:30	42.82615;-78.86069	0.044	0.019	0.0162	0.1289
12/8/2022 12:31		0.045	0.019	0.016	0.1293
12/8/2022 12:32		0.045	0.019	0.0158	0.1289
12/8/2022 12:33		0.045	0.019	0.0157	0.1287
12/8/2022 12:34		0.046	0.019	0.0156	0.1285
12/8/2022 12:35	42.82621;-78.86068	0.046	0.019	0.0156	0.1284
12/8/2022 12:36		0.046	0.019	0.0155	0.1284
12/8/2022 12:37		0.046	0.019	0.0153	0.1283
12/8/2022 12:38		0.047	0.019	0.0151	0.1277
12/8/2022 12:39		0.047	0.019	0.0149	0.1281
12/8/2022 12:40	42.82628;-78.86066	0.047	0.019	0.0147	0.1281
12/8/2022 12:41		0.047	0.02	0.0146	0.1278
12/8/2022 12:42		0.048	0.02	0.0144	0.1277
12/8/2022 12:43		0.048	0.02	0.0142	0.1275
12/8/2022 12:44		0.048	0.02	0.014	0.1277
12/8/2022 12:45	42.82623;-78.86067	0.048	0.02	0.0139	0.1275
12/8/2022 12:46		0.049	0.02	0.0137	0.1273
12/8/2022 12:47		0.049	0.02	0.0137	0.1275
12/8/2022 12:48		0.049	0.02	0.0135	0.1275
12/8/2022 12:49		0.049	0.02	0.0134	0.1276
12/8/2022 12:50	42.82629;-78.86071	0.05	0.02	0.0132	0.1277
12/8/2022 12:51		0.05	0.02	0.0131	0.1276
12/8/2022 12:52		0.05	0.02	0.013	0.1275
12/8/2022 12:53		0.051	0.02	0.0129	0.1277
12/8/2022 12:54		0.051	0.02	0.0129	0.1275
12/8/2022 12:55	42.82629;-78.86066	0.051	0.02	0.0127	0.1275
12/8/2022 12:56		0.051	0.02	0.0126	0.1275
12/8/2022 12:57		0.052	0.02	0.0126	0.1277
12/8/2022 12:58		0.052	0.02	0.0127	0.1279
12/8/2022 12:59		0.052	0.02	0.0127	0.1279
12/8/2022 13:00	42.82624;-78.86061	0.052	0.02	0.0127	0.1279
12/8/2022 13:01		0.053	0.02	0.0127	0.1282
12/8/2022 13:02		0.053	0.02	0.0127	0.1283
12/8/2022 13:03		0.053	0.02	0.0127	0.1286
12/8/2022 13:04		0.053	0.02	0.0127	0.129
12/8/2022 13:05	42.82634;-78.8606	0.054	0.02	0.0127	0.1289
12/8/2022 13:06		0.054	0.02	0.0128	0.1292
12/8/2022 13:07		0.054	0.02	0.0129	0.1295
12/8/2022 13:08		0.055	0.02	0.0129	0.1299
12/8/2022 13:09		0.055	0.02	0.013	0.1303
12/8/2022 13:10	42.82639;-78.86055	0.055	0.02	0.0131	0.1308
12/8/2022 13:11		0.055	0.02	0.0132	0.1311
12/8/2022 13:12		0.056	0.02	0.0132	0.1312

12/8/2022 13:13		0.056	0.02	0.0131	0.1313
12/8/2022 13:14		0.056	0.02	0.0131	0.1317
12/8/2022 13:15	42.82633;-78.86054	0.057	0.02	0.0131	0.1325
12/8/2022 13:16		0.057	0.02	0.0131	0.1315
12/8/2022 13:17		0.057	0.02	0.0131	0.131
12/8/2022 13:18		0.057	0.02	0.0131	0.1306
12/8/2022 13:19		0.058	0.021	0.0132	0.1306
12/8/2022 13:20	42.82637;-78.86058	0.058	0.021	0.0132	0.1306
12/8/2022 13:21		0.058	0.021	0.0131	0.1307
12/8/2022 13:22		0.058	0.021	0.0131	0.1309
12/8/2022 13:23		0.059	0.021	0.0131	0.1309
12/8/2022 13:24		0.059	0.021	0.0131	0.1306
12/8/2022 13:25	42.82626;-78.86057	0.059	0.021	0.0131	0.1305
12/8/2022 13:26		0.059	0.021	0.0131	0.1308
12/8/2022 13:27		0.06	0.021	0.0131	0.1313
12/8/2022 13:28		0.06	0.021	0.0131	0.1317
12/8/2022 13:29		0.06	0.021	0.0131	0.1319
12/8/2022 13:30	42.82626;-78.86058	0.061	0.021	0.0131	0.1319
12/8/2022 13:31		0.061	0.021	0.0131	0.1335
12/8/2022 13:32		0.061	0.021	0.0131	0.1349
12/8/2022 13:33		0.062	0.021	0.0131	0.1361
12/8/2022 13:34		0.062	0.021	0.0129	0.1369
12/8/2022 13:35	42.8264;-78.8606	0.062	0.021	0.0129	0.138
12/8/2022 13:36		0.062	0.021	0.0129	0.1387
12/8/2022 13:37		0.063	0.021	0.013	0.1395
12/8/2022 13:38		0.063	0.021	0.0131	0.1403
12/8/2022 13:39		0.063	0.021	0.013	0.1413
12/8/2022 13:40	42.82634;-78.8606	0.064	0.021	0.0129	0.1423
12/8/2022 13:41		0.064	0.021	0.013	0.1431
12/8/2022 13:42		0.064	0.021	0.0131	0.1437
12/8/2022 13:43		0.065	0.021	0.0131	0.1443
12/8/2022 13:44		0.065	0.021	0.0131	0.1449
12/8/2022 13:45	42.82626;-78.86055	0.065	0.021	0.0131	0.1455
12/8/2022 13:46		0.065	0.021	0.0278	0.1459
12/8/2022 13:47		0.066	0.021	0.0277	0.1465
12/8/2022 13:48		0.066	0.021	0.0276	0.1471
12/8/2022 13:49		0.066	0.021	0.0276	0.1479
12/8/2022 13:50	42.82626;-78.86061	0.067	0.021	0.0276	0.1486
12/8/2022 13:51		0.067	0.021	0.0276	0.1495
12/8/2022 13:52		0.067	0.021	0.0275	0.1503
12/8/2022 13:53		0.068	0.021	0.0273	0.1513
12/8/2022 13:54		0.068	0.021	0.0275	0.1525
12/8/2022 13:55	42.82625;-78.86059	0.068	21	0.0276	0.1535
12/8/2022 13:56		0.069	0.022	0.0275	0.1545
12/8/2022 13:57		0.069	0.022	0.0274	0.1553
12/8/2022 13:58		0.069	0.022	0.0275	0.1562
12/8/2022 13:59		0.07	0.022	0.0276	0.1571
12/8/2022 14:00	42.82627;-78.86061	0.07	0.022	0.0276	0.1582
12/8/2022 14:01		0.07	0.022	0.0129	0.159
12/8/2022 14:02		0.071	0.022	0.0129	0.1594
12/8/2022 14:03		0.071	0.022	0.0129	0.1598

12/8/2022 14:04		0.071	0.022	0.0129	0.1601
12/8/2022 14:05	42.8263;-78.8606	0.072	0.022	0.0129	0.1604
12/8/2022 14:06		0.072	0.022	0.0129	0.1605
12/8/2022 14:07		0.072	0.022	0.0127	0.1606
12/8/2022 14:08		0.073	0.022	0.0128	0.1605
12/8/2022 14:09		0.073	0.022	0.0127	0.1603
12/8/2022 14:10	42.82624;-78.86059	0.073	0.022	0.0125	0.1601
12/8/2022 14:11		0.074	0.022	0.0123	0.1594
12/8/2022 14:12		0.074	0.022	0.0123	0.1589
12/8/2022 14:13		0.074	0.022	0.0121	0.1584
12/8/2022 14:14		0.075	0.022	0.0243	0.1579
12/8/2022 14:15	42.82624;-78.86058	0.075	0.022	0.0241	0.1571
12/8/2022 14:16		0.075	0.022	0.024	0.1566
12/8/2022 14:17		0.076	0.022	0.0239	0.1563
12/8/2022 14:18		0.076	0.022	0.0237	0.1559
12/8/2022 14:19		0.076	0.022	0.0236	0.1555
12/8/2022 14:20	42.82631;-78.86064	0.077	0.022	0.0239	0.155
12/8/2022 14:21		0.077	0.022	0.0243	0.1545
12/8/2022 14:22		0.077	0.022	0.0245	0.1541
12/8/2022 14:23		0.078	0.022	0.0245	0.1537
12/8/2022 14:24		0.078	0.022	0.0245	0.153
12/8/2022 14:25	42.82631;-78.86062	0.078	0.022	0.0244	0.1523
12/8/2022 14:26		0.078	0.022	0.0243	0.1524
12/8/2022 14:27		0.079	0.022	0.0243	0.1519
12/8/2022 14:28		0.079	0.022	0.0241	0.1513
12/8/2022 14:29		0.079	0.022	0.0117	0.1511
12/8/2022 14:30	42.82628;-78.8606	0.08	0.022	0.0117	0.151
12/8/2022 14:31		0.08	0.022	0.0121	0.1508
12/8/2022 14:32		0.08	0.022	0.0121	0.1505
12/8/2022 14:33		0.081	0.022	0.0121	0.1503
12/8/2022 14:34		0.081	0.022	0.0122	0.1501
12/8/2022 14:35	42.82629;-78.8606	0.081	0.022	0.0118	0.1499
12/8/2022 14:36		0.082	0.023	0.0112	0.1498
12/8/2022 14:37		0.082	0.023	0.011	0.1497
12/8/2022 14:38		0.082	0.023	0.0109	0.1495
12/8/2022 14:39		0.082	0.023	0.0108	0.1494
12/8/2022 14:40	42.82624;-78.86059	0.083	0.023	0.0107	0.1494
12/8/2022 14:41		0.083	0.023	0.0107	0.1487
12/8/2022 14:42		0.083	0.023	0.0107	0.1489
12/8/2022 14:43		0.084	0.023	0.0107	0.1489
12/8/2022 14:44		0.084	0.023	0.0106	0.1487
12/8/2022 14:45	42.82635;-78.86062	0.084	0.023	0.0105	0.1485
12/8/2022 14:46		0.085	0.023	0.0101	0.1483
12/8/2022 14:47		0.085	0.023	0.0099	0.1484
12/8/2022 14:48		0.085	0.023	0.0098	0.1481
12/8/2022 14:49		0.086	0.023	0.0097	0.1481
12/8/2022 14:50	42.82629;-78.86063	0.086	0.023	0.0096	0.1479
12/8/2022 14:51		0.086	0.023	0.0095	0.1478
12/8/2022 14:52		0.086	0.023	0.0093	0.1477
12/8/2022 14:53		0.087	0.023	0.0091	0.1473
12/8/2022 14:54		0.087	0.023	0.0089	0.1471

12/8/2022 14:55	42.82628;-78.86067	0.087	0.023	0.0089	0.1476
12/8/2022 14:56		0.088	0.023	0.009	0.1483
12/8/2022 14:57		0.088	0.023	0.009	0.1485
12/8/2022 14:58		0.088	0.023	0.009	0.1487

(America/New_York)	Location	VOC (TWA) (ppm)	Total TWA (mg/m³)	mg/m³ AVG 15m (mg/m³)	VOC ppm AVG 15m (ppm)
12/9/2022 7:53		0	0	0.033	0.001
12/9/2022 7:54		0	0	0.033	0.001
12/9/2022 7:55	42.82627;-78.86058	0	0	0.0333	0.001
12/9/2022 7:56		0	0	0.0335	0.0018
12/9/2022 7:57		0	0	0.0334	0.0024
12/9/2022 7:58		0	0	0.0333	0.0028
12/9/2022 7:59		0	0	0.0333	0.0029
12/9/2022 8:00	42.82624;-78.86058	0	0	0.0333	0.0033
12/9/2022 8:01		0	0	0.0332	0.0036
12/9/2022 8:02		0	0	0.0331	0.004
12/9/2022 8:03		0	0	0.033	0.0045
12/9/2022 8:04		0	0	0.0329	0.0048
12/9/2022 8:05	42.82621;-78.86049	0	0	0.0328	0.0049
12/9/2022 8:06		0	0	0.0328	0.0054
12/9/2022 8:07		0	0	0.0327	0.0061
12/9/2022 8:08		0	0.001	0.0327	0.0071
12/9/2022 8:09		0	0.001	0.0326	0.0079
12/9/2022 8:10	42.82619;-78.86057	0	0.001	0.0324	0.009
12/9/2022 8:11		0	0.001	0.0322	0.0098
12/9/2022 8:12		0	0.001	0.032	0.0105
12/9/2022 8:13		0	0.001	0.0318	0.0111
12/9/2022 8:14		0	0.001	0.0315	0.0119
12/9/2022 8:15	42.82622;-78.86057	0	0.001	0.0313	0.0127
12/9/2022 8:16		0	0.002	0.0309	0.0133
12/9/2022 8:17		0	0.002	0.0307	0.0137
12/9/2022 8:18		0	0.002	0.0304	0.0143
12/9/2022 8:19		0	0.002	0.0301	0.015
12/9/2022 8:20	42.82623;-78.86056	0	0.002	0.0299	0.0158
12/9/2022 8:21		0	0.002	0.0296	0.0164
12/9/2022 8:22		0	0.002	0.0294	0.017
12/9/2022 8:23		0	0.002	0.0291	0.0177
12/9/2022 8:24		0	0.002	0.0289	0.0188
12/9/2022 8:25	42.82621;-78.86057	0	0.002	0.0287	0.0193
12/9/2022 8:26		0	0.002	0.0283	0.0199
12/9/2022 8:27		0	0.002	0.0281	0.0206
12/9/2022 8:28		0	0.002	0.0281	0.0212
12/9/2022 8:29		0.001	0.002	0.0281	0.0219
12/9/2022 8:30	42.82624;-78.86056	0.001	0.002	0.0279	0.0224
12/9/2022 8:31		0.001	0.002	0.0277	0.0231
12/9/2022 8:32		0.001	0.002	0.0275	0.024
12/9/2022 8:33		0.001	0.002	0.0273	0.0244
12/9/2022 8:34		0.001	0.003	0.0271	0.0249
12/9/2022 8:35	42.82624;-78.86057	0.001	0.003	0.0269	0.0255
12/9/2022 8:36		0.001	0.003	0.0267	0.0262
12/9/2022 8:37		0.001	0.003	0.0265	0.0267

12/9/2022 8:38		0.001	0.003	0.0263	0.0269
12/9/2022 8:39		0.001	0.003	0.0261	0.027
12/9/2022 8:40	42.82618;-78.86058	0.001	0.003	0.0259	0.0269
12/9/2022 8:41		0.001	0.003	0.0258	0.0269
12/9/2022 8:42		0.001	0.003	0.0257	0.0271
12/9/2022 8:43		0.001	0.003	0.0523	0.0279
12/9/2022 8:44		0.001	0.003	0.0519	0.0285
12/9/2022 8:45	42.82622;-78.86057	0.001	0.003	0.0518	0.0295
12/9/2022 8:46		0.002	0.003	0.0517	0.0301
12/9/2022 8:47		0.002	0.003	0.0515	0.0306
12/9/2022 8:48		0.002	0.003	0.0513	0.0313
12/9/2022 8:49		0.002	0.003	0.0511	0.0319
12/9/2022 8:50	42.8262;-78.86058	0.002	0.003	0.051	0.0325
12/9/2022 8:51		0.002	0.003	0.0509	0.0332
12/9/2022 8:52		0.002	0.003	0.0507	0.0337
12/9/2022 8:53		0.002	0.003	0.0506	0.0342
12/9/2022 8:54		0.002	0.004	0.0505	0.0351
12/9/2022 8:55	42.82616;-78.86056	0.002	0.004	0.0503	0.0361
12/9/2022 8:56		0.002	0.004	0.0501	0.0371
12/9/2022 8:57		0.002	0.004	0.0499	0.0375
12/9/2022 8:58		0.002	0.004	0.0227	0.0374
12/9/2022 8:59		0.003	0.004	0.0225	0.0379
12/9/2022 9:00	42.82623;-78.8606	0.003	0.004	0.0223	0.0382
12/9/2022 9:01		0.003	0.004	0.0223	0.0387
12/9/2022 9:02		0.003	0.004	0.0221	0.0392
12/9/2022 9:03		0.003	0.004	0.0219	0.0397
12/9/2022 9:04		0.003	0.004	0.0217	0.0403
12/9/2022 9:05	42.82616;-78.8606	0.003	0.004	0.0215	0.0409
12/9/2022 9:06		0.003	0.004	0.0212	0.0413
12/9/2022 9:07		0.003	0.004	0.0209	0.0419
12/9/2022 9:08		0.003	0.004	0.0207	0.0425
12/9/2022 9:09		0.003	0.004	0.0419	0.0429
12/9/2022 9:10	42.82616;-78.86059	0.004	0.004	0.0416	0.0435
12/9/2022 9:11		0.004	0.004	0.0413	0.0442
12/9/2022 9:12		0.004	0.004	0.041	0.0454
12/9/2022 9:13		0.004	0.004	0.0407	0.0463
12/9/2022 9:14		0.004	0.004	0.0405	0.0469
12/9/2022 9:15	42.82623;-78.86057	0.004		0.0403	0.0475
12/9/2022 9:16		0.004	0.004	0.0401	0.0481
12/9/2022 9:17		0.004	0.004	0.0399	0.0486
12/9/2022 9:18		0.004	0.004	0.0398	0.0492
12/9/2022 9:19		0.005	0.005	0.0397	0.0497
12/9/2022 9:20	42.82621;-78.86064	0.005	0.005	0.0395	0.0501
12/9/2022 9:21		0.005	0.005	0.0394	0.0502
12/9/2022 9:22		0.005	0.005	0.0393	0.0508
12/9/2022 9:23		0.005	0.005	0.0391	0.0512
12/9/2022 9:24		0.005	0.005	0.0175	0.0516
12/9/2022 9:25	42.82621;-78.86056	0.005	0.005	0.0174	0.0522
12/9/2022 9:26		0.005	0.005	0.0174	0.0526
12/9/2022 9:27		0.005	0.005	0.0173	0.0529
12/9/2022 9:28		0.006	0.005	0.0171	0.0533

12/9/2022 9:29		0.006	0.005	0.017	0.0539
12/9/2022 9:30	42.82625;-78.86061	0.006	0.005	0.0169	0.0541
12/9/2022 9:31		0.006	0.005	0.0167	0.0546
12/9/2022 9:32		0.006	0.005	0.0165	0.0552
12/9/2022 9:33		0.006	0.005	0.0164	0.0557
12/9/2022 9:34		0.006	0.005	0.0163	0.0565
12/9/2022 9:35	42.82623;-78.86057	0.006	0.005	0.0163	0.0569
12/9/2022 9:36		0.006	0.005	0.0161	0.0579
12/9/2022 9:37		0.007	0.005	0.016	0.0582
12/9/2022 9:38		0.007	0.005	0.0158	0.0587
12/9/2022 9:39		0.007	0.005	0.0156	0.0591
12/9/2022 9:40	42.8262;-78.86062	0.007	0.005	0.0155	0.0594
12/9/2022 9:41		0.007	0.005	0.0153	0.0597
12/9/2022 9:42		0.007	0.005	0.0151	0.0602
12/9/2022 9:43		0.007	0.005	0.0149	0.0603
12/9/2022 9:44		0.007	0.005	0.0147	0.0605
12/9/2022 9:45	42.82618;-78.86057	0.008	0.005	0.0146	0.0611
12/9/2022 9:46		0.008	0.005	0.0144	0.0615
12/9/2022 9:47		0.008	0.005	0.0143	0.0619
12/9/2022 9:48		0.008	0.005	0.0141	0.0625
12/9/2022 9:49		0.008	0.005	0.0139	0.0629
12/9/2022 9:50	42.8262;-78.86059	0.008	0.005	0.0138	0.0637
12/9/2022 9:51		0.008	0.006	0.0137	0.0638
12/9/2022 9:52		0.009	0.006	0.0138	0.0643
12/9/2022 9:53		0.009	0.006	0.0137	0.0653
12/9/2022 9:54		0.009	0.006	0.0137	0.0661
12/9/2022 9:55	42.82622;-78.86058	0.009	0.006	0.0136	0.0665
12/9/2022 9:56		0.009	0.006	0.0136	0.0673
12/9/2022 9:57		0.009	0.006	0.0136	0.0677
12/9/2022 9:58		0.009	0.006	0.0137	0.0686
12/9/2022 9:59		0.01	0.006	0.0138	0.0695
12/9/2022 10:00	42.82627;-78.86057	0.01	0.006	0.0137	0.0703
12/9/2022 10:01		0.01	0.006	0.0138	0.0711
12/9/2022 10:02		0.01	0.006	0.0139	0.072
12/9/2022 10:03		0.01	0.006	0.0139	0.0726
12/9/2022 10:04		0.01	0.006	0.0285	0.0731
12/9/2022 10:05	42.82621;-78.86054	0.011	0.006	0.0285	0.0735
12/9/2022 10:06		0.011	0.006	0.0284	0.0743
12/9/2022 10:07		0.011	0.006	0.0281	0.0745
12/9/2022 10:08		0.011	0.006	0.0281	0.0747
12/9/2022 10:09		0.011	0.006	0.0281	0.0751
12/9/2022 10:10	42.82624;-78.86059	0.011	0.006	0.0281	0.0755
12/9/2022 10:11		0.012	0.006	0.0281	0.0759
12/9/2022 10:12		0.012	0.006	0.0281	0.0761
12/9/2022 10:13		0.012	0.006	0.028	0.0767
12/9/2022 10:14		0.012	0.006	0.0279	0.077
12/9/2022 10:15	42.82624;-78.86057	0.012	0.006	0.0279	0.0773
12/9/2022 10:16		0.012	0.006	0.0278	0.0774
12/9/2022 10:17		0.013	0.006	0.0279	0.0775
12/9/2022 10:18		0.013	0.006	0.0279	0.0778
12/9/2022 10:19		0.013	0.006	0.0131	0.0781

12/9/2022 10:20	42.82627;-78.86054	0.013	0.006	0.0266	0.0784
12/9/2022 10:21		0.013	0.006	0.0265	0.0787
12/9/2022 10:22		0.013	0.006	0.0265	0.0791
12/9/2022 10:23		0.014	0.006	0.0265	0.0794
12/9/2022 10:24		0.014	0.006	0.0264	0.0795
12/9/2022 10:25	42.82623;-78.86057	0.014	0.006	0.0263	0.0797
12/9/2022 10:26		0.014	0.006	0.0263	0.08
12/9/2022 10:27		0.014	0.007	0.0261	0.0807
12/9/2022 10:28		0.014	0.007	0.0261	0.0809
12/9/2022 10:29		0.015	0.007	0.0261	0.0811
12/9/2022 10:30	42.82625;-78.86061	0.015	0.007	0.0261	0.0812
12/9/2022 10:31		0.015	0.007	0.026	0.0815
12/9/2022 10:32		0.015	0.007	0.0405	0.0814
12/9/2022 10:33		0.015	0.007	0.0404	0.0813
12/9/2022 10:34		0.015	0	0.0405	0.0816
12/9/2022 10:35	42.82619;-78.86057	0.016	0.007	0.027	0.0818
12/9/2022 10:36		0.016	0.007	0.027	0.0821
12/9/2022 10:37		0.016	0.007	0.027	0.0824
12/9/2022 10:38		0.016	0.007	0.027	0.0825
12/9/2022 10:39		0.016	0.007	0.0271	0.0827
12/9/2022 10:40	42.82626;-78.86059	0.016	0.007	0.0271	0.0831
12/9/2022 10:41		0.017	0.007	0.0271	0.0831
12/9/2022 10:42		0.017	0.007	0.0271	0.0829
12/9/2022 10:43		0.017	0.007	0.0271	0.0832
12/9/2022 10:44		0.017	0.007	0.0271	0.0833
12/9/2022 10:45	42.82623;-78.8606	0.017	0.007	0.0271	0.0837
12/9/2022 10:46		0.017	0.007	0.0271	0.0839
12/9/2022 10:47		0.018	0.007	0.0124	0.0842
12/9/2022 10:48		0.018	0.007	0.0125	0.0847
12/9/2022 10:49		0.018	0.007	0.0125	0.0849
12/9/2022 10:50	42.82624;-78.86057	0.018	0.007	0.0125	0.0853
12/9/2022 10:51		0.018	0.007	0.0125	0.0855
12/9/2022 10:52		0.019	0.007	0.0126	0.0857
12/9/2022 10:53		0.019	0.007	0.0127	0.0861

ATTACHMENT 4

GROUNDWATER SAMPLING FIELD SHEETS

GROUNDWATER FIELD FORM

Project Name: OU4 Supplemental Gw Investigation
Location: Tecumseh
Project No.:
Date: 1-5-23
Field Team: CEH

Well No. B-4	Diameter (inches): 6"	Sample Date / Time: 1-5-23 / 1125
Product Depth (fbTOR):	Water Column (ft): 16.9	DTW when sampled: 4.91
DTW (static) (fbTOR): 4.53	One Well Volume (gal): 24.8	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample
Total Depth (fbTOR): 21.25 (21.24)	Total Volume Purged (gal): 50.0	Purge Method: Bailer

Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1026	0 Initial	0.00	6.59	2.3	1006	103	2.53	23	SL Turbid, no odor
1032	1 4.91	5.00	6.67	8.0	993.1	91.1	2.36	7	" " " "
1037	2 5.52	10.00	6.69	7.9	994.7	70.3	2.98	11	clear, no odor
1043	3 5.63	15.00	6.71	8.0	988.9	43.0	2.98	3	" " "
1048	4 5.63	20.00	6.71	7.9	998.6	31.4	2.82	9	" " "
1053	5 5.71	25.00	6.73	8.0	1016	20.3	2.87	-18	" " "
1059	6 5.63	30.00	6.80	7.8	1012	18.3	2.73	-23	" " "
1104	7 5.61	35.00	6.78	7.9	1024	15.5	3.11	-20	" " "
1110	8 5.69	40.00	6.78	8.0	1029	14.2	2.87	-20	" " "
1115	9 5.64	45.00	6.79	7.9	1031	14.4	3.44	-22	" " "
1120	10 5.72	50.00	6.81	8.2	1016	13.3	2.83	-21	" " "
Sample Information:									
1125	S1 4.91	50.0	6.82	8.3	1033	13.0	3.19	-23	clear, no odor
1142	S2 4.61	50.0	6.93	8.0	1023	10.5	2.34	-21	" " "

Well No. B-5	Diameter (inches): 6"	Sample Date / Time: 1-5-23 / 1300
Product Depth (fbTOR):	Water Column (ft): 16.93	DTW when sampled: 4.77
DTW (static) (fbTOR): 4.60	One Well Volume (gal): 24.9	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample
Total Depth (fbTOR): 21.53 (21.38)	Total Volume Purged (gal): 50.0	Purge Method: Bailer

Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1200	0 Initial	0.00	7.45	8.4	2298	23.9	1.42	-154	clear, petrol odor
1205	1 6.21	5.00	7.48	8.9	2247	49.7	1.67	-203	" " "
1209	2 6.34	10.00	7.52	9.0	2027	40.7	2.49	-219	" " "
1214	3 6.75	15.00	7.50	8.9	1844	29.0	2.23	-231	" " "
1220	4 6.78	20.00	7.49	8.9	1731	24.9	2.61	-242	" " "
1225	5 6.69	25.00	7.42	9.0	1663	31.3	2.02	-248	" " "
1230	6 6.81	30.00	7.36	9.1	1628	31.3	1.94	-254	" " "
1235	7 6.83	35.00	7.36	9.2	1613	42.3	2.81	-253	" " "
1240	8 6.75	40.00	7.33	9.2	1614	41.0	2.86	-256	" " "
1245	9 6.81	45.00	7.29	9.0	1615	38.0	2.50	-256	" " "
1250	10 6.85	50.00	7.30	9.1	1624	40.1	2.22	-257	" " "
Sample Information:									
1300	S1 4.77	50.00	7.21	8.9	1607	40.4	1.70	-263	clear, petrol odor
1305	S2 4.65	50.00	7.24	8.8	1607	50.6	2.17	-262	" " "

REMARKS: Black tint on B-5

Note: All measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

GROUNDWATER FIELD FORM

Project Name: OU4
Location: Tecumseh
Project No.:
Date: 1-5-23
Field Team: CEH

Well No. B-6			Diameter (inches): 6"			Sample Date / Time: 1-5-23/1540			
Product Depth (fbTOR):			Water Column (ft): 18.8			DTW when sampled: 5.69			
DTW (static) (fbTOR): 5.28			One Well Volume (gal): 27.6			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 24.07 22.95			Total Volume Purged (gal): 60			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1440	0 Initial	0.00	7.68	5.8	1489	21.0	2.12	-107	clear, SL Petrol odor
1446	1 6.80	5.00	7.54	9.4	1487	27.9	2.02	-106	" " "
1452	2 7.10	10.00	7.51	9.4	1489	26.6	2.22	-107	" " "
1456	3 7.35	15.0	7.50	9.6	1502	19.5	2.46	-108	" " "
1501	4 7.11	20.0	7.50	9.8	1498	13.3	2.97	-107	" " "
1506	5 7.35	25	7.51	9.8	1499	12.9	2.98	-104	" " "
1508	6 7.22	30	7.51	9.9	1496	11.0	2.76	-105	" " "
1513	7 7.25	35	7.53	10.0	1493	10.8	3.42	-105	" " "
1518	8 7.31	40	7.52	10.0	1491	10.0	3.30	-103	" " "
1523	9 7.24	45	7.52	10.2	1490	11.3	3.37	-104	" " "
1528	10 7.38	50	7.52	10.2	1488	9.06	3.24	-105	" " "
Sample Information:			Continued on other page						
	S1								
	S2								

Well No. B-7			Diameter (inches): 6"			Sample Date / Time: 1-5-23/1645			
Product Depth (fbTOR):			Water Column (ft): 13.52			DTW when sampled: 7.09			
DTW (static) (fbTOR): 6.95			One Well Volume (gal): 19.9			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 20.47 20.45			Total Volume Purged (gal): 40.0			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1600	0 Initial	0.00	7.14	9.8	1303	14.4	2.76	-68	clear, SL Petrol odor
1608	1 8.40	5.0	7.02	9.6	1254	109	2.43	-60	SL turbid, " " "
1612	2 8.53	10.0	6.97	9.5	1209	177	2.36	-61	" " " " "
1617	3 8.79	15.0	6.97	9.2	1166	106	3.22	-68	" " " " "
1622	4 8.90	20.0	6.97	9.1	1153	79.4	3.25	-82	" " " " "
1627	5 8.88	25.0	6.97	9.0	1147	61.9	3.49	-88	" " " " "
1632	6 8.90	30.0	6.99	8.8	1111	41.5	3.09	-84	clear, SL Petrol odor
1637	7 8.85	35.0	6.96	8.6	1110	44.3	3.24	-75	" " "
1642	8 8.81	40.0	6.94	8.6	1107	34.6	3.75	-77	" " "
	9								
	10								
Sample Information:									
1645	S1 7.09	40.0	7.00	8.5	1151	31.9	4.27	-93	clear, SL Petrol odor
1654	S2 7.05	40.0	6.96	8.7	1127	27.8	3.18	-99	" " "

REMARKS:

Note: All measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

GROUNDWATER FIELD FORM

Project Name: 004 Date: 1-5-23
Location: Project No.: Field Team: CEH

Well No. B-6			Diameter (inches): 6"			Sample Date / Time: 1-5-23 / 1540			
Product Depth (fbTOR):			Water Column (ft): 18.8			DTW when sampled: 5.69			
DTW (static) (fbTOR): 5.28			One Well Volume (gal): 27.6			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 24.07			Total Volume Purged (gal): 60			Purge Method: Bailer			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1533	0 Initial 7.51	55	7.51	10.1	1487	10.7	3.73	-102	Clear, SL Petrol odor
1538	1 7.50	60	7.50	10.1	1484	10.1	2.98	-104	" " " "
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1540	S1 5.69	60	7.53	10.0	1483	10.8	3.43	-105	Clear, SL Petrol odor
1550	S2 5.61	60	7.51	9.6	1480	10.8	3.34	-100	" " " "

Well No.			Diameter (inches):			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft):			DTW when sampled:			
DTW (static) (fbTOR):			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR):			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0 Initial								
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS:

Note: All measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

TurnKey Environmental Restoration, LLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: 004 Date: 1-5-23

Project No.:

Client:

Instrument Source: [X] BM [ ] Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
[X] pH meter	units	1000	Myron L Company Ultra Meter 6P	6213516 [ ] 6243084 [ ] 6212375 [ ] 6223973 [X]	CEH	4.00 7.00 10.01	3.91 7.04 9.95	
[X] Turbidity meter	NTU	1000	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) [ ] 13120C030432 (Q) [X]	CEH	< 0.4 or 10 for 2100 Q 20 100 800	10.8	
[ ] Turbidity meter	NTU		LaMotte 2020	6523-1816 (La) [ ]		0.0 NTU 1.0 NTU 10.0 NTU		
[X] Sp. Cond. meter	uS mS	1000	Myron L Company Ultra Meter 6P	6213516 [ ] 6243084 [ ] 6212375 [ ] 6223973 [X]	CEH	7000 mS @ 25 °C	7001	
[ ] PID	ppm		MinRAE 2000			open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
[X] Dissolved Oxygen	ppm	1000	HACH Model HQ30d	080700023281 [ ] 100500041867 [X] 1402000100319 [ ]	CEH	100% Satuartion	100 %	102.7 % slope
[ ] Particulate meter	mg/m^3					zero air		
[ ] Oxygen	%					open air		
[ ] Hydrogen sulfide	ppm					open air		
[ ] Carbon monoxide	ppm					open air		
[ ] LEL	%					open air		
[ ] Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: CEH **DATE:**

ATTACHMENT 5

LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L2300876
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Brock Greene
Phone:	(716) 856-0599
Project Name:	OU4
Project Number:	T0071-021-912
Report Date:	02/03/23

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

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

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2300876-01	B-4	WATER	TECUMSEH	01/05/23 11:25	01/06/23
L2300876-02	B-5	WATER	TECUMSEH	01/05/23 13:00	01/06/23
L2300876-03	B-6	WATER	TECUMSEH	01/05/23 15:40	01/06/23
L2300876-04	B-7	WATER	TECUMSEH	01/05/23 16:45	01/06/23
L2300876-05	FIELD BLANK	WATER	TECUMSEH	01/05/23 09:00	01/06/23

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

Case Narrative

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

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

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

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

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

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

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

Case Narrative (continued)

Report Submission

February 03, 2023: This final report includes the results of all requested analyses.

January 20, 2023: This is a preliminary report.

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

L2300876-01, -02, -03, and -04: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

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: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 02/03/23

ORGANICS

VOLATILES

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-01
Client ID: B-4
Sample Location: TECUMSEH

Date Collected: 01/05/23 11:25
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 01/10/23 20:29
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	0.17	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	101		70-130

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-02 D
Client ID: B-5
Sample Location: TECUMSEH

Date Collected: 01/05/23 13:00
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 01/10/23 20:49
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	1200		ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	44		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	21	J	ug/l	25	7.0	10
o-Xylene	12	J	ug/l	25	7.0	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
n-Propylbenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	ND		ug/l	25	7.0	10
1,2,4-Trimethylbenzene	8.6	J	ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	98		70-130

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-03
Client ID: B-6
Sample Location: TECUMSEH

Date Collected: 01/05/23 15:40
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 01/10/23 21:09
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	15		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	0.84	J	ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	0.76	J	ug/l	2.5	0.70	1
o-Xylene	1.1	J	ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	0.98	J	ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	103		70-130

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-04
Client ID: B-7
Sample Location: TECUMSEH

Date Collected: 01/05/23 16:45
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 01/10/23 21:29
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	49		ug/l	0.50	0.16	1
Toluene	0.76	J	ug/l	2.5	0.70	1
Ethylbenzene	5.0		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	4.9		ug/l	2.5	0.70	1
o-Xylene	6.2		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	1.1	J	ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	1.1	J	ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	6.1		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	100		70-130

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 01/10/23 18:49
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1732109-5					
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: OU4

Project Number: T0071-021-912

Lab Number: L2300876

Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1732109-3 WG1732109-4								
Benzene	94		94		70-130	0		20
Toluene	93		95		70-130	2		20
Ethylbenzene	90		91		70-130	1		20
Methyl tert butyl ether	87		85		63-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
n-Butylbenzene	87		90		53-136	3		20
sec-Butylbenzene	92		92		70-130	0		20
tert-Butylbenzene	94		93		70-130	1		20
Isopropylbenzene	89		90		70-130	1		20
p-Isopropyltoluene	91		92		70-130	1		20
n-Propylbenzene	90		90		69-130	0		20
1,3,5-Trimethylbenzene	88		90		64-130	2		20
1,2,4-Trimethylbenzene	89		89		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		89		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	102		102		70-130
Dibromofluoromethane	97		95		70-130

SEMIVOLATILES

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-01
Client ID: B-4
Sample Location: TECUMSEH

Date Collected: 01/05/23 11:25
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 01/09/23 18:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 01/08/23 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	ND		ug/l	2.0	0.46	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	39		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	40		10-120
4-Terphenyl-d14	58		41-149

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-01
Client ID: B-4
Sample Location: TECUMSEH

Date Collected: 01/05/23 11:25
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 07:12
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	7.68		ng/l	1.78	0.364	1
Perfluoropentanoic Acid (PFPeA)	2.90		ng/l	1.78	0.353	1
Perfluorobutanesulfonic Acid (PFBS)	0.874	J	ng/l	1.78	0.212	1
Perfluorohexanoic Acid (PFHxA)	2.58		ng/l	1.78	0.293	1
Perfluoroheptanoic Acid (PFHpA)	1.83		ng/l	1.78	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	0.418	J	ng/l	1.78	0.335	1
Perfluorooctanoic Acid (PFOA)	4.45		ng/l	1.78	0.210	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.78	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.78	0.614	1
Perfluorononanoic Acid (PFNA)	0.314	J	ng/l	1.78	0.278	1
Perfluorooctanesulfonic Acid (PFOS)	1.16	J	ng/l	1.78	0.450	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.78	0.271	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.78	1.08	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.78	0.578	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.78	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.78	0.874	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.78	0.517	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.78	0.717	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.78	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.78	0.292	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.78	0.221	1
PFOA/PFOS, Total	5.61	J	ng/l	1.78	0.210	1

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-01 Date Collected: 01/05/23 11:25

Client ID: B-4 Date Received: 01/06/23

Sample Location: TECUMSEH Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	76		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	87		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	67		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	84		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**207**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	70		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	77		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	76		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	161		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	81		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	50		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	58		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	72		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	61		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-02
Client ID: B-5
Sample Location: TECUMSEH

Date Collected: 01/05/23 13:00
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 01/09/23 18:42
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 01/08/23 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	62.		ug/l	2.0	0.46	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	3.6	J	ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	19.		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		21-120
Phenol-d6	41		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	54		10-120
4-Terphenyl-d14	60		41-149

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-02
Client ID: B-5
Sample Location: TECUMSEH

Date Collected: 01/05/23 13:00
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 07:28
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	23.4		ng/l	1.86	0.379	1
Perfluoropentanoic Acid (PFPeA)	7.57		ng/l	1.86	0.368	1
Perfluorobutanesulfonic Acid (PFBS)	1.70	J	ng/l	1.86	0.221	1
Perfluorohexanoic Acid (PFHxA)	4.22		ng/l	1.86	0.305	1
Perfluoroheptanoic Acid (PFHpA)	2.44		ng/l	1.86	0.209	1
Perfluorohexanesulfonic Acid (PFHxS)	0.543	JF	ng/l	1.86	0.350	1
Perfluorooctanoic Acid (PFOA)	8.72		ng/l	1.86	0.219	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.86	1.24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.86	0.640	1
Perfluorononanoic Acid (PFNA)	0.848	J	ng/l	1.86	0.290	1
Perfluorooctanesulfonic Acid (PFOS)	5.05		ng/l	1.86	0.469	1
Perfluorodecanoic Acid (PFDA)	0.312	J	ng/l	1.86	0.283	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.86	1.13	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.86	0.603	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.86	0.242	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.86	0.911	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.86	0.539	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.86	0.748	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.86	0.346	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.86	0.304	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.86	0.231	1
PFOA/PFOS, Total	13.8		ng/l	1.86	0.219	1

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-02 Date Collected: 01/05/23 13:00

Client ID: B-5 Date Received: 01/06/23

Sample Location: TECUMSEH Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	80		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	78		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	64		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	75		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	95		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	76		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**186**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	62		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	73		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	70		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	144		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	67		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	50		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	69		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	67		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	60		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-03
Client ID: B-6
Sample Location: TECUMSEH

Date Collected: 01/05/23 15:40
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 01/09/23 19:08
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 01/08/23 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	45.		ug/l	2.0	0.46	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	0.89	J	ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	52		23-120
2-Fluorobiphenyl	49		15-120
2,4,6-Tribromophenol	49		10-120
4-Terphenyl-d14	49		41-149

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-03
Client ID: B-6
Sample Location: TECUMSEH

Date Collected: 01/05/23 15:40
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 07:45
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	8.33		ng/l	1.79	0.365	1
Perfluoropentanoic Acid (PFPeA)	6.55		ng/l	1.79	0.354	1
Perfluorobutanesulfonic Acid (PFBS)	0.694	J	ng/l	1.79	0.213	1
Perfluorohexanoic Acid (PFHxA)	3.59		ng/l	1.79	0.293	1
Perfluoroheptanoic Acid (PFHpA)	2.90		ng/l	1.79	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	0.651	JF	ng/l	1.79	0.336	1
Perfluorooctanoic Acid (PFOA)	12.0		ng/l	1.79	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.79	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.79	0.615	1
Perfluorononanoic Acid (PFNA)	1.08	J	ng/l	1.79	0.279	1
Perfluorooctanesulfonic Acid (PFOS)	3.94		ng/l	1.79	0.451	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.272	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.79	1.08	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.579	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.79	0.876	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.519	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.719	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.333	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.293	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.222	1
PFOA/PFOS, Total	15.9		ng/l	1.79	0.211	1

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-03 Date Collected: 01/05/23 15:40

Client ID: B-6 Date Received: 01/06/23

Sample Location: TECUMSEH Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	73		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	68		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	81		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**186**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	67		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	76		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	74		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	152		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	70		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	55		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	74		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	77		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	65		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-04
Client ID: B-7
Sample Location: TECUMSEH

Date Collected: 01/05/23 16:45
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 01/09/23 19:33
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 01/08/23 08:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Naphthalene	59.		ug/l	2.0	0.46	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	2.1	J	ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1
Phenol	0.69	J	ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	40		23-120
2-Fluorobiphenyl	38		15-120
2,4,6-Tribromophenol	38		10-120
4-Terphenyl-d14	41		41-149

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-04
Client ID: B-7
Sample Location: TECUMSEH

Date Collected: 01/05/23 16:45
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 08:01
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	8.70		ng/l	1.84	0.374	1
Perfluoropentanoic Acid (PFPeA)	9.03		ng/l	1.84	0.363	1
Perfluorobutanesulfonic Acid (PFBS)	0.870	J	ng/l	1.84	0.218	1
Perfluorohexanoic Acid (PFHxA)	5.58		ng/l	1.84	0.301	1
Perfluoroheptanoic Acid (PFHpA)	4.16		ng/l	1.84	0.207	1
Perfluorohexanesulfonic Acid (PFHxS)	0.378	J	ng/l	1.84	0.345	1
Perfluorooctanoic Acid (PFOA)	9.30		ng/l	1.84	0.216	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.84	1.22	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.84	0.631	1
Perfluorononanoic Acid (PFNA)	0.683	J	ng/l	1.84	0.286	1
Perfluorooctanesulfonic Acid (PFOS)	1.10	J	ng/l	1.84	0.462	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.84	0.279	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.84	1.11	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.84	0.595	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.84	0.239	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.84	0.899	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.84	0.532	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.84	0.738	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.84	0.341	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.84	0.300	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.84	0.228	1
PFOA/PFOS, Total	10.4	J	ng/l	1.84	0.216	1

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-04 Date Collected: 01/05/23 16:45

Client ID: B-7 Date Received: 01/06/23

Sample Location: TECUMSEH Field Prep: Not Specified

Sample Depth:

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

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	72		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	86		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	66		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	81		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	93		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	82		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**182**	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	70		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	76		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	75		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	144		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	67		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	53		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	72		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	62		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-05
Client ID: FIELD BLANK
Sample Location: TECUMSEH

Date Collected: 01/05/23 09:00
Date Received: 01/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 08:35
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.07	0.423	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.07	0.410	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.07	0.247	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.07	0.340	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.07	0.233	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.07	0.390	1
Perfluorooctanoic Acid (PFOA)	0.315	J	ng/l	2.07	0.245	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.07	1.38	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.07	0.713	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.07	0.323	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.07	0.522	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.07	0.315	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.07	1.26	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.07	0.672	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.07	0.270	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.07	1.02	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.07	0.601	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.07	0.834	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.07	0.386	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.07	0.339	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.07	0.257	1
PFOA/PFOS, Total	0.315	J	ng/l	2.07	0.245	1

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

SAMPLE RESULTS

Lab ID: L2300876-05 Date Collected: 01/05/23 09:00

Client ID: FIELD BLANK Date Received: 01/06/23

Sample Location: TECUMSEH Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	96		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	108		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	94		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	97		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	100		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	104		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	76		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	102		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	72		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	92		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	58		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	85		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 01/08/23 13:43
Analyst: CMM

Extraction Method: EPA 3510C
Extraction Date: 01/07/23 17:22

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1731037-1					
Naphthalene	ND		ug/l	2.0	0.46
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzyl Alcohol	ND		ug/l	2.0	0.59

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	48		10-120
4-Terphenyl-d14	56		41-149

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 04:26
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1734847-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
PFOA/PFOS, Total	ND		ng/l	2.00	0.236

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/21/23 04:26
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1734847-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	94		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	98		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	88		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	108		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	91		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	100		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	72		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	87		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	86		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	95		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	71		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	51		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	75		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	96		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	78		22-136

Project Name: OU4 **Lab Number:** L2300876

Project Number: T0071-021-912 **Report Date:** 02/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/23/23 16:56
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 01/18/23 17:42

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1734847-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	65		10-112

Lab Control Sample Analysis
Batch Quality Control

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1731037-2 WG1731037-3								
Naphthalene	65		55		40-140	17		30
2,4,6-Trichlorophenol	63		55		30-130	14		30
p-Chloro-m-cresol	66		60		23-97	10		30
2-Chlorophenol	67		56		27-123	18		30
2,4-Dichlorophenol	66		58		30-130	13		30
2,4-Dimethylphenol	53		36		30-130	**38**	Q	30
2-Nitrophenol	67		55		30-130	20		30
4-Nitrophenol	60		58		10-80	3		30
2,4-Dinitrophenol	47		38		20-130	21		30
4,6-Dinitro-o-cresol	57		52		20-164	9		30
Pentachlorophenol	48		44		9-103	9		30
Phenol	51		42		12-110	19		30
2-Methylphenol	64		53		30-130	19		30
3-Methylphenol/4-Methylphenol	70		57		30-130	20		30
2,4,5-Trichlorophenol	66		61		30-130	8		30
Benzyl Alcohol	65		54		26-116	18		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1731037-2 WG1731037-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		47		21-120
Phenol-d6	53		44		10-120
Nitrobenzene-d5	74		60		23-120
2-Fluorobiphenyl	67		58		15-120
2,4,6-Tribromophenol	61		58		10-120
4-Terphenyl-d14	64		59		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-05 Batch: WG1734847-2								
Perfluorobutanoic Acid (PFBA)	94		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	97		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	95		-		65-157	-		30
Perfluorohexanoic Acid (PFHxA)	97		-		69-168	-		30
Perfluoroheptanoic Acid (PFHpA)	95		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	116		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	90		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	109		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	112		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	117		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	111		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	107		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	99		-		56-173	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	107		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	80		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	94		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	92		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	97		-		67-153	-		30
Perfluorotridecanoic Acid (PFTrDA)	114		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	115		-		59-182	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-05 Batch: WG1734847-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	96				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	99				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	104				70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	90				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	92				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	110				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	101				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	73				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	90				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	104				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	77				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	55				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	76				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	87				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75				22-136

Lab Control Sample Analysis

Batch Quality Control

Project Name: OU4

Project Number: T0071-021-912

Lab Number: L2300876

Report Date: 02/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab	Associated sample(s): 01-05		Batch: WG1734847-2					
Perfluorooctanesulfonamide (FOSA)	92		-		46-170	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	67				10-112

Matrix Spike Analysis
Batch Quality Control

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

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): 01-05 QC Batch ID: WG1734847-3 WG1734847-4 QC Sample: L2300450-06 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	74.0	35.8	110	101		112	105		67-148	2		30
Perfluoropentanoic Acid (PFPeA)	108	35.8	147	109		149	113		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	238	31.8	276	120		287	152		65-157	4		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	33.6	36.3	108		36.7	108		37-219	1		30
Perfluorohexanoic Acid (PFHxA)	393	35.8	432	109		450	157		69-168	4		30
Perfluoropentanesulfonic Acid (PFPeS)	176	33.7	210	101		213	108		52-156	1		30
Perfluoroheptanoic Acid (PFHpA)	49.3	35.8	85.0	100		86.0	101		58-159	1		30
Perfluorohexanesulfonic Acid (PFHxS)	629	32.7	664	107		653	72		69-177	2		30
Perfluorooctanoic Acid (PFOA)	50.3	35.8	86.8	102		88.7	106		63-159	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	34.1	39.5	116		40.0	116		49-187	1		30
Perfluoroheptanesulfonic Acid (PFHpS)	11.6	34.2	50.4	114		51.4	115		61-179	2		30
Perfluorononanoic Acid (PFNA)	ND	35.8	41.7	116		44.3	122		68-171	6		30
Perfluorooctanesulfonic Acid (PFOS)	239	33.2	272	99		273	101		52-151	0		30
Perfluorodecanoic Acid (PFDA)	ND	35.8	33.5	94		38.4	106		63-171	14		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	34.4	34.7	101		34.3	98		56-173	1		30
Perfluorononanesulfonic Acid (PFNS)	ND	34.4	37.4	109		37.4	107		48-150	0		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	35.8	35.8	100		37.1	102		60-166	4		30
Perfluoroundecanoic Acid (PFUnA)	ND	35.8	28.1	78		28.6	79		60-153	2		30
Perfluorodecanesulfonic Acid (PFDS)	ND	34.6	36.6	106		40.3	115		38-156	10		30
Perfluorooctanesulfonamide (FOSA)	ND	35.8	31.6F	88		32.9	90		46-170	4		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	35.8	33.8	94		33.1	91		45-170	2		30
Perfluorododecanoic Acid (PFDoA)	ND	35.8	31.0	87		31.8	88		67-153	3		30

Matrix Spike Analysis

Batch Quality Control

Project Name: OU4

Project Number: T0071-021-912

Lab Number: L2300876

Report Date: 02/03/23

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): 01-05 QC Batch ID: WG1734847-3 WG1734847-4 QC Sample: L2300450-06 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	35.8	37.6	105		39.3	108		48-158	4		30
Perfluorotetradecanoic Acid (PFTA)	ND	35.8	39.2	109		39.2	108		59-182	0		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	**167**	Q	**177**	Q	10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	**194**	Q	**197**	Q	12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	**205**	Q	**211**	Q	14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	73		67		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	72		65		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93		89		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83		75		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	65		61		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	83		78		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		97		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	84		80		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	72		71		22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	90		88		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	67		64		62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	44		38		10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	83		85		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	87		83		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	74		69		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	88		89		70-131

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

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(*)
L2300876-01A	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-01B	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-01C	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-01D	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-01E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-01F	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-01G	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-02A	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-02B	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-02C	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-02D	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-02E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-02F	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-02G	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-03A	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-03B	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-03C	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-03D	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-03E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-03F	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-03G	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-04A	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)

*Values in parentheses indicate holding time in days

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2300876-04B	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-04C	Vial HCl preserved	A	NA		3.7	Y	Absent		NYCP51-8260(14)
L2300876-04D	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-04E	Amber 250ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8270-LVI(7)
L2300876-04F	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-04G	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)
L2300876-05A	Plastic 250ml unpreserved	B	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(28)

*Values in parentheses indicate holding time in days

Project Name: OU4
Project Number: T0071-021-912

Lab Number: L2300876
Report Date: 02/03/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: OU4
Project Number: T0071-021-912

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Report Date: 02/03/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

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

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

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

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

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

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

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

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

J - Estimated value. 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

Report Format: DU Report with 'J' Qualifiers

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

Data Qualifiers

Identified Compounds (TICs).

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

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	OU4	**Lab Number:**	L2300876
Project Number:	T0071-021-912	**Report Date:**	02/03/23

REFERENCES

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

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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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: 1/7/23

ALPHA Job #: L2300876

Client Information

Client: Turnkey
Address: 2558 Hamburg Turnpike
Buffalo, NY 14218
Phone: 716-856-0599
Fax:
Email: bgreene@hm-tk.com

Project Information

Project Name: OU4
Project Location: Tecumseh
Project # T0071-021-912
(Use Project name as Project #) ☐
Project Manager:
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:

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	CP-51-8260	NYTCL-8270-Lvl (Phenol + NAPH+)	A2-NY-537-Isotope						Total Bottle
00876-01	B-4	1-5-23	1125	water	CEH	X	X	X						
-02	B-5	1-5-23	1300	water	CEH	X	X	X						
-03	B-6	1-5-23	1540	water	CEH	X	X	X						
-04	B-7	1-5-23	1645	water	CEH	X	X	X						
-05	Field Blank	1-5-23	0900	water	CEH			X						

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

Sample Specific Comments

Container Type	V	A	P											
Preservative	B	A	A											

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
Chester Hochester AAL	1-5-23/1730	AAL	1/6 1220
AAL	1/6/23 1557		1/7/23 0002

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)