

April 25, 2025

Ms. Megan Kuczka
NYSDEC - Region 9
700 Delaware Avenue
Buffalo, NY 14209

Re: **2024 Groundwater Sampling**
NYSDEC Site No. 915145
Lehigh Industrial Park
31 South Street, Lackawanna, NY, 14219
LaBella Project #2234026.127

Dear Ms. Kuczka,

LaBella Associates, D.P.C. ("LaBella") is pleased to submit this letter summarizing the Groundwater sampling activities for the property located at 31 South Street, Lackawanna, 14218, Erie County, New York, hereinafter referred to as the "Site."

FIELD ACTIVITIES

On October 21, 2024, LaBella personnel conducted groundwater sampling from two monitoring wells (MW-2 and MW-4) at the Lehigh Industrial Park (site). A site map is presented as **Figure 1**, and the locations of MW-2 and MW-4 are presented in **Figure 2**. The monitoring wells were sampled using low-flow methodology with a peristaltic pump and dedicated high density polyethylene (HDPE) tubing. A multi-parameter instrument (YSI) was used to measure certain groundwater stabilization criteria (e.g., pH, temperature, dissolved oxygen, turbidity) to confirm that sample collection could begin. The groundwater sampling logs are presented in **Appendix 1**. The requested laboratory analysis consisted of Per- and Polyfluorinated Alkyl Substances (PFAS) via EPA Method 1633 (DRAFT), Target Analyte List (TAL) Metals via EPA Methods 6010/7470, and Polychlorinated biphenyls (PCBs) via EPA Method 8082. All sample coolers were packed with ice and shipped under chain of custody to Con-Test, a Pace Analytical Laboratory (Con-Test) in East Longmeadow, Massachusetts. PFAS samples were stored in dedicated coolers, separate from the other samples. LaBella followed a strict emerging contaminants sampling protocol which included not eating or drinking while on-site and not applying sunscreen or cosmetic products on the sampling day. Emerging contaminants protocol also require the sampler to wear well laundered clothes without the use of fabric softeners. No Teflon containing materials, field notebooks or sharpie markers were permitted on-site.

RESULTS

The analytical results were received from Con-Test on November 6, 2024. Sample results are reflected in Table 1. Results for metals and PCBs were compared to guidance values from the Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1. The analytical data for PFAS was compared to the NYSDEC Guidelines for Sampling and Analysis of PFAS, April 2023; NYSDEC TOGS 1.1.1 AWQS (February 2023 updates). A complete analytical package is presented as **Appendix 2**.

Based on the analytical results, iron, magnesium and sodium were detected at concentrations exceeding their respective NYSDEC TOGS AWQS in the groundwater sample collected from MW-2 during the most recent sampling event. Iron, magnesium and manganese were detected at concentrations exceeding their respective NYSDEC TOGS AWQS in the groundwater sample collected from MW-4. PCBs were not detected in the groundwater samples collected from MW-2 and MW-4, and such have not been detected in groundwater samples collected from these wells since September 2022. While metals concentrations in groundwater have fluctuated between sampling events, no sharp or dramatic increases indicative of a new release or area of concern were identified. Considering the relatively low concentrations of certain metals in groundwater, depth to groundwater, and the nature of the site (no groundwater use), the results are not considered a significant threat to human health or the environment.

Several PFAS compounds were detected in the groundwater samples collected from both MW-2 and MW-4, including the two PFAS compounds for which NYSDEC has established TOGS 1.1.1 AWQS (February 2023), Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS). The concentration of PFOA was 110 nanograms per liter (ng/L) for the sample taken at MW-2, 120 ng/L for the duplicate sample performed on MW-2, and 15 ng/L for the sample taken at MW-4, compared to regulatory criteria of 6.7 ng/L. The concentration of PFOS was 120 ng/L for the sample taken at MW-2, 150 ng/L for the duplicate sample performed on MW-2, and 19 ng/L for the sample taken at MW-4, compared to regulatory criteria of 2.7 ng/L. PFAS concentrations in groundwater have fluctuated between sampling events with a general increase in contaminant concentrations observed between 2020 and 2024. The change in PFAS concentrations may be attributable to several factors including sample turbidity, cross contamination, and advancements in laboratory analytical methods. Considering the depth to groundwater and nature of the site (no groundwater use), the results are not considered a significant threat to human health or the environment. The PFAS results for MW-2 and MW-4 are displayed in Table 1.

A data usability summary report (DUSR) was performed on the analytical results by Dataval Inc. and received on March 6, 2025. The results indicated the data was acceptable and no samples or data were rejected as unusable arising from quality control (QC) failures. A complete DUSR report is presented in **Appendix 3**.

We appreciate the opportunity to serve your environmental needs. If you have any questions, please do not hesitate to contact me at 716-345-6709.

Respectfully submitted,

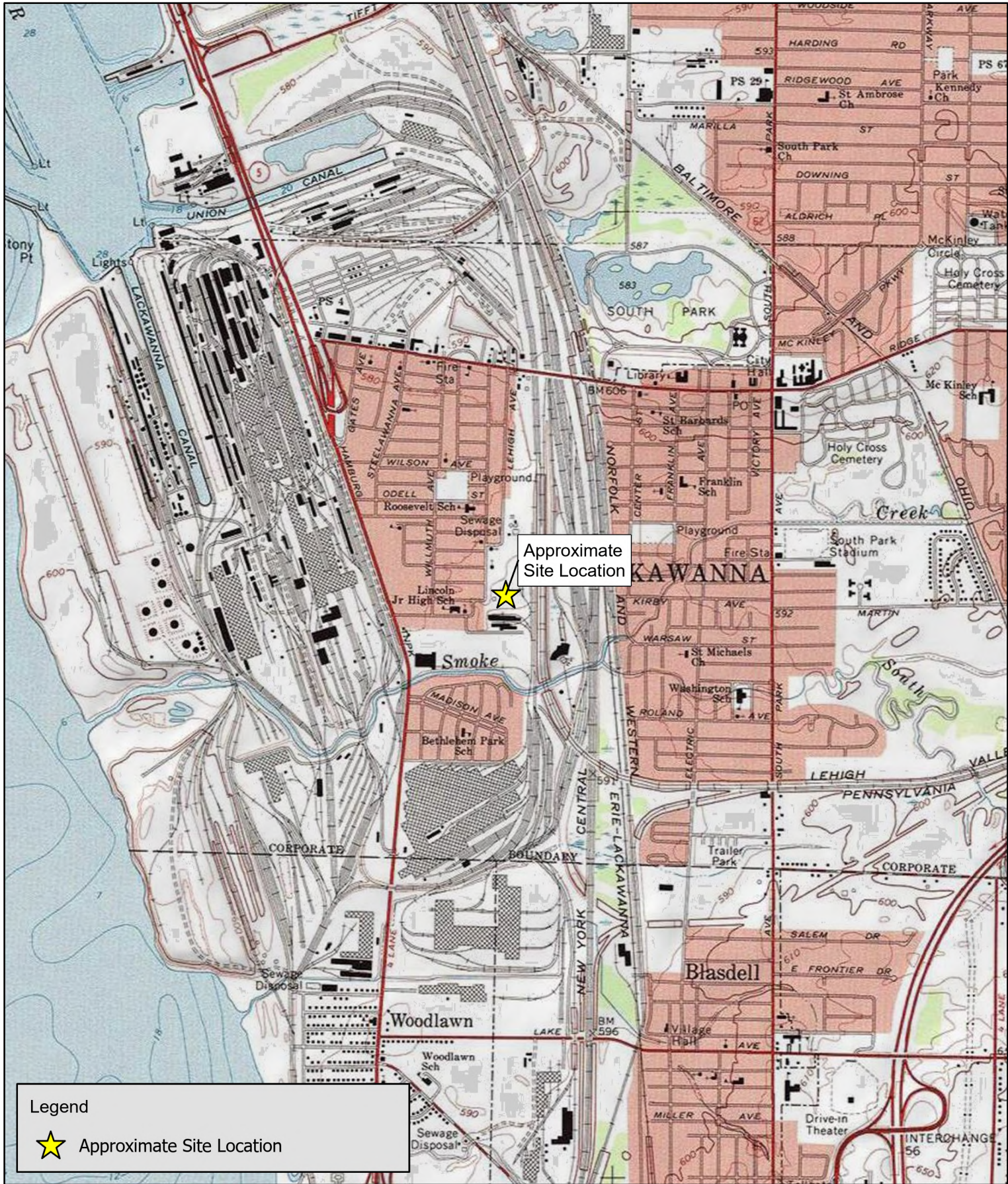
LABELLA ASSOCIATES, D.P.C.



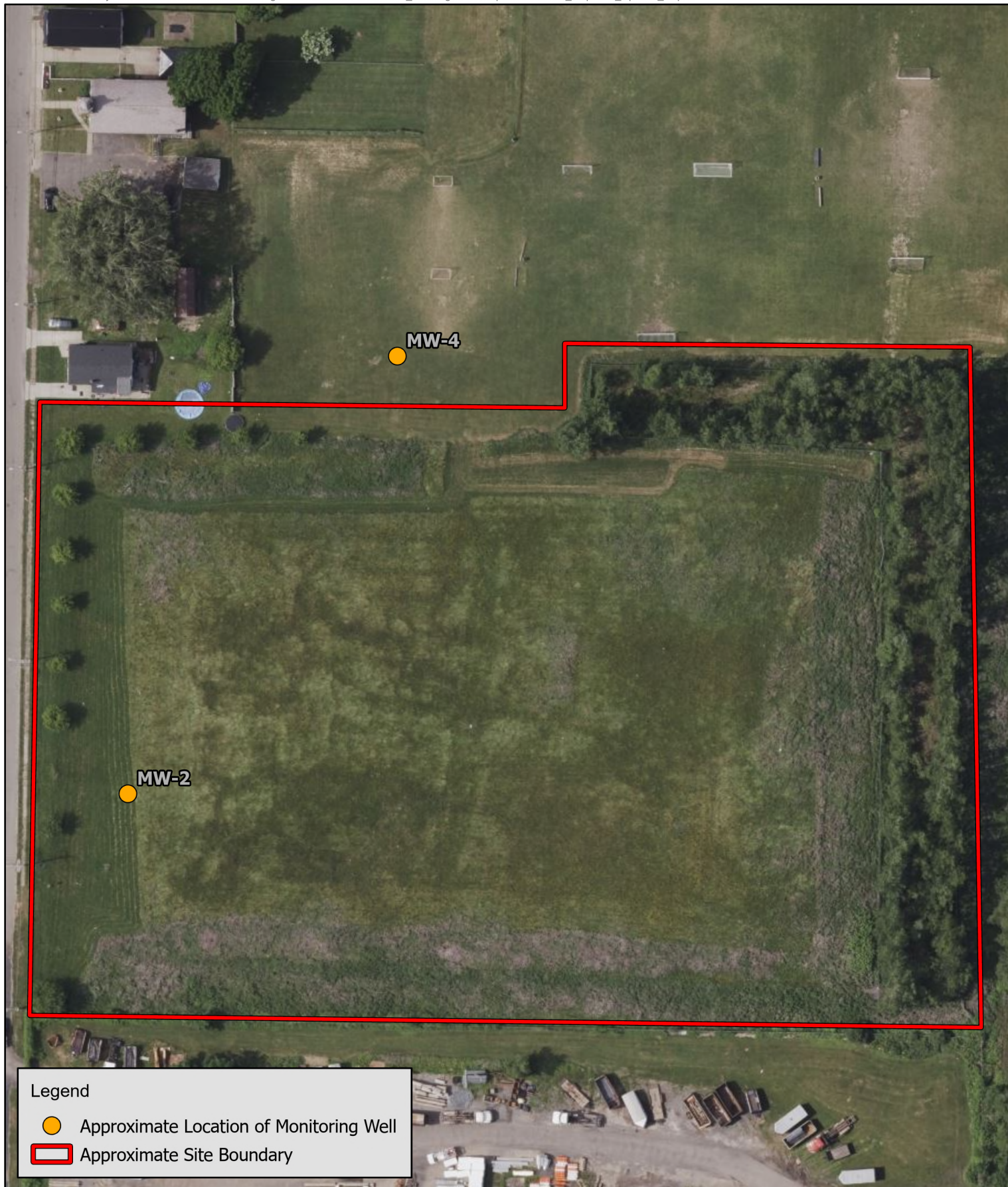
Andy Janik



FIGURES



PROJECT # / DRAWING # / DATE: 2234026.127 Figure 1 4/24/2025	DRAWING NAME: Site Location Map	PROJECT: 2024 Groundwater Sampling 31 South Street Lackawanna, NY	
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Legend

-  Approximate Location of Monitoring Well
-  Approximate Site Boundary

PROJECT # / DRAWING # /
DATE:

2234026.127

Figure 2

4/23/2025

DRAWING NAME:

Site Map

PROJECT:

2024 Groundwater
Sampling

31 South Street
Lackawanna, NY



0 50 100
Feet

 **LaBella**
Powered by partnership.

TABLES

TABLE 1
Lehigh Industrial Park
2024 Annual Results
GROUNDWATER ANALYSIS SUMMARY
(Detected Analytes Only)

MONITORING LOCATIONS	MW-2	MW-2	MW-2	MW-2	MW-2	Field Duplicate MW-2	MW-4	MW-4	MW-4	MW-4	MW-4	NYSDEC Ambient Water Quality Standards and Guidance Values ⁽¹⁾	Units		
Collection Date	9/30/2020	9/28/2021	9/12/2022 - 9/13/2022	11/8/2023	10/22/2024	10/22/2024	9/30/2020	9/28/2021	9/12/2022 - 9/13/2022	11/8/2023	10/22/2024				
Metals (Total)															
Aluminum	0.16 J	0.2 J	NA	1.3 J	0.038 J	-	-	5.3	-	21	0.55	0.043 J	0.31 J	NL	mg/L
Antimony	-	-	NA	0.0029 J	-	-	-	-	-	-	-	-	-	0.003	mg/L
Arsenic	-	-	NA	0.0014 J	-	-	-	-	-	0.011	-	-	-	0.025	mg/L
Barium	0.067	0.053	NA	0.066 J	0.042 J	0.044 J	0.044 J	0.11	0.076	0.49	0.086	0.07	0.078 J	1	mg/L
Beryllium	-	-	NA	0.0001 J	-	-	-	-	-	0.0047 J	0.00017 J	-	-	0.003	mg/L
Cadmium	-	-	NA	0.00045 J	-	-	-	-	-	0.0017	0.000032 J	-	-	0.005	mg/L
Calcium	152	144	NA	150	120	140 J	130 J	172	144	730	160	130	150 J	NL	mg/L
Chromium	0.0016 J	-	NA	0.011	-	-	0.0067 J	0.0076	-	0.05	0.0014	-	-	0.05	mg/L
Cobalt	0.0013 J	-	NA	0.0033 J	-	-	-	0.0019 J	-	0.029	0.001 J	-	-	NL	mg/L
Copper	0.0027 J	0.003 J	NA	0.022 J	-	-	-	0.021	0.0023 J	0.11	0.0057	-	-	0.2	mg/L
Iron	7.7	0.091	NA	29 J	1.2	0.84	2.1	5.9	0.085	47	1.0	0.027	0.68	0.3	mg/L
Lead	-	-	NA	0.0078 J	-	0.0083 J	0.0068 J	0.012	-	0.15	0.0021	-	0.009 J	0.025	mg/L
Magnesium	47.1	42.9	NA	46	44	44	43	47.3	44.2	110	45	38	39	35	mg/L
Manganese	0.098	0.006	NA	0.11 J	0.033	0.014	0.018	0.29	0.27	11	0.14	0.33	0.35	0.3	mg/L
Mercury	-	-	NA	0.000059 J	-	-	-	-	-	0.00004 J	-	-	-	0.0007	mg/L
Nickel	0.006 J	0.005 J	NA	0.021 J	0.0033 J	0.006 J	0.0068 J	0.0076 J	-	0.11	0.0093	0.0025 J	-	0.1	mg/L
Potassium	5.2	5.3	NA	5.7	5.6	5.6	5.5	6.3	4.0	9.7	5.8	5.9	6.5	NL	mg/L
Selenium	-	-	NA	0.0037 J	-	-	-	-	-	0.002 J	-	-	-	0.01	mg/L
Silver	-	-	NA	0.00013 J	-	-	-	-	-	0.00057	-	-	-	0.05	mg/L
Sodium	26.2	21.9	NA	28	22	20	20	9.5	8.5	12	10	9.6	8.2	20	mg/L
Thallium	-	-	NA	0.00028 J	-	-	-	-	-	0.0021	0.00025	-	-	0.0005	mg/L
Vanadium	-	-	NA	0.0035 J	-	-	-	0.0097	-	0.04	-	-	-	NL	mg/L
Zinc	0.029	0.0033 J	NA	0.21 J	-	-	0.0081 J	0.031	0.0027 J	0.29	0.0081 J	-	-	2	mg/L
Polychlorinated Biphenyls (PCBs) (µg/L)															
Total PCBs	-	0.65 J	0.26	1.0	-	-	-	-	0.33 J	2.3	-	-	-	0.09	µg/L
Per- and Polyfluoroalkyl Substances (PFAS)															
Perfluorobutanoic acid (PFBA)	35	58	1.7 J	NA	13	25 J	28 J	-	1.3 J	3.1 J	2.3 J	2.0	- UJ	NL	ng/L
Perfluoropentanoic acid (PFPeA)	21	50	2.7 J	NA	14	14 J	15 J	-	-	-	3.6 J	4.0	- UJ	NL	ng/L
Perfluorohexanoic acid (PFHxA)	22	39	3.1	NA	12	-	-	-	0.73 J	-	-	3.9	-	NL	ng/L
Perfluoroheptanoic acid (PFHpA)	15	15	1.2 J	NA	19	21	22	0.42 J	1.1 J	1.9 J	1.4 J	4.4	1.7 J	NL	ng/L
Perfluorooctanoic acid (PFOA)	81	42	4.9 J	NA	110	110	120	4.3	13	16 J	11 J	19 J	15 J	6.7	ng/L
Perfluorononanoic acid (PFNA)	1.6 J	0.5 J	0.36 J	NA	3.4	2.7	2.6	-	-	-	-	-	- UJ	NL	ng/L
Perfluorodecanoic acid (PFDA)	-	-	-	NA	-	-	0.43 J	-	-	-	-	-	0.25 J	NL	ng/L
Perfluorobutanesulfonic acid (PFBS)	2.7	1.6 J	1.8 J	NA	5.7	3.1 J	5 J	0.73 J	1.6 J	1.9 J	3.3 J	2.0	1.8 J	NL	ng/L
Perfluorohexanesulfonic acid (PFHxS)	16	5.6	2.1	NA	15	11	13 J	-	1.9	-	-	3.1	1.8 J	NL	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	2.6	0.81 J	-	NA	3.7	2.3	2.9	-	-	-	-	-	-	NL	ng/L
Perfluorooctanesulfonic acid (PFOS)	82	27	5.7	NA	110	120	150 J	1.4 J	4.7	8.5	4.2 J	23	19 J	2.7	ng/L
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	NA	NA	NA	2.4	2.6 J	NA	NA	NA	NA	NA	-	NL	ng/L
Total Suspended Solids	NA	NA	NA	NA	NA	18	24	NA	NA	NA	NA	NA	34	NL	ng/L
PFOA/PFOS, Total	278.9	239.5	23.56	NA	305.8	311.5	361.5	6.9	24.3	31.4	28.6	61.4	75.25	500**	ng/L

mg/L = milligrams per liter
 ng/L = nanograms per liter
 µg/L = micrograms per liter
 NA - Not Analyzed
 NL - Indicates that no regulatory value is listed within the NYSDEC TOGS Water Quality Standards
 UJ - The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise
 J - Indicates the value is an estimate

*J - Indicates the analyte concentration is below the Method Detection Limit (non-detect)

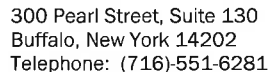
(1) Regulatory values are from NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations dated June 1998.

PFAS Guidance Values = NYSDEC Guidelines for Sampling and Analysis of PFAS, November 2022; NYSDEC TOGS 1.1.1 AWQS (February 2023 updates)

** NYSDEC Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS), April 2023

APPENDIX 1

Field Logs



Weather:

Let High Industrial Park
Lackawanna NY
2234026.127
B. Sabudg
10/21/24
Sunny

WELL I.D.:

Pump Type:

2"
22.42'
TOP of PVC
Peristaltic

Tubing Type:

19.36'

HDPE 1/4 in

[illegible]

Total	1.0	Gallons Purged
-------	-----	----------------

Purge Time Start:

Purge Time End:

Final Static Water Level:

21.68

OBSERVATIONS

~~ma-0613~~

mw - 02 sampled @ 1020

Dup Sampled @ 1045

* Lock was cut to access well

* NO PVC Cap on well

300 Pearl Street, Suite 130
Buffalo, New York 14202
Telephone: (716)-551-6281

Project Name: Lehigh Industrial Park
Location: Lackawanna NY
Project No.: 2234026.127
Sampled By: B. Sabuda
Date: 10/21/24
Weather: Sunny

WELL I.D.: MW - 04

WELL SAMPLING INFORMATION

Well Diameter: 2"
Depth of Well: 16.98
Measuring Point: Top of PVC
Pump Type: Peristaltic

Static Water Level: 14.30
Length of Well Screen: _____
Depth to Top of Pump: _____
Tubing Type: HDPE 1/4 in

FIELD PARAMETER MEASUREMENT

[illegible]

Total	1.6	Gallons Purged
-------	-----	----------------

Purge Time Start: 1120

Purge Time End: 1200

Final Static Water Level: _____

OBSERVATIONS

MW-04 Sampled @ 1215

* Lock had to be cut to access well

ms/msd taken

- well purged dry @ 1240, returned @ 1340 to complete (PCB/metal)

APPENDIX 2

Laboratory Analytical Report

November 6, 2024

Megan Kuczka
NYDEC_Labelle Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020

Project Location: Lackawanna, NY
Client Job Number:
Project Number: 915145
Laboratory Work Order Number: 24J3097

Enclosed are results of analyses for samples as received by the laboratory on October 22, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332NYDEC_Labella Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020
ATTN: Megan Kuczka

REPORT DATE: 11/6/2024

PURCHASE ORDER NUMBER: 152390

PROJECT NUMBER: 915145

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24J3097

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Lackawanna, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-2_20241021	24J3097-01	Ground Water		Draft Method 1633 SW-846 6010D SW-846 7470A SW-846 8082A	
MW-4_20241021	24J3097-02	Ground Water		Draft Method 1633 SW-846 6010D SW-846 7470A SW-846 8082A	
DUP_20241021	24J3097-03	Ground Water		Draft Method 1633 SW-846 6010D SW-846 7470A SW-846 8082A	
Equipment Blank	24J3097-04	Equipment Blank Water		Draft Method 1633	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

1,4 Dioxane circled on COC by mistake, not needed per client.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Draft Method 1633**Qualifications:****MS-07A**

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.

Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:**Perfluoro-3-methoxypropanoic acid (PFMPA)**

B390328-MS1, B390328-MSD1

MS-12

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high

bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:**2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3F)**

B390328-MS1, B390328-MSD1

4,8-Dioxa-3H-perfluorononanoic acid (ADONA)

B390328-MS1, B390328-MSD1

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and

bias is on the high side.

Analyte & Samples(s) Qualified:**13C2-4:2FTS**

24J3097-01[MW-2_20241021], 24J3097-03[DUP_20241021]

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT)

24J3097-01[MW-2_20241021], 24J3097-03[DUP_20241021]

PF-18

Re-analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:**13C2-4:2FTS**

24J3097-02[MW-4_20241021], B390328-MSD1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT)

24J3097-02[MW-4_20241021], B390328-MSD1

PF-22

Qualifier ion ratio >150% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:**Perfluoropentanoic acid (PFPeA)**

24J3097-03[DUP_20241021]

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:**13C2-PFTeDA**

S113199-CCV3

Perfluorotetradecanoic acid (PFTeDA)

S113199-CCV3

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:**11Cl-PF3OUdS (F53B Major)**

B390328-BLK1, B390328-BS1, B390328-MRL1, B390328-MS1, B390328-MSD1, S113199-CCV3

2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3F)

24J3097-01[MW-2_20241021], 24J3097-02[MW-4_20241021], 24J3097-03[DUP_20241021], 24J3097-04[Equipment Blank], S113309-CCV4

3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTC)

24J3097-01[MW-2_20241021], 24J3097-02[MW-4_20241021], 24J3097-03[DUP_20241021], 24J3097-04[Equipment Blank], S113309-CCV4

SW-846 6010D**Qualifications:**

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:**Calcium**

24J3097-02[MW-4_20241021], B390832-MS1, B390832-MSD1

MS-22

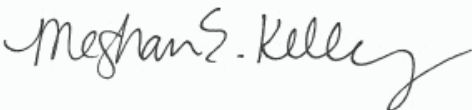
Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:**Aluminum**

24J3097-02[MW-4_20241021], B390832-MS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	25	3.9	2.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoropentanoic acid (PFPeA)	14	1.9	0.42	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorohexanoic acid (PFHxA)	23	0.97	0.23	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoroheptanoic acid (PFHpA)	21	0.97	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorooctanoic acid (PFOA)	110	0.97	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorononanoic acid (PFNA)	2.7	0.97	0.18	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorodecanoic acid (PFDA)	ND	0.97	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.97	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.97	0.19	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	0.29	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorobutanesulfonic acid (PFBS)	3.1	0.97	0.21	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoropentanesulfonic acid (PFPeS)	2.4	0.97	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorohexanesulfonic acid (PFHxS)	11	0.97	0.27	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoroheptanesulfonic acid (PFHpS)	2.3	0.97	0.32	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorooctanesulfonic acid (PFOS)	120	0.97	0.37	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.97	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.72	ng/L	1	PF-17	Draft Method 1633	10/29/24	11/2/24 16:28	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	2.9	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	0.22	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.97	0.32	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.97	0.35	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.97	0.39	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.7	2.6	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	2.6	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.80	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.93	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
11Cl-PF3OUDS (F53B Major)	ND	3.9	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	2.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	11	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 16:28	AMS
3-Perfluoroheptyl propanoic acid (FHPrPA) (7:3FTCA)	ND	48	9.2	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.34	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.54	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:28	AMS
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
13C4-PFBA	18.9		10-130				11/2/24 16:28			
13C5-PFPeA	56.6		35-150				11/2/24 16:28			
13C5-PFHxA	72.9		55-150				11/2/24 16:28			
13C4-PFHpA	76.5		55-150				11/2/24 16:28			
13C8-PFOA	77.3		60-140				11/2/24 16:28			
13C9-PFNA	74.1		55-140				11/2/24 16:28			
13C6-PFDA	72.6		50-140				11/2/24 16:28			
13C7-PFUnA	69.0		30-140				11/2/24 16:28			
13C2-PFDoA	56.7		10-150				11/2/24 16:28			
13C2-PFTeDA	54.8		10-130				11/2/24 16:28			
13C3-PFBS	86.8		55-150				11/2/24 16:28			
13C3-PFHxS	77.3		55-150				11/2/24 16:28			
13C8-PFOS	75.1		45-140				11/2/24 16:28			
13C2-4:2FTS	226	*	60-200		PF-17		11/2/24 16:28			
13C2-6:2FTS	168		60-200				11/2/24 16:28			
13C2-8:2FTS	100		50-200				11/2/24 16:28			
13C8-PFOA	62.9		30-130				11/2/24 16:28			
D3-NMeFOSA	56.5		15-130				11/2/24 16:28			
D5-NEtFOSA	55.6		10-130				11/2/24 16:28			
D3-NMeFOSAA	76.3		45-200				11/2/24 16:28			
D5-NEtFOSAA	71.0		10-200				11/2/24 16:28			
D7-NMeFOSE	55.4		10-150				11/2/24 16:28			
D9-NEtFOSE	55.2		10-150				11/2/24 16:28			
13C3-HFPO-DA	64.4		25-160				11/2/24 16:28			

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1221 [1]	ND	0.19	0.097	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1232 [1]	ND	0.19	0.087	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1248 [1]	ND	0.19	0.088	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1254 [1]	ND	0.19	0.098	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1260 [2]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1262 [1]	ND	0.19	0.077	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1268 [1]	ND	0.19	0.071	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	79.8		30-150				10/30/24 14:51			
Decachlorobiphenyl [2]	79.1		30-150				10/30/24 14:51			
Tetrachloro-m-xylene [1]	62.5		30-150				10/30/24 14:51			
Tetrachloro-m-xylene [2]	59.6		30-150				10/30/24 14:51			

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.025	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Barium	0.044	0.050	0.0098	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Calcium	140	0.50	0.21	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Chromium	ND	0.010	0.0053	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Iron	0.84	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:25	HNN
Lead	0.0083	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Magnesium	44	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Manganese	0.014	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:53	AAJ
Nickel	0.0060	0.010	0.0046	mg/L	1	J	SW-846 6010D	10/29/24	10/31/24 6:25	HNN
Potassium	5.6	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Sodium	20	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Zinc	ND	0.010	0.0080	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH

Project Location: Lackawanna, NY

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sample ID: 24J3097-01

Sample Matrix: Ground Water

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Description:

Sampled: 10/21/2024 10:20

Work Order: 24J3097

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)									
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	18	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.8	2.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.40	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorohexanoic acid (PFHxA)	1.7	0.94	0.23	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoroheptanoic acid (PFHpA)	1.7	0.94	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorooctanoic acid (PFOA)	15	0.94	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorononanoic acid (PFNA)	ND	0.94	0.18	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorodecanoic acid (PFDA)	0.25	0.94	0.19	ng/L	1	J	Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.94	0.19	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.94	0.19	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.94	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.94	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorobutanesulfonic acid (PFBS)	1.8	0.94	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.94	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.8	0.94	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.94	0.31	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorooctanesulfonic acid (PFOS)	19	0.94	0.36	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.94	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.94	0.27	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.94	0.27	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.70	ng/L	1	PF-18	Draft Method 1633	10/29/24	11/2/24 16:44	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	2.8	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.94	0.22	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.94	0.31	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.94	0.32	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.94	0.34	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.94	0.38	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.4	2.6	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.4	2.5	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.97	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.77	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.91	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
11Cl-PF3OUDS (F53B Major)	ND	3.8	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.4	2.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	11	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 16:44	AMS
3-Perfluoroheptyl propanoic acid (FHPrPA) (7:3FTCA)	ND	47	8.9	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.51	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	10/29/24	11/2/24 16:44	AMS
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
13C4-PFBA	19.3		10-130				11/2/24 16:44			
13C5-PFPeA	56.9		35-150				11/2/24 16:44			
13C5-PFHxA	65.6		55-150				11/2/24 16:44			
13C4-PFHpA	68.1		55-150				11/2/24 16:44			
13C8-PFOA	68.3		60-140				11/2/24 16:44			
13C9-PFNA	65.8		55-140				11/2/24 16:44			
13C6-PFDA	66.0		50-140				11/2/24 16:44			
13C7-PFUnA	60.5		30-140				11/2/24 16:44			
13C2-PFDoA	55.1		10-150				11/2/24 16:44			
13C2-PFTeDA	50.3		10-130				11/2/24 16:44			
13C3-PFBS	70.9		55-150				11/2/24 16:44			
13C3-PFHxS	68.3		55-150				11/2/24 16:44			
13C8-PFOS	67.0		45-140				11/2/24 16:44			
13C2-4:2FTS	210	*	60-200		PF-18		11/2/24 16:44			
13C2-6:2FTS	181		60-200				11/2/24 16:44			
13C2-8:2FTS	114		50-200				11/2/24 16:44			
13C8-PFOA	55.1		30-130				11/2/24 16:44			
D3-NMeFOSA	48.0		15-130				11/2/24 16:44			
D5-NEtFOSA	47.8		10-130				11/2/24 16:44			
D3-NMeFOSAA	73.9		45-200				11/2/24 16:44			
D5-NEtFOSAA	76.7		10-200				11/2/24 16:44			
D7-NMeFOSE	47.8		10-150				11/2/24 16:44			
D9-NEtFOSE	48.2		10-150				11/2/24 16:44			
13C3-HFPO-DA	60.4		25-160				11/2/24 16:44			

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1221 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1232 [1]	ND	0.19	0.091	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1248 [1]	ND	0.19	0.091	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1254 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1260 [1]	ND	0.19	0.12	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1262 [1]	ND	0.19	0.080	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1268 [1]	ND	0.19	0.074	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	80.5		30-150							
Decachlorobiphenyl [2]	80.0		30-150							
Tetrachloro-m-xylene [1]	85.5		30-150							
Tetrachloro-m-xylene [2]	80.7		30-150							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.31	0.050	0.025	mg/L	1	MS-22	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Barium	0.078	0.050	0.0098	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Calcium	150	0.50	0.21	mg/L	1	MS-19	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Chromium	ND	0.010	0.0053	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Iron	0.68	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Lead	0.0090	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Magnesium	39	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Manganese	0.35	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:55	AAJ
Nickel	ND	0.010	0.0046	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:02	HNN
Potassium	6.5	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Sodium	8.2	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Zinc	ND	0.010	0.0080	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH

Project Location: Lackawanna, NY

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sample ID: 24J3097-02

Sample Matrix: Ground Water

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Description:

Sampled: 10/21/2024 12:15

Work Order: 24J3097

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)									
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	34	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	28	3.9	2.2	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoropentanoic acid (PFPeA)	15	2.0	0.42	ng/L	1	PF-22	Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorohexanoic acid (PFHxA)	23	0.99	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoroheptanoic acid (PFHpA)	22	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorooctanoic acid (PFOA)	120	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorononanoic acid (PFNA)	2.6	0.99	0.19	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorodecanoic acid (PFDA)	0.43	0.99	0.20	ng/L	1	J	Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.99	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.99	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	0.29	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorobutanesulfonic acid (PFBS)	5.0	0.99	0.21	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoropentanesulfonic acid (PFPeS)	2.6	0.99	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorohexanesulfonic acid (PFHxS)	13	0.99	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoroheptanesulfonic acid (PFHpS)	2.9	0.99	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorooctanesulfonic acid (PFOS)	150	0.99	0.38	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.99	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.74	ng/L	1	PF-17	Draft Method 1633	10/29/24	11/2/24 17:00	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	3.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	0.23	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.99	0.32	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.99	0.35	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.99	0.39	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.9	2.7	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	2.6	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.81	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.95	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
11Cl-PF3OUDS (F53B Major)	ND	3.9	1.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	2.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	11	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 17:00	AMS
3-Perfluoroheptyl propanoic acid (FHPrPA) (7:3FTCA)	ND	49	9.4	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.34	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.55	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.53	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.54	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:00	AMS
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
13C4-PFBA	18.3		10-130				11/2/24 17:00			
13C5-PFPeA	53.5		35-150				11/2/24 17:00			
13C5-PFHxA	66.8		55-150				11/2/24 17:00			
13C4-PFHpA	71.0		55-150				11/2/24 17:00			
13C8-PFOA	70.9		60-140				11/2/24 17:00			
13C9-PFNA	67.7		55-140				11/2/24 17:00			
13C6-PFDA	69.0		50-140				11/2/24 17:00			
13C7-PFUnA	64.6		30-140				11/2/24 17:00			
13C2-PFDoA	58.1		10-150				11/2/24 17:00			
13C2-PFTeDA	50.6		10-130				11/2/24 17:00			
13C3-PFBS	70.4		55-150				11/2/24 17:00			
13C3-PFHxS	68.4		55-150				11/2/24 17:00			
13C8-PFOS	66.0		45-140				11/2/24 17:00			
13C2-4:2FTS	204 *		60-200		PF-17		11/2/24 17:00			
13C2-6:2FTS	149		60-200				11/2/24 17:00			
13C2-8:2FTS	85.7		50-200				11/2/24 17:00			
13C8-PFOSA	56.0		30-130				11/2/24 17:00			
D3-NMeFOSA	47.5		15-130				11/2/24 17:00			
D5-NEtFOSA	46.3		10-130				11/2/24 17:00			
D3-NMeFOSAA	63.4		45-200				11/2/24 17:00			
D5-NEtFOSAA	59.7		10-200				11/2/24 17:00			
D7-NMeFOSE	46.8		10-150				11/2/24 17:00			
D9-NEtFOSE	46.7		10-150				11/2/24 17:00			
13C3-HFPO-DA	66.0		25-160				11/2/24 17:00			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1221 [1]	ND	0.19	0.099	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1232 [1]	ND	0.19	0.089	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1248 [1]	ND	0.19	0.090	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1254 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1260 [1]	ND	0.19	0.12	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1262 [1]	ND	0.19	0.079	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1268 [1]	ND	0.19	0.072	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	81.5		30-150						10/30/24 15:25	
Decachlorobiphenyl [2]	81.2		30-150						10/30/24 15:25	
Tetrachloro-m-xylene [1]	80.1		30-150						10/30/24 15:25	
Tetrachloro-m-xylene [2]	73.7		30-150						10/30/24 15:25	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.025	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Barium	0.044	0.050	0.0098	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Calcium	130	0.50	0.21	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Chromium	0.0067	0.010	0.0053	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Iron	2.1	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:33	HNN
Lead	0.0068	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Magnesium	43	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Manganese	0.018	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:56	AAJ
Nickel	0.0068	0.010	0.0046	mg/L	1	J	SW-846 6010D	10/29/24	10/31/24 6:33	HNN
Potassium	5.5	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Sodium	20	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Zinc	0.0081	0.010	0.0080	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH

Project Location: Lackawanna, NY

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sample ID: 24J3097-03

Sample Matrix: Ground Water

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Description:

Sampled: 10/21/2024 00:00

Work Order: 24J3097

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)									
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	24	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: Equipment Blank

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-04

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.0	2.2	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.43	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.99	0.24	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorooctanoic acid (PFOA)	ND	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorononanoic acid (PFNA)	ND	0.99	0.19	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorodecanoic acid (PFDA)	ND	0.99	0.21	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.99	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.99	0.20	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	0.29	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	0.26	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	0.21	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	0.28	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	0.38	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.99	0.25	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	0.29	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	0.29	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.74	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	3.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	0.23	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.99	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	0.33	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.99	0.35	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.99	0.40	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.9	2.7	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	2.7	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.0	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.82	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.96	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
11Cl-PF3OUDS (F53B Major)	ND	4.0	1.1	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	2.2	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	11	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 17:16	AMS
3-Perfluoroheptyl propanoic acid (FHPrPA) (7:3FTCA)	ND	50	9.4	ng/L	1	V-05	Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.35	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.55	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: Equipment Blank

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-04

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.54	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.55	ng/L	1		Draft Method 1633	10/29/24	11/2/24 17:16	AMS
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
13C4-PFBA	89.8		10-130				11/2/24 17:16			
13C5-PFPeA	74.4		35-150				11/2/24 17:16			
13C5-PFHxA	68.2		55-150				11/2/24 17:16			
13C4-PFHpA	67.1		55-150				11/2/24 17:16			
13C8-PFOA	74.3		60-140				11/2/24 17:16			
13C9-PFNA	74.4		55-140				11/2/24 17:16			
13C6-PFDA	74.5		50-140				11/2/24 17:16			
13C7-PFUnA	70.9		30-140				11/2/24 17:16			
13C2-PFDoA	66.1		10-150				11/2/24 17:16			
13C2-PFTeDA	62.3		10-130				11/2/24 17:16			
13C3-PFBS	81.5		55-150				11/2/24 17:16			
13C3-PFHxS	71.7		55-150				11/2/24 17:16			
13C8-PFOS	75.0		45-140				11/2/24 17:16			
13C2-4:2FTS	83.5		60-200				11/2/24 17:16			
13C2-6:2FTS	72.6		60-200				11/2/24 17:16			
13C2-8:2FTS	70.7		50-200				11/2/24 17:16			
13C8-PFOA	62.3		30-130				11/2/24 17:16			
D3-NMeFOSA	60.9		15-130				11/2/24 17:16			
D5-NEtFOSA	69.4		10-130				11/2/24 17:16			
D3-NMeFOSAA	72.2		45-200				11/2/24 17:16			
D5-NEtFOSAA	74.5		10-200				11/2/24 17:16			
D7-NMeFOSE	64.4		10-150				11/2/24 17:16			
D9-NEtFOSE	67.2		10-150				11/2/24 17:16			
13C3-HFPO-DA	79.3		25-160				11/2/24 17:16			

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Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: Equipment Blank

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-04

Sample Matrix: Equipment Blank Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 7:07	LL

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Sample Extraction Data**Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [mL]	Date
24J3097-04 [Equipment Blank]	B390125	50.0	10/23/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24J3097-01 [MW-2_20241021]	B390195	50.0	10/23/24
24J3097-02 [MW-4_20241021]	B390195	50.0	10/23/24
24J3097-03 [DUP_20241021]	B390195	50.0	10/23/24

Prep Method:Draft Method 1633 **Analytical Method:**Draft Method 1633 Leachates were extracted on 10/23/2024 per NO PREP in Batch B390195

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24J3097-01 [MW-2_20241021]	B390328	516	5.00	10/29/24
24J3097-02 [MW-4_20241021]	B390328	532	5.00	10/29/24
24J3097-03 [DUP_20241021]	B390328	508	5.00	10/29/24
24J3097-04 [Equipment Blank]	B390328	504	5.00	10/29/24

Prep Method:SW-846 3005A **Analytical Method:**SW-846 6010D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24J3097-01 [MW-2_20241021]	B390832	50.0	50.0	10/29/24
24J3097-02 [MW-4_20241021]	B390832	50.0	50.0	10/29/24
24J3097-03 [DUP_20241021]	B390832	50.0	50.0	10/29/24

Prep Method:SW-846 7470A Prep **Analytical Method:**SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24J3097-01 [MW-2_20241021]	B390879	10.0	10.0	10/30/24
24J3097-02 [MW-4_20241021]	B390879	10.0	10.0	10/30/24
24J3097-03 [DUP_20241021]	B390879	10.0	10.0	10/30/24

Prep Method:SW-846 3510C **Analytical Method:**SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24J3097-01 [MW-2_20241021]	B390132	107	2.00	10/23/24
24J3097-02 [MW-4_20241021]	B390132	103	2.00	10/23/24
24J3097-03 [DUP_20241021]	B390132	105	2.00	10/23/24

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390328 - Draft Method 1633										
Blank (B390328-BLK1)				Prepared: 10/29/24 Analyzed: 11/01/24						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							V-05
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	72.5		ng/L	98.23		73.8	10-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390328 - Draft Method 1633
Blank (B390328-BLK1)

Prepared: 10/29/24 Analyzed: 11/01/24

Surrogate: 13C5-PFPeA	40.1		ng/L	49.12		81.6	35-150			
Surrogate: 13C5-PFHxA	20.0		ng/L	24.56		81.6	55-150			
Surrogate: 13C4-PFHpA	21.7		ng/L	24.56		88.2	55-150			
Surrogate: 13C8-PFOA	19.6		ng/L	24.56		80.0	60-140			
Surrogate: 13C9-PFNA	11.1		ng/L	12.28		90.8	55-140			
Surrogate: 13C6-PFDA	11.3		ng/L	12.28		91.8	50-140			
Surrogate: 13C7-PFUnA	9.46		ng/L	12.28		77.1	30-140			
Surrogate: 13C2-PFDoA	10.5		ng/L	12.28		85.2	10-150			
Surrogate: 13C2-PFTeDA	10.6		ng/L	12.28		86.4	10-130			
Surrogate: 13C3-PFBS	23.6		ng/L	24.56		95.9	55-150			
Surrogate: 13C3-PFHxS	20.2		ng/L	24.56		82.1	55-150			
Surrogate: 13C8-PFOS	19.9		ng/L	24.56		81.0	45-140			
Surrogate: 13C2-4:2FTS	45.4		ng/L	49.12		92.5	60-200			
Surrogate: 13C2-6:2FTS	42.6		ng/L	49.12		86.8	60-200			
Surrogate: 13C2-8:2FTS	35.9		ng/L	49.12		73.1	50-200			
Surrogate: 13C8-PFOA	19.3		ng/L	24.56		78.8	30-130			
Surrogate: D3-NMeFOSA	15.2		ng/L	24.56		61.9	15-130			
Surrogate: D5-NEtFOSA	16.6		ng/L	24.56		67.5	10-130			
Surrogate: D3-NMeFOSAA	41.8		ng/L	49.12		85.2	45-200			
Surrogate: D5-NEtFOSAA	44.6		ng/L	49.12		90.7	10-200			
Surrogate: D7-NMeFOSE	191		ng/L	245.6		77.8	10-150			
Surrogate: D9-NEtFOSE	174		ng/L	245.6		71.0	10-150			
Surrogate: 13C3-HFPO-DA	86.0		ng/L	98.23		87.6	25-160			

LCS (B390328-BS1)

Prepared: 10/29/24 Analyzed: 11/01/24

Perfluorobutanoic acid (PFBA)	90.4	3.9	ng/L	94.10		96.0	58-148			
Perfluoropentanoic acid (PFPeA)	48.2	2.0	ng/L	47.05		102	54-152			
Perfluorohexanoic acid (PFHxA)	25.0	0.98	ng/L	23.52		106	55-152			
Perfluoroheptanoic acid (PFHpA)	23.0	0.98	ng/L	23.52		97.6	54-154			
Perfluorooctanoic acid (PFOA)	24.9	0.98	ng/L	23.52		106	52-161			
Perfluorononanoic acid (PFNA)	20.3	0.98	ng/L	23.52		86.4	59-149			
Perfluorodecanoic acid (PFDA)	21.6	0.98	ng/L	23.52		91.8	52-147			
Perfluoroundecanoic acid (PFUnA)	25.9	0.98	ng/L	23.52		110	48-159			
Perfluorododecanoic acid (PFDoA)	25.0	0.98	ng/L	23.52		106	64-142			
Perfluorotridecanoic acid (PFTTrDA)	26.0	0.98	ng/L	23.52		111	49-148			
Perfluorotetradecanoic acid (PFTeDA)	23.2	0.98	ng/L	23.52		98.7	47-161			
Perfluorobutanesulfonic acid (PFBS)	20.8	0.98	ng/L	20.87		99.5	62-144			
Perfluoropentanesulfonic acid (PFPeS)	24.3	0.98	ng/L	22.14		110	59-151			
Perfluorohexanesulfonic acid (PFHxS)	21.4	0.98	ng/L	21.50		99.7	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	23.7	0.98	ng/L	22.42		106	55-152			
Perfluorooctanesulfonic acid (PFOS)	22.0	0.98	ng/L	21.83		101	58-149			
Perfluorononanesulfonic acid (PFNS)	24.2	0.98	ng/L	22.63		107	52-148			
Perfluorodecanesulfonic acid (PFDS)	25.1	0.98	ng/L	22.70		111	51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.6	0.98	ng/L	22.82		94.7	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	105	3.9	ng/L	88.22		119	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	95.1	3.9	ng/L	89.39		106	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	100	3.9	ng/L	90.33		111	63-152			
Perfluorooctanesulfonamide (PFOSA)	24.5	0.98	ng/L	23.52		104	61-148			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	22.0	0.98	ng/L	23.52		93.4	63-145			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390328 - Draft Method 1633

LCS (B390328-BS1)									
				Prepared: 10/29/24 Analyzed: 11/01/24					
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.2	0.98	ng/L	23.52		86.0	65-139		
N-MeFOSAA (NMeFOSAA)	23.4	0.98	ng/L	23.52		99.4	58-144		
N-EtFOSAA (NEtFOSAA)	19.9	0.98	ng/L	23.52		84.7	59-146		
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	210	9.8	ng/L	235.2		89.2	71-136		
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	222	9.8	ng/L	235.2		94.3	69-137		
Hexafluoropropylene oxide dimer acid (HFPO-DA)	116	3.9	ng/L	94.10		123	63-144		
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	104	3.9	ng/L	88.92		117	68-146		
9Cl-PF3ONS (F53B Minor)	86.7	3.9	ng/L	87.98		98.5	56-156		
11Cl-PF3OUdS (F53B Major)	74.3	3.9	ng/L	88.92		83.6	46-156		V-05
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	228	9.8	ng/L	235.2		96.9	62-129		
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1080	49	ng/L	1176		91.4	63-134		
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1040	49	ng/L	1176		88.0	50-138		
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	46.8	2.0	ng/L	41.87		112	56-151		
Perfluoro-3-methoxypropanoic acid (PFMPA)	49.5	2.0	ng/L	47.05		105	51-145		
Perfluoro-4-methoxybutanoic acid (PFMBA)	54.3	2.0	ng/L	47.05		115	55-148		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	61.2	2.0	ng/L	47.05		130	48-161		
Surrogate: 13C4-PFBA	72.0		ng/L	98.02		73.5	10-130		
Surrogate: 13C5-PFPeA	38.0		ng/L	49.01		77.6	35-150		
Surrogate: 13C5-PFHxA	19.1		ng/L	24.50		77.9	55-150		
Surrogate: 13C4-PFHpA	20.1		ng/L	24.50		82.1	55-150		
Surrogate: 13C8-PFOA	18.5		ng/L	24.50		75.3	60-140		
Surrogate: 13C9-PFNA	10.6		ng/L	12.25		86.3	55-140		
Surrogate: 13C6-PFDA	10.9		ng/L	12.25		89.1	50-140		
Surrogate: 13C7-PFUnA	9.02		ng/L	12.25		73.6	30-140		
Surrogate: 13C2-PFDoA	10.3		ng/L	12.25		83.9	10-150		
Surrogate: 13C2-PFTeDA	10.3		ng/L	12.25		84.0	10-130		
Surrogate: 13C3-PFBS	22.0		ng/L	24.50		90.0	55-150		
Surrogate: 13C3-PFHxS	19.2		ng/L	24.50		78.4	55-150		
Surrogate: 13C8-PFOS	18.3		ng/L	24.50		74.8	45-140		
Surrogate: 13C2-4:2FTS	40.6		ng/L	49.01		82.9	60-200		
Surrogate: 13C2-6:2FTS	40.8		ng/L	49.01		83.2	60-200		
Surrogate: 13C2-8:2FTS	31.3		ng/L	49.01		63.8	50-200		
Surrogate: 13C8-PFOSA	18.4		ng/L	24.50		74.9	30-130		
Surrogate: D3-NMeFOSA	14.7		ng/L	24.50		60.1	15-130		
Surrogate: D5-NEtFOSA	17.0		ng/L	24.50		69.3	10-130		
Surrogate: D3-NMeFOSAA	38.3		ng/L	49.01		78.1	45-200		
Surrogate: D5-NEtFOSAA	42.0		ng/L	49.01		85.8	10-200		
Surrogate: D7-NMeFOSE	181		ng/L	245.0		73.7	10-150		
Surrogate: D9-NEtFOSE	169		ng/L	245.0		69.1	10-150		
Surrogate: 13C3-HFPO-DA	79.8		ng/L	98.02		81.4	25-160		

MRL Check (B390328-MRL1)

Prepared: 10/29/24 Analyzed: 11/01/24

Perfluorobutanoic acid (PFBA)	8.85	3.9	ng/L	7.845		113	44-157		
Perfluoropentanoic acid (PFPeA)	4.51	2.0	ng/L	3.923		115	57-148		

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390328 - Draft Method 1633										
MRL Check (B390328-MRL1)				Prepared: 10/29/24 Analyzed: 11/01/24						
Perfluorohexanoic acid (PFHxA)	2.35	0.98	ng/L	1.961		120	62-149			
Perfluoroheptanoic acid (PFHpA)	2.14	0.98	ng/L	1.961		109	56-150			
Perfluorooctanoic acid (PFOA)	2.36	0.98	ng/L	1.961		120	57-161			
Perfluorononanoic acid (PFNA)	1.83	0.98	ng/L	1.961		93.5	53-157			
Perfluorodecanoic acid (PFDA)	2.05	0.98	ng/L	1.961		104	43-158			
Perfluoroundecanoic acid (PFUnA)	2.40	0.98	ng/L	1.961		122	50-155			
Perfluorododecanoic acid (PFDoA)	2.16	0.98	ng/L	1.961		110	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.20	0.98	ng/L	1.961		112	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.12	0.98	ng/L	1.961		108	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.82	0.98	ng/L	1.740		105	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.18	0.98	ng/L	1.846		118	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.01	0.98	ng/L	1.793		112	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.15	0.98	ng/L	1.869		115	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.96	0.98	ng/L	1.820		108	43-162			
Perfluorononanesulfonic acid (PFNS)	2.23	0.98	ng/L	1.887		118	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.40	0.98	ng/L	1.893		127	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.89	0.98	ng/L	1.902		99.3	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	9.01	3.9	ng/L	7.355		123	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	9.80	3.9	ng/L	7.453		131	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.50	3.9	ng/L	7.531		126	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.33	0.98	ng/L	1.961		119	47-163			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	1.74	0.98	ng/L	1.961		88.8	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.79	0.98	ng/L	1.961		91.3	49-156			
N-MeFOSAA (NMeFOSAA)	2.29	0.98	ng/L	1.961		117	32-160			
N-EtFOSAA (NEtFOSAA)	1.91	0.98	ng/L	1.961		97.3	51-154			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	18.0	9.8	ng/L	19.61		91.9	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	19.7	9.8	ng/L	19.61		100	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.57	3.9	ng/L	7.845		109	58-154			
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	7.67	3.9	ng/L	7.414		103	61-148			
9Cl-PF3ONS (F53B Minor)	6.18	3.9	ng/L	7.335		84.2	44-167			
11Cl-PF3OUdS (F53B Major)	5.26	3.9	ng/L	7.414		70.9	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.7	9.8	ng/L	19.61		90.0	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)(5:3FTCA)	81.0	49	ng/L	98.06		82.6	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	78.4	49	ng/L	98.06		79.9	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.67	2.0	ng/L	3.491		105	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.78	2.0	ng/L	3.923		96.3	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.11	2.0	ng/L	3.923		105	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.81	2.0	ng/L	3.923		123	47-160			
Surrogate: 13C4-PFBA	66.8		ng/L	98.06		68.2	10-130			
Surrogate: 13C5-PFPeA	36.1		ng/L	49.03		73.5	35-150			
Surrogate: 13C5-PFHxA	18.3		ng/L	24.52		74.7	55-150			

V-05

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390328 - Draft Method 1633
MRL Check (B390328-MRL1)

Prepared: 10/29/24 Analyzed: 11/01/24

Surrogate: 13C4-PFHpA	19.0		ng/L	24.52		77.5	55-150			
Surrogate: 13C8-PFOA	18.5		ng/L	24.52		75.3	60-140			
Surrogate: 13C9-PFNA	9.83		ng/L	12.26		80.2	55-140			
Surrogate: 13C6-PFDA	9.18		ng/L	12.26		74.9	50-140			
Surrogate: 13C7-PFUnA	7.61		ng/L	12.26		62.1	30-140			
Surrogate: 13C2-PFDoA	8.79		ng/L	12.26		71.7	10-150			
Surrogate: 13C2-PFTeDA	8.76		ng/L	12.26		71.5	10-130			
Surrogate: 13C3-PFBS	20.6		ng/L	24.52		84.2	55-150			
Surrogate: 13C3-PFHxS	18.4		ng/L	24.52		75.1	55-150			
Surrogate: 13C8-PFOS	18.5		ng/L	24.52		75.6	45-140			
Surrogate: 13C2-4:2FTS	41.7		ng/L	49.03		85.1	60-200			
Surrogate: 13C2-6:2FTS	38.5		ng/L	49.03		78.6	60-200			
Surrogate: 13C2-8:2FTS	31.2		ng/L	49.03		63.7	50-200			
Surrogate: 13C8-PFOSA	17.9		ng/L	24.52		73.0	30-130			
Surrogate: D3-NMeFOSA	13.7		ng/L	24.52		55.8	15-130			
Surrogate: D5-NEtFOSA	15.1		ng/L	24.52		61.6	10-130			
Surrogate: D3-NMeFOSAA	38.4		ng/L	49.03		78.4	45-200			
Surrogate: D5-NEtFOSAA	39.5		ng/L	49.03		80.5	10-200			
Surrogate: D7-NMeFOSE	175		ng/L	245.2		71.3	10-150			
Surrogate: D9-NEtFOSE	158		ng/L	245.2		64.3	10-150			
Surrogate: 13C3-HFPO-DA	79.4		ng/L	98.06		81.0	25-160			

Matrix Spike (B390328-MS1)

Source: 24J3097-02

Prepared: 10/29/24 Analyzed: 11/01/24

Perfluorobutanoic acid (PFBA)	95.5	3.9	ng/L	94.43	ND	101	58-148			
Perfluoropentanoic acid (PFPeA)	49.5	2.0	ng/L	47.22	ND	105	54-152			
Perfluorohexanoic acid (PFHxA)	27.8	0.98	ng/L	23.61	1.65	111	55-152			
Perfluoroheptanoic acid (PFHpA)	25.5	0.98	ng/L	23.61	1.71	101	54-154			
Perfluorooctanoic acid (PFOA)	39.3	0.98	ng/L	23.61	14.5	105	52-161			
Perfluorononanoic acid (PFNA)	21.5	0.98	ng/L	23.61	ND	91.2	59-149			
Perfluorodecanoic acid (PFDA)	23.0	0.98	ng/L	23.61	0.253	96.3	52-147			
Perfluoroundecanoic acid (PFUnA)	25.1	0.98	ng/L	23.61	ND	106	48-159			
Perfluorododecanoic acid (PFDoA)	25.8	0.98	ng/L	23.61	ND	109	64-142			
Perfluorotridecanoic acid (PFTrDA)	26.8	0.98	ng/L	23.61	ND	114	49-148			
Perfluorotetradecanoic acid (PFTeDA)	25.1	0.98	ng/L	23.61	ND	106	47-161			
Perfluorobutanesulfonic acid (PFBS)	22.2	0.98	ng/L	20.94	1.79	97.5	62-144			
Perfluoropentanesulfonic acid (PFPeS)	22.9	0.98	ng/L	22.22	ND	103	59-151			
Perfluorohexanesulfonic acid (PFHxS)	21.3	0.98	ng/L	21.58	1.80	90.3	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	23.2	0.98	ng/L	22.50	ND	103	55-152			
Perfluorooctanesulfonic acid (PFOS)	35.5	0.98	ng/L	21.91	19.4	73.8	58-149			
Perfluorononanesulfonic acid (PFNS)	21.2	0.98	ng/L	22.71	ND	93.5	52-148			
Perfluorodecanesulfonic acid (PFDS)	21.8	0.98	ng/L	22.78	ND	95.6	51-147			
Perfluorododecanesulfonic acid (PFDoS)	18.4	0.98	ng/L	22.90	ND	80.2	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	96.2	3.9	ng/L	88.53	ND	109	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	103	3.9	ng/L	89.71	ND	115	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	109	3.9	ng/L	90.66	ND	120	63-152			
Perfluorooctanesulfonamide (PFOSA)	23.9	0.98	ng/L	23.61	ND	101	61-148			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	23.4	0.98	ng/L	23.61	ND	99.1	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	21.5	0.98	ng/L	23.61	ND	91.0	65-139			
N-MeFOSAA (NMeFOSAA)	24.6	0.98	ng/L	23.61	ND	104	58-144			

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QUALITY CONTROL
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390328 - Draft Method 1633

Matrix Spike (B390328-MS1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 11/01/24						
N-EtFOSAA (NEtFOSAA)	20.5	0.98	ng/L	23.61	ND	87.0	59-146			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	211	9.8	ng/L	236.1	ND	89.5	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	216	9.8	ng/L	236.1	ND	91.4	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	117	3.9	ng/L	94.43	ND	124	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	137	3.9	ng/L	89.24	ND	153 *	68-146			MS-12
9Cl-PF3ONS (F53B Minor)	114	3.9	ng/L	88.30	ND	129	56-156			
11Cl-PF3OUdS (F53B Major)	85.4	3.9	ng/L	89.24	ND	95.7	46-156			V-05
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	240	9.8	ng/L	236.1	ND	102	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA) (5:3FTCA)	1620	49	ng/L	1180	ND	138 *	63-134			MS-12
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1460	49	ng/L	1180	ND	124	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	52.4	2.0	ng/L	42.02	ND	125	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	18.0	2.0	ng/L	47.22	ND	38.2 *	51-145			MS-07A
Perfluoro-4-methoxybutanoic acid (PFMBA)	65.2	2.0	ng/L	47.22	ND	138	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	39.5	2.0	ng/L	47.22	ND	83.7	48-161			
Surrogate: 13C4-PFBA	9.87		ng/L	98.37		10.0	10-130			
Surrogate: 13C5-PFPeA	24.7		ng/L	49.18		50.1	35-150			
Surrogate: 13C5-PFHxA	17.5		ng/L	24.59		71.1	55-150			
Surrogate: 13C4-PFHpA	19.4		ng/L	24.59		78.9	55-150			
Surrogate: 13C8-PFOA	17.7		ng/L	24.59		71.8	60-140			
Surrogate: 13C9-PFNA	8.90		ng/L	12.30		72.4	55-140			
Surrogate: 13C6-PFDA	8.83		ng/L	12.30		71.8	50-140			
Surrogate: 13C7-PFUnA	8.09		ng/L	12.30		65.8	30-140			
Surrogate: 13C2-PFDoA	8.05		ng/L	12.30		65.5	10-150			
Surrogate: 13C2-PFTeDA	8.05		ng/L	12.30		65.5	10-130			
Surrogate: 13C3-PFBS	18.4		ng/L	24.59		74.9	55-150			
Surrogate: 13C3-PFHxS	18.0		ng/L	24.59		73.3	55-150			
Surrogate: 13C8-PFOS	18.1		ng/L	24.59		73.5	45-140			
Surrogate: 13C2-4:2FTS	96.8		ng/L	49.18		197	60-200			
Surrogate: 13C2-6:2FTS	82.9		ng/L	49.18		168	60-200			
Surrogate: 13C2-8:2FTS	43.2		ng/L	49.18		87.7	50-200			
Surrogate: 13C8-PFOA	16.7		ng/L	24.59		67.8	30-130			
Surrogate: D3-NMeFOSA	11.9		ng/L	24.59		48.4	15-130			
Surrogate: D5-NEtFOSA	13.2		ng/L	24.59		53.6	10-130			
Surrogate: D3-NMeFOSAA	39.3		ng/L	49.18		79.8	45-200			
Surrogate: D5-NEtFOSAA	42.9		ng/L	49.18		87.2	10-200			
Surrogate: D7-NMeFOSE	139		ng/L	245.9		56.5	10-150			
Surrogate: D9-NEtFOSE	129		ng/L	245.9		52.4	10-150			
Surrogate: 13C3-HFPO-DA	58.1		ng/L	98.37		59.0	25-160			
Matrix Spike Dup (B390328-MSD1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 11/01/24						
Perfluorobutanoic acid (PFBA)	91.4	3.9	ng/L	94.56	ND	96.6	58-148	4.39	20	
Perfluoropentanoic acid (PFPeA)	48.7	2.0	ng/L	47.28	ND	103	54-152	1.58	20	
Perfluorohexanoic acid (PFHxA)	27.1	0.99	ng/L	23.64	1.65	107	55-152	2.66	25	
Perfluoroheptanoic acid (PFHpA)	24.6	0.99	ng/L	23.64	1.71	96.7	54-154	3.69	25	
Perfluorooctanoic acid (PFOA)	39.2	0.99	ng/L	23.64	14.5	104	52-161	0.256	25	

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390328 - Draft Method 1633										
Matrix Spike Dup (B390328-MSD1)	Source: 24J3097-02			Prepared: 10/29/24 Analyzed: 11/01/24						
Perfluorononanoic acid (PFNA)	21.1	0.99	ng/L	23.64	ND	89.1	59-149	2.23	25	
Perfluorodecanoic acid (PFDA)	20.9	0.99	ng/L	23.64	0.253	87.5	52-147	9.32	25	
Perfluoroundecanoic acid (PFUnA)	25.7	0.99	ng/L	23.64	ND	109	48-159	2.26	30	
Perfluorododecanoic acid (PFDoA)	24.8	0.99	ng/L	23.64	ND	105	64-142	3.80	25	
Perfluorotridecanoic acid (PFTrDA)	26.5	0.99	ng/L	23.64	ND	112	49-148	1.28	25	
Perfluorotetradecanoic acid (PFTeDA)	23.3	0.99	ng/L	23.64	ND	98.5	47-161	7.61	25	
Perfluorobutanesulfonic acid (PFBS)	22.2	0.99	ng/L	20.97	1.79	97.3	62-144	0.122	20	
Perfluoropentanesulfonic acid (PFPeS)	24.9	0.99	ng/L	22.25	ND	112	59-151	8.24	25	
Perfluorohexanesulfonic acid (PFHxS)	21.1	0.99	ng/L	21.61	1.80	89.3	57-146	0.937	25	
Perfluoroheptanesulfonic acid (PFHpS)	22.7	0.99	ng/L	22.53	ND	101	55-152	2.39	25	
Perfluorooctanesulfonic acid (PFOS)	36.1	0.99	ng/L	21.94	19.4	76.1	58-149	1.47	20	
Perfluorononanesulfonic acid (PFNS)	20.8	0.99	ng/L	22.74	ND	91.3	52-148	2.27	25	
Perfluorodecanesulfonic acid (PFDS)	21.8	0.99	ng/L	22.81	ND	95.6	51-147	0.188	25	
Perfluorododecanesulfonic acid (PFDoS)	18.9	0.99	ng/L	22.93	ND	82.4	36-145	2.81	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	96.4	3.9	ng/L	88.65	ND	109	67-146	0.116	25	PF-18
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	99.6	3.9	ng/L	89.83	ND	111	61-151	3.37	30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	95.5	3.9	ng/L	90.78	ND	105	63-152	12.8	30	
Perfluorooctanesulfonamide (PFOSA)	23.9	0.99	ng/L	23.64	ND	101	61-148	0.105	20	
N-methyl perfluorooctanesulfonamide (NMeFOSA)	22.5	0.99	ng/L	23.64	ND	95.4	63-145	3.75	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	21.5	0.99	ng/L	23.64	ND	90.8	65-139	0.168	25	
N-MeFOSAA (NMeFOSAA)	23.4	0.99	ng/L	23.64	ND	98.9	58-144	4.99	25	
N-EtFOSAA (NEtFOSAA)	20.1	0.99	ng/L	23.64	ND	84.9	59-146	2.26	25	
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	205	9.9	ng/L	236.4	ND	86.7	71-136	3.06	20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	216	9.9	ng/L	236.4	ND	91.3	69-137	0.0744	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	115	3.9	ng/L	94.56	ND	122	63-144	1.77	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	141	3.9	ng/L	89.36	ND	158	* 68-146	3.26	20	MS-12
9Cl-PF3ONS (F53B Minor)	116	3.9	ng/L	88.42	ND	131	56-156	1.91	30	
11Cl-PF3OUDS (F53B Major)	88.7	3.9	ng/L	89.36	ND	99.3	46-156	3.79	35	V-05
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	254	9.9	ng/L	236.4	ND	107	62-129	5.54	20	
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)(5:3FTCA)	1620	49	ng/L	1182	ND	137	* 63-134	0.0894	20	MS-12
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1490	49	ng/L	1182	ND	126	50-138	2.02	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	51.9	2.0	ng/L	42.08	ND	123	56-151	1.04	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	19.2	2.0	ng/L	47.28	ND	40.7	* 51-145	6.46	25	MS-07A
Perfluoro-4-methoxybutanoic acid (PFMBA)	63.6	2.0	ng/L	47.28	ND	135	55-148	2.45	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	37.6	2.0	ng/L	47.28	ND	79.5	48-161	4.98	35	
Surrogate: 13C4-PFBA	11.8		ng/L	98.50		12.0	10-130			
Surrogate: 13C5-PFPeA	27.2		ng/L	49.25		55.3	35-150			
Surrogate: 13C5-PFHxA	18.0		ng/L	24.63		73.0	55-150			
Surrogate: 13C4-PFHpA	19.6		ng/L	24.63		79.5	55-150			
Surrogate: 13C8-PFOA	17.4		ng/L	24.63		70.6	60-140			
Surrogate: 13C9-PFNA	9.67		ng/L	12.31		78.5	55-140			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390328 - Draft Method 1633
Matrix Spike Dup (B390328-MSD1)
Source: 24J3097-02

Prepared: 10/29/24 Analyzed: 11/01/24

Surrogate: 13C6-PFDA	10.1		ng/L	12.31		82.2	50-140			
Surrogate: 13C7-PFUnA	8.71		ng/L	12.31		70.7	30-140			
Surrogate: 13C2-PFDoA	8.91		ng/L	12.31		72.4	10-150			
Surrogate: 13C2-PFTeDA	8.97		ng/L	12.31		72.9	10-130			
Surrogate: 13C3-PFBS	19.0		ng/L	24.63		77.1	55-150			
Surrogate: 13C3-PFHxS	18.0		ng/L	24.63		73.3	55-150			
Surrogate: 13C8-PFOS	17.9		ng/L	24.63		72.6	45-140			
Surrogate: 13C2-4:2FTS	102		ng/L	49.25		207 *	60-200			PF-18
Surrogate: 13C2-6:2FTS	86.4		ng/L	49.25		175	60-200			
Surrogate: 13C2-8:2FTS	47.4		ng/L	49.25		96.1	50-200			
Surrogate: 13C8-PFOSA	17.0		ng/L	24.63		68.8	30-130			
Surrogate: D3-NMeFOSA	12.5		ng/L	24.63		50.7	15-130			
Surrogate: D5-NEtFOSA	13.6		ng/L	24.63		55.3	10-130			
Surrogate: D3-NMeFOSAA	41.2		ng/L	49.25		83.8	45-200			
Surrogate: D5-NEtFOSAA	44.9		ng/L	49.25		91.2	10-200			
Surrogate: D7-NMeFOSE	139		ng/L	246.3		56.6	10-150			
Surrogate: D9-NEtFOSE	129		ng/L	246.3		52.2	10-150			
Surrogate: 13C3-HFPO-DA	58.3		ng/L	98.50		59.2	25-160			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390132 - SW-846 3510C
Blank (B390132-BLK1)

Prepared: 10/23/24 Analyzed: 10/28/24

Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	4.84		µg/L	4.000		121	30-150			
Surrogate: Decachlorobiphenyl [2C]	4.59		µg/L	4.000		115	30-150			
Surrogate: Tetrachloro-m-xylene	3.61		µg/L	4.000		90.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.55		µg/L	4.000		88.8	30-150			

LCS (B390132-BS1)

Prepared: 10/23/24 Analyzed: 10/28/24

Aroclor-1016	1.0	0.20	µg/L	1.000		102	40-140			
Aroclor-1016 [2C]	1.0	0.20	µg/L	1.000		104	40-140			
Aroclor-1260	1.3	0.20	µg/L	1.000		128	40-140			
Aroclor-1260 [2C]	1.2	0.20	µg/L	1.000		125	40-140			
Surrogate: Decachlorobiphenyl	4.56		µg/L	4.000		114	30-150			
Surrogate: Decachlorobiphenyl [2C]	4.37		µg/L	4.000		109	30-150			
Surrogate: Tetrachloro-m-xylene	3.89		µg/L	4.000		97.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.80		µg/L	4.000		95.1	30-150			

LCS Dup (B390132-BSD1)

Prepared: 10/23/24 Analyzed: 10/28/24

Aroclor-1016	0.87	0.20	µg/L	1.000		86.8	40-140	16.3	20	
Aroclor-1016 [2C]	0.88	0.20	µg/L	1.000		87.9	40-140	16.4	20	
Aroclor-1260	1.1	0.20	µg/L	1.000		108	40-140	17.1	20	
Aroclor-1260 [2C]	1.1	0.20	µg/L	1.000		105	40-140	17.2	20	
Surrogate: Decachlorobiphenyl	4.09		µg/L	4.000		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.92		µg/L	4.000		98.0	30-150			
Surrogate: Tetrachloro-m-xylene	3.13		µg/L	4.000		78.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.08		µg/L	4.000		77.1	30-150			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390132 - SW-846 3510C
Matrix Spike (B390132-MS1)
Source: 24J3097-02

Prepared: 10/23/24 Analyzed: 10/29/24

Aroclor-1016	0.96	0.20	µg/L	0.9826	ND	98.0	40-140			
Aroclor-1016 [2C]	0.90	0.20	µg/L	0.9826	ND	91.6	40-140			
Aroclor-1260	1.0	0.20	µg/L	0.9826	ND	107	40-140			
Aroclor-1260 [2C]	0.99	0.20	µg/L	0.9826	ND	100	40-140			
Surrogate: Decachlorobiphenyl	2.88		µg/L	3.930		73.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.72		µg/L	3.930		69.2	30-150			
Surrogate: Tetrachloro-m-xylene	3.30		µg/L	3.930		83.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.20		µg/L	3.930		81.4	30-150			

Matrix Spike Dup (B390132-MSD1)
Source: 24J3097-02

Prepared: 10/23/24 Analyzed: 10/29/24

Aroclor-1016	0.91	0.19	µg/L	0.9371	ND	96.9	40-140	5.88	50	
Aroclor-1016 [2C]	0.88	0.19	µg/L	0.9371	ND	94.2	40-140	1.95	50	
Aroclor-1260	1.0	0.19	µg/L	0.9371	ND	109	40-140	2.56	50	
Aroclor-1260 [2C]	0.97	0.19	µg/L	0.9371	ND	104	40-140	1.60	50	
Surrogate: Decachlorobiphenyl	3.17		µg/L	3.748		84.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.01		µg/L	3.748		80.3	30-150			
Surrogate: Tetrachloro-m-xylene	2.92		µg/L	3.748		77.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.87		µg/L	3.748		76.6	30-150			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390832 - SW-846 3005A
Blank (B390832-BLK1)

Prepared: 10/29/24 Analyzed: 10/30/24

Aluminum	ND	0.050	mg/L
Antimony	ND	0.050	mg/L
Arsenic	ND	0.010	mg/L
Barium	ND	0.050	mg/L
Beryllium	ND	0.0040	mg/L
Cadmium	ND	0.0040	mg/L
Calcium	ND	0.50	mg/L
Chromium	ND	0.010	mg/L
Cobalt	ND	0.010	mg/L
Copper	ND	0.010	mg/L
Iron	ND	0.050	mg/L
Lead	ND	0.010	mg/L
Magnesium	ND	0.050	mg/L
Manganese	ND	0.010	mg/L
Potassium	ND	2.0	mg/L
Selenium	ND	0.050	mg/L
Silver	ND	0.010	mg/L
Sodium	ND	2.0	mg/L
Thallium	ND	0.050	mg/L
Vanadium	ND	0.010	mg/L
Zinc	ND	0.010	mg/L

Blank (B390832-BLK2)

Prepared: 10/29/24 Analyzed: 10/31/24

Nickel	ND	0.010	mg/L
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LCS (B390832-BS1)

Prepared: 10/29/24 Analyzed: 10/30/24

Aluminum	0.519	0.050	mg/L	0.5000	104	80-120
Antimony	0.501	0.050	mg/L	0.5000	100	80-120
Arsenic	0.481	0.010	mg/L	0.5000	96.2	80-120
Barium	0.513	0.050	mg/L	0.5000	103	80-120
Beryllium	0.537	0.0040	mg/L	0.5000	107	80-120
Cadmium	0.502	0.0040	mg/L	0.5000	100	80-120
Calcium	4.15	0.50	mg/L	4.000	104	80-120
Chromium	0.512	0.010	mg/L	0.5000	102	80-120
Cobalt	0.512	0.010	mg/L	0.5000	102	80-120
Copper	1.01	0.010	mg/L	1.000	101	80-120
Iron	4.30	0.050	mg/L	4.000	108	80-120
Lead	0.515	0.010	mg/L	0.5000	103	80-120
Magnesium	4.05	0.050	mg/L	4.000	101	80-120
Manganese	0.512	0.010	mg/L	0.5000	102	80-120
Potassium	4.20	2.0	mg/L	4.000	105	80-120
Selenium	0.515	0.050	mg/L	0.5000	103	80-120
Silver	0.530	0.010	mg/L	0.5000	106	80-120
Sodium	4.14	2.0	mg/L	4.000	104	80-120
Thallium	0.491	0.050	mg/L	0.5000	98.1	80-120
Vanadium	0.501	0.010	mg/L	0.5000	100	80-120
Zinc	1.02	0.010	mg/L	1.000	102	80-120

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390832 - SW-846 3005A
LCS (B390832-BS2)

Prepared: 10/29/24 Analyzed: 10/31/24

Nickel	0.550	0.010	mg/L	0.5000		110	80-120			
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LCS Dup (B390832-BSD1)

Prepared: 10/29/24 Analyzed: 10/30/24

Aluminum	0.550	0.050	mg/L	0.5000		110	80-120	5.78	30	
Antimony	0.505	0.050	mg/L	0.5000		101	80-120	0.744	20	
Arsenic	0.481	0.010	mg/L	0.5000		96.2	80-120	0.0609	20	
Barium	0.512	0.050	mg/L	0.5000		102	80-120	0.211	20	
Beryllium	0.550	0.0040	mg/L	0.5000		110	80-120	2.43	20	
Cadmium	0.502	0.0040	mg/L	0.5000		100	80-120	0.0580	20	
Calcium	4.38	0.50	mg/L	4.000		109	80-120	5.21	20	
Chromium	0.512	0.010	mg/L	0.5000		102	80-120	0.00598	20	
Cobalt	0.513	0.010	mg/L	0.5000		103	80-120	0.307	20	
Copper	1.01	0.010	mg/L	1.000		101	80-120	0.0533	20	
Iron	4.52	0.050	mg/L	4.000		113	80-120	4.92	20	
Lead	0.515	0.010	mg/L	0.5000		103	80-120	0.137	20	
Magnesium	4.24	0.050	mg/L	4.000		106	80-120	4.58	20	
Manganese	0.536	0.010	mg/L	0.5000		107	80-120	4.61	20	
Potassium	4.44	2.0	mg/L	4.000		111	80-120	5.46	20	
Selenium	0.515	0.050	mg/L	0.5000		103	80-120	0.0858	20	
Silver	0.531	0.010	mg/L	0.5000		106	80-120	0.200	20	
Sodium	4.24	2.0	mg/L	4.000		106	80-120	2.25	20	
Thallium	0.504	0.050	mg/L	0.5000		101	80-120	2.73	20	
Vanadium	0.502	0.010	mg/L	0.5000		100	80-120	0.234	20	
Zinc	1.02	0.010	mg/L	1.000		102	80-120	0.280	20	

LCS Dup (B390832-BSD2)

Prepared: 10/29/24 Analyzed: 10/31/24

Nickel	0.551	0.010	mg/L	0.5000		110	80-120	0.194	30	
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Matrix Spike (B390832-MS1)
Source: 24J3097-02

Prepared: 10/29/24 Analyzed: 10/30/24

Aluminum	0.939	0.050	mg/L	0.5000	0.308	126	*	75-125		MS-22
Antimony	0.534	0.050	mg/L	0.5000	ND	107		75-125		
Arsenic	0.498	0.010	mg/L	0.5000	ND	99.6		75-125		
Barium	0.593	0.050	mg/L	0.5000	0.0776	103		75-125		
Beryllium	0.563	0.0040	mg/L	0.5000	ND	113		75-125		
Cadmium	0.511	0.0040	mg/L	0.5000	ND	102		75-125		
Calcium	152	0.50	mg/L	4.000	146	155	*	75-125		MS-19
Chromium	0.523	0.010	mg/L	0.5000	ND	105		75-125		
Cobalt	0.491	0.010	mg/L	0.5000	ND	98.3		75-125		
Copper	1.03	0.010	mg/L	1.000	ND	103		75-125		
Iron	5.19	0.050	mg/L	4.000	0.684	113		75-125		
Lead	0.513	0.010	mg/L	0.5000	0.00896	101		75-125		
Magnesium	43.4	0.050	mg/L	4.000	39.2	105		75-125		
Manganese	0.877	0.010	mg/L	0.5000	0.350	105		75-125		
Potassium	10.8	2.0	mg/L	4.000	6.46	109		75-125		
Selenium	0.507	0.050	mg/L	0.5000	ND	101		75-125		
Silver	0.544	0.010	mg/L	0.5000	ND	109		75-125		
Sodium	12.5	2.0	mg/L	4.000	8.16	110		75-125		
Thallium	0.515	0.050	mg/L	0.5000	ND	103		75-125		
Vanadium	0.524	0.010	mg/L	0.5000	ND	105		75-125		
Zinc	0.992	0.010	mg/L	1.000	ND	99.2		75-125		

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390832 - SW-846 3005A										
Matrix Spike (B390832-MS2)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.524	0.010	mg/L	0.5000	ND	105	75-125			
Matrix Spike Dup (B390832-MSD1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	0.866	0.050	mg/L	0.5000	0.308	112	75-125	8.10	20	
Antimony	0.519	0.050	mg/L	0.5000	ND	104	75-125	3.03	20	
Arsenic	0.487	0.010	mg/L	0.5000	ND	97.4	75-125	2.17	20	
Barium	0.569	0.050	mg/L	0.5000	0.0776	98.3	75-125	4.11	20	
Beryllium	0.539	0.0040	mg/L	0.5000	ND	108	75-125	4.38	20	
Cadmium	0.491	0.0040	mg/L	0.5000	ND	98.2	75-125	3.95	20	
Calcium	146	0.50	mg/L	4.000	146	14.5	75-125	3.78	20	MS-19
Chromium	0.502	0.010	mg/L	0.5000	ND	100	75-125	4.08	20	
Cobalt	0.472	0.010	mg/L	0.5000	ND	94.4	75-125	4.00	20	
Copper	0.983	0.010	mg/L	1.000	ND	98.3	75-125	4.47	20	
Iron	4.92	0.050	mg/L	4.000	0.684	106	75-125	5.32	20	
Lead	0.501	0.010	mg/L	0.5000	0.00896	98.3	75-125	2.48	20	
Magnesium	42.5	0.050	mg/L	4.000	39.2	83.0	75-125	2.04	20	
Manganese	0.850	0.010	mg/L	0.5000	0.350	100	75-125	3.19	20	
Potassium	10.5	2.0	mg/L	4.000	6.46	102	75-125	2.60	20	
Selenium	0.508	0.050	mg/L	0.5000	ND	102	75-125	0.116	20	
Silver	0.522	0.010	mg/L	0.5000	ND	104	75-125	4.03	20	
Sodium	12.2	2.0	mg/L	4.000	8.16	100	75-125	3.02	20	
Thallium	0.499	0.050	mg/L	0.5000	ND	99.9	75-125	3.12	20	
Vanadium	0.502	0.010	mg/L	0.5000	ND	100	75-125	4.32	20	
Zinc	0.953	0.010	mg/L	1.000	ND	95.3	75-125	4.06	20	
Matrix Spike Dup (B390832-MSD2)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.511	0.010	mg/L	0.5000	ND	102	75-125	2.44	20	
Post Spike (B390832-PS1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	2.43		mg/L	2.000	0.302	106	75-125			
Antimony	2.04		mg/L	2.000	0.00862	102	75-125			
Arsenic	1.95		mg/L	2.000	-0.00673	97.6	75-125			
Barium	2.06		mg/L	2.000	0.0760	99.3	75-125			
Beryllium	2.13		mg/L	2.000	0.0000992	107	75-125			
Cadmium	1.98		mg/L	2.000	0.000219	98.8	75-125			
Calcium	160		mg/L	16.00	143	108	75-125			
Chromium	2.01		mg/L	2.000	0.00373	101	75-125			
Cobalt	1.90		mg/L	2.000	0.00191	94.8	75-125			
Copper	4.00		mg/L	4.000	-0.000613	100	75-125			
Iron	17.6		mg/L	16.00	0.670	106	75-125			
Lead	1.95		mg/L	2.000	0.00878	97.2	75-125			
Magnesium	54.5		mg/L	16.00	38.4	101	75-125			
Manganese	2.36		mg/L	2.000	0.343	101	75-125			
Potassium	23.6		mg/L	16.00	6.33	108	75-125			
Selenium	2.02		mg/L	2.000	-0.0108	101	75-125			
Silver	2.01		mg/L	2.000	-0.00239	100	75-125			
Sodium	24.4		mg/L	16.00	7.99	103	75-125			
Thallium	2.13		mg/L	2.000	-0.00507	107	75-125			
Vanadium	2.02		mg/L	2.000	0.00491	101	75-125			
Zinc	3.81		mg/L	4.000	0.00314	95.3	75-125			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390832 - SW-846 3005A

Dilution Check (B390832-SRL1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/30/24						
Antimony	ND	0.25	mg/L		ND				20	
Arsenic	ND	0.050	mg/L		ND				20	
Barium	0.0800	0.25	mg/L		0.0776			3.05	20	J
Beryllium	ND	0.020	mg/L		ND				20	
Cadmium	ND	0.020	mg/L		ND				20	
Calcium	151	2.5	mg/L		146			3.70	20	
Chromium	ND	0.050	mg/L		ND				20	
Cobalt	ND	0.050	mg/L		ND				20	
Copper	ND	0.050	mg/L		ND				20	
Iron	0.707	0.25	mg/L		0.684			3.29	20	
Lead	ND	0.050	mg/L		ND				20	
Magnesium	41.2	0.25	mg/L		39.2			5.11	20	
Manganese	0.369	0.050	mg/L		0.350			5.10	20	
Potassium	7.05	10	mg/L		6.46			8.66	20	J
Selenium	ND	0.25	mg/L		ND				20	
Silver	ND	0.050	mg/L		ND				20	
Sodium	8.43	10	mg/L		8.16			3.35	20	J
Thallium	ND	0.25	mg/L		ND				20	
Vanadium	ND	0.050	mg/L		ND				20	
Zinc	ND	0.050	mg/L		ND				20	

Batch B390879 - SW-846 7470A Prep

Blank (B390879-BLK1)		Prepared & Analyzed: 10/30/24								
Mercury	ND	0.00020	mg/L							
LCS (B390879-BS1)		Prepared & Analyzed: 10/30/24								
Mercury	0.00394	0.00020	mg/L	0.004020	97.9	80-120				
LCS Dup (B390879-BSD1)		Prepared & Analyzed: 10/30/24								
Mercury	0.00395	0.00020	mg/L	0.004020	98.2	80-120	0.279	20		
Matrix Spike (B390879-MS1)		Source: 24J3097-02		Prepared & Analyzed: 10/30/24						
Mercury	0.00389	0.00020	mg/L	0.004020	ND	96.7	75-125			
Matrix Spike Dup (B390879-MSD1)		Source: 24J3097-02		Prepared & Analyzed: 10/30/24						
Mercury	0.00401	0.00020	mg/L	0.004020	ND	99.8	75-125	3.12	20	

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B390195 - Draft Method 1633
Blank (B390195-BLK1)

Prepared & Analyzed: 10/23/24

Total Suspended Solids	ND	5.0	mg/L
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LCS (B390195-BS1)

Prepared & Analyzed: 10/23/24

Total Suspended Solids	215	5.0	mg/L	200.0	108	51.5-130
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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**
SW-846 8082A

LCS

Lab Sample ID: B390132-BS1 Date(s) Analyzed: 10/28/2024 10/28/2024
Instrument ID (1): ECD5 Instrument ID (2): ECD5
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	1.0	0.0
Aroclor-1260	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.2	8.0

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

SW-846 8082A

LCS Dup

Lab Sample ID: B390132-BSD1 Date(s) Analyzed: 10/28/2024 10/28/2024

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.87	
	2	0.000	0.000	0.000	0.88	1.1
Aroclor-1260	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	1.1	0.0

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***SW-846 8082A***Matrix Spike**

Lab Sample ID: B390132-MS1 Date(s) Analyzed: 10/29/2024 10/29/2024
Instrument ID (1): ECD5 Instrument ID (2): ECD5
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.96	
	2	0.000	0.000	0.000	0.90	6.5
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.99	10.5

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***SW-846 8082A***Matrix Spike Dup**

Lab Sample ID: B390132-MSD1 Date(s) Analyzed: 10/29/2024 10/29/2024
Instrument ID (1): ECD5 Instrument ID (2): ECD5
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.91	
	2	0.000	0.000	0.000	0.88	3.4
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.97	3.1

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Re-analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-22	Qualifier ion ratio >150% of associated calibration. Detection is suspect.
S-29	Extracted Internal Standard is outside of control limits.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>Draft Method 1633 in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV,CT
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV,CT
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV,CT
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV,CT
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV,CT
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV,CT
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV,CT
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV,CT
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV,CT
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV,CT
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV,CT
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV,CT
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV,CT
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV,CT
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV,CT
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV,CT
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV,CT
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV,CT
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NH-P,PA,WV,CT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV,CT
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV,CT
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV,CT
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV,CT
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV,CT
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV,CT
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV,CT
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV,CT
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV,CT
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	NH-P,NY,PA,WV,CT
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV,CT
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV,CT
<i>SW-846 6010D in Water</i>	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6010D in Water</i>	
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2025
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2025
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2025

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: NYS DEC

Consultant Address: 300 Pearl St. Buffalo NY

Consultant Phone: 716 836 1111

Callout Project Name: Lehigh Industrial Park

Project Location: Lackawanna NY

Callout Number: 152391

Site/Spill Number: 915145

Project Manager: Megan Kuczyka

Pace Analytical Quote Name/Number: 152390

Invoice Recipient:

Sampled By: G. Sabuda

Fax To #: 716 836 1111

Ending Date/Time: 10-21-24

Beginning Date/Time: 10-21-24

Client Sample ID / Description: MW-2-20241021

Client Sample ID / Description: MW-4-20241021

Client Sample ID / Description: DUP-20241021

Client Sample ID / Description: Equipment Blank

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

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Client Sample ID / Description:

Requested Turnaround Time

DEC Standard 30-calendar day

Due Date:

Rush (Prior Approval Required)

1-Day 2-Day 3-Day 4-Day 5-Day 10-Day

Format: PDF EXCEL

Other:

CLP Like (Level 4) Data Pkg Required:

Email To: bsabuda@lablogix.com

Fax To #:

Ending Date/Time: 10-21-24

Beginning Date/Time: 10-21-24

Client Sample ID / Description: MW-2-20241021

Client Sample ID / Description: MW-4-20241021

Client Sample ID / Description: DUP-20241021

Client Sample ID / Description: Equipment Blank

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

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Client Sample ID / Description:

Requested Turnaround Time

DEC Standard 30-calendar day

Due Date:

Rush (Prior Approval Required)

1-Day 2-Day 3-Day 4-Day 5-Day 10-Day

Format: PDF EXCEL

Other:

CLP Like (Level 4) Data Pkg Required:

Email To: bsabuda@lablogix.com

Fax To #:

Ending Date/Time: 10-21-24

Beginning Date/Time: 10-21-24

Client Sample ID / Description: MW-2-20241021

Client Sample ID / Description: MW-4-20241021

Client Sample ID / Description: DUP-20241021

Client Sample ID / Description: Equipment Blank

Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

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Client Sample ID / Description:

Client Sample ID / Description:

Client Sample ID / Description:

of Containers

2 Preservation Code

3 Container Code

Dissolved Metals Samples

Field Filtered

Lab to Filter

Orthophosphate Samples

Field Filtered

Lab to Filter

Matrix Codes:

GW = Ground Water

WW = Waste Water

DW = Drinking Water

A = Air

S = Soil

SL = Sludge

SOL = Solid

O = Other (please define)

Preservation Codes:

I = Iced

H = HCL

M = Methanol

N = Nitric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

X = Sodium Hydroxide

T = Sodium Thiosulfate

O = Other (please define)

Container Codes:

A = Amber Glass

G = Glass

P = Plastic

ST = Sterile

V = Vial

S = Summa Canister

T = Tedlar Bag

O = Other (please define)

PCB ONLY

Soxhlet

Non Soxhlet

	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log In Back-Sheet

Client NYSDEC LaBella
 Project Let High Industrial Park
 MCP/RCP Required NA
 Deliverable Package Requirement NA
 Location Lackawanna, NY
 PWSID# (When Applicable) N/A
 Arrival Method:
 Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐
 Received By / Date / Time RL 10/22/24 1020
 Back-Sheet By / Date / Time STM 10/22/24 1549
 Temperature Method GUN # 6
 WV samples: Yes (see note*) ☐ No (follow normal procedure) ☒
 Temp ☒ < 6° C Actual Temperature 0.0, 0.4
 Rush Samples: Yes ☐ No ☒ Notify ☐
 Short Hold: Yes ☐ No ☒ Notify ☐

Notes regarding Samples/COC outside of SOP:

Client circled by Dioxane
but did not send containers

Login Sample Receipt Checklist – (Rejection Criteria Listing
– Using Acceptance Policy) Any False statement will be
brought to the attention of the Client – True or False

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☒ STM
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐
COC Included: (Check all included)		
Client ☒ Analysis ☒ Sampler Name ☒		
Project ☒ IDs ☒ Collection Date/Time ☒		
All Samples Proper pH: N/A	☒	☐

Additional Container Notes

***Note: West Virginia requires all samples to have their temperature taken. Note any outliers.**

[illegible]

APPENDIX 3

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT

for

LABELLA ASSOCIATES, P.C.

300 State Street

Rochester, NY 14614

Lehigh Industrial Park-CO 152390

SDG: 24J3097

Sampled October 24, 2024

PCB, PFAS, METALS

MW-2_20241021	24J3097-01
MW-4_20241021	24J3097-02
DUP_20241021	24J3097-03
Equipment Blank	24J3097-04

DATA ASSESSMENT

An ASP Category B data package containing analytical results for three groundwater samples and an equipment blank was received from Labella Associates, P.C. on 24Feb25. The deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Lehigh Industrial Park site, were identified by Chain of Custody documents and traceable through the work of con-test, the laboratory contracted for analysis. Analyses, performed according to SW-846 methods, addressed determinations of 1,4-dioxane, PCB, total metals and PFAS.

Laboratory data was evaluated according to the quality assurance / quality control requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP), September 1989, Rev. 07/2005. When the required protocol was not followed, the current EPA Region II Functional Guidelines (SOP NO HW35, Rev. 2, Semivolatile Data Validation; SOP HW-37 Rev. 3, Polychlorinated Biphenyl (PCB) Aroclor Data Validation; the Draft Method for PFAS by SPE and LC/MS/MS Isotope dilution), and SOP NO. HW-2a Rev 15, ICP-AES Data Validation were used as technical references.

CORRECTNESS AND USABILITY

Reported data should be considered technically defensible and completely usable in its present form. Results presenting a usable estimation of the conditions at the time of sampling have been flagged "J", "U" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed strict QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly, DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature:


James B. Baldwin

Date: 05 Mar 25

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation, or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the time of sample collection. Samples must remain chilled to $4\pm 2^{\circ}\text{C}$ between the time of collection and the time of analysis. Acid preserved VOC samples must be analyzed within 14 days, unpreserved VOC samples within 7 days. The holding time for VOC soils is 14 days. Aqueous semivolatile organics, pesticide, PCB and herbicide samples must be extracted within seven days of collection. Soils must be extracted within 14 days. The extracts must then be analyzed within forty days of extraction. PFAS samples must be analyzed within 90 days of collection. The holding times for cyanide and mercury samples are 14 and 28 days, respectively. Metals samples must be analyzed within six months.

This delivery group contained three groundwater samples and an equipment blank. The samples were collected from the Lehigh Industrial Park site on 21Oct24 and delivered to the laboratory, via a courier, on 22Oct24. At the time of receipt, the sample coolers were found to be intact and properly chilled. Cooler temperatures of 0.0°C and 0.4 were recorded at that time.

Users of the data contained in this report should remain aware that it has been compiled based on the QC information found in the first 49 pages. The remaining 2,500 pages were submitted without a Table of Contents. This made the calibrations impossible to verify and the sample results impossible to duplicate. The results from this delivery group should only be considered useful if consistent with site history.

WET CHEMISTRY

Total Suspended Solids

This group of samples was prepared and analyzed for determinations of Total Suspended Solids on 23Oct24. These samples were associated with a clean method blank and a spiked blank (LCS) that produced a recovery of 108%. This indicated that the method was under control.

PCB

This group of samples was extracted for PCB analysis on 23Oct24 and the extracts were analyzed on 30Oct24. The program holding time limitations were satisfied.

This group of samples was analyzed with a delivery group that included a clean method blank and a pair of spiked blanks that

produced acceptable recoveries (LCS/LCSD). MW-4 20241021 was also spiked in duplicate and produced recoveries that demonstrated acceptable levels of measurement precision and accuracy.

Each Aroclor sample was analyzed in duplicate to demonstrate the stability of the analytical method.

PFAS ORGANICS

This group of samples was extracted for PFAS analysis on 29Oct24 and the extracts were analyzed on 02Nov24. The program holding time limitations were satisfied.

Blanks

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank.

Although the results from eight calibration blanks were reported, only two were associated with the samples from this program. These blanks and the equipment blank produced acceptable chromatography and were free of targeted analyte contamination.

Calibrations

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration check standards verify instrument stability.

The initial instrument calibrations for PFAS were performed on 22Oct24 and 01Nov24. Ten standards ranging between 0.1 and 62.5 ng/ml were included. Each targeted analyte demonstrated an acceptable degree of linearity during this calibration.

Although the results from eight calibration check standards were reported, only two bracketed the samples from this project. When compared to the initial calibrations, 2H,2H,3H,3H-perfluorooctanoic acid (FPePA), 3-perfluoroheptylpropanoic acid (FHpPA) and perfluorobutanesulfonic acid (13C3-PFBS) standards demonstrated poor stability. Based on this performance, the 2H,2H,3H,3H-perfluorooctanoic acid, 3-perfluoroheptylpropanoic acid and perfluorobutanesulfonic results from this project have been qualified as estimations.

Surrogates (Isotope Dilution Analytes - IDA)

Each sample, blank and standard is spiked with IDA compounds prior to extraction and analysis. Each analyte response is then compared to an isotopically labeled version of the same compound. This technique allows for the correction of bias that might be related to the sample matrix or sample preparation activities. Each IDA must produce a specified level of response.

Surrogate Summary Sheets were properly prepared, based on the method acceptance criteria. When compared to these requirements, unacceptable results were reported for the following samples.

SURROGATE QUALIFICATIONS

MW-2_20241021 PFBA PFPeA PFUnA 4:2FTS 6:2FTS PFOSA NMeFOSA
NEtFOSA NMeFOSE NEtFOSE HFPO-DA

MW-4_20241021 PFBA PFPeA PFHxA PFHpA PFUnA PFOA PFNA PFDA PFUnA
PFDoA PFTeDA PFBS PFHxS PFOS 4:2FTS 6:2FTS PFOSA
NMeFOSA NEtFOSA NMeFOSE NEtFOSE HFPO-DA

DUP_20241021 PFBA PFPeA PFNA PFDA PFUnA PFDoA PFTeDA PFHxS PFOS
4:2FTS 6:2FTS PFOSA NMeFOSA NEtFOSA NMeFOSAA
NEtFOSAA NMeFOSE NEtFOSE HFPO-DA

EQUIPMENT BLANK PFHxA PFHpA PFDoA PFTeDA PFBS PFOSA NMeFOSA
NEtFOSA NMeFOSE NEtFOSE

These results have been qualified as estimations.

Matrix Spikes

Matrix spiking refers to the addition of known analyte concentrations to a sample, prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

MW-4_20241021 was selected for matrix spiking. The entire list of targeted analytes was added to two portions of these samples. The recoveries reported for these spikes included high results for ADONA and FPePA, and a low result for PFMPA. The positive bias indicated for ADONA and FPePA warrants no concern because these analytes were not found in MW-4_20241021. The PFMPA result from MW-4_20241021 has been qualified as an estimation.

A spiked blank (LCS) was also extracted and analyzed with this group of samples. The recoveries reported for this LCS sample demonstrated an acceptable level of measurement accuracy.

Duplicates

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. The results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Although the blind duplicates from this delivery group were not identified, the duplicate spikes to MW-4_20241021 demonstrated an acceptable level of measurement precision.

METALS and MERCURY

This group of ICP and mercury samples was digested for total metals analysis on 29Nov24 and digestates were analyzed on 30Nov24 and 31Nov24. The samples for mercury analysis were digested on 29Nov24 and analyzed on 30Nov24. The program holding time limitations were satisfied.

MW-2_20241021, MW-4_20241021 and DUP_20241021 were analyzed with a group of samples that included a method blank, a pair of spiked blanks (LCS/LCSD), and duplicate spikes to MW-4_20241021 (MS/MSD). The mercury and ICP metals method blanks were clean.

With the exception of aluminum (126%) and calcium (155%,145%) the MS/MSD spiked samples demonstrated acceptable levels of measurement precision and accuracy. Based on these indications of positive bias, the aluminum and calcium concentrations found in this group of samples have been qualified as estimations.

A pair of spiked blanks was also analyzed with this group of samples. This LCS/LCSD pair demonstrated acceptable levels of measurement precision and accuracy. The method blank was clean.

SUMMARY OF QUALIFIED DATA

Lehigh Industrial Park

SAMPLED: OCTOBER 21, 2024

	CALIBRATE FPePA	CALIBRATE FHpPA	CALIBRATE PFBS	SPIKE PFMPA	SPIKES ALUMINUM	SPIKE CALCIUM	SURROGATES PFAS	
MW-2	20241021	24J3097-1	11UJ	9.2UJ	3.1J	0.05UJ	140J	Table 1 *
MW-4	20241021	24J3097-2	11UJ	8.9UJ	1.8J	0.31J	150J	Table 1 *
DUPE	20241021	24J3097-3	11UJ	9.4UJ	5.0J	0.05UJ	130J	Table 1 *
EQUIP	BLANK	24J3097-4	11UJ	9.4UJ	0.21UJ			

Table 1* = Data that has been qualified due to surrogate standard performance has been tabulated on Page 4.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	18	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	34	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	24	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 15:11	EMF



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: Equipment Blank

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-04

Sample Matrix: Equipment Blank Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	10/23/24	10/23/24 7:07	LL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1221 [1]	ND	0.19	0.097	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1232 [1]	ND	0.19	0.087	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1248 [1]	ND	0.19	0.088	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1254 [1]	ND	0.19	0.098	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1260 [2]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1262 [1]	ND	0.19	0.077	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Aroclor-1268 [1]	ND	0.19	0.071	µg/L	1		SW-846 8082A	10/23/24	10/30/24 14:51	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	79.8		30-150						10/30/24 14:51	
Decachlorobiphenyl [2]	79.1		30-150						10/30/24 14:51	
Tetrachloro-m-xylene [1]	62.5		30-150						10/30/24 14:51	
Tetrachloro-m-xylene [2]	59.6		30-150						10/30/24 14:51	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1221 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1232 [1]	ND	0.19	0.091	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1248 [1]	ND	0.19	0.091	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1254 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1260 [1]	ND	0.19	0.12	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1262 [1]	ND	0.19	0.080	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Aroclor-1268 [1]	ND	0.19	0.074	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:08	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	80.5		30-150						10/30/24 15:08	
Decachlorobiphenyl [2]	80.0		30-150						10/30/24 15:08	
Tetrachloro-m-xylene [1]	85.5		30-150						10/30/24 15:08	
Tetrachloro-m-xylene [2]	80.7		30-150						10/30/24 15:08	



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.13	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1221 [1]	ND	0.19	0.099	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1232 [1]	ND	0.19	0.089	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1242 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1248 [1]	ND	0.19	0.090	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1254 [1]	ND	0.19	0.10	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1260 [1]	ND	0.19	0.12	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1262 [1]	ND	0.19	0.079	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Aroclor-1268 [1]	ND	0.19	0.072	µg/L	1		SW-846 8082A	10/23/24	10/30/24 15:25	MEW
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	81.5		30-150						10/30/24 15:25	
Decachlorobiphenyl [2]	81.2		30-150						10/30/24 15:25	
Tetrachloro-m-xylene [1]	80.1		30-150						10/30/24 15:25	
Tetrachloro-m-xylene [2]	73.7		30-150						10/30/24 15:25	



1 - FORM I ANALYSIS DATA SHEET

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MW-2_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-01
		File ID:	24J3097-01.d
Sampled:	10/21/24 10:20	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 16:28
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	516.33 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
375-22-4	Perfluorobutanoic acid (PFBA)	25 J	2.1	3.9	
2706-90-3	Perfluoropentanoic acid (PFPeA)	14 J	0.42	1.9	
307-24-4	Perfluorohexanoic acid (PFHxA)	23	0.23	0.97	
375-85-9	Perfluoroheptanoic acid (PFHpA)	21	0.26	0.97	
335-67-1	Perfluorooctanoic acid (PFOA)	110	0.25	0.97	
375-95-1	Perfluorononanoic acid (PFNA)	2.7	0.18	0.97	
335-76-2	Perfluorodecanoic acid (PFDA)		0.20	0.97	
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.20 J	0.20	0.97	
307-55-1	Perfluorododecanoic acid (PFDoA)		0.19	0.97	
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)		0.29	0.97	
376-06-7	Perfluorotetradecanoic acid (PFTeDA)		0.25	0.97	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.1 J	0.21	0.97	
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	2.4	0.25	0.97	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	11	0.27	0.97	
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.3	0.32	0.97	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	120	0.37	0.97	
68259-12-1	Perfluorononanesulfonic acid (PFNS)		0.24	0.97	
335-77-3	Perfluorodecanesulfonic acid (PFDS)		0.28	0.97	
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)		0.28	0.97	
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (PFHxS)	0.72 UJ	0.72	3.9	PF-17
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (PFOS)	2.9 UJ	2.9	3.9	
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (PFDS)		1.1	3.9	
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.22 UJ	0.22	0.97	
31506-32-8	N-methyl perfluorooctanesulfonamide (NMeF)	0.32 UJ	0.32	0.97	
4151-50-2	N-ethyl perfluorooctanesulfonamide (NEtFOS)	0.33 UJ	0.33	0.97	
2355-31-9	N-MeFOSAA (NMeFOSAA)		0.35	0.97	
2991-50-6	N-EtFOSAA (NEtFOSAA)		0.39	0.97	
24448-09-7	N-methylperfluorooctanesulfonamidoethanol (NMeFOSAA-EtOH)	2.6 UJ	2.6	9.7	PF-17
1691-99-2	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSAA-EtOH)	2.6 UJ	2.6	9.7	
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPC)	1.0 UJ	1.0	3.9	

1 - FORM I ANALYSIS DATA SHEET

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MW-2_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-01
		File ID:	24J3097-01.d
Sampled:	10/21/24 10:20	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 16:28
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	516.33 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADON,		0.80	3.9	
756426-58-1	9CI-PF3ONS (F53B Minor)		0.93	3.9	
763051-92-9	11CI-PF3OUdS (F53B Major)		1.0	3.9	
356-02-5	3-Perfluoropropyl propanoic acid (FPrPA)(3:3		2.1	9.7	
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)	1103	11	48	V-05
812-70-4	3-Perfluoroheptyl propanoic acid (FHpPA)(7:1	9.203	9.2	48	V-05
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEE		0.34	1.9	
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)		0.54	1.9	
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)		0.52	1.9	
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)		0.53	1.9	

JMS

1 - FORM I ANALYSIS DATA SHEET

85

MW-4_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labelle Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-02
		File ID:	24J3097-02.d
Sampled:	10/21/24 12:15	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 16:44
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	532.19 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
375-22-4	Perfluorobutanoic acid (PFBA)	2.1 UJ	2.1	3.8	
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.40 UJ	0.40	1.9	
307-24-4	Perfluorohexanoic acid (PFHxA)	1.7 J	0.23	0.94	
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.7 J	0.25	0.94	
335-67-1	Perfluorooctanoic acid (PFOA)	15 J	0.25	0.94	
375-95-1	Perfluorononanoic acid (PFNA)	0.18 UJ	0.18	0.94	
335-76-2	Perfluorodecanoic acid (PFDA)	0.25 J	0.19	0.94	J
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.19 UJ	0.19	0.94	
307-55-1	Perfluorododecanoic acid (PFDoA)	0.19 UJ	0.19	0.94	
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)		0.28	0.94	
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.24 UJ	0.24	0.94	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.8 J	0.20	0.94	
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)		0.24	0.94	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.8 J	0.26	0.94	
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)		0.31	0.94	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	19 J	0.36	0.94	
68259-12-1	Perfluorononanesulfonic acid (PFNS)		0.24	0.94	
335-77-3	Perfluorodecanesulfonic acid (PFDS)		0.27	0.94	
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)		0.27	0.94	
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (PFHxS)	0.70 UJ	0.70	3.8	PF-18
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (PFOS)	2.8 UJ	2.8	3.8	
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (PFDS)		1.0	3.8	
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.22 UJ	0.22	0.94	
31506-32-8	N-methyl perfluorooctanesulfonamide (NMeFOSAA)	0.31 UJ	0.31	0.94	
4151-50-2	N-ethyl perfluorooctanesulfonamide (NEtFOSAA)	0.32 UJ	0.32	0.94	
2355-31-9	N-MeFOSAA (NMeFOSAA)		0.34	0.94	
2991-50-6	N-EtFOSAA (NEtFOSAA)		0.38	0.94	
24448-09-7	N-methylperfluorooctanesulfonamidoethanol (NMeFOSAA-EtOH)	2.6 UJ	2.6	9.4	
1691-99-2	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSAA-EtOH)	2.5 UJ	2.5	9.4	
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPC)	0.97 UJ	0.97	3.8	

JMS

1 - FORM I ANALYSIS DATA SHEET

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MW-4_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-02
		File ID:	24J3097-02.d
Sampled:	10/21/24 12:15	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 16:44
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	532.19 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADON.		0.77	3.8	
756426-58-1	9CI-PF3ONS (F53B Minor)		0.91	3.8	
763051-92-9	11CI-PF3OUdS (F53B Major)		1.0	3.8	
356-02-5	3-Perfluoropropyl propanoic acid (FPrPA)(3:3		2.0	9.4	
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)	110J	11	47	V-05
812-70-4	3-Perfluoroheptyl propanoic acid (FHpPA)(7:1	890J	8.9	47	V-05
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEE		0.33	1.9	
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)	0,50J	0.52	1.9	
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)		0.51	1.9	
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)		0.52	1.9	

1 - FORM I

ANALYSIS DATA SHEET

115

DUP_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-03
		File ID:	24J3097-03.d
Sampled:	10/21/24 00:00	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 17:00
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	507.57 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
375-22-4	Perfluorobutanoic acid (PFBA)	28 J	2.2	3.9	
2706-90-3	Perfluoropentanoic acid (PFPeA)	15 J	0.42	2.0	PF-22
307-24-4	Perfluorohexanoic acid (PFHxA)	23	0.24	0.99	
375-85-9	Perfluoroheptanoic acid (PFHpA)	22	0.26	0.99	
335-67-1	Perfluorooctanoic acid (PFOA)	120	0.26	0.99	
375-95-1	Perfluorononanoic acid (PFNA)	2.6 J	0.19	0.99	
335-76-2	Perfluorodecanoic acid (PFDA)	0.43 J	0.20	0.99	J
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.20 UJ	0.20	0.99	
307-55-1	Perfluorododecanoic acid (PFDoA)	0.20 UJ	0.20	0.99	
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)		0.29	0.99	
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.26 UJ	0.26	0.99	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	5.0 J	0.21	0.99	
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)	2.6	0.25	0.99	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	13 J	0.28	0.99	
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)	2.9	0.33	0.99	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	150 J	0.38	0.99	
68259-12-1	Perfluorononanesulfonic acid (PFNS)		0.25	0.99	
335-77-3	Perfluorodecanesulfonic acid (PFDS)		0.28	0.99	
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)		0.28	0.99	
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (	0.74 UJ	0.74	3.9	PF-17
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (	3.0 UJ	3.0	3.9	
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (	1.1 UJ	1.1	3.9	
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.23 UJ	0.23	0.99	
31506-32-8	N-methyl perfluorooctanesulfonamide (NMeF	0.32 UJ	0.32	0.99	
4151-50-2	N-ethyl perfluorooctanesulfonamide (NEtFOS	0.33 UJ	0.33	0.99	
2355-31-9	N-MeFOSAA (NMeFOSAA)		0.35	0.99	
2991-50-6	N-EtFOSAA (NEtFOSAA)		0.39	0.99	
24448-09-7	N-methylperfluorooctanesulfonamidoethanol(		2.7	9.9	
1691-99-2	N-ethylperfluorooctanesulfonamidoethanol (N		2.6	9.9	
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPC	1.0 UJ	1.0	3.9	

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1 - FORM I ANALYSIS DATA SHEET

116

DUP_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Ground Water	Laboratory ID:	24J3097-03
		File ID:	24J3097-03.d
Sampled:	10/21/24 00:00	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 17:00
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	507.57 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADON.		0.81	3.9	
756426-58-1	9CI-PF3ONS (F53B Minor)		0.95	3.9	
763051-92-9	11CI-PF3OUdS (F53B Major)		1.1	3.9	
356-02-5	3-Perfluoropropyl propanoic acid (FPrPA)(3:3		2.1	9.9	
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)	110J	11	49	V-05
812-70-4	3-Perfluoroheptyl propanoic acid (FHpPA)(7:1	9.40J	9.4	49	V-05
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEE		0.34	2.0	
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)		0.55	2.0	
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)		0.53	2.0	
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA		0.54	2.0	

JMS

1 - FORM I ANALYSIS DATA SHEET

145

Equipment Blank

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Equipment Blank Water	Laboratory ID:	24J3097-04
		File ID:	24J3097-04.d
Sampled:	10/21/24 00:00	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 17:16
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	503.84 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
375-22-4	Perfluorobutanoic acid (PFBA)		2.2	4.0	
2706-90-3	Perfluoropentanoic acid (PFPeA)		0.43	2.0	
307-24-4	Perfluorohexanoic acid (PFHxA)	0.14 UJ	0.24	0.99	
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.26 UJ	0.26	0.99	
335-67-1	Perfluorooctanoic acid (PFOA)		0.26	0.99	
375-95-1	Perfluorononanoic acid (PFNA)		0.19	0.99	
335-76-2	Perfluorodecanoic acid (PFDA)		0.21	0.99	
2058-94-8	Perfluoroundecanoic acid (PFUnA)		0.20	0.99	
307-55-1	Perfluorododecanoic acid (PFDoA)	0.20 UJ	0.20	0.99	
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)		0.29	0.99	
376-06-7	Perfluorotetradecanoic acid (PFTeDA)	0.26 UJ	0.26	0.99	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.21 UJ	0.21	0.99	
2706-91-4	Perfluoropentanesulfonic acid (PFPeS)		0.25	0.99	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)		0.28	0.99	
375-92-8	Perfluoroheptanesulfonic acid (PFHpS)		0.33	0.99	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)		0.38	0.99	
68259-12-1	Perfluorononanesulfonic acid (PFNS)		0.25	0.99	
335-77-3	Perfluorodecanesulfonic acid (PFDS)		0.29	0.99	
79780-39-5	Perfluorododecanesulfonic acid (PFDoS)		0.29	0.99	
757124-72-4	1H,1H,2H,2H-Perfluorohexane sulfonic acid (		0.74	4.0	
27619-97-2	1H,1H,2H,2H-Perfluorooctane sulfonic acid (		3.0	4.0	
39108-34-4	1H,1H,2H,2H-Perfluorodecane sulfonic acid (		1.1	4.0	
754-91-6	Perfluorooctanesulfonamide (PFOSA)	2.3 UJ	0.23	0.99	
31506-32-8	N-methyl perfluorooctanesulfonamide (NMeF	0.33 UJ	0.33	0.99	
4151-50-2	N-ethyl perfluorooctanesulfonamide (NEtFOS	0.33 UJ	0.33	0.99	
2355-31-9	N-MeFOSAA (NMeFOSAA)		0.35	0.99	
2991-50-6	N-EtFOSAA (NEtFOSAA)		0.40	0.99	
24448-09-7	N-methylperfluorooctanesulfonamidoethanol(	2.7 UJ	2.7	9.9	
1691-99-2	N-ethylperfluorooctanesulfonamidoethanol (N	2.7 UJ	2.7	9.9	
13252-13-6	Hexafluoropropylene oxide dimer acid (HFPC		1.0	4.0	

1 - FORM I ANALYSIS DATA SHEET

146

Equipment Blank

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballst	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Equipment Blank Water	Laboratory ID:	24J3097-04
		File ID:	24J3097-04.d
Sampled:	10/21/24 00:00	Prepared:	10/29/24 00:00
		Analyzed:	11/02/24 17:16
Solids:		Preparation:	Draft Method 1633
		Dilution:	1
Initial/Final:	503.84 mL / 5 mL		
Batch:	B390328	Sequence:	S113309
		Calibration:	2401179
		Instrument:	QQQ6

CAS NO.	COMPOUND	CONC. (ng/L)	MDL	RL	Q
919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid (ADON.		0.82	4.0	
756426-58-1	9CI-PF3ONS (F53B Minor)		0.96	4.0	
763051-92-9	11CI-PF3OUdS (F53B Major)		1.1	4.0	
356-02-5	3-Perfluoropropyl propanoic acid (FPrPA)(3:3		2.2	9.9	
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)	110J	11	50	V-05
812-70-4	3-Perfluoroheptyl propanoic acid (FHpPA)(7:1	9.40J	9.4	50	V-05
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEE		0.35	2.0	
377-73-1	Perfluoro-3-methoxypropanoic acid (PFMPA)		0.55	2.0	
863090-89-5	Perfluoro-4-methoxybutanoic acid (PFMBA)		0.54	2.0	
151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA		0.55	2.0	

110J

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-2_20241021

Sampled: 10/21/2024 10:20

Sample ID: 24J3097-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.05 UJ ND	0.050	0.025	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Barium	0.044	0.050	0.0098	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Calcium	140 J	0.50	0.21	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Chromium	ND	0.010	0.0053	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Iron	0.84	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:25	HNN
Lead	0.0083	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Magnesium	44	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Manganese	0.014	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:53	AAJ
Nickel	0.0060	0.010	0.0046	mg/L	1	J	SW-846 6010D	10/29/24	10/31/24 6:25	HNN
Potassium	5.6	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Sodium	20	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH
Zinc	ND	0.010	0.0080	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:47	MJH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: MW-4_20241021

Sampled: 10/21/2024 12:15

Sample ID: 24J3097-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.31 	0.050	0.025	mg/L	1	MS-22	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Barium	0.078	0.050	0.0098	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Calcium	150 	0.50	0.21	mg/L	1	MS-19	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Chromium	ND	0.010	0.0053	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Iron	0.68	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Lead	0.0090	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Magnesium	39	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Manganese	0.35	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:55	AAJ
Nickel	ND	0.010	0.0046	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:02	HNN
Potassium	6.5	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Sodium	8.2	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH
Zinc	ND	0.010	0.0080	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:01	MJH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lackawanna, NY

Sample Description:

Work Order: 24J3097

Date Received: 10/22/2024

Field Sample #: DUP_20241021

Sampled: 10/21/2024 00:00

Sample ID: 24J3097-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.05 ug ND	0.050	0.025	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Arsenic	ND	0.010	0.0050	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Barium	0.044	0.050	0.0098	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Beryllium	ND	0.0040	0.00090	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Cadmium	ND	0.0040	0.0015	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Calcium	130 J	0.50	0.21	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Chromium	0.0067	0.010	0.0053	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Cobalt	ND	0.010	0.0027	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Copper	ND	0.010	0.0095	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Iron	2.1	0.050	0.036	mg/L	1		SW-846 6010D	10/29/24	10/31/24 6:33	HNN
Lead	0.0068	0.010	0.0044	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Magnesium	43	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Manganese	0.018	0.010	0.0018	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Mercury	ND	0.00020	0.00012	mg/L	1		SW-846 7470A	10/30/24	10/30/24 13:56	AAJ
Nickel	0.0068	0.010	0.0046	mg/L	1	J	SW-846 6010D	10/29/24	10/31/24 6:33	HNN
Potassium	5.5	2.0	0.47	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Selenium	ND	0.050	0.0085	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Silver	ND	0.010	0.0044	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Sodium	20	2.0	0.38	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Thallium	ND	0.050	0.016	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Vanadium	ND	0.010	0.0054	mg/L	1		SW-846 6010D	10/29/24	10/30/24 18:52	MJH
Zinc	0.0081	0.010	0.0080	mg/L	1	J	SW-846 6010D	10/29/24	10/30/24 18:52	MJH



39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390195 - Draft Method 1633										
Blank (B390195-BLK1)				Prepared & Analyzed: 10/23/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B390195-BS1)				Prepared & Analyzed: 10/23/24						
Total Suspended Solids	215	5.0	mg/L	200.0		108	✓ 51.5-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390132 - SW-846 3510C										
Blank (B390132-BLK1)										
Prepared: 10/23/24 Analyzed: 10/28/24										
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	4.84		µg/L	4.000		121	30-150			
Surrogate: Decachlorobiphenyl [2C]	4.59		µg/L	4.000		115	30-150			
Surrogate: Tetrachloro-m-xylene	3.61		µg/L	4.000		90.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.55		µg/L	4.000		88.8	30-150			
LCS (B390132-BS1)										
Prepared: 10/23/24 Analyzed: 10/28/24										
Aroclor-1016	1.0	0.20	µg/L	1.000		102	40-140			
Aroclor-1016 [2C]	1.0	0.20	µg/L	1.000		104	40-140			
Aroclor-1260	1.3	0.20	µg/L	1.000		128	40-140			
Aroclor-1260 [2C]	1.2	0.20	µg/L	1.000		125	40-140			
Surrogate: Decachlorobiphenyl	4.56		µg/L	4.000		114	30-150			
Surrogate: Decachlorobiphenyl [2C]	4.37		µg/L	4.000		109	30-150			
Surrogate: Tetrachloro-m-xylene	3.89		µg/L	4.000		97.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.80		µg/L	4.000		95.1	30-150			
LCS Dup (B390132-BSD1)										
Prepared: 10/23/24 Analyzed: 10/28/24										
Aroclor-1016	0.87	0.20	µg/L	1.000		86.8	40-140	16.3	20	
Aroclor-1016 [2C]	0.88	0.20	µg/L	1.000		87.9	40-140	16.4	20	
Aroclor-1260	1.1	0.20	µg/L	1.000		108	40-140	17.1	20	
Aroclor-1260 [2C]	1.1	0.20	µg/L	1.000		105	40-140	17.2	20	
Surrogate: Decachlorobiphenyl	4.09		µg/L	4.000		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.92		µg/L	4.000		98.0	30-150			
Surrogate: Tetrachloro-m-xylene	3.13		µg/L	4.000		78.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.08		µg/L	4.000		77.1	30-150			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390132 - SW-846 3510C										
Matrix Spike (B390132-MS1)	Source: 24J3097-02			Prepared: 10/23/24 Analyzed: 10/29/24						
Aroclor-1016	0.96	0.20	µg/L	0.9826	ND	98.0	40-140			
Aroclor-1016 [2C]	0.90	0.20	µg/L	0.9826	ND	91.6	40-140			
Aroclor-1260	1.0	0.20	µg/L	0.9826	ND	107	40-140			
Aroclor-1260 [2C]	0.99	0.20	µg/L	0.9826	ND	100	40-140			
Surrogate: Decachlorobiphenyl	2.88		µg/L	3.930		73.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.72		µg/L	3.930		69.2	30-150			
Surrogate: Tetrachloro-m-xylene	3.30		µg/L	3.930		83.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	3.20		µg/L	3.930		81.4	30-150			
Matrix Spike Dup (B390132-MSD1)	Source: 24J3097-02			Prepared: 10/23/24 Analyzed: 10/29/24						
Aroclor-1016	0.91	0.19	µg/L	0.9371	ND	96.9	40-140	5.88	50	
Aroclor-1016 [2C]	0.88	0.19	µg/L	0.9371	ND	94.2	40-140	1.95	50	
Aroclor-1260	1.0	0.19	µg/L	0.9371	ND	109	40-140	2.56	50	
Aroclor-1260 [2C]	0.97	0.19	µg/L	0.9371	ND	104	40-140	1.60	50	
Surrogate: Decachlorobiphenyl	3.17		µg/L	3.748		84.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	3.01		µg/L	3.748		80.3	30-150			
Surrogate: Tetrachloro-m-xylene	2.92		µg/L	3.748		77.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.87		µg/L	3.748		76.6	30-150			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B390132-BS1 Date(s) Analyzed: 10/28/2024 10/28/2024
 Instrument ID (1): ECD5 Instrument ID (2): ECD5
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	1.0	0.0 ✓
Aroclor-1260	1	0.000	0.000	0.000	1.3	
	2	0.000	0.000	0.000	1.2	8.0 ✓

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B390132-BSD1 Date(s) Analyzed: 10/28/2024 10/28/2024
Instrument ID (1): ECD5 Instrument ID (2): ECD5
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.87	
	2	0.000	0.000	0.000	0.88	1.1 ✓
Aroclor-1260	1	0.000	0.000	0.000	1.1	
	2	0.000	0.000	0.000	1.1	0.0 ✓

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B390132-MS1 Date(s) Analyzed: 10/29/2024 10/29/2024

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.96	
	2	0.000	0.000	0.000	0.90	6.5 ✓
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.99	10.5 ✓

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B390132-MSD1 Date(s) Analyzed: 10/29/2024 10/29/2024
Instrument ID (1): ECD5 Instrument ID (2): ECD5
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.91	
	2	0.000	0.000	0.000	0.88	3.4 ✓
Aroclor-1260	1	0.000	0.000	0.000	1.0	
	2	0.000	0.000	0.000	0.97	3.1 ✓

4 - FORM IV
METHOD BLANK SUMMARY

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Draft Method 1633

Laboratory: Pace New England Work Order: 24J3097
Client: NYDEC_Labella Associates - Ballston Spa, NY Project: Lehigh Industrial Park - CO 152390
Blank ID: B390328-BLK1 Batch: B390328 Prepared: 10/29/2024 00:00

Client Sample ID	Laboratory Sample ID	Lab File ID	Time Analyzed
MRL Check	B390328-MRL1	B390328-MRL1.d	01:44
LCS	B390328-BS1	B390328-BS1.d	02:00
Matrix Spike	B390328-MS1	B390328-MS1.d	02:15
Matrix Spike Dup	B390328-MSD1	B390328-MSD1.d	02:31
MW-2_20241021	24J3097-01	24J3097-01.d	16:28
MW-4_20241021	24J3097-02	24J3097-02.d	16:44
DUP_20241021	24J3097-03	24J3097-03.d	17:00
Equipment Blank	24J3097-04	24J3097-04.d	17:16

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MW-4_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballston Spa, NY	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Water	Analysis:	Draft Method 1633
Batch:	B390328	Preparation:	Draft Method 1633
% Solids:		Laboratory ID:	B390328-MS1
Initial/Final:	508.29 mL / 5 mL	Sample Lab ID:	24J3097-02
Column:			

ANALYTE	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC.	QC LIMITS REC.
Perfluorobutanoic acid (PFBA)	94.43	ND	95.5	101	58 - 148
Perfluoropentanoic acid (PFPeA)	47.22	ND	49.5	105	54 - 152
Perfluorohexanoic acid (PFHxA)	23.61	1.65	27.8	111	55 - 152
Perfluoroheptanoic acid (PFHpA)	23.61	1.71	25.5	101	54 - 154
Perfluorooctanoic acid (PFOA)	23.61	14.5	39.3	105	52 - 161
Perfluorononanoic acid (PFNA)	23.61	ND	21.5	91.2	59 - 149
Perfluorodecanoic acid (PFDA)	23.61	0.253	23.0	96.3	52 - 147
Perfluoroundecanoic acid (PFUnA)	23.61	ND	25.1	106	48 - 159
Perfluorododecanoic acid (PFDoA)	23.61	ND	25.8	109	64 - 142
Perfluorotridecanoic acid (PFTrDA)	23.61	ND	26.8	114	49 - 148
Perfluorotetradecanoic acid (PFTeDA)	23.61	ND	25.1	106	47 - 161
Perfluorobutanesulfonic acid (PFBS)	20.94	1.79	22.2	97.5	62 - 144
Perfluoropentanesulfonic acid (PFPeS)	22.22	ND	22.9	103	59 - 151
Perfluorohexanesulfonic acid (PFHxS)	21.58	1.80	21.3	90.3	57 - 146
Perfluoroheptanesulfonic acid (PFHpS)	22.50	ND	23.2	103	55 - 152
Perfluorooctanesulfonic acid (PFOS)	21.91	19.4	35.5	73.8	58 - 149
Perfluorononanesulfonic acid (PFNS)	22.71	ND	21.2	93.5	52 - 148
Perfluorodecanesulfonic acid (PFDS)	22.78	ND	21.8	95.6	51 - 147
Perfluorododecanesulfonic acid (PFDoS)	22.90	ND	18.4	80.2	36 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	88.53	ND	96.2	109	67 - 146
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	89.71	ND	103	115	61 - 151
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	90.66	ND	109	120	63 - 152

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MW-4_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballston Spa, NY	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Water	Analysis:	Draft Method 1633
Batch:	B390328	Preparation:	Draft Method 1633
% Solids:		Laboratory ID:	B390328-MS1
Initial/Final:	508.29 mL / 5 mL	Sample Lab ID:	24J3097-02
Column:			

ANALYTE	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC.	QC LIMITS REC.
Perfluorooctanesulfonamide (PFOSA)	23.61	ND	23.9	101	61 - 148
N-methyl perfluorooctanesulfonamide (NMeFOSA)	23.61	ND	23.4	99.1	63 - 145
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.61	ND	21.5	91.0	65 - 139
N-MeFOSAA (NMeFOSAA)	23.61	ND	24.6	104	58 - 144
N-EtFOSAA (NEtFOSAA)	23.61	ND	20.5	87.0	59 - 146
N-methylperfluorooctanesulfon amidoethanol(NMeFOSE)	236.1	ND	211	89.5	71 - 136
N-ethylperfluorooctanesulfona midoethanol (NEtFOSE)	236.1	ND	216	91.4	69 - 137
Hexafluoropropylene oxide dimer acid (HFPO-DA)	94.43	ND	117	124	63 - 144
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	89.24	ND	137	153	* 68 - 146
9Cl-PF3ONS (F53B Minor)	88.30	ND	114	129	56 - 156
11Cl-PF3OUdS (F53B Major)	89.24	ND	85.4	95.7	46 - 156
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	236.1	ND	240	102	62 - 129
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1180	ND	1620	138	* 63 - 134
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	1180	ND	1460	124	50 - 138
Perfluoro(2-ethoxyethane)sulfo nic acid (PFEESA)	42.02	ND	52.4	125	56 - 151
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.22	ND	18.0	38.2	* 51 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	47.22	ND	65.2	138	55 - 148
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.22	ND	39.5	83.7	48 - 161

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MW-4_20241021

Laboratory: Pace New England

Work Order: 24J3097

Client: NYDEC_Labella Associates - Ballston Spa, NY

Project: Lehigh Industrial Park - CO 152390

Matrix: Water

Analysis: Draft Method 1633

Batch: B390328

Preparation: Draft Method 1633

% Solids:

Laboratory ID: B390328-MSD1

Initial/Final: 507.6 mL / 5 mL

Sample Lab ID: 24J3097-02

Column:

ANALYTE	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC. #	% RPD	QC LIMITS	
					RPD	REC.
Perfluorobutanoic acid (PFBA)	94.56	91.4	96.6	4.39	20	58 - 148
Perfluoropentanoic acid (PFPeA)	47.28	48.7	103	1.58	20	54 - 152
Perfluorohexanoic acid (PFHxA)	23.64	27.1	107	2.66	25	55 - 152
Perfluoroheptanoic acid (PFHpA)	23.64	24.6	96.7	3.69	25	54 - 154
Perfluorooctanoic acid (PFOA)	23.64	39.2	104	0.256	25	52 - 161
Perfluorononanoic acid (PFNA)	23.64	21.1	89.1	2.23	25	59 - 149
Perfluorodecanoic acid (PFDA)	23.64	20.9	87.5	9.32	25	52 - 147
Perfluoroundecanoic acid (PFUnA)	23.64	25.7	109	2.26	30	48 - 159
Perfluorododecanoic acid (PFDoA)	23.64	24.8	105	3.80	25	64 - 142
Perfluorotridecanoic acid (PFTrDA)	23.64	26.5	112	1.28	25	49 - 148
Perfluorotetradecanoic acid (PFTeDA)	23.64	23.3	98.5	7.61	25	47 - 161
Perfluorobutanesulfonic acid (PFBS)	20.97	22.2	97.3	0.122	20	62 - 144
Perfluoropentanesulfonic acid (PFPeS)	22.25	24.9	112	8.24	25	59 - 151
Perfluorohexanesulfonic acid (PFHxS)	21.61	21.1	89.3	0.937	25	57 - 146
Perfluoroheptanesulfonic acid (PFHpS)	22.53	22.7	101	2.39	25	55 - 152
Perfluorooctanesulfonic acid (PFOS)	21.94	36.1	76.1	1.47	20	58 - 149
Perfluorononanesulfonic acid (PFNS)	22.74	20.8	91.3	2.27	25	52 - 148
Perfluorodecanesulfonic acid (PFDS)	22.81	21.8	95.6	0.188	25	51 - 147
Perfluorododecanesulfonic acid (PFDoS)	22.93	18.9	82.4	2.81	30	36 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	88.65	96.4	109	0.116	25	67 - 146
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	89.83	99.6	111	3.37	30	61 - 151

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MW-4_20241021

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballston Spa, NY	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Water	Analysis:	Draft Method 1633
Batch:	B390328	Preparation:	Draft Method 1633
% Solids:		Laboratory ID:	B390328-MSD1
Initial/Final:	507.6 mL / 5 mL	Sample Lab ID:	24J3097-02
Column:			

ANALYTE	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC. #	% RPD	QC LIMITS	
					RPD	REC.
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	90.78	95.5	105	12.8	30	63 - 152
Perfluorooctanesulfonamide (PFOSA)	23.64	23.9	101	0.105	20	61 - 148
N-methyl perfluorooctanesulfonamide (NMeFOSA)	23.64	22.5	95.4	3.75	25	63 - 145
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.64	21.5	90.8	0.168	25	65 - 139
N-MeFOSAA (NMeFOSAA)	23.64	23.4	98.9	4.99	25	58 - 144
N-EtFOSAA (NEtFOSAA)	23.64	20.1	84.9	2.26	25	59 - 146
N-methylperfluorooctanesulfon amidoethanol(NMeFOSE)	236.4	205	86.7	3.06	20	71 - 136
N-ethylperfluorooctanesulfona midoethanol (NEtFOSE)	236.4	216	91.3	0.0744	25	69 - 137
Hexafluoropropylene oxide dimer acid (HFPO-DA)	94.56	115	122	1.77	25	63 - 144
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	89.36	141	158 *	3.26	20	68 - 146
9CI-PF3ONS (F53B Minor)	88.42	116	131	1.91	30	56 - 156
11CI-PF3OUdS (F53B Major)	89.36	88.7	99.3	3.79	35	46 - 156
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	236.4	254	107	5.54	20	62 - 129
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1182	1620	137 *	0.0894	20	63 - 134
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	1182	1490	126	2.02	25	50 - 138
Perfluoro(2-ethoxyethane)sulfo nic acid (PFEESA)	42.08	51.9	123	1.04	20	56 - 151
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.28	19.2	40.7 *	6.46	25	51 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	47.28	63.6	135	2.45	20	55 - 148
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.28	37.6	79.5	4.98	35	48 - 161

LCS / LCS DUPLICATE RECOVERY

Draft Method 1633

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballston Spa, NY	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Water	Preparation:	Draft Method 1633
Batch:	B390328	Laboratory ID:	B390328-BS1
Column:		Initial/Final:	510.11 mL / 5 mL

ANALYTE	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC.	QC LIMITS REC.
Perfluorobutanoic acid (PFBA)	94.10	90.4	96.0	58 - 148
Perfluoropentanoic acid (PFPeA)	47.05	48.2	102	54 - 152
Perfluorohexanoic acid (PFHxA)	23.52	25.0	106	55 - 152
Perfluoroheptanoic acid (PFHpA)	23.52	23.0	97.6	54 - 154
Perfluorooctanoic acid (PFOA)	23.52	24.9	106	52 - 161
Perfluorononanoic acid (PFNA)	23.52	20.3	86.4	59 - 149
Perfluorodecanoic acid (PFDA)	23.52	21.6	91.8	52 - 147
Perfluoroundecanoic acid (PFUnA)	23.52	25.9	110	48 - 159
Perfluorododecanoic acid (PFDoA)	23.52	25.0	106	64 - 142
Perfluorotridecanoic acid (PFTrDA)	23.52	26.0	111	49 - 148
Perfluorotetradecanoic acid (PFTeDA)	23.52	23.2	98.7	47 - 161
Perfluorobutanesulfonic acid (PFBS)	20.87	20.8	99.5	62 - 144
Perfluoropentanesulfonic acid (PFPeS)	22.14	24.3	110	59 - 151
Perfluorohexanesulfonic acid (PFHxS)	21.50	21.4	99.7	57 - 146
Perfluoroheptanesulfonic acid (PFHpS)	22.42	23.7	106	55 - 152
Perfluorooctanesulfonic acid (PFOS)	21.83	22.0	101	58 - 149
Perfluorononanesulfonic acid (PFNS)	22.63	24.2	107	52 - 148
Perfluorodecanesulfonic acid (PFDS)	22.70	25.1	111	51 - 147
Perfluorododecanesulfonic acid (PFDoS)	22.82	21.6	94.7	36 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	88.22	105	119	67 - 146
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	89.39	95.1	106	61 - 151
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	90.33	100	111	63 - 152
Perfluorooctanesulfonamide (PFOSA)	23.52	24.5	104	61 - 148
N-methyl perfluorooctanesulfonamide (NMeFOSA)	23.52	22.0	93.4	63 - 145
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.52	20.2	86.0	65 - 139
N-MeFOSAA (NMeFOSAA)	23.52	23.4	99.4	58 - 144
N-EtFOSAA (NEtFOSAA)	23.52	19.9	84.7	59 - 146
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	235.2	210	89.2	71 - 136
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	235.2	222	94.3	69 - 137
Hexafluoropropylene oxide dimer acid (HFPO-DA)	94.10	116	123	63 - 144

LCS / LCS DUPLICATE RECOVERY

Draft Method 1633

Laboratory:	Pace New England	Work Order:	24J3097
Client:	NYDEC_Labella Associates - Ballston Spa, NY	Project:	Lehigh Industrial Park - CO 152390
Matrix:	Water	Preparation:	Draft Method 1633
Batch:	B390328	Laboratory ID:	B390328-BS1
Column:		Initial/Final:	510.11 mL / 5 mL

ANALYTE	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC.	QC LIMITS REC.
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	88.92	104	117	68 - 146
9CI-PF3ONS (F53B Minor)	87.98	86.7	98.5	56 - 156
11CI-PF3OUdS (F53B Major)	88.92	74.3	83.6	46 - 156
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	235.2	228	96.9	62 - 129
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA) (5:3FTCA)	1176	1080	91.4	63 - 134
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1176	1040	88.0	50 - 138
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	41.87	46.8	112	56 - 151
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.05	49.5	105	51 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	47.05	54.3	115	55 - 148
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	47.05	61.2	130	48 - 161

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390832 - SW-846 3005A										
Blank (B390832-BLK1)										
				Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							
Blank (B390832-BLK2)										
				Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	ND	0.010	mg/L							
LCS (B390832-BS1)										
				Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	0.519	0.050	mg/L	0.5000		104	80-120			
Antimony	0.501	0.050	mg/L	0.5000		100	80-120			
Arsenic	0.481	0.010	mg/L	0.5000		96.2	80-120			
Barium	0.513	0.050	mg/L	0.5000		103	80-120			
Beryllium	0.537	0.0040	mg/L	0.5000		107	80-120			
Cadmium	0.502	0.0040	mg/L	0.5000		100	80-120			
Calcium	4.15	0.50	mg/L	4.000		104	80-120			
Chromium	0.512	0.010	mg/L	0.5000		102	80-120			
Cobalt	0.512	0.010	mg/L	0.5000		102	80-120			
Copper	1.01	0.010	mg/L	1.000		101	80-120			
Iron	4.30	0.050	mg/L	4.000		108	80-120			
Lead	0.515	0.010	mg/L	0.5000		103	80-120			
Magnesium	4.05	0.050	mg/L	4.000		101	80-120			
Manganese	0.512	0.010	mg/L	0.5000		102	80-120			
Potassium	4.20	2.0	mg/L	4.000		105	80-120			
Selenium	0.515	0.050	mg/L	0.5000		103	80-120			
Silver	0.530	0.010	mg/L	0.5000		106	80-120			
Sodium	4.14	2.0	mg/L	4.000		104	80-120			
Thallium	0.491	0.050	mg/L	0.5000		98.1	80-120			
Vanadium	0.501	0.010	mg/L	0.5000		100	80-120			
Zinc	1.02	0.010	mg/L	1.000		102	80-120			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390832 - SW-846 3005A										
LCS (B390832-BS2)										
				Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.550	0.010	mg/L	0.5000	110		80-120			
LCS Dup (B390832-BSD1)										
				Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	0.550	0.050	mg/L	0.5000	110		80-120	5.78	30	
Antimony	0.505	0.050	mg/L	0.5000	101		80-120	0.744	20	
Arsenic	0.481	0.010	mg/L	0.5000	96.2		80-120	0.0609	20	
Barium	0.512	0.050	mg/L	0.5000	102		80-120	0.211	20	
Beryllium	0.550	0.0040	mg/L	0.5000	110		80-120	2.43	20	
Cadmium	0.502	0.0040	mg/L	0.5000	100		80-120	0.0580	20	
Calcium	4.38	0.50	mg/L	4.000	109		80-120	5.21	20	
Chromium	0.512	0.010	mg/L	0.5000	102		80-120	0.00598	20	
Cobalt	0.513	0.010	mg/L	0.5000	103		80-120	0.307	20	
Copper	1.01	0.010	mg/L	1.000	101		80-120	0.0533	20	
Iron	4.52	0.050	mg/L	4.000	113		80-120	4.92	20	
Lead	0.515	0.010	mg/L	0.5000	103		80-120	0.137	20	
Magnesium	4.24	0.050	mg/L	4.000	106		80-120	4.58	20	
Manganese	0.536	0.010	mg/L	0.5000	107		80-120	4.61	20	
Potassium	4.44	2.0	mg/L	4.000	111		80-120	5.46	20	
Selenium	0.515	0.050	mg/L	0.5000	103		80-120	0.0858	20	
Silver	0.531	0.010	mg/L	0.5000	106		80-120	0.200	20	
Sodium	4.24	2.0	mg/L	4.000	106		80-120	2.25	20	
Thallium	0.504	0.050	mg/L	0.5000	101		80-120	2.73	20	
Vanadium	0.502	0.010	mg/L	0.5000	100		80-120	0.234	20	
Zinc	1.02	0.010	mg/L	1.000	102		80-120	0.280	20	
LCS Dup (B390832-BSD2)										
				Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.551	0.010	mg/L	0.5000	110		80-120	0.194	30	
Matrix Spike (B390832-MS1)										
				Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/30/24				
Aluminum	0.939	0.050	mg/L	0.5000	0.308	126 *	75-125			MS-22
Antimony	0.534	0.050	mg/L	0.5000	ND	107	75-125			
Arsenic	0.498	0.010	mg/L	0.5000	ND	99.6	75-125			
Barium	0.593	0.050	mg/L	0.5000	0.0776	103	75-125			
Beryllium	0.563	0.0040	mg/L	0.5000	ND	113	75-125			
Cadmium	0.511	0.0040	mg/L	0.5000	ND	102	75-125			
Calcium	152	0.50	mg/L	4.000	146	155 *	75-125			MS-19
Chromium	0.523	0.010	mg/L	0.5000	ND	105	75-125			
Cobalt	0.491	0.010	mg/L	0.5000	ND	98.3	75-125			
Copper	1.03	0.010	mg/L	1.000	ND	103	75-125			
Iron	5.19	0.050	mg/L	4.000	0.684	113	75-125			
Lead	0.513	0.010	mg/L	0.5000	0.00896	101	75-125			
Magnesium	43.4	0.050	mg/L	4.000	39.2	105	75-125			
Manganese	0.877	0.010	mg/L	0.5000	0.350	105	75-125			
Potassium	10.8	2.0	mg/L	4.000	6.46	109	75-125			
Selenium	0.507	0.050	mg/L	0.5000	ND	101	75-125			
Silver	0.544	0.010	mg/L	0.5000	ND	109	75-125			
Sodium	12.5	2.0	mg/L	4.000	8.16	110	75-125			
Thallium	0.515	0.050	mg/L	0.5000	ND	103	75-125			
Vanadium	0.524	0.010	mg/L	0.5000	ND	105	75-125			
Zinc	0.992	0.010	mg/L	1.000	ND	99.2	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390832 - SW-846 3005A										
Matrix Spike (B390832-MS2)										
Source: 24J3097-02				Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.524	0.010	mg/L	0.5000	ND	105	75-125			
Matrix Spike Dup (B390832-MSD1)										
Source: 24J3097-02				Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	0.866	0.050	mg/L	0.5000	0.308	112	75-125	8.10	20	
Antimony	0.519	0.050	mg/L	0.5000	ND	104	75-125	3.03	20	
Arsenic	0.487	0.010	mg/L	0.5000	ND	97.4	75-125	2.17	20	
Barium	0.569	0.050	mg/L	0.5000	0.0776	98.3	75-125	4.11	20	
Beryllium	0.539	0.0040	mg/L	0.5000	ND	108	75-125	4.38	20	
Cadmium	0.491	0.0040	mg/L	0.5000	ND	98.2	75-125	3.95	20	
Calcium	146	0.50	mg/L	4.000	146	14.5	75-125	3.78	20	MS-19
Chromium	0.502	0.010	mg/L	0.5000	ND	100	75-125	4.08	20	
Cobalt	0.472	0.010	mg/L	0.5000	ND	94.4	75-125	4.00	20	
Copper	0.983	0.010	mg/L	1.000	ND	98.3	75-125	4.47	20	
Iron	4.92	0.050	mg/L	4.000	0.684	106	75-125	5.32	20	
Lead	0.501	0.010	mg/L	0.5000	0.00896	98.3	75-125	2.48	20	
Magnesium	42.5	0.050	mg/L	4.000	39.2	83.0	75-125	2.04	20	
Manganese	0.850	0.010	mg/L	0.5000	0.350	100	75-125	3.19	20	
Potassium	10.5	2.0	mg/L	4.000	6.46	102	75-125	2.60	20	
Selenium	0.508	0.050	mg/L	0.5000	ND	102	75-125	0.116	20	
Silver	0.522	0.010	mg/L	0.5000	ND	104	75-125	4.03	20	
Sodium	12.2	2.0	mg/L	4.000	8.16	100	75-125	3.02	20	
Thallium	0.499	0.050	mg/L	0.5000	ND	99.9	75-125	3.12	20	
Vanadium	0.502	0.010	mg/L	0.5000	ND	100	75-125	4.32	20	
Zinc	0.953	0.010	mg/L	1.000	ND	95.3	75-125	4.06	20	
Matrix Spike Dup (B390832-MSD2)										
Source: 24J3097-02				Prepared: 10/29/24 Analyzed: 10/31/24						
Nickel	0.511	0.010	mg/L	0.5000	ND	102	75-125	2.44	20	
Post Spike (B390832-PS1)										
Source: 24J3097-02				Prepared: 10/29/24 Analyzed: 10/30/24						
Aluminum	2.43		mg/L	2.000	0.302	106	75-125			
Antimony	2.04		mg/L	2.000	0.00862	102	75-125			
Arsenic	1.95		mg/L	2.000	-0.00673	97.6	75-125			
Barium	2.06		mg/L	2.000	0.0760	99.3	75-125			
Beryllium	2.13		mg/L	2.000	0.0000992	107	75-125			
Cadmium	1.98		mg/L	2.000	0.000219	98.8	75-125			
Calcium	160		mg/L	16.00	143	108	75-125			
Chromium	2.01		mg/L	2.000	0.00373	101	75-125			
Cobalt	1.90		mg/L	2.000	0.00191	94.8	75-125			
Copper	4.00		mg/L	4.000	-0.000613	100	75-125			
Iron	17.6		mg/L	16.00	0.670	106	75-125			
Lead	1.95		mg/L	2.000	0.00878	97.2	75-125			
Magnesium	54.5		mg/L	16.00	38.4	101	75-125			
Manganese	2.36		mg/L	2.000	0.343	101	75-125			
Potassium	23.6		mg/L	16.00	6.33	108	75-125			
Selenium	2.02		mg/L	2.000	-0.0108	101	75-125			
Silver	2.01		mg/L	2.000	-0.00239	100	75-125			
Sodium	24.4		mg/L	16.00	7.99	103	75-125			
Thallium	2.13		mg/L	2.000	-0.00507	107	75-125			
Vanadium	2.02		mg/L	2.000	0.00491	101	75-125			
Zinc	3.81		mg/L	4.000	0.00314	95.3	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B390832 - SW-846 3005A										
Dilution Check (B390832-SRL1)		Source: 24J3097-02		Prepared: 10/29/24 Analyzed: 10/30/24						
Antimony	ND	0.25	mg/L		ND				20	
Arsenic	ND	0.050	mg/L		ND				20	
Barium	0.0800	0.25	mg/L		0.0776			3.05	20	J
Beryllium	ND	0.020	mg/L		ND				20	
Cadmium	ND	0.020	mg/L		ND				20	
Calcium	151	2.5	mg/L		146			3.70	20	
Chromium	ND	0.050	mg/L		ND				20	
Cobalt	ND	0.050	mg/L		ND				20	
Copper	ND	0.050	mg/L		ND				20	
Iron	0.707	0.25	mg/L		0.684			3.29	20	
Lead	ND	0.050	mg/L		ND				20	
Magnesium	41.2	0.25	mg/L		39.2			5.11	20	
Manganese	0.369	0.050	mg/L		0.350			5.10	20	
Potassium	7.05	10	mg/L		6.46			8.66	20	J
Selenium	ND	0.25	mg/L		ND				20	
Silver	ND	0.050	mg/L		ND				20	
Sodium	8.43	10	mg/L		8.16			3.35	20	J
Thallium	ND	0.25	mg/L		ND				20	
Vanadium	ND	0.050	mg/L		ND				20	
Zinc	ND	0.050	mg/L		ND				20	
Batch B390879 - SW-846 7470A Prep										
Blank (B390879-BLK1)		Prepared & Analyzed: 10/30/24								
Mercury	ND	0.00020	mg/L							
LCS (B390879-BS1)		Prepared & Analyzed: 10/30/24								
Mercury	0.00394	0.00020	mg/L	0.004020	97.9		80-120			
LCS Dup (B390879-BSD1)		Prepared & Analyzed: 10/30/24								
Mercury	0.00395	0.00020	mg/L	0.004020	98.2		80-120	0.279	20	
Matrix Spike (B390879-MS1)		Source: 24J3097-02		Prepared & Analyzed: 10/30/24						
Mercury	0.00389	0.00020	mg/L	0.004020	ND	96.7	75-125			
Matrix Spike Dup (B390879-MSD1)		Source: 24J3097-02		Prepared & Analyzed: 10/30/24						
Mercury	0.00401	0.00020	mg/L	0.004020	ND	99.8	75-125	3.12	20	