April 5, 2022

Mr. Charles Gregory
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Re: Emerging Contaminant Groundwater Sampling
Former Rochester Metal Etching Company
NYSDEC Site No. 828100
100 Lake Avenue, Rochester, NY
NYSDEC Callout ID: 140007

Dear Mr. Gregory,

LaBella Associates D.P.C. (LaBella) is pleased to submit this letter summarizing the work that was completed to evaluate groundwater for emerging contaminants at the Former Rochester Metal Etching Company site located at 100 Lake Avenue, City of Rochester, Monroe County, New York, hereinafter referred to as the "Site." The site is in the New York State Superfund program designated as site number 828100.

BACKGROUND

LaBella recently completed a review of site documentation as well as a site visit to determine the actions recommended to enable the collection of groundwater from three separate well locations for analysis of emerging contaminants. Review of the site *Remedial Investigation/Feasibility Study* dated September 2007, indicated the presence of four (4) 1-inch diameter monitoring wells at the site, designated as MW-1 through MW-4. Groundwater samples were historically not collected from well MW-4 due to lack of groundwater at the location according to the report and wells MW-1 and MW-2 had reportedly been dry or had low recharge rates. The report provided no indications of any issues with collecting groundwater from MW-3. During the site visit, the location and presence of monitoring wells MW-1 through MW-4 were confirmed; however, groundwater level measurements indicated there was no groundwater in wells MW-1 and MW-4. Additionally, well MW-1 and MW-2 were observed to be damaged at the surface and partially filled with silt and debris based on a comparison of well construction logs to the corresponding well depth measurements collected.

Based on the review of documentation and completion of the site inspection, Labella provided a letter to the New York State Department of Environmental Conservation (NYSDEC) dated September 10, 2021, that described recommendations for actions that would allow for the collection of groundwater samples to be analyzed for emerging contaminates. The NYSDEC requested that Labella complete the following scope of work:

- Decommission wells MW-1 and MW-2 via overdrilling and reinstall as 2-inch diameter PVC wells.
- Develop the reinstalled wells and MW-3 by removing approximately three (3) well volumes or until dry and allow to equilibrate for approximately 1-week prior to sampling.
- Collect groundwater grab samples for 1,4-dioxane and PFAS from three (3) wells using PFAS-free methods in accordance with the New York State Department of Environmental

Conservation (NYSDEC) *Sampling and Analysis of Per- and Polyfluoroalkyl Substances* guidance document dated June 2021.

- Submit a summary report

The details of the work completed are further described below.

MONITORING WELL DECOMMISSIONING AND REINSTALLATION

Prior to the initiation of subsurface work, an underground utility stake-out, via *Dig Safely New York*, was completed at the Site (ticket number 01202-000-571) to locate utilities in the areas where the subsurface work would take place.

On January 28, 2022, a total of two (2) overburden wells, designated as MW-1 and MW-2, were decommissioned at the site and then reinstalled as wells MW-1R and MW-2R, respectively. The wells were decommissioned via overdrilling using a track-mounted Geoprobe® Systems Model 6620 drilling rig with hollow-stem augers. The well casing and augers were removed then the augers were readvanced down each hole to remove any remaining sand and bentonite materials from the hole.

Drill cuttings produced during well decommissioning were continuously screened for visual and olfactory indications of contamination and using a photoionization detector (PID) equipped with a 10.6 electronvolt (eV) lamp for the presence of VOCs, collectively referred to as "evidence of impairment." No evidence of impairment was observed during the field activities with the highest PID reading in the drill cuttings recorded at 0.0 ppm.

Well MW-1R and MW-2R were then reinstalled down the open holes that were drilled for decommissioning. Well MW-1R was installed in the location of former well MW-1 and MW-2R was installed in the location of former well MW-2. Each well was completed with 5-ft of 2-in diameter, 0.010-inch slot PVC well screen with the appropriate length of solid 2-inch diameter PVC riser to the surface. The annulus of each well was sand packed with quartz sand to a nominal depth of 1-2-ft above the screened section followed by a bentonite seal to just below the surface. The wells were then completed at the surface with a flush-mounted protective casing. A summary of the reinstalled monitoring well details are presented below.

Well ID	Installation Location	Depth of Well (ft bgs)	Screen Length (ft)	Screen Interval (ft bgs)
MW-1R	Former MW-1	9.0	5.0	4.0-9.0
MW-2R	Former MW-2	10.3	5.0	5.3-10.3

Well decommissioning logs are included as Attachment 2 and well construction logs are included as Attachment 3. Refer to Figure 1 for the general location of the reinstalled monitoring wells.

MONITORING WELL DEVELOPMENT AND SAMPLING

On January 31, 2022, LaBella mobilized to the Site to develop wells MW-1R, MW-2R and MW-3. Each of the wells were developed until the well was purged dry using HDPE bailers or tubing. Wells were allowed to equilibrate for at least one week (i.e., seven days) prior to sampling.

LaBella returned to the Site from February 11 to February 16, 2022 to collect groundwater samples from wells MW-1R, MW-2R and MW-3. Groundwater samples were submitted for analysis of the following parameters:

- PFAS via United States Environmental Protection Agency (USEPA) method 537.1
- 1,4-dioxane via USEPA Method 8270 SIM

On February 11, 2022, a peristaltic pump with dedicated silicone and HDPE tubing was used to collect groundwater samples for analysis of PFAS. Groundwater samples were collected as grab samples; therefore, groundwater quality parameters were not collected during sampling. The groundwater samples were collected in general accordance with the NYSDEC guidance document titled *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)* dated June 2021. Precautions listed in the NYSDEC PFAS guidance document were taken during sampling to minimize potential cross contamination including but not limited to using regular ice to preserve samples, wearing nitrile gloves for sampling, wearing clothing that was laundered multiple times, avoiding waterproofing materials (i.e., PFTE, Gore-Tex®, etc.) on clothing and PPE, and using only approved sampling supplies and containers.

Grab samples for 1,4-Dioxane were collected on February 14, 15 and 16, 2022 using dedicated HDPE bailers.

Quality Assurance and Quality Control (QA/QC) samples including a blind duplicate, MS/MSD, and equipment rinsate blank were also collected. The blind duplicate and MS/MSD samples were collected from monitoring well MW-3. The equipment rinsate blank was collected by pouring PFAS-free water provided by Pace Analytical laboratory through a new PFAS-free bailer and pumping it through new HDPE and silicone tubing.

Samples were placed directly into laboratory-supplied containers, preserved as appropriate on ice in a cooler, and submitted to Pace Analytical (formerly Con-Test) in East Longmeadow, Massachusetts, which is a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory, under chain-of-custody protocol.

Well development logs are included as Attachment 4 and field logs for groundwater sampling are included as Attachment 5.

SAMPLE RESULTS

The table below shows the locations of samples collected and the corresponding sample analyses for each location.

Location ID	PFAS	1,4-Dioxane
MW-1R	X	X
MW-2R	X	X
MW-3(1)	X	X
DUP-2.11.22 (Blind Duplicate of MW-3)	X	
DUP-2.14.22 (Blind Duplicate of MW-3)		X
EB-2.11.22 (Equipment Blank)	X	

Note:

1. Blind duplicate samples and MS/MSD were collected from well MW-3 at the same date and time of the parent sample.

Laboratory analytical results for the groundwater samples have been compared to the following standards:

- **TOGS 1.1.1** - NYSDEC document titled "Division of Water Technical and Operational Guidance Series 1.1.1; Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" dated June 1998 as amended with April 2000 and June 2004 addendum tables.

- **PFAS guidance values** - PFAS samples were compared to the NYSDEC June 2021 *Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS)* guidance values for groundwater.

The following summarizes the sample results:

1,4-Dioxane:
1,4-Dioxane was detected in each of the three (3) samples, as well as the blind duplicate sample. There is currently (as of the date of this letter) no regulatory groundwater standard for 1,4-dioxane in groundwater.

PFAS:
PFAS were detected in each of the three (3) groundwater samples collected as well as in the blind duplicate. PFAS were not detected in the equipment blank (EB-2.11.22). Per the NYSDEC PFAS Guidance, a guideline value of 10 parts per trillion (ppt) was established for PFOA and PFOS. There are currently no other regulatory standards for other individual PFAS. PFOA was detected in MW-3 at a concentration of 12 ppt slightly exceeding the guidance value. All other concentrations of PFOA and PFOS detected in groundwater remained below NYSDEC guidance values.

Refer to Tables 1A and 1B for a summary of laboratory analytical data. The full laboratory analytical report is included as Attachment 1.

A copy of all information collected during this assessment, including maps, notes, analytical data and other material will be kept on file at the offices of LaBella Associates, D.P.C. This information is available upon the request.

If you have any questions, please feel free to reach out to me directly at 585-770-2552.

Respectfully submitted,

LaBella Associates

Alexander Brett, EIT
Project Manager

Attachments
Table 1A – Groundwater Sample Results – 1,4-Dioxane
Table 1B – Groundwater Sample Results – PFAS
Figure 1 – Monitoring Well Locations
Attachment 1 – Laboratory Reports
Attachment 2 – Well Decommissioning Logs
Attachment 3 – Well Construction Logs
Attachment 4 – Well Development Logs

Attachment 5 – Groundwater Sampling Logs

J:\NYSDEC\2161937 - Investigation & Remediation\059 - Former Rochester Metal Etching Co. CallOut ID 140007\Summary Letter.docx

TABLES

Table 1A

Groundwater Analytical Results - 1,4-Dioxane

Former Rochester Metal Etching Company

100 Lake Avenue

Rochester, New York

NYSDEC Callout ID #140007

LaBella Project Number 2161937.059

Sample ID	NYSDEC TOGS 1.1.1 Ambient Groundwater Quality Standards and Guidance Values	MW-1R	MW-2R	MW-3	DUP-2.14.22 (MW-3)
Sample Date		2/16/2022	2/15/2022	2/14/2022	2/14/2022
Screened Interval (ft bgs)		4.0-9.0	5.3-10.3	8.0-13.0	8.0-13.0
Extractable Organics					
1,4-Dioxane	NL	0.22	0.36	0.17 J	0.14 J

Notes:

All values are displayed in micrograms per liter (µg/L) or parts per billion (ppb)

1,4-Dioxane was analyzed by USEPA Method 8270 SIM

J - Indicates the result was detected but below the reporting limit; therefore, the result is considered estimated.

NL - Indicates no applicable regulatory standard available at the time of this report

Table 1B
Groundwater Analytical Results - PFAS
Former Rochester Metal Etching Company
100 Lake Avenue
Rochester, New York
NYSDEC Callout ID #140007
LaBella Project Number 2161937.059

Sample ID	NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances	MW-1R	MW-2R	MW-3	DUP-2.14.22 (MW-3)	EB-2.11.22
Sample Date		2/11/2022	2/11/2022	2/11/2022	2/11/2022	2/11/2022
Screened Interval (ft bgs)		4.0-9.0	5.3-10.3	8.0-13.0	8.0-13.0	NA
PFAS						
Perfluorobutanoic acid (PFBA)	NL	<0.70	27	10	10	<0.70
Perfluorobutanesulfonic acid (PFBS)	NL	0.96 J	<0.27	1.8 J	1.8 J	<0.27
Perfluoropentanoic acid (PFPeA)	NL	8.2	<0.37	5.8	5	<0.37
Perfluorohexanoic acid (PFHxA)	NL	6.1	4.8	4.9	4.1	<0.36
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NL	<0.58	<0.57	<0.63	<0.61	<0.58
Perfluorodecanoic acid (PFDA)	NL	0.65 J	<0.46	10 A	3.4	<0.46
Perfluorododecanoic acid (PFDoA)	NL	<0.42	<0.42	<0.46	<0.45	<0.42
Perfluoroheptanesulfonic acid (PFHpS)	NL	<0.89	<0.89	<0.97	<0.95	<0.89
N-EtFOSAA	NL	<0.60	<0.59	<0.65	<0.64	<0.60
N-MeFOSAA	NL	<0.72	<0.72	<0.78	<0.77	<0.72
Perfluorotetradecanoic acid (PFTA)	NL	<0.35	<0.35	<0.38	<0.37	<0.35
Perfluorotridecanoic acid (PFTrDA)	NL	<0.26	<0.26	<0.29	<0.28	<0.26
Perfluorodecanesulfonic acid (PFDS)	NL	<0.31	<0.31	<0.34	<0.33	<0.31
Perfluorooctanesulfonamide (FOSA)	NL	<0.40	<0.40	<0.43	<0.42	<0.40
Perfluoro-1-hexanesulfonamide (FHxSA)	NL	<0.29	<0.29	<0.32	<0.31	<0.29
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NL	<0.35	<0.34	7.6 A	1.5 J	<0.35
Perfluoroundecanoic acid (PFUnA)	NL	<0.35	<0.35	<0.38	<0.37	<0.35
Perfluorooctanoic acid (PFOA)	10	3.1	3	12 A	8.1	<0.64
Perfluorooctanesulfonic acid (PFOS)	10	2.4	1.2 J	<0.62	3.8	<0.57
Perfluorononanoic acid (PFNA)	NL	1 J	0.48 J	2.1 B	0.99	<0.33

Notes:

All values are displayed in nanograms per liter (ng/L) or parts per trillion (ppt)

PFAS were analyzed by USEPA Method 537.1

"<" - Indicates the compound was not detected above the laboratory method detection limit (MDL) with the MDL shown

J - Indicates the result was detected but below the reporting limit; therefore, the result is considered estimated.

NL - Indicates no applicable regulatory standard available at the time of this report

A - Indicates that the matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fotifited blank recovery. Possibility of matrix effects that lead to low bias or non-homogenous sample aliquot cannot be eliminated

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

RED values indicate the compound exceeds the NYSDEC Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) guideline concentration.

NA - Indicates not applicable

FIGURE

NOTES;
1. AERIAL IMAGERY WAS PROVIDED BY EAGLEVIEW CONNECTEXPLORER AND MAY NOT REPRESENT CURRENT SITE FEATURES.
2. WELL LOCATIONS WERE GEOREFERENCED FROM FIGURE 1-2 OF THE SITE REMEDIAL INVESTIGATION/FEASIBILITY STUDY DATED SEPTEMBER 2007 AND SHOULD BE CONSIDERED APPROXIMATE.
3. WELLS MW-1R AND MW-2R WERE REINSTALLED IN THE SAME LOCATIONS WHERE MW-1 AND MW-2 WERE DECOMMISSIONED.

LaBella
Powered by partnership.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC)

FORMER ROCHESTER METAL ETCHING COMPANY

N

0 20 Feet

1 inch = 20 feet

LaBella Project No: 2161937

Date: 4/4/2022

11" x 17"

MONITORING WELL LOCATIONS

FIGURE 1

Creator: AGB Reviewer: AGB

Path: J:\NYSDEC\2161937 - Investigation & Remediation\059 - Former Rochester Metal Etching Co. CallOut ID 140007\Drawings\Well Locations_georeference.mxd

ATTACHMENT 1

Laboratory Reports

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

February 23, 2022

Charles Gregory
NYDEC_Labella Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020

Project Location: Rochester, NY
Client Job Number:
Project Number: 828100
Laboratory Work Order Number: 22B1039

Enclosed are results of analyses for samples as received by the laboratory on February 17, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Buttrick
Project Manager

Table of Contents

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A Pace Analytical® Laboratory

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NYDEC_Labella Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020
ATTN: Charles Gregory

REPORT DATE: 2/23/2022

PURCHASE ORDER NUMBER: 142993

PROJECT NUMBER: 828100

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22B1039

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

PROJECT LOCATION: Rochester, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-3-2.14.22	22B1039-01	Ground Water		SW-846 8270D-E	
MW-2-2.15.22	22B1039-02	Ground Water		SW-846 8270D-E	
MW-1-2.16.22	22B1039-03	Ground Water		SW-846 8270D-E	
DUP -2-2.14.22	22B1039-04	Ground Water		SW-846 8270D-E	

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CASE NARRATIVE SUMMARY

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

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.

Lisa A. Worthington
Technical Representative

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B1039

Date Received: 2/17/2022

Field Sample #: MW-3-2.14.22

Sample ID: 22B1039-01 | Start Date/Time: 2/14/2022 6:00:00AM

Sample Matrix: Ground Water | Stop Date/Time: 2/14/2022 4:00:00PM

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.17	0.22	0.036	µg/L	1	J	SW-846 8270D-E	2/17/22	2/21/22 17:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	26.1	15-110		2/21/22 17:33

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B1039

Date Received: 2/17/2022

Field Sample #: MW-2-2.15.22 | Sampled: 2/15/2022 16:45

Sample ID: 22B1039-02

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.36	0.20	0.033	µg/L	1		SW-846 8270D-E	2/17/22	2/21/22 17:53	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	22.7	15-110			2/21/22 17:53

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B1039

Date Received: 2/17/2022

Field Sample #: MW-1-2.16.22 | Sampled: 2/16/2022 18:00

Sample ID: 22B1039-03

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.22	0.20	0.033	µg/L	1		SW-846 8270D-E	2/17/22	2/21/22 18:13	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	22.8	15-110		2/21/22 18:13

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B1039

Date Received: 2/17/2022

Field Sample #: DUP -2-2.14.22 | Sampled: 2/14/2022 18:00

Sample ID: 22B1039-04

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.14	0.21	0.034	µg/L	1	J	SW-846 8270D-E	2/17/22	2/21/22 17:13	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	24.1	15-110		2/21/22 17:13

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Sample Extraction Data

Prep Method: SW-846 3510C **Analytical Method: SW-846 8270D-E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22B1039-01 [MW-3-2.14.22]	B301465	910	1.00	02/17/22
22B1039-02 [MW-2-2.15.22]	B301465	980	1.00	02/17/22
22B1039-03 [MW-1-2.16.22]	B301465	980	1.00	02/17/22
22B1039-04 [DUP -2-2.14.22]	B301465	970	1.00	02/17/22

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QUALITY CONTROL

1,4-Dioxane by isotope dilution GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B301465 - SW-846 3510C										
Blank (B301465-BLK1)				Prepared: 02/17/22 Analyzed: 02/21/22						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	*2.36*		µg/L	10.0		23.6	15-110			
LCS (B301465-BS1)				Prepared: 02/17/22 Analyzed: 02/21/22						
1,4-Dioxane	10.3	0.20	µg/L	10.0		103	40-140			
Surrogate: 1,4-Dioxane-d8	*2.66*		µg/L	10.0		26.6	15-110			
LCS Dup (B301465-BSD1)				Prepared: 02/17/22 Analyzed: 02/21/22						
1,4-Dioxane	11.2	0.20	µg/L	10.0		112	40-140	8.40	30	
Surrogate: 1,4-Dioxane-d8	*2.47*		µg/L	10.0		24.7	15-110			

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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).

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D-E in Water	
1,4-Dioxane	NY

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

2251039

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD (New York)

Doc # 380 Rev 1_03242017

39 Spruce St
E. Longmeadow, MA 01028

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

Company Name: NYSDEC
Address: 625 Broadway, Albany, NY 12233
Phone: 518-402-8246
Project Name: Former Rochester Metal Etching Site
Project Location: Rochester, NY
Project Number: NYSDEC Callout ID 142993
Project Manager: Charles Gregory
Pace Analytical Quote Name/Number:
Invoice Recipient: Charles Gregory (NYSDEC) - charles.gregory@dec.ny.gov
Sampled By: Alex Brett (LaBella Associates)

Requested Turnaround Time
(1-Day) 10-Day
Due Date: Standard TAT

Rush-Approval Required
1-Day 3-Day
2-Day 4-Day

Data Delivery
Format: (PDF) (EXCEL)
Other: ASP Cat B + EQuIS EDD (NY)
CLP Like Data Pkg Required:
Email To: charles.gregory@dec.ny.gov and abrett@LaBellaPC.com

Analysis: 1,4-Dioxane - 8270 SIM | # of Containers: 11 | 2 Preservation Code: None | 3 Container Code: Glass

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	1Matrix Code	Conc Code
	MW-3 - 2.14.22*	2/14/22	2/14/22 1600		✓	GW	U
	MW-2 - 2.15.22	2/15/22	2/15/22 1645		✓	GW	U
	MW-1 - 2.16.22	2/16/22	2/16/22 1800		✓	GW	U
	DUP - 2.14.22	2/14/22	2/14/22		✓	GW	U

Dissolved Metals Samples
Field Filtered
Lab to Filter

Orthophosphate Samples
Field Filtered
Lab to Filter

1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

Comments:
* Perform MS/MSD on sample MW-3-2.14.22 → Extra sample volume/bottles included
• Results sent to: Company name: NYSDEC Charles Gregory email charles.gregory@dec.ny.gov & LaBella Associates Alex Brett (585-709-0761) abrett@LaBellaPC.com

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

	Date/Time:
Relinquished by: (signature) [signature]	2/16/22 2000
Received by: (signature) [signature] 4	2/17/22 958
Relinquished by: (signature)	
Received by: (signature)	
Relinquished by: (signature)	
Received by: (signature)	

Program & Regulatory Information
AWQ STDS
NYC Sewer Discharge
Part 360 GW (Landfill)
NY Restricted Use
NY Unrestricted Use
NY Part 375
NY TOGS
NY CP-51
Other:

Project Entity
(Government) Federal City
Municipality 21 J Brownfield
MWRA School MBTA
WRTA

Deliverables
X Enhanced Data Package
X NYSDEC EQuIS EDD
EQuIS (Standard) EDD
NY Regulatory EDD
NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited
Other
Chromatogram
AIHA-LAP,LLC

PCB ONLY
Soxhlet
Non Soxhlet

FedEx

FedEx Tracking

289921047641

ADD NICKNAME

ON TIME

Delivered
Thursday, February 17, 2022 at 9:58 am

DELIVERED

Signed for by: R.RIOS

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

LABELLA ASSOCIATES PC

300 STATE ST STE 201
ROCHESTER, NY US 14614
585-770-2552

TO

CON-TEST ANALYTICAL LABORATORY LLC

39 SPRUCE ST
EAST LONGMEADOW, MA US 01028
413-318-0051

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Thursday, February 17, 2022		
9:58 AM	EAST LONGMEADOW, MA	Delivered
8:38 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
8:29 AM	WINDSOR LOCKS, CT	At local FedEx facility
7:36 AM	EAST GRANBY, CT	At destination sort facility
4:38 AM	MEMPHIS, TN	Departed FedEx hub
Wednesday, February 16, 2022		

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client NYSDEC

Received By CA Date 2/17/22 Time 958

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling F Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4

By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? F

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	1	1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

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

March 23, 2022

Charles Gregory
NYDEC_Labella Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020

Project Location: Rochester, NY
Client Job Number:
Project Number: 828100
Laboratory Work Order Number: 22B0973

Enclosed are results of analyses for samples as received by the laboratory on February 16, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Buttrick
Project Manager

Table of Contents

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

NYDEC_Labella Associates - Ballston Spa, NY
5 McCrea Hill Road
Ballston Spa, NY 12020
ATTN: Charles Gregory

REPORT DATE: 3/23/2022

PURCHASE ORDER NUMBER: 142993

PROJECT NUMBER: 828100

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22B0973

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

PROJECT LOCATION: Rochester, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-3-2.11.22	22B0973-01	Ground Water		SOP-454 PFAS	
MW-2-2.11.22	22B0973-02	Ground Water		SOP-454 PFAS	
MW-1-2.11.22	22B0973-03	Ground Water		SOP-454 PFAS	
DUP-2.11.22	22B0973-04	Ground Water		SOP-454 PFAS	
EB-2.11.22	22B0973-05	Ground Water		SOP-454 PFAS	

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CASE NARRATIVE SUMMARY

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

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

SOP-454 PFAS

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:

6:2 Fluorotelomersulfonic acid (6:2
22B0973-01[MW-3-2.11.22], B301972-MS1, B301972-MSD1

Perfluorodecanoic acid (PFDA)
22B0973-01[MW-3-2.11.22], B301972-MS1, B301972-MSD1

Perfluorooctanoic acid (PFOA)
22B0973-01[MW-3-2.11.22], B301972-MS1, B301972-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:

Perfluorononanoic acid (PFNA)
22B0973-01[MW-3-2.11.22], B301972-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:

M2-6:2FTS
22B0973-03[MW-1-2.11.22]

M2-8:2FTS
22B0973-03[MW-1-2.11.22]

M8PFOS
22B0973-05[EB-2.11.22]

M9PFNA
22B0973-05[EB-2.11.22]

PF-18

Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:

M2-6:2FTS
B301972-MS1, B301972-MSD1

M9PFNA
22B0973-01[MW-3-2.11.22], B301972-MS1, B301972-MSD1

MPFBA
22B0973-02RE1[MW-2-2.11.22]

PF-20

Sample extracted at a dilution. Elevated reporting limits due to adjusted sample volume during preparation.

Analyte & Samples(s) Qualified:

22B0973-02RE1[MW-2-2.11.22], 22B0973-04RE1[DUP-2.11.22]

PF-21

Extracted Internal Standard was outside of control limits in original analysis. Re-extraction/re-analysis outside of holding time resulted in conforming data. Both results reported.

Analyte & Samples(s) Qualified:

22B0973-02RE1[MW-2-2.11.22], 22B0973-04RE1[DUP-2.11.22]

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S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

d3-NMeFOSAA
22B0973-02[MW-2-2.11.22]

d5-NEtFOSAA
22B0973-02[MW-2-2.11.22]

M2-4:2FTS
B303622-BLK1

M2-6:2FTS
22B0973-02[MW-2-2.11.22], B303622-BLK1, S069541-CCV3

M2-8:2FTS
22B0973-02RE1[MW-2-2.11.22]

M2PFTA
22B0973-02[MW-2-2.11.22], B303622-BLK1

M3HFPO-DA
22B0973-02RE1[MW-2-2.11.22]

M3PFHxS
B303622-BLK1

M4PFHpA
B303622-BLK1

M5PFPeA
22B0973-02[MW-2-2.11.22]

M6PFDA
B301972-BS1, B303622-BLK1

M7PFUnA
22B0973-02[MW-2-2.11.22]

M8FOSA
22B0973-02[MW-2-2.11.22], B303622-BLK1

M8PFOA
B301972-BS1, B303622-BLK1, S069541-CCV3

M8PFOS
22B0973-04[DUP-2.11.22], B301972-MS1, B303622-BLK1, S069362-CCV4

M9PFNA
22B0973-04[DUP-2.11.22], B301972-BS1, B303622-BLK1

MPFBA
22B0973-02[MW-2-2.11.22]

MPFDoA
22B0973-02[MW-2-2.11.22], B303622-BLK1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Perfluorodecanesulfonic acid (PFD
S069362-CCV3

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.

Lisa A. Worthington
Technical Representative

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

Project Location: Rochester, NY | Sample Description: | Work Order: 22B0973

Date Received: 2/16/2022

Field Sample #: MW-3-2.11.22 | Sampled: 2/11/2022 10:00

Sample ID: 22B0973-01

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)	10	2.1	0.77	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorobutanesulfonic acid (PFBS)	1.8	2.1	0.29	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluoropentanoic acid (PFPeA)	5.8	2.1	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorohexanoic acid (PFHxA)	4.9	2.1	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.1	0.63	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorodecanoic acid (PFDA)	10	2.1	0.51	ng/L	1	MS-07A	SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.1	0.46	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.1	0.97	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
N-EtFOSAA	ND	2.1	0.65	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
N-MeFOSAA	ND	2.1	0.78	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.1	0.38	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	2.1	0.29	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	2.1	0.34	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorooctanesulfonamide (FOSA)	ND	2.1	0.43	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.1	0.32	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	7.6	2.1	0.38	ng/L	1	MS-07A	SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.1	0.38	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorooctanoic acid (PFOA)	12	2.1	0.70	ng/L	1	MS-07A	SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.1	0.62	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH
Perfluorononanoic acid (PFNA)	2.1	2.1	0.36	ng/L	1	MS-22	SOP-454 PFAS	3/1/22	3/18/22 8:21	BLH

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

Project Location: Rochester, NY | Sample Description: | Work Order: 22B0973

Date Received: 2/16/2022

Field Sample #: MW-2-2.11.22 | Sampled: 2/11/2022 12:00

Sample ID: 22B0973-02

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)	27	1.9	0.70	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorobutanoic acid (PFBA)	12	4.0	1.5	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	4.0	0.57	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluoropentanoic acid (PFPeA)	ND	4.0	0.80	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorohexanoic acid (PFHxA)	4.8	1.9	0.36	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorohexanoic acid (PFHxA)	ND	4.0	0.78	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.57	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.0	1.2	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.46	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorodecanoic acid (PFDA)	ND	4.0	0.99	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.42	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorododecanoic acid (PFDoA)	ND	4.0	0.89	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.89	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	4.0	1.9	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
N-EtFOSAA	ND	1.9	0.59	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
N-EtFOSAA	ND	4.0	1.3	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
N-MeFOSAA	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
N-MeFOSAA	ND	4.0	1.5	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorotetradecanoic acid (PFTA)	ND	4.0	0.74	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	4.0	0.56	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	4.0	0.66	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorooctanesulfonamide (FOSA)	ND	4.0	0.85	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.0	0.63	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.34	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	1.8	4.0	0.74	ng/L	1	J	SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluoroundecanoic acid (PFUnA)	ND	4.0	0.75	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorooctanoic acid (PFOA)	3.0	1.9	0.64	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorooctanoic acid (PFOA)	2.6	4.0	1.4	ng/L	1	J	SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorooctanesulfonic acid (PFOS)	1.2	1.9	0.57	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	4.0	1.2	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH
Perfluorononanoic acid (PFNA)	0.48	1.9	0.33	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 10:52	BLH
Perfluorononanoic acid (PFNA)	ND	4.0	0.70	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 2:59	BLH

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

Project Location: Rochester, NY | Sample Description: | Work Order: 22B0973

Date Received: 2/16/2022

Field Sample #: MW-1-2.11.22 | Sampled: 2/11/2022 14:00

Sample ID: 22B0973-03

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)	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorobutanesulfonic acid (PFBS)	0.96	1.9	0.27	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluoropentanoic acid (PFPeA)	8.2	1.9	0.37	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorohexanoic acid (PFHxA)	6.1	1.9	0.36	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorodecanoic acid (PFDA)	0.65	1.9	0.46	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.42	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.89	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
N-EtFOSAA	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
N-MeFOSAA	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorooctanoic acid (PFOA)	3.1	1.9	0.64	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorooctanesulfonic acid (PFOS)	2.4	1.9	0.57	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH
Perfluorononanoic acid (PFNA)	1.0	1.9	0.33	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 9:11	BLH

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B0973

Date Received: 2/16/2022

Field Sample #: DUP-2.11.22 | Sampled: 2/11/2022 00:00

Sample ID: 22B0973-04

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)	10	2.0	0.75	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorobutanoic acid (PFBA)	10	4.1	1.5	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorobutanesulfonic acid (PFBS)	1.8	2.0	0.28	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorobutanesulfonic acid (PFBS)	2.1	4.1	0.58	ng/L	1	J	SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluoropentanoic acid (PFPeA)	5.4	4.1	0.81	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluoropentanoic acid (PFPeA)	5.0	2.0	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorohexanoic acid (PFHxA)	4.3	4.1	0.79	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorohexanoic acid (PFHxA)	4.1	2.0	0.39	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.1	1.2	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	0.61	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorodecanoic acid (PFDA)	3.4	2.0	0.49	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorodecanoic acid (PFDA)	1.1	4.1	1.0	ng/L	1	J	SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	4.1	0.91	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.45	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	0.95	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
N-EtFOSAA	ND	2.0	0.64	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
N-EtFOSAA	ND	4.1	1.3	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
N-MeFOSAA	ND	2.0	0.77	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
N-MeFOSAA	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	4.1	0.75	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorotetradecanoic acid (PFTA)	ND	2.0	0.37	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	4.1	0.57	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	0.28	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	0.33	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	4.1	0.67	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	4.1	0.86	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorooctanesulfonamide (FOSA)	ND	2.0	0.42	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	0.31	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.1	0.64	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.1	0.75	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	1.5	2.0	0.37	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluoroundecanoic acid (PFUnA)	ND	4.1	0.76	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.37	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorooctanoic acid (PFOA)	7.7	4.1	1.4	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorooctanoic acid (PFOA)	8.1	2.0	0.69	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorooctanesulfonic acid (PFOS)	3.4	4.1	1.2	ng/L	1	J	SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorooctanesulfonic acid (PFOS)	3.8	2.0	0.61	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH
Perfluorononanoic acid (PFNA)	ND	4.1	0.71	ng/L	1		SOP-454 PFAS	3/21/22	3/23/22 3:06	BLH
Perfluorononanoic acid (PFNA)	0.99	2.0	0.35	ng/L	1	J	SOP-454 PFAS	3/1/22	3/18/22 8:28	BLH

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Project Location: Rochester, NY | Sample Description: | Work Order: 22B0973

Date Received: 2/16/2022

Field Sample #: EB-2.11.22 | Sampled: 2/11/2022 15:30

Sample ID: 22B0973-05

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	1.9	0.70	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.27	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.37	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.36	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.58	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.46	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.42	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.89	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
N-EtFOSAA	ND	1.9	0.60	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
N-MeFOSAA	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.26	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.31	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.40	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.29	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.35	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.64	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.57	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.33	ng/L	1		SOP-454 PFAS	3/1/22	3/18/22 8:35	BLH

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Sample Extraction Data

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22B0973-01 [MW-3-2.11.22]	B301972	243	1.00	03/01/22
22B0973-02 [MW-2-2.11.22]	B301972	266	1.00	03/01/22
22B0973-03 [MW-1-2.11.22]	B301972	265	1.00	03/01/22
22B0973-04 [DUP-2.11.22]	B301972	248	1.00	03/01/22
22B0973-05 [EB-2.11.22]	B301972	265	1.00	03/01/22

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22B0973-02RE1 [MW-2-2.11.22]	B303622	124	1.00	03/21/22
22B0973-04RE1 [DUP-2.11.22]	B303622	122	1.00	03/21/22

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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 B301972 - SOP 454-PFAAS										
Blank (B301972-BLK1)				Prepared: 03/01/22 Analyzed: 03/18/22						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
N-EtFOSAA	ND	1.9	ng/L							
N-MeFOSAA	ND	1.9	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
LCS (B301972-BS1)				Prepared: 03/01/22 Analyzed: 03/18/22						
Perfluorobutanoic acid (PFBA)	8.95	1.7	ng/L	8.75		102	73-129			
Perfluorobutanesulfonic acid (PFBS)	7.79	1.7	ng/L	7.74		101	72-130			
Perfluoropentanoic acid (PFPeA)	8.74	1.7	ng/L	8.75		99.9	72-129			
Perfluorohexanoic acid (PFHxA)	8.69	1.7	ng/L	8.75		99.3	72-129			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.78	1.7	ng/L	8.40		116	67-138			
Perfluorodecanoic acid (PFDA)	8.43	1.7	ng/L	8.75		96.4	71-129			
Perfluorododecanoic acid (PFDoA)	8.30	1.7	ng/L	8.75		94.8	72-134			
Perfluoroheptanesulfonic acid (PFHpS)	8.58	1.7	ng/L	8.36		103	69-134			
N-EtFOSAA	8.97	1.7	ng/L	8.75		103	61-135			
N-MeFOSAA	10.8	1.7	ng/L	8.75		123	65-136			
Perfluorotetradecanoic acid (PFTA)	7.25	1.7	ng/L	8.75		82.8	71-132			
Perfluorotridecanoic acid (PFTrDA)	8.46	1.7	ng/L	8.75		96.6	65-144			
Perfluorodecanesulfonic acid (PFDS)	8.83	1.7	ng/L	8.44		105	53-142			
Perfluorooctanesulfonamide (FOSA)	8.52	1.7	ng/L	8.75		97.4	67-137			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.93	1.7	ng/L	8.75		102	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.46	1.7	ng/L	8.31		102	64-140			
Perfluoroundecanoic acid (PFUnA)	9.65	1.7	ng/L	8.75		110	69-133			
Perfluorooctanoic acid (PFOA)	7.88	1.7	ng/L	8.75		90.1	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.94	1.7	ng/L	8.09		98.1	65-140			
Perfluorononanoic acid (PFNA)	7.54	1.7	ng/L	8.75		86.2	69-130			

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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
Batch B301972 - SOP 454-PFAAS											
Matrix Spike (B301972-MS1)	**Source: 22B0973-01**			Prepared: 03/01/22 Analyzed: 03/18/22							
Perfluorobutanoic acid (PFBA)	20.8	2.1	ng/L	10.3	10.3	102		73-129			
Perfluorobutanesulfonic acid (PFBS)	10.6	2.1	ng/L	9.11	1.84	96.3		72-130			
Perfluoropentanoic acid (PFPeA)	16.1	2.1	ng/L	10.3	5.79	99.9		72-129			
Perfluorohexanoic acid (PFHxA)	13.8	2.1	ng/L	10.3	4.93	86.1		72-129			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.76	2.1	ng/L	9.89	ND	98.8		67-138			
Perfluorodecanoic acid (PFDA)	11.5	2.1	ng/L	10.3	10.3	**10.9**	*	71-129			MS-07A
Perfluorododecanoic acid (PFDoA)	10.0	2.1	ng/L	10.3	ND	97.5		72-134			
Perfluoroheptanesulfonic acid (PFHpS)	8.89	2.1	ng/L	9.83	ND	90.4		69-134			
N-EtFOSAA	10.5	2.1	ng/L	10.3	ND	102		61-135			
N-MeFOSAA	12.6	2.1	ng/L	10.3	ND	122		65-136			
Perfluorotetradecanoic acid (PFTA)	8.37	2.1	ng/L	10.3	ND	81.3		71-132			
Perfluorotridecanoic acid (PFTrDA)	9.64	2.1	ng/L	10.3	ND	93.6		65-144			
Perfluorodecanesulfonic acid (PFDS)	8.92	2.1	ng/L	9.94	ND	89.8		53-142			
Perfluorooctanesulfonamide (FOSA)	8.65	2.1	ng/L	10.3	ND	84.0		67-137			
Perfluoro-1-hexanesulfonamide (FHxSA)	11.2	2.1	ng/L	10.3	ND	109		50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.0	2.1	ng/L	9.78	7.56	**25.0**	*	64-140			MS-07A
Perfluoroundecanoic acid (PFUnA)	10.6	2.1	ng/L	10.3	ND	102		69-133			
Perfluorooctanoic acid (PFOA)	17.1	2.1	ng/L	10.3	12.1	**47.8**	*	71-133			MS-07A
Perfluorooctanesulfonic acid (PFOS)	11.6	2.1	ng/L	9.53	ND	121		65-140			
Perfluorononanoic acid (PFNA)	10.9	2.1	ng/L	10.3	2.08	85.5		69-130			
Matrix Spike Dup (B301972-MSD1)	**Source: 22B0973-01**			Prepared: 03/01/22 Analyzed: 03/18/22							
Perfluorobutanoic acid (PFBA)	20.8	2.0	ng/L	10.0	10.3	106		73-129	0.448	30	
Perfluorobutanesulfonic acid (PFBS)	10.8	2.0	ng/L	8.85	1.84	101		72-130	1.80	30	
Perfluoropentanoic acid (PFPeA)	15.0	2.0	ng/L	10.0	5.79	92.1		72-129	6.93	30	
Perfluorohexanoic acid (PFHxA)	14.0	2.0	ng/L	10.0	4.93	91.2		72-129	1.79	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	9.29	2.0	ng/L	9.60	ND	96.7		67-138	4.99	30	
Perfluorodecanoic acid (PFDA)	10.6	2.0	ng/L	10.0	10.3	**2.54**	*	71-129	7.88	30	MS-07A
Perfluorododecanoic acid (PFDoA)	9.97	2.0	ng/L	10.0	ND	99.7		72-134	0.710	30	
Perfluoroheptanesulfonic acid (PFHpS)	10.3	2.0	ng/L	9.55	ND	108		69-134	14.4	30	
N-EtFOSAA	10.9	2.0	ng/L	10.0	ND	109		61-135	3.17	30	
N-MeFOSAA	11.9	2.0	ng/L	10.0	ND	119		65-136	5.46	30	
Perfluorotetradecanoic acid (PFTA)	8.51	2.0	ng/L	10.0	ND	85.1		71-132	1.66	30	
Perfluorotridecanoic acid (PFTrDA)	9.48	2.0	ng/L	10.0	ND	94.8		65-144	1.59	30	
Perfluorodecanesulfonic acid (PFDS)	10.0	2.0	ng/L	9.65	ND	104		53-142	11.9	30	
Perfluorooctanesulfonamide (FOSA)	9.29	2.0	ng/L	10.0	ND	92.9		67-137	7.16	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	10.2	2.0	ng/L	10.0	ND	102		50-150	9.94	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.0	2.0	ng/L	9.50	7.56	**25.8**	*	64-140	0.0297	30	MS-07A
Perfluoroundecanoic acid (PFUnA)	10.4	2.0	ng/L	10.0	ND	104		69-133	1.31	30	
Perfluorooctanoic acid (PFOA)	16.9	2.0	ng/L	10.0	12.1	**47.9**	*	71-133	0.778	30	MS-07A
Perfluorooctanesulfonic acid (PFOS)	12.3	2.0	ng/L	9.25	ND	133		65-140	6.47	30	
Perfluorononanoic acid (PFNA)	8.81	2.0	ng/L	10.0	2.08	**67.3**	*	69-130	21.0	30	MS-22

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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 B303622 - SOP 454-PFAAS										
Blank (B303622-BLK1)				Prepared: 03/21/22 Analyzed: 03/23/22						
Perfluorobutanoic acid (PFBA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
N-EtFOSAA	ND	1.8	ng/L							
N-MeFOSAA	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.8	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L							
LCS (B303622-BS1)				Prepared: 03/21/22 Analyzed: 03/23/22						
Perfluorobutanoic acid (PFBA)	7.94	1.7	ng/L	8.75		90.7	73-129			
Perfluorobutanesulfonic acid (PFBS)	6.89	1.7	ng/L	7.74		89.0	72-130			
Perfluoropentanoic acid (PFPeA)	7.79	1.7	ng/L	8.75		89.0	72-129			
Perfluorohexanoic acid (PFHxA)	7.81	1.7	ng/L	8.75		89.3	72-129			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	7.29	1.7	ng/L	8.40		86.8	67-138			
Perfluorodecanoic acid (PFDA)	8.27	1.7	ng/L	8.75		94.5	71-129			
Perfluorododecanoic acid (PFDoA)	7.53	1.7	ng/L	8.75		86.1	72-134			
Perfluoroheptanesulfonic acid (PFHpS)	6.96	1.7	ng/L	8.36		83.3	69-134			
N-EtFOSAA	7.67	1.7	ng/L	8.75		87.6	61-135			
N-MeFOSAA	7.79	1.7	ng/L	8.75		89.0	65-136			
Perfluorotetradecanoic acid (PFTA)	7.30	1.7	ng/L	8.75		83.5	71-132			
Perfluorotridecanoic acid (PFTrDA)	7.73	1.7	ng/L	8.75		88.4	65-144			
Perfluorodecanesulfonic acid (PFDS)	5.67	1.7	ng/L	8.44		67.2	53-142			
Perfluorooctanesulfonamide (FOSA)	7.05	1.7	ng/L	8.75		80.6	67-137			
Perfluoro-1-hexanesulfonamide (FHxSA)	9.44	1.7	ng/L	8.75		108	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.49	1.7	ng/L	8.31		102	64-140			
Perfluoroundecanoic acid (PFUnA)	7.10	1.7	ng/L	8.75		81.1	69-133			
Perfluorooctanoic acid (PFOA)	7.96	1.7	ng/L	8.75		90.9	71-133			
Perfluorooctanesulfonic acid (PFOS)	7.37	1.7	ng/L	8.09		91.1	65-140			
Perfluorononanoic acid (PFNA)	7.64	1.7	ng/L	8.75		87.3	69-130			

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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-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	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-20	Sample extracted at a dilution. Elevated reporting limits due to adjusted sample volume during preparation.
PF-21	Extracted Internal Standard was outside of control limits in original analysis. Re-extraction/re-analysis outside of holding time resulted in conforming data. Both results reported.
S-29	Extracted Internal Standard is outside of control limits.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-3-2.11.22 (22B0973-01)			Lab File ID: 22B0973-01.d			Analyzed: 03/18/22 08:21			
M8FOSA	219089.4	4.044517	170,448.00	4.044517	129	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	149921.5	2.6118	183,600.00	2.6118	82	50 - 150	0.0000	+/-0.50	
M2PFTA	1035906	4.38655	936,080.00	4.378433	111	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	88920.43	3.850933	90,790.00	3.850917	98	50 - 150	0.0000	+/-0.50	
MPFBA	600903.6	1.108317	567,352.00	1.108317	106	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	272987.2	2.929717	242,666.00	2.929717	112	50 - 150	0.0000	+/-0.50	
M6PFDA	509727	3.851417	376,224.00	3.851417	135	50 - 150	0.0000	+/-0.50	
M3PFBS	178639	1.9945	160,179.00	1.9945	112	50 - 150	0.0000	+/-0.50	
M7PFUnA	761597.9	4.001983	612,305.00	4.001983	124	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	89961.16	3.501317	63,651.00	3.493333	141	50 - 150	0.0080	+/-0.50	
M5PFPeA	613193.2	1.80795	560,022.00	1.80795	109	50 - 150	0.0000	+/-0.50	
M5PFHxA	1050635	2.706317	967,686.00	2.706317	109	50 - 150	0.0000	+/-0.50	
M3PFHxS	108911.9	3.276217	84,902.00	3.276217	128	50 - 150	0.0000	+/-0.50	
M4PFHpA	1056700	3.243783	872,305.00	3.243783	121	50 - 150	0.0000	+/-0.50	
M8PFOA	764104.5	3.51015	556,161.00	3.51015	137	50 - 150	0.0000	+/-0.50	
M8PFOS	98430.16	3.692083	68,985.00	3.692083	143	50 - 150	0.0000	+/-0.50	
M9PFNA	585153.7	3.693117	378,914.00	3.693117	154	50 - 150	0.0000	+/-0.50	*
MPFDoA	820328	4.136817	694,328.00	4.14485	118	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	260927	4.009467	191,072.00	4.00945	137	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	250153.4	3.929883	227,876.00	3.929883	110	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-2-2.11.22 (22B0973-02)			Lab File ID: 22B0973-02.d			Analyzed: 03/18/22 10:52			
M8FOSA	11080.59	4.044517	170,448.00	4.044533	07	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	245716.6	2.52145	183,600.00	2.620017	134	50 - 150	-0.0986	+/-0.50	
M2PFTA	4704.063	4.38655	936,080.00	4.38655	01	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	129507.4	3.850933	90,790.00	3.850933	143	50 - 150	0.0000	+/-0.50	
MPFBA	91018.03	1.075083	567,352.00	1.108317	16	50 - 150	-0.0332	+/-0.50	*
M3HFPO-DA	170086.8	2.872033	242,666.00	2.929733	70	50 - 150	-0.0577	+/-0.50	
M6PFDA	200489.9	3.851417	376,224.00	3.851433	53	50 - 150	0.0000	+/-0.50	
M3PFBS	103493.8	1.911533	160,179.00	2.002783	65	50 - 150	-0.0913	+/-0.50	
M7PFUnA	123325	4.001983	612,305.00	4.002	20	50 - 150	0.0000	+/-0.50	*
M2-6:2FTS	150580.1	3.485367	63,651.00	3.501333	237	50 - 150	-0.0160	+/-0.50	*
M5PFPeA	241904.3	1.7231	560,022.00	1.80795	43	50 - 150	-0.0848	+/-0.50	*
M5PFHxA	636264.5	2.6134	967,686.00	2.706317	66	50 - 150	-0.0929	+/-0.50	
M3PFHxS	83590.57	3.250667	84,902.00	3.276217	98	50 - 150	-0.0256	+/-0.50	
M4PFHpA	641679.6	3.219533	872,305.00	3.243783	74	50 - 150	-0.0242	+/-0.50	
M8PFOA	493422.3	3.493867	556,161.00	3.510167	89	50 - 150	-0.0163	+/-0.50	
M8PFOS	44247.84	3.692083	68,985.00	3.692083	64	50 - 150	0.0000	+/-0.50	
M9PFNA	329307.3	3.693117	378,914.00	3.693117	87	50 - 150	0.0000	+/-0.50	
MPFDoA	46716.97	4.136817	694,328.00	4.14485	07	50 - 150	-0.0080	+/-0.50	*
d5-NEtFOSAA	53446.25	4.009467	191,072.00	4.009467	28	50 - 150	0.0000	+/-0.50	*
d3-NMeFOSAA	67984.18	3.929883	227,876.00	3.929883	30	50 - 150	0.0000	+/-0.50	*

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-2-2.11.22 (22B0973-02RE1)			Lab File ID: 22B0973-02RE1.d			Analyzed: 03/23/22 02:59			
M8FOSA	279385.6	4.036533	331,236.00	4.036517	84	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	185403.8	2.537883	124,820.00	2.595367	149	50 - 150	-0.0575	+/-0.50	
M2PFTA	882558.6	4.370283	989,902.00	4.370283	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	212465.2	3.842967	117,312.00	3.842967	181	50 - 150	0.0000	+/-0.50	*
MPFBA	184686.2	1.0834	553,531.00	1.108317	33	50 - 150	-0.0249	+/-0.50	*
M3HFPO-DA	107299.7	2.880217	225,130.00	2.921133	48	50 - 150	-0.0409	+/-0.50	*
M6PFDA	568523.3	3.843467	673,817.00	3.843467	84	50 - 150	0.0000	+/-0.50	
M3PFBS	111699.6	1.928117	142,236.00	1.978033	79	50 - 150	-0.0499	+/-0.50	
M7PFUnA	795971.8	3.994	784,522.00	3.993983	101	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	111544.2	3.48535	76,910.00	3.493333	145	50 - 150	-0.0080	+/-0.50	
M5PFPeA	331845.8	1.741133	482,742.00	1.791367	69	50 - 150	-0.0502	+/-0.50	
M5PFHxA	588215.8	2.629833	713,707.00	2.680533	82	50 - 150	-0.0507	+/-0.50	
M3PFHxS	81135.07	3.250667	113,219.00	3.266833	72	50 - 150	-0.0162	+/-0.50	
M4PFHpA	538219.3	3.219533	741,095.00	3.2357	73	50 - 150	-0.0162	+/-0.50	
M8PFOA	496537.3	3.493867	742,658.00	3.50185	67	50 - 150	-0.0080	+/-0.50	
M8PFOS	95382.06	3.6841	135,113.00	3.692083	71	50 - 150	-0.0080	+/-0.50	
M9PFNA	466103.2	3.685133	588,076.00	3.693117	79	50 - 150	-0.0080	+/-0.50	
MPFDoA	782763.1	4.1288	791,993.00	4.128783	99	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	241686.6	4.001467	180,249.00	4.001467	134	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	272817.4	3.921883	220,181.00	3.921883	124	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-1-2.11.22 (22B0973-03)			Lab File ID: 22B0973-03.d			Analyzed: 03/18/22 09:11			
M8FOSA	208410.6	4.044533	170,448.00	4.044517	122	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	199064.8	2.603583	183,600.00	2.6118	108	50 - 150	-0.0082	+/-0.50	
M2PFTA	809090	4.38655	936,080.00	4.378433	86	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	156851.5	3.850933	90,790.00	3.850917	173	50 - 150	0.0000	+/-0.50	*
MPFBA	420339	1.108317	567,352.00	1.108317	74	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	177789.2	2.929733	242,666.00	2.929717	73	50 - 150	0.0000	+/-0.50	
M6PFDA	469583.3	3.851433	376,224.00	3.851417	125	50 - 150	0.0000	+/-0.50	
M3PFBS	156843.1	1.986217	160,179.00	1.9945	98	50 - 150	-0.0083	+/-0.50	
M7PFUnA	639346.1	4.002	612,305.00	4.001983	104	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	110866.5	3.49335	63,651.00	3.493333	174	50 - 150	0.0000	+/-0.50	*
M5PFPeA	602282.9	1.799667	560,022.00	1.80795	108	50 - 150	-0.0083	+/-0.50	
M5PFHxA	1011962	2.696967	967,686.00	2.706317	105	50 - 150	-0.0093	+/-0.50	
M3PFHxS	98151.73	3.276217	84,902.00	3.276217	116	50 - 150	0.0000	+/-0.50	
M4PFHpA	992272.1	3.243783	872,305.00	3.243783	114	50 - 150	0.0000	+/-0.50	
M8PFOA	706033.5	3.510167	556,161.00	3.51015	127	50 - 150	0.0000	+/-0.50	
M8PFOS	81471.88	3.692083	68,985.00	3.692083	118	50 - 150	0.0000	+/-0.50	
M9PFNA	498473.1	3.693117	378,914.00	3.693117	132	50 - 150	0.0000	+/-0.50	
MPFDoA	623495.7	4.136817	694,328.00	4.14485	90	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	198472.6	4.009467	191,072.00	4.00945	104	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	183450.3	3.929883	227,876.00	3.929883	81	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DUP-2.11.22 (22B0973-04)			Lab File ID: 22B0973-04.d			Analyzed: 03/18/22 08:28			
M8FOSA	213708.8	4.044517	170,448.00	4.044517	125	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	132070	2.6118	183,600.00	2.6118	72	50 - 150	0.0000	+/-0.50	
M2PFTA	973719.2	4.386533	936,080.00	4.378433	104	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	93493.97	3.850917	90,790.00	3.850917	103	50 - 150	0.0000	+/-0.50	
MPFBA	658309.3	1.108317	567,352.00	1.108317	116	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	296785	2.929717	242,666.00	2.929717	122	50 - 150	0.0000	+/-0.50	
M6PFDA	479151.9	3.851417	376,224.00	3.851417	127	50 - 150	0.0000	+/-0.50	
M3PFBS	189509.4	1.9945	160,179.00	1.9945	118	50 - 150	0.0000	+/-0.50	
M7PFUnA	776633.9	4.001983	612,305.00	4.001983	127	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	88621.62	3.501317	63,651.00	3.493333	139	50 - 150	0.0080	+/-0.50	
M5PFPeA	670410.3	1.80795	560,022.00	1.80795	120	50 - 150	0.0000	+/-0.50	
M5PFHxA	1128950	2.706317	967,686.00	2.706317	117	50 - 150	0.0000	+/-0.50	
M3PFHxS	118197.7	3.276217	84,902.00	3.276217	139	50 - 150	0.0000	+/-0.50	
M4PFHpA	1195227	3.243783	872,305.00	3.243783	137	50 - 150	0.0000	+/-0.50	
M8PFOA	834229.6	3.51015	556,161.00	3.51015	150	50 - 150	0.0000	+/-0.50	
M8PFOS	105205.6	3.692083	68,985.00	3.692083	153	50 - 150	0.0000	+/-0.50	*
M9PFNA	600877.5	3.693117	378,914.00	3.693117	159	50 - 150	0.0000	+/-0.50	*
MPFDoA	780508.3	4.136817	694,328.00	4.14485	112	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	227264.2	4.00945	191,072.00	4.00945	119	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	231966.8	3.929883	227,876.00	3.929883	102	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DUP-2.11.22 (22B0973-04RE1)			Lab File ID: 22B0973-04RE1.d			Analyzed: 03/23/22 03:06			
M8FOSA	199751.7	4.036517	331,236.00	4.036517	60	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	70618.47	2.595367	124,820.00	2.595367	57	50 - 150	0.0000	+/-0.50	
M2PFTA	672311	4.370283	989,902.00	4.370283	68	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	76599.59	3.842967	117,312.00	3.842967	65	50 - 150	0.0000	+/-0.50	
MPFBA	593382.2	1.108317	553,531.00	1.108317	107	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	207691.3	2.921133	225,130.00	2.921133	92	50 - 150	0.0000	+/-0.50	
M6PFDA	518993.7	3.843467	673,817.00	3.843467	77	50 - 150	0.0000	+/-0.50	
M3PFBS	140063.5	1.978033	142,236.00	1.978033	98	50 - 150	0.0000	+/-0.50	
M7PFUnA	628335.9	3.993983	784,522.00	3.993983	80	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	46806.59	3.493333	76,910.00	3.493333	61	50 - 150	0.0000	+/-0.50	
M5PFPeA	542217.1	1.791367	482,742.00	1.791367	112	50 - 150	0.0000	+/-0.50	
M5PFHxA	707641.6	2.680533	713,707.00	2.680533	99	50 - 150	0.0000	+/-0.50	
M3PFHxS	79045.55	3.266833	113,219.00	3.266833	70	50 - 150	0.0000	+/-0.50	
M4PFHpA	657959.8	3.2357	741,095.00	3.2357	89	50 - 150	0.0000	+/-0.50	
M8PFOA	554656	3.50185	742,658.00	3.50185	75	50 - 150	0.0000	+/-0.50	
M8PFOS	97474.76	3.692083	135,113.00	3.692083	72	50 - 150	0.0000	+/-0.50	
M9PFNA	462982.3	3.693117	588,076.00	3.693117	79	50 - 150	0.0000	+/-0.50	
MPFDoA	616821.9	4.128783	791,993.00	4.128783	78	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	157050.3	4.001467	180,249.00	4.001467	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	192755.6	3.921883	220,181.00	3.921883	88	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
EB-2.11.22 (22B0973-05)			Lab File ID: 22B0973-05.d			Analyzed: 03/18/22 08:35			
M8FOSA	210384.9	4.044517	170,448.00	4.044517	123	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	114216.1	2.62	183,600.00	2.6118	62	50 - 150	0.0082	+/-0.50	
M2PFTA	902434.6	4.386533	936,080.00	4.378433	96	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	71819.93	3.850917	90,790.00	3.850917	79	50 - 150	0.0000	+/-0.50	
MPFBA	760304.4	1.108317	567,352.00	1.108317	134	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	341184.4	2.937833	242,666.00	2.929717	141	50 - 150	0.0081	+/-0.50	
M6PFDA	532304.3	3.851417	376,224.00	3.851417	141	50 - 150	0.0000	+/-0.50	
M3PFBS	179744.9	1.9945	160,179.00	1.9945	112	50 - 150	0.0000	+/-0.50	
M7PFUnA	750300.3	4.001983	612,305.00	4.001983	123	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	52959.84	3.501317	63,651.00	3.493333	83	50 - 150	0.0080	+/-0.50	
M5PFPeA	654374.3	1.80795	560,022.00	1.80795	117	50 - 150	0.0000	+/-0.50	
M5PFHxA	1122357	2.706317	967,686.00	2.706317	116	50 - 150	0.0000	+/-0.50	
M3PFHxS	123745.8	3.276217	84,902.00	3.276217	146	50 - 150	0.0000	+/-0.50	
M4PFHpA	1131768	3.243783	872,305.00	3.243783	130	50 - 150	0.0000	+/-0.50	
M8PFOA	836217.5	3.51015	556,161.00	3.51015	150	50 - 150	0.0000	+/-0.50	
M8PFOS	104229.8	3.692067	68,985.00	3.692083	151	50 - 150	0.0000	+/-0.50	*
M9PFNA	599251.8	3.693117	378,914.00	3.693117	158	50 - 150	0.0000	+/-0.50	*
MPFDoA	700063.6	4.136817	694,328.00	4.14485	101	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	191869.5	4.00945	191,072.00	4.00945	100	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	221462.1	3.929883	227,876.00	3.929883	97	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B301972-BLK1)			Lab File ID: B301972-BLK1.d			Analyzed: 03/18/22 07:45			
M8FOSA	200850.8	4.044533	170,448.00	4.044517	118	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	158633.3	2.62	183,600.00	2.6118	86	50 - 150	0.0082	+/-0.50	
M2PFTA	918942.2	4.378417	936,080.00	4.378433	98	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	106758.1	3.850933	90,790.00	3.850917	118	50 - 150	0.0000	+/-0.50	
MPFBA	713773.7	1.108317	567,352.00	1.108317	126	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	300738.1	2.929717	242,666.00	2.929717	124	50 - 150	0.0000	+/-0.50	
M6PFDA	525938	3.851417	376,224.00	3.851417	140	50 - 150	0.0000	+/-0.50	
M3PFBS	174380.8	1.9945	160,179.00	1.9945	109	50 - 150	0.0000	+/-0.50	
M7PFUnA	693260.6	4.002	612,305.00	4.001983	113	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	74341.02	3.501333	63,651.00	3.493333	117	50 - 150	0.0080	+/-0.50	
M5PFPeA	631780.3	1.80795	560,022.00	1.80795	113	50 - 150	0.0000	+/-0.50	
M5PFHxA	1070461	2.706317	967,686.00	2.706317	111	50 - 150	0.0000	+/-0.50	
M3PFHxS	120014.4	3.276217	84,902.00	3.276217	141	50 - 150	0.0000	+/-0.50	
M4PFHpA	1078300	3.243783	872,305.00	3.243783	124	50 - 150	0.0000	+/-0.50	
M8PFOA	769516.8	3.510167	556,161.00	3.51015	138	50 - 150	0.0000	+/-0.50	
M8PFOS	96440.76	3.692083	68,985.00	3.692083	140	50 - 150	0.0000	+/-0.50	
M9PFNA	530349.6	3.693117	378,914.00	3.693117	140	50 - 150	0.0000	+/-0.50	
MPFDoA	727985.3	4.14485	694,328.00	4.14485	105	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	186595.9	4.009467	191,072.00	4.00945	98	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	236066.3	3.929883	227,876.00	3.929883	104	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B301972-BS1)			Lab File ID: B301972-BS1.d			Analyzed: 03/18/22 07:38			
M8FOSA	213758.8	4.044533	170,448.00	4.044517	125	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	159560.9	2.6118	183,600.00	2.6118	87	50 - 150	0.0000	+/-0.50	
M2PFTA	874101.9	4.378417	936,080.00	4.378433	93	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	83901.05	3.850933	90,790.00	3.850917	92	50 - 150	0.0000	+/-0.50	
MPFBA	745561.9	1.108317	567,352.00	1.108317	131	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	303526.7	2.929733	242,666.00	2.929717	125	50 - 150	0.0000	+/-0.50	
M6PFDA	574024	3.851433	376,224.00	3.851417	153	50 - 150	0.0000	+/-0.50	*
M3PFBS	179333.8	1.9945	160,179.00	1.9945	112	50 - 150	0.0000	+/-0.50	
M7PFUnA	722392.6	4.002	612,305.00	4.001983	118	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	67939.7	3.501333	63,651.00	3.493333	107	50 - 150	0.0080	+/-0.50	
M5PFPeA	654323	1.80795	560,022.00	1.80795	117	50 - 150	0.0000	+/-0.50	
M5PFHxA	1107482	2.706317	967,686.00	2.706317	114	50 - 150	0.0000	+/-0.50	
M3PFHxS	119270.8	3.276217	84,902.00	3.276217	140	50 - 150	0.0000	+/-0.50	
M4PFHpA	1160313	3.243783	872,305.00	3.243783	133	50 - 150	0.0000	+/-0.50	
M8PFOA	844431.6	3.510167	556,161.00	3.51015	152	50 - 150	0.0000	+/-0.50	*
M8PFOS	102805.4	3.692083	68,985.00	3.692083	149	50 - 150	0.0000	+/-0.50	
M9PFNA	642133.2	3.693117	378,914.00	3.693117	169	50 - 150	0.0000	+/-0.50	*
MPFDoA	722373.3	4.136833	694,328.00	4.14485	104	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	203229.8	4.009467	191,072.00	4.00945	106	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	244780.5	3.929883	227,876.00	3.929883	107	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B301972-MS1)			Lab File ID: B301972-MS1.d			Analyzed: 03/18/22 07:52			
M8FOSA	251856.7	4.044517	170,448.00	4.044517	148	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	157455.2	2.6118	183,600.00	2.6118	86	50 - 150	0.0000	+/-0.50	
M2PFTA	833370.4	4.378417	936,080.00	4.378433	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	102877.2	3.850933	90,790.00	3.850917	113	50 - 150	0.0000	+/-0.50	
MPFBA	669981.9	1.108317	567,352.00	1.108317	118	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	284424	2.929717	242,666.00	2.929717	117	50 - 150	0.0000	+/-0.50	
M6PFDA	539846.8	3.851417	376,224.00	3.851417	143	50 - 150	0.0000	+/-0.50	
M3PFBS	192471.1	1.9945	160,179.00	1.9945	120	50 - 150	0.0000	+/-0.50	
M7PFUnA	749246.9	4.001983	612,305.00	4.001983	122	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	97710.52	3.501317	63,651.00	3.493333	154	50 - 150	0.0080	+/-0.50	*
M5PFPeA	685688.7	1.80795	560,022.00	1.80795	122	50 - 150	0.0000	+/-0.50	
M5PFHxA	1154492	2.696967	967,686.00	2.706317	119	50 - 150	-0.0093	+/-0.50	
M3PFHxS	119138.5	3.276217	84,902.00	3.276217	140	50 - 150	0.0000	+/-0.50	
M4PFHpA	1184071	3.243783	872,305.00	3.243783	136	50 - 150	0.0000	+/-0.50	
M8PFOA	818327.9	3.51015	556,161.00	3.51015	147	50 - 150	0.0000	+/-0.50	
M8PFOS	113893.3	3.692083	68,985.00	3.692083	165	50 - 150	0.0000	+/-0.50	*
M9PFNA	597877.8	3.693117	378,914.00	3.693117	158	50 - 150	0.0000	+/-0.50	*
MPFDoA	718397.7	4.136817	694,328.00	4.14485	103	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	207014.9	4.00945	191,072.00	4.00945	108	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	242868.2	3.929883	227,876.00	3.929883	107	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B301972-MSD1)			Lab File ID: B301972-MSD1.d			Analyzed: 03/18/22 07:59			
M8FOSA	218169	4.044517	170,448.00	4.044517	128	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	157436.9	2.6118	183,600.00	2.6118	86	50 - 150	0.0000	+/-0.50	
M2PFTA	1005423	4.378417	936,080.00	4.378433	107	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	104233.5	3.850933	90,790.00	3.850917	115	50 - 150	0.0000	+/-0.50	
MPFBA	634329.3	1.108317	567,352.00	1.108317	112	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	289237.1	2.929733	242,666.00	2.929717	119	50 - 150	0.0000	+/-0.50	
M6PFDA	543952.3	3.851417	376,224.00	3.851417	145	50 - 150	0.0000	+/-0.50	
M3PFBS	185972.8	1.9945	160,179.00	1.9945	116	50 - 150	0.0000	+/-0.50	
M7PFUnA	785169.6	4.001983	612,305.00	4.001983	128	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	98275.55	3.501333	63,651.00	3.493333	154	50 - 150	0.0080	+/-0.50	*
M5PFPeA	659905.5	1.80795	560,022.00	1.80795	118	50 - 150	0.0000	+/-0.50	
M5PFHxA	1124888	2.706317	967,686.00	2.706317	116	50 - 150	0.0000	+/-0.50	
M3PFHxS	120637.2	3.276217	84,902.00	3.276217	142	50 - 150	0.0000	+/-0.50	
M4PFHpA	1141763	3.243783	872,305.00	3.243783	131	50 - 150	0.0000	+/-0.50	
M8PFOA	825611.3	3.510167	556,161.00	3.51015	148	50 - 150	0.0000	+/-0.50	
M8PFOS	102308	3.692083	68,985.00	3.692083	148	50 - 150	0.0000	+/-0.50	
M9PFNA	637691.9	3.693117	378,914.00	3.693117	168	50 - 150	0.0000	+/-0.50	*
MPFDoA	798734.9	4.136817	694,328.00	4.14485	115	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	247466.8	4.009467	191,072.00	4.00945	130	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	249877.2	3.929883	227,876.00	3.929883	110	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B303622-BLK1)			Lab File ID: B303622-BLK1.d			Analyzed: 03/23/22 00:28			
M8FOSA	92248.64	4.036517	331,236.00	4.036517	28	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	56205.16	2.603583	124,820.00	2.595367	45	50 - 150	0.0082	+/-0.50	*
M2PFTA	301325.1	4.370283	989,902.00	4.370283	30	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	66790.4	3.842967	117,312.00	3.842967	57	50 - 150	0.0000	+/-0.50	
MPFBA	481217.2	1.108317	553,531.00	1.108317	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	184833.7	2.921133	225,130.00	2.921133	82	50 - 150	0.0000	+/-0.50	
M6PFDA	333043.8	3.84345	673,817.00	3.84345	49	50 - 150	0.0000	+/-0.50	*
M3PFBS	94389.13	1.986217	142,236.00	1.978033	66	50 - 150	0.0082	+/-0.50	
M7PFUnA	451285.3	3.993983	784,522.00	3.993983	58	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	26915.95	3.493333	76,910.00	3.493333	35	50 - 150	0.0000	+/-0.50	*
M5PFPeA	431448	1.79965	482,742.00	1.791367	89	50 - 150	0.0083	+/-0.50	
M5PFHxA	453613.1	2.68875	713,707.00	2.680533	64	50 - 150	0.0082	+/-0.50	
M3PFHxS	37426.38	3.266817	113,219.00	3.266833	33	50 - 150	0.0000	+/-0.50	*
M4PFHpA	339591	3.2357	741,095.00	3.2357	46	50 - 150	0.0000	+/-0.50	*
M8PFOA	251287.5	3.50185	742,658.00	3.50185	34	50 - 150	0.0000	+/-0.50	*
M8PFOS	63088.91	3.692067	135,113.00	3.692083	47	50 - 150	0.0000	+/-0.50	*
M9PFNA	261473.9	3.693117	588,076.00	3.693117	44	50 - 150	0.0000	+/-0.50	*
MPFDoA	391315.4	4.136817	791,993.00	4.128783	49	50 - 150	0.0080	+/-0.50	*
d5-NEtFOSAA	100599.1	4.00145	180,249.00	4.001467	56	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	135340.2	3.921883	220,181.00	3.921883	61	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B303622-BS1)			Lab File ID: B303622-BS1.d			Analyzed: 03/23/22 00:20			
M8FOSA	217291.7	4.036517	331,236.00	4.036517	66	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	93438.93	2.595367	124,820.00	2.595367	75	50 - 150	0.0000	+/-0.50	
M2PFTA	722127.9	4.370283	989,902.00	4.370283	73	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	99812.82	3.842967	117,312.00	3.842967	85	50 - 150	0.0000	+/-0.50	
MPFBA	632729.4	1.108317	553,531.00	1.108317	114	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	217314.5	2.921133	225,130.00	2.921133	97	50 - 150	0.0000	+/-0.50	
M6PFDA	419646.2	3.84345	673,817.00	3.84345	62	50 - 150	0.0000	+/-0.50	
M3PFBS	135448.6	1.978033	142,236.00	1.978033	95	50 - 150	0.0000	+/-0.50	
M7PFUnA	648546.4	3.993983	784,522.00	3.993983	83	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	39540.05	3.493333	76,910.00	3.493333	51	50 - 150	0.0000	+/-0.50	
M5PFPeA	560796.6	1.791367	482,742.00	1.791367	116	50 - 150	0.0000	+/-0.50	
M5PFHxA	675238	2.68875	713,707.00	2.680533	95	50 - 150	0.0082	+/-0.50	
M3PFHxS	63640.46	3.266833	113,219.00	3.266833	56	50 - 150	0.0000	+/-0.50	
M4PFHpA	560770.3	3.2357	741,095.00	3.2357	76	50 - 150	0.0000	+/-0.50	
M8PFOA	403454.7	3.50185	742,658.00	3.50185	54	50 - 150	0.0000	+/-0.50	
M8PFOS	89279.05	3.692083	135,113.00	3.692083	66	50 - 150	0.0000	+/-0.50	
M9PFNA	394242.7	3.693117	588,076.00	3.693117	67	50 - 150	0.0000	+/-0.50	
MPFDoA	633855.4	4.128783	791,993.00	4.128783	80	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	156402.8	4.001467	180,249.00	4.001467	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	182206	3.921883	220,181.00	3.921883	83	50 - 150	0.0000	+/-0.50	

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

22B0973

Pace Analytical®
Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

CHAIN OF CUSTODY RECORD (New York)

Doc # 380 Rev 1_03242017

37 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

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

Company Name:	NYSDEC
Address:	625 Broadway, Albany, NY 12233
Phone:	518-402-8246
Project Name:	Former Rochester Metal Etching Site 828108
Project Location:	Rochester, NY
Project Number:	NYSDEC Callout ID 142993
Project Manager:	Charles Gregory
Pace Analytical Quote Name/Number:	
Invoice Recipient:	Charles Gregory (NYSDEC) – charles.gregory@dec.ny.gov
Sampled By:	Alex Brett (LaBella Associates)

Requested Turnaround Time
7-Day ☑ 10-Day
Due Date: Standard turnaround

Rush-Approval Required
1-Day 3-Day
2-Day 4-Day

Data Delivery
Format: (PDF) (EXCEL)
Other: ASP Cat B – EQuIS EDD
CLP Like Data Pkg Required:
Email To: charles.gregory@dec.ny.gov and ~~Fax To #:~~ abrett@LaBellaPC.com

Analysis: PFAS – Isotope; Preservation Code: None; Container Code: P

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	1Matrix Code	Conc Code	PFAS
1	MW-3 - 2.11.22*	2/11/22	2/11/22 1000		✓	GW	U	X
2	MW-2 - 2.11.22	2/11/22	2/11/22 1200		✓	GW	U	X
3	MW-1 - 2.11.22	2/11/22	2/11/22 1400		✓	GW	U	X
4	Dup - 2.11.22	2/11/22	2/11/22		✓	GW	U	X
5	EB - 2.11.22	2/11/22	2/11/22 1530		✓		U	X

# of Containers
2 Preservation Code
3 Container Code

Dissolved Metals Samples
Field Filtered
Lab to Filter

Orthophosphate Samples
Field Filtered
Lab to Filter

1Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

Comments:
*Perform MS/MSD on sample MW-3-2.11.22 – Extra sample volume/bottles included
• Results to send: NYSDEC (518-402-8246) Charles Gregory charles.gregory@dec.ny.gov AND LaBella Associates Alex Brett (585-770-2553) abrett@LaBellapc.com

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) [signature]	Date/Time: 2/15/22 1545
Received by: (signature) [signature] 4.2	Date/Time: 2.16 930
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Program & Regulatory Information
AWQ STDS — NY TOGS
NYC Sewer Discharge — NY CP-51
Part 360 GW (Landfill)
NY Restricted Use
NY Unrestricted Use
NY Part 375
Other

Deliverables
☑ Enhanced Data Package
☒ (NYSDEC EQuIS EDD)
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Others

NELAC and AIHA-LAP, LLC Accredited

Project Entity
X Government — Municipality — MWRA — WRTA
Federal — 21 J — School
City — Brownfield — MBTA

Other
Chromatogram
AIHA-LAP,LLC

PCB ONLY
Soxhlet
Non Soxhlet

FedEx

FedEx Tracking

289869933733

ADD NICKNAME

ON TIME

Delivered
Wednesday, February 16, 2022 at 9:30 am

DELIVERED

Signed for by: R.RIOS

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM	TO
ROCHESTER, NY US	EAST LONGMEADOW, MA US

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Wednesday, February 16, 2022		
9:30 AM	EAST LONGMEADOW, MA	Delivered
8:30 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
8:22 AM	WINDSOR LOCKS, CT	At local FedEx facility
Tuesday, February 15, 2022		
11:02 PM	MEMPHIS, TN	Arrived at FedEx hub
7:42 PM	ROCHESTER, NY	Shipment arriving On-Time
7:30 PM	ROCHESTER, NY	Left FedEx origin facility
3:24 PM		Shipment information sent to FedEx

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client NYSDEC

Received By JR Date 2.16.22 Time 930

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp - 4.2
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all Client T Analysis T Sampler Name T
pertinent Information? Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____
Is there enough Volume? T
Is there Headspace where applicable? NA MS/MSD? T
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? NA Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	13	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

ATTACHMENT 2

Well Decommissioning Logs

FIGURE 3

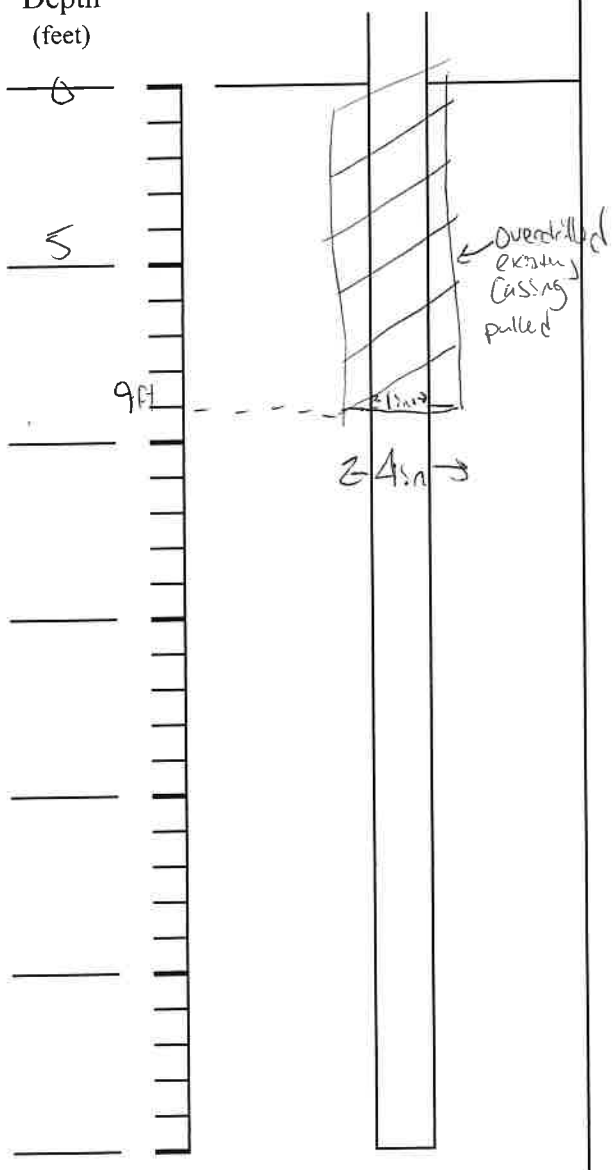
WELL DECOMMISSIONING RECORD

Site Name:	100 Lake Avenue	Well I.D.:	MW-01
Site Location:	FORMER ROCHESTER METAL ETCHING	Driller:	MP
Drilling Co.:	Cubella	Inspector:	ES
		Date:	1/28/22

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	fill
Drilling Method(s)	Auger
Borehole Dia. (in.)	4"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	
Casing retrieved (feet)	
Casing type/dia. (in)	
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	
# of batches prepared	
For each batch record:	
Quantity of water used (gal.)	
Quantity of cement used (lbs.)	
Cement type	
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	

WELL SCHEMATIC*



COMMENTS:
Well replaced w/ 2" well and new Roadbox

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

Drilling Contractor

Department Representative

FIGURE 3

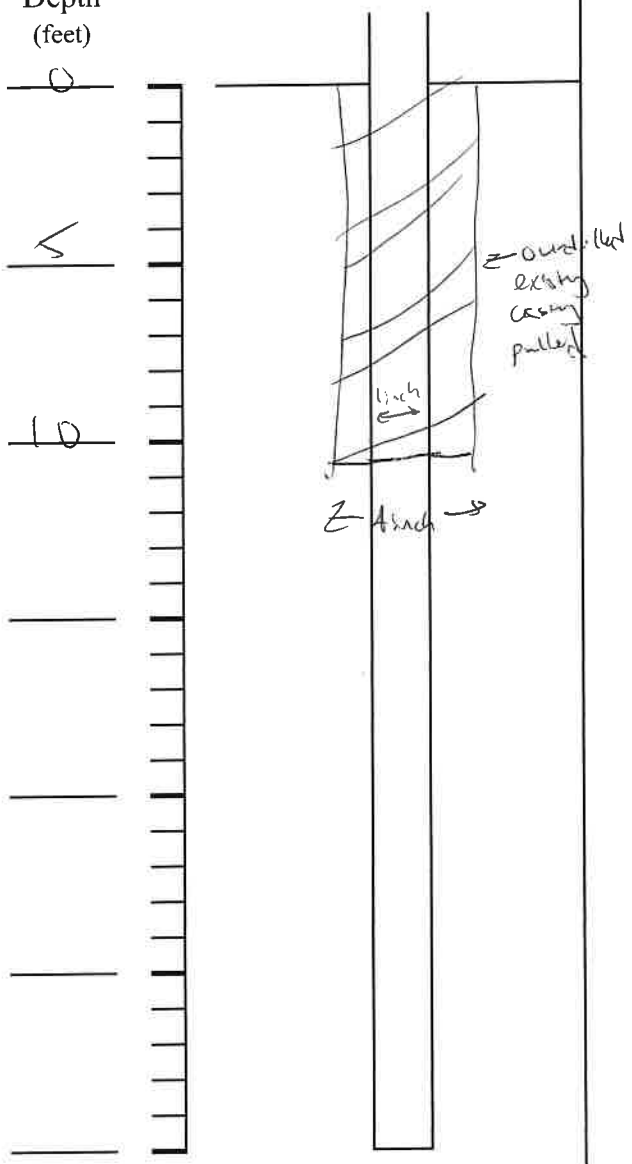
WELL DECOMMISSIONING RECORD

Site Name: 100 Lake Avenue	Well I.D.: MW-02
Site Location: FORMER ROCHESTER METAL ETCHING	Driller: MP
Drilling Co.: LaBella	Inspector: ES
	Date: 1/28/22

DECOMMISSIONING DATA
(Fill in all that apply)

OVERDRILLING	
Interval Drilled	10.5
Drilling Method(s)	Auger
Borehole Dia. (in.)	~4"
Temporary Casing Installed? (y/n)	N
Depth temporary casing installed	
Casing type/dia. (in.)	
Method of installing	
CASING PULLING	
Method employed	
Casing retrieved (feet)	
Casing type/dia. (in)	
CASING PERFORATING	
Equipment used	
Number of perforations/foot	
Size of perforations	
Interval perforated	
GROUTING	
Interval grouted (FBLS)	
# of batches prepared	
For each batch record:	
Quantity of water used (gal.)	
Quantity of cement used (lbs.)	
Cement type	
Quantity of bentonite used (lbs.)	
Quantity of calcium chloride used (lbs.)	
Volume of grout prepared (gal.)	
Volume of grout used (gal.)	

WELL SCHEMATIC*



COMMENTS:

Reinstallation of well → replaced with 2" well. New Road box installed

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

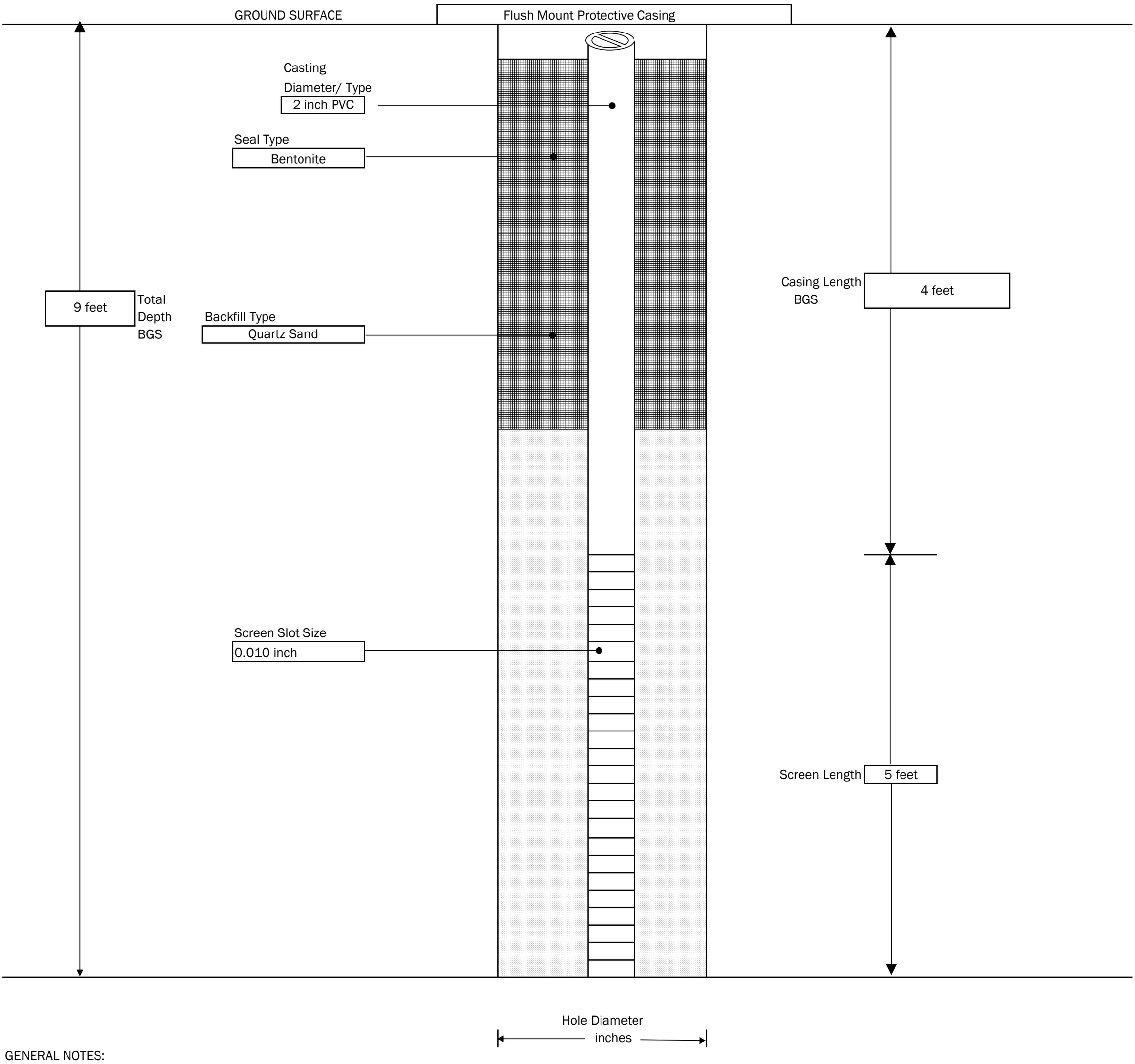
Drilling Contractor

Department Representative

ATTACHMENT 3

Well Construction Logs

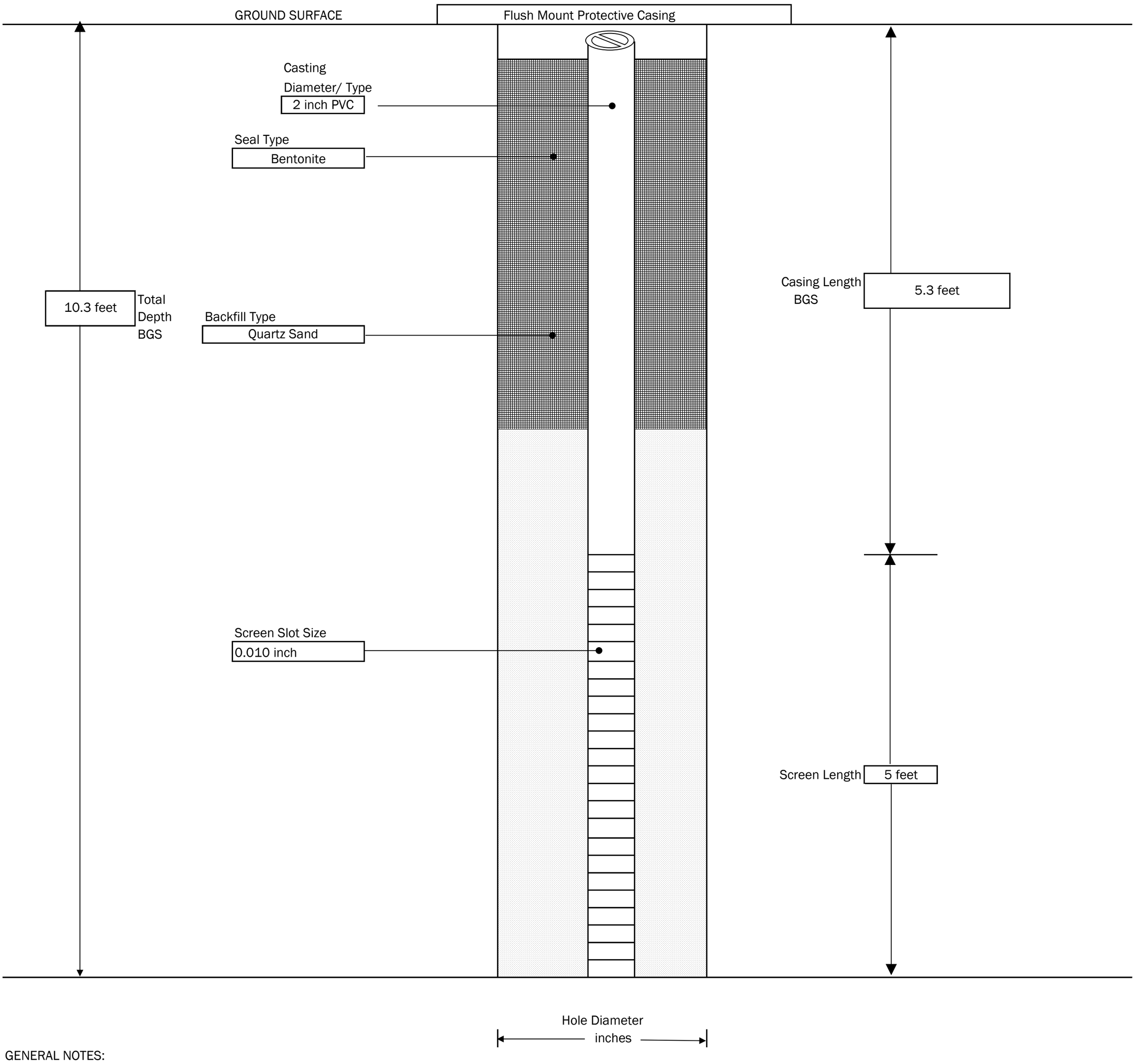
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Former Rochester Metal Etching Company 100 Lake Avenue, Rochester, NY	**MONITORING WELL : MW-1R** **BORING LOCATION :** **SHEET** 1 OF 1 **JOB # 2161937.059**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: E. Spirito	START TIME: NA END TIME: NA GROUND SURFACE ELEVATION: NA DATUM: NA	TYPE OF DRILL RIG: 6620DT AUGER SIZE AND TYPE: 2.25 inch ID Hollow-stem augers OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Former Rochester Metal Etching Company 100 Lake Avenue, Rochester, NY	**MONITORING WELL : MW-2R** **BORING LOCATION :** **SHEET** 1 OF 1 **JOB # 2161937.059**
CONTRACTOR: LaBella Environmental LLC DRILLER: M. Pepe LABELLA REPRESENTATIVE: E. Spirito	START TIME: NA END TIME: NA GROUND SURFACE ELEVATION: NA DATUM: NA	TYPE OF DRILL RIG: 6620DT AUGER SIZE AND TYPE: 2.25 inch ID Hollow-stem augers OVERBURDEN SAMPLING METHOD: NA



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

ATTACHMENT 4

Well Development Logs

LaBella
Powered by partnership.

300 State Street, Suite 201, Rochester, NY

GROUNDWATER DEVELOPMENT FORM

WELL I.D. MW-1R

Project Name: Former Rochester Metal Etching Company
Project No.: 2161937.059
Location: 100 Lake Avenue, Rochester, NY
Development By: AGB
Date: 1/31/2022
Weather: 20's (F), mostly cloudy

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 8.52 -Feet
Depth of Well: 9.00 -Feet
Single Well Volume: 0.08 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: HDPE
[ ] Pump - Type
Sampling Device:
Pump Rate:

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	Temp °C	Conductivity (mS/cm)	pH	Dissolved O2 (mg/L)	Turbidity (NTU)	Comments
1300	0	NA	NA	NA	NA	NA	
1315	0.08	NA	NA	NA	NA	NA	Well went dry.
							Color = Clear to light brown
							LNAPL or DNAPL observed = NO
							Odor: NO
							Sheen: NO

Total 0.08 Gallons Purged
Purge Start Time: 1300
Purge End Time: 1315

OBSERVATIONS:

Well Volume (1" well) = 0.0408-gal/ft.	Well Volume (4" well) = 0.65-gal/ft.
Well Volume (2" well) = 0.163-gal/ft.	

LaBella
Powered by partnership.

300 State Street, Suite 201, Rochester, NY

GROUNDWATER DEVELOPMENT FORM

WELL I.D. MW-2R

Project Name: Former Rochester Metal Etching Company
Project No.: 2161937.059
Location: 100 Lake Avenue, Rochester, NY
Development By: AGB
Date: 1/31/2022
Weather: 20's (F), mostly cloudy

PURGE VOLUME CALCULATION

Well Diameter: 2.0 -Inch
Static Water Level: 9.11 -Feet
Depth of Well: 10.30 -Feet
Single Well Volume: 0.19 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: HDPE
[ ] Pump - Type
Sampling Device:
Pump Rate:

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	Temp °C	Conductivity (mS/cm)	pH	Dissolved O2 (mg/L)	Turbidity (NTU)	Comments
1330	0	NA	NA	NA	NA	NA	
1345	0.19	NA	NA	NA	NA	NA	Well went dry.
							Color = Clear to light brown
							LNAPL or DNAPL observed = NO
							Odor: YES / NO
							Sheen: YES / NO

Total 0.19 Gallons Purged
Purge Start Time: 1330
Purge End Time: 1345

OBSERVATIONS:

Well Volume (1" well) = 0.0408-gal/ft.	Well Volume (4" well) = 0.65-gal/ft.
Well Volume (2" well) = 0.163-gal/ft.	

LaBella
Powered by partnership.

300 State Street, Suite 201, Rochester, NY

GROUNDWATER DEVELOPMENT FORM

WELL I.D. MW-3

Project Name: Former Rochester Metal Etching Company
Project No.: 2161937.059
Location: 100 Lake Avenue, Rochester, NY
Development By: AGB
Date: 1/31/2022
Weather: 20's (F), mostly cloudy

PURGE VOLUME CALCULATION

Well Diameter: 1.0 -Inch
Static Water Level: 10.63 -Feet
Depth of Well: 13.36 -Feet
Single Well Volume: 0.11 -Gallons

PURGE & SAMPLING METHOD

[X] Bailer - Type: HDPE
[ ] Pump - Type
Sampling Device:
Pump Rate:

FIELD PARAMETER MEASUREMENTS

Time	Gallons Purged	Temp °C	Conductivity (mS/cm)	pH	Dissolved O2 (mg/L)	Turbidity (NTU)	Comments
1330	0	NA	NA	NA	NA	NA	
1400	0.30	NA	NA	NA	NA	NA	Well went dry.
							Color = Clear to light brown
							LNAPL or DNAPL observed = NO
							Odor: NO
							Sheen: NO

Total 0.30 Gallons Purged
Purge Start Time: 1330
Purge End Time: 1400

OBSERVATIONS:

Well Volume (1" well) = 0.0408-gal/ft.	Well Volume (4" well) = 0.65-gal/ft.
Well Volume (2" well) = 0.163-gal/ft.	

ATTACHMENT 5

Groundwater Sampling Logs

FORMER ROCHESTER METAL ETCHING COMPANY

2161937.059

1/2022

A.Brett on-site at 100 Lake Ave Former Rochester Metal etching site for PFAS SAMPLE EVENT. Weather- 30s, mostly cloudy

A.Brett setting up at well MW-3 HDPE tubing + peristaltic pump.

A.Brett using old clothes, boots, no waterproofing etc.

A.Brett turn on pump and begin fill jars at low rate for peristaltic from MW-3.

Jars filled (HDPE plastic), A.Brett to label fill them + place on ice in cooler. Duplicate DUP-2.11.22 collected MS/MSD

A.Brett heading to well MW-2R Water in MW-3 had no sheen or odor, relatively low turbidity

A.Brett drove around back of building well opened. Need to run to office to grab new washer, washer broken. Grabbing extra cooler and jars to potentially grab 1/4 duplicate with.

A.Brett back on-site. Set up HDPE tubing in well MW-2R

Pump started

Sample almost complete, well going dry. A.Brett to let well recharge.

AB

FORMER ROCHESTER Metal Etching Company

2161937.059

2/11/2022

1330 Sample from MW-3 completed. No sheen or odor observed in water. Slight turbidity toward end when well drying out. Samples labeled and place in cooler on ice

1345 Begin setting up at MW-1R, well may take longer to complete as well had less water during development.

1400 Peristaltic pump with HDPE tubing turned on begin sampling, 3/4 of first jar filled Will let recharge.

1430 First bottle filled and sent of record.

1500 Second bottle filled + labeled

1525 Sample @ MW-1R complete

1530 Appears as though lab sent 1 HDPE 250 ml jar of DI and 2x extra empty intended for field blank. A.Brett using pump tubing to pump PFAS-Free DI water to empty jar using HDPE and Silicone pump head tubing for Equipment Blank (EB-2.11.22)

1600 A.Brett head off site, samples stored stored in locked lab in fridge to be shipped to lab only next week.

AB 2/11/22

Former Rochester Metal Etching Company

4/22 216437.059

- A. Brett on-site. 15°F and Cloudy.
- A. Brett opened well MW-3. began Sampling for 1,4-Dioxane, also collects MS/MSD and Duplicate. 2-1 liter glass bottles per sample. Using HDPE bailer for grab sampling groundwater.
- Samples collected, placed on ice. DUP-2.14.22 collected at MW-3. A. Brett Leaving site.
- Samples placed in LaBella locked lab in sample fridge for preservation prior to shipment.

Former Rochester Metal Etching Company

2/15/22 216437.059

1630 A.Brett on-site, digging out well location, MW-2. 20's, cloudy

1645 Began sample MW-2 with HDPE bailer for 1,4-Dioxane in groundwater

1700 Well begin to go dry. A.Brett will let recharge and continue

1730 A. Brett baling additional water out and letting recharge again.

1800 A. Brett complete sample, 2-1 liter amber glass jars filled, placed on ice, labeling jars

1830. Jars placed in locked LaBella lab in refridgerator to preserve samples until shipping.

Former Rochester Metal Etching Company

2/16/22 216137.059

0730 A. Batt on site. weather 40's cloudy, dark outside. Ready to begin sample collection for 1,4-dioxane in 2-1 liter amber glass jars using HDPE sampler for grab samples

1800 Filling jar.

1810 Well dry letting recharge.

1830 Continue filling jar. Well dry again to let recharge

1845 Continue filling jar, going dry. Will repeat until jars filled.

1930 One jar almost filled, will submit one jar instead of two. 1-1 liter amber glass.

1940 A Batt heading off site, packing cooler to head to Fedex to ship samples.

2000 Scottsville Rd Fedex closed heading to Fedex further out, open until 830 pm.

[signature] 2/16/22