

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## Division of Environmental Remediation

625 Broadway, 12th Floor, Albany, New York 12233-7011

P: (518) 402-9706 | F: (518) 402-9020

www.dec.ny.gov

April 6, 2022

Mr. George Meyers, Supervisor  
Town of New Windsor  
555 Union Avenue  
New Windsor, New York 12553

Re: New Windsor Public Water Supply Well Sample Results  
Kroll Well, New Windsor (T), Orange County

Dear Supervisor George Meyers:

The New York State Department of Environmental Conservation (DEC) is providing you with a copy of analytical results derived from the March 17, 2022 sampling of the granular activated carbon (GAC) water treatment system by DEC representatives that was installed on the Town of New Windsor (Town) Kroll Well located at 354 Mount Airy Road.

**No PFOS or PFOA was detected in the Kroll Well GAC-treated water. The NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.**

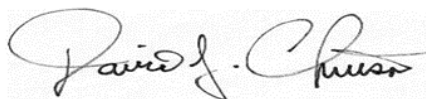
Specifically, the samples were analyzed for a total of twenty-five per- and polyfluoroalkyl substances (PFAS), including Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). Data received for the 25 PFAS list analysis has been attached. During this event, sampling for the 25 PFAS list was conducted at 9 locations:

- pre-treatment (raw untreated water), which has a “RAW WATER” identifier in the Client Sample ID;
- 25 % treatment – lead tank (A-25 identifier);
- 50 % treatment – lead tank (A-50 identifier);
- 75 % treatment – lead tank (A-75 identifier);
- mid-treatment (after the first GAC canister and prior to the second GAC canister), which has a “MID POINT” identifier in the Client Sample ID;
- 25 % treatment – lag tank (B-25 identifier);
- 50 % treatment – lag tank (B-50 identifier);
- 75 % treatment – lag tank (B-75 identifier); and
- post-treatment (after the entire treatment system), which has a “EFFLUENT” identifier in the Client Sample ID.

The 9 locations sampled (and their associated identifiers) are depicted in Figure 1. Please note that the next sampling event will be scheduled around June 2022.

If you have any technical questions regarding the analytical results or on the operation and performance of the GAC treatment system, please feel free to contact me or Jim Hayward, EA Science and Technology (DEC's Project Engineer) at (315) 431-4610 (ext.1857) or [jhayward@eaest.com](mailto:jhayward@eaest.com) . For weekday or off hour / weekend emergency repair issues, please call DEC's contractor, Brian Neumann of Precision Environmental Services at (518) 441-1520 (cell). For questions regarding site-related health concerns, please contact Steve Gagnon of the Orange County DOH at (845) 291-2331 or Dr. Min-Sook Kim of the NYSDOH Bureau of Water Supply Protection at (518) 402-7650; email: [min-sook.kim@health.ny.gov](mailto:min-sook.kim@health.ny.gov) .

Sincerely,



David J. Chiusano  
Environmental Engineer/Project Manager  
Remedial Section A, Remedial Bureau E  
Division of Environmental Remediation

#### Enclosures

ec: w/enclosures  
D. Zagon, Town of New Windsor  
J. Marina, Town of New Windsor  
J. Egitto, Town of New Windsor  
K. Rea, Town of New Windsor  
J. Conrad, PVE LLC  
C. Brown, PVE LLC  
M. Weeks, MHE  
Dr. Kim, NYSDOH  
S. Gladding, NYSDOH  
S. Gagnon, OCDOH  
M. Andersen, OCDOH  
J. Hayward, EA Engineering  
B. Neumann, PES  
M. Cruden, NYSDEC  
B. Rung, NYSDEC  
D. Bendell, Region 3 RHWRE

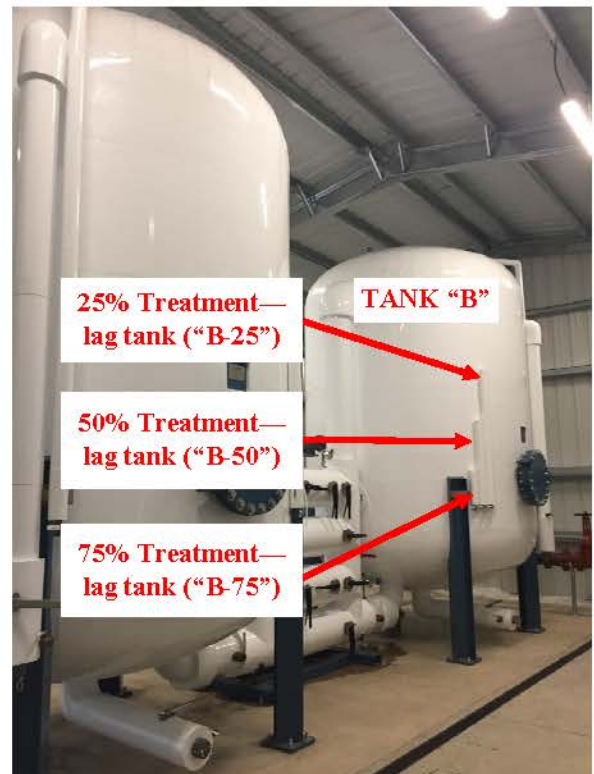
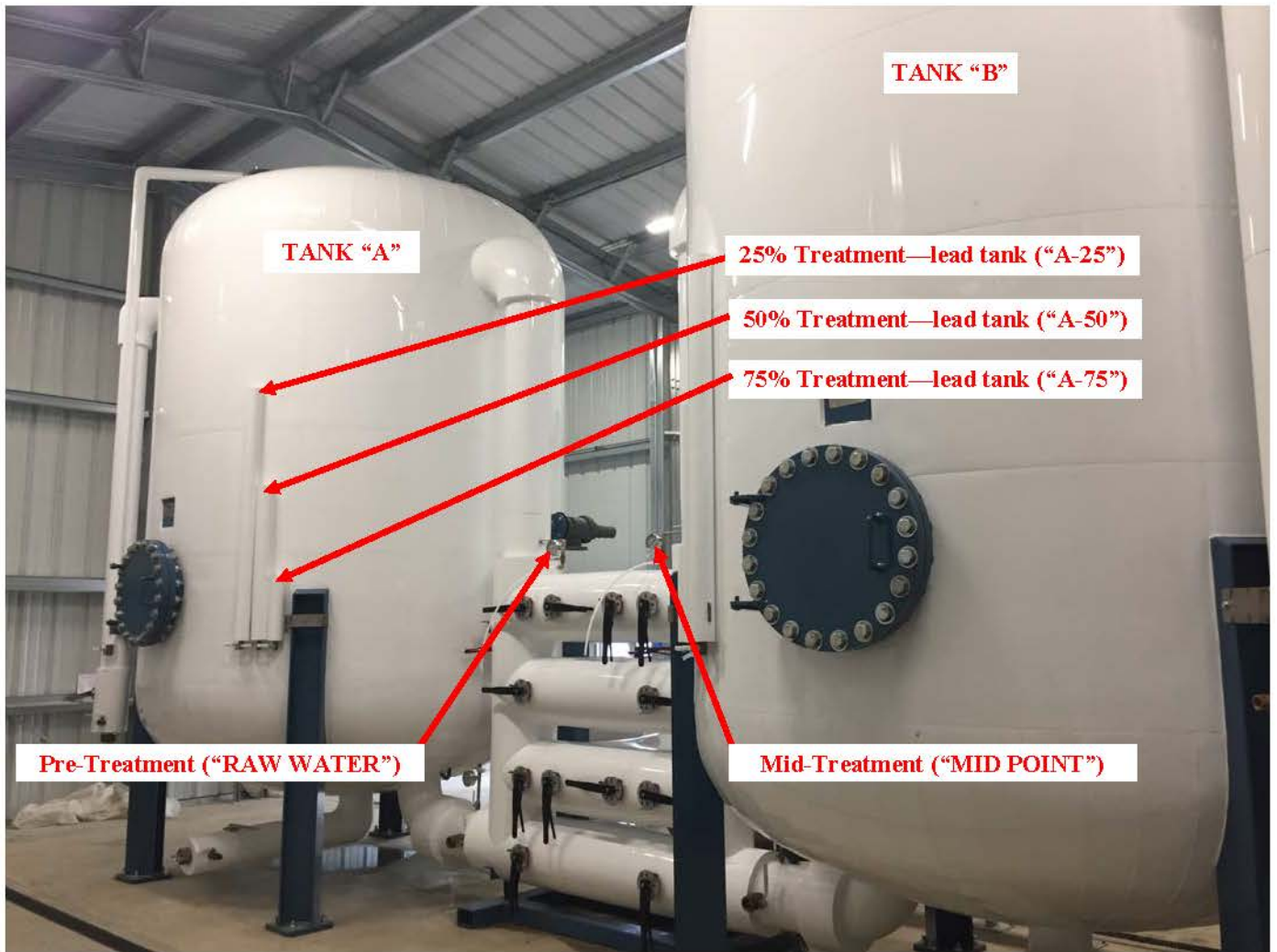


Figure 1—Kroll Well GAC Treatment System  
Sampling Locations

**Town of New Windsor**  
**Kroll Well GAC Operation and Maintenance PFOA and PFOS Sampling Results \*\* (Parts Per Trillion (PPT))**  
**(Last updated: March 2022)**

Date	Analyte	Result <sup>1</sup> Raw Water	Result A25	Result <sup>2</sup> A50	Result A75	Result Mid-Point	Result B25	Result B50	Result B75	Treated Effluent	USEPA Drinking Water Health Advisory Guidance Value	Proposed NYS MCLs
September 2019 (Based on 21 PFAS Analysis Data only)	PFOA	8.4	ND	6.1	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	14	ND	7.8	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
October 2019 (Based on 21 PFAS Analysis Data only)	PFOA	7.9	6.5	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	13	8.7	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
November 2019 (Based on 21 PFAS Analysis Data only)	PFOA	12	10	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	10	8.4	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
December 2019 (Based on 21 PFAS Analysis Data only)	PFOA	12	10	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	10	8.7	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
January 2020 (Based on 21 PFAS Analysis Data only)	PFOA	11	10	2.2	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	10	8.7	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
February 2020 (Based on 21 PFAS Analysis Data only)	PFOA	11	9.9	3.3	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	9.7	8.4	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>

**Notes:**

\*\* 21 PFAS List Analysis.

1. PFOS and PFOA results and comparison values are reported in parts per trillion (ppt, nanograms per liter, ng/l).
2. "ND" means non-detect. The analyte was not detected in the sample.
3. MCL (Maximum Contaminant Level, mg/l) is the maximum permissible level of a contaminant in water delivered by a public water system.
4. Guidance: USEPA Drinking Water Health Advisory guidance value is currently 70 ppt.
5. The proposed NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.

**Town of New Windsor**

**Kroll Well GAC Operation and Maintenance PFOA and PFOS Sampling Results \*\* (Parts Per Trillion (PPT)) Continued**

**(Last updated: March 2022)**

Date	Analyte	Result <sup>1</sup> Raw Water	Result A25	Result <sup>2</sup> A50	Result A75	Result Mid-Point	Result B25	Result B50	Result B75	Treated Effluent	USEPA Drinking Water Health Advisory Guidance Value	NYS MCLs
March 2020 (Based on 21 PFAS Analysis Data only)	PFOA	9.3	9.2	4.2	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	9.6	11	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
April 2020 (Based on 21 PFAS Analysis Data only)	PFOA	8.7	8.4	4.3	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	8.9	7.7	1.9	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
May 2020 (Based on 21 PFAS Analysis Data only)	PFOA	ND	7.9	4.8	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	11.0	7.7	2.0	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
August 2020 (Based on 21 PFAS Analysis Data only)	PFOA	9.4	9.2	6.8	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	11.0	11.0	4.5	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	<b>GAC CHANGE COMPLETED BY NYSDEC IN NOVEMBER 2020</b>											
February 2021 (Based on 21 PFAS Analysis Data only)	PFOA	7.5	ND	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	6.7	ND	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
May 2021 (Based on 21 PFAS Analysis Data only)	PFOA	9.1	5.7	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	7.4	2.6	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>

**Notes:**

\*\* 21 PFAS List Analysis.

1. PFOS and PFOA results and comparison values are reported in parts per trillion (ppt, nanograms per liter, ng/l).
2. "ND" means non-detect. The analyte was not detected in the sample.
3. MCL (Maximum Contaminant Level, mg/l) is the maximum permissible level of a contaminant in water delivered by a public water system.
4. Guidance: USEPA Drinking Water Health Advisory guidance value is 70 ppt.
5. Effective August 2020 the NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.

**Town of New Windsor**

**Kroll Well GAC Operation and Maintenance PFOA and PFOS Sampling Results \*\*\* (Parts Per Trillion (PPT)) Continued**

**(Last updated: March 2022)**

Date	Analyte	Result <sup>1</sup> Raw Water	Result A25	Result <sup>2</sup> A50	Result A75	Result Mid-Point	Result B25	Result B50	Result B75	Treated Effluent	USEPA Drinking Water Health Advisory Guidance Value	NYS MCLs
August 2021** (Based on 21 PFAS Analysis Data only)	PFOA	7.0	4.9	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	8.0	4.3	ND	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
November 2021*** (Based on 25 PFAS Analysis Data (EPA Method 533))	PFOA	7.6	6.4	3.6	0.72	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	9.4	6.1	1.8	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
March 2022*** (Based on 25 PFAS Analysis Data (EPA Method 533))	PFOA	7.6	6.1	4.1	0.92	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>
	PFOS	9.5	4.5	1.6	ND	ND	ND	ND	ND	ND	70 <sup>4</sup>	10 <sup>5</sup>

**Notes:**

\*\* 21 PFAS List Analysis

\*\*\* 25 PFAS List Analysis Via USEPA Method 533

1. PFOS and PFOA results and comparison values are reported in parts per trillion (ppt, nanograms per liter, ng/l).
2. "ND" means non-detect. The analyte was not detected in the sample.
3. MCL (Maximum Contaminant Level, mg/l) is the maximum permissible level of a contaminant in water delivered by a public water system.
4. Guidance: USEPA Drinking Water Health Advisory guidance value is 70 ppt.
5. Effective August 2020 the NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.

## How to Read Your Laboratory Reports

### **PFOA and PFOS Results:**

- Analyte is the term used to describe what the laboratory was testing for, in this case PFOS and PFOA.
- Conc. (ng/l) is your result for PFOS and PFOA. In your case, no PFOS and PFOA were detected, thus ND or “non-detect” or <2.0 ng/l was reported. (ng/l = ppt)
- RL = reporting limit or RDL = reportable detection limit is the lowest level at which this specific testing protocol and laboratory has confidence in measuring the given analyte.
- Qualifiers are added information to help understand the quality of the data. Often, if something about the results or the calibration of the testing equipment was irregular, it would be reported here.

All other columns represent laboratory quality control information. The laboratory calibrates its equipment against a precise quantity of the chemical in order to ensure that the equipment is functioning properly. Some laboratory reports may not have all this information.

- Labeled Standard or Surrogate is the lab’s specific name for an individual control sample.
- %R is the percent of the control sample that was detected by the equipment. A 100% reading represents perfect equipment alignment.
- LCL-UCL is the lower concentration limit (LCL) and upper concentration limit (UCL). The LCL represents the lowest acceptable %R value and the UCL represent the highest acceptable %R value required to ensure your result is accurate.
- Qualifiers: If a result quality control variance is noted or if the %R value of any of the control samples were outside the allowable range that would have been noted in this last column. This gives the analyst less confidence in the measured value.

The analysis for PFOS and PFOA is performed using modified EPA Method 537. The laboratory may report a detection of PFOS and PFOA down to approximately 2.0 nanograms per liter (ng/l) or parts per trillion (ppt).

### **Inorganic Results:**

- Parameter is the same as “analyte” above – it is the chemical being tested.
- Result is the concentration of that chemical detected.
- RL/PQL is the lowest level at which the specific laboratory test can reliably quantify the concentration. Below that number, the result is considered unreliable.
- DIL is the number of times the sample was diluted (necessary because the test has a certain range that it is accurate for).
- Units: mg/l is milligrams per liter or parts per million; ug/l is micrograms per liter or parts per billion.
- DW MCL stands for drinking water (DW) and “maximum contaminant level” (MCL). All chemicals that have a “maximum contaminant level” (MCL) established for drinking water (DW) have a level reported in this column.

- Sec Goal is the EPA nomenclature for all contaminants that have regulatory levels set based on aesthetics (for example, taste or color). DOH recognizes these EPA secondary goals as primary standards and enforces its drinking water quality program accordingly.
- Date/Time represents the date and time of the analysis at the lab.
- By refers to the technician who ran the test.
- Reference indicates the EPA method used in the test.



April 4, 2022

Dave Chiusano  
NYDEC\_Precision Environmental Services, Inc  
831 Rt. 67 Lot 38A  
Ballston Spa, NY 12020

Project Location: New Windsor, NY  
Client Job Number:  
Project Number: Spill # 336089  
Laboratory Work Order Number: 22C1278

Enclosed are results of analyses for samples as received by the laboratory on March 18, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mike Buttrick  
Project Manager

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

 NYDEC\_Precision Environmental Services, Inc  
 831 Rt. 67 Lot 38A  
 Ballston Spa, NY 12020  
 ATTN: Dave Chiusano

REPORT DATE: 4/4/2022

PURCHASE ORDER NUMBER: 141589

PROJECT NUMBER: Spill # 336089

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 22C1278

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

PROJECT LOCATION: New Windsor, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Raw Water	22C1278-01	Drinking Water		EPA 533	
Mid	22C1278-02	Drinking Water		EPA 533	
Eff	22C1278-03	Drinking Water		EPA 533	
DUP	22C1278-04	Drinking Water		EPA 533	
A-25%	22C1278-05	Drinking Water		EPA 533	
A-50%	22C1278-06	Drinking Water		EPA 533	
A-75%	22C1278-07	Drinking Water		EPA 533	
B-25%	22C1278-08	Drinking Water		EPA 533	
B-50%	22C1278-09	Drinking Water		EPA 533	
B-75%	22C1278-10	Drinking Water		EPA 533	

**CASE NARRATIVE SUMMARY**

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

**EPA 533**

**Qualifications:**

**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 & Sample(s) Qualified:**

**9CI-PF3ONS (F53B Major)**

B303626-MSD1

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

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: Raw Water

Sampled: 3/17/2022 13:25

Sample ID: 22C1278-01

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	3.9	2.0	0.32			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorobutanesulfonic acid (PFBS)	7.9	2.0	0.48			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoropentanoic acid (PFPeA)	2.8	2.0	0.31			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorohexanoic acid (PFHxA)	2.6	2.0	0.44			1		EPA 533	3/24/22	3/28/22 12:18	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.60			1		EPA 533	3/24/22	3/28/22 12:18	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.50			1		EPA 533	3/24/22	3/28/22 12:18	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.40			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.99			1		EPA 533	3/24/22	3/28/22 12:18	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	1.1			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.44			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.57			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	0.34			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	1.6			1		EPA 533	3/24/22	3/28/22 12:18	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.45			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorohexanesulfonic acid (PFHxS)	2.0	2.0	0.38			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.34			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.60			1		EPA 533	3/24/22	3/28/22 12:18	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	1.2			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.55			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.40			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.56			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluoroheptanoic acid (PFHpA)	1.7	2.0	0.39			1	J	EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorooctanoic acid (PFOA)	7.6	2.0	0.47			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorooctanesulfonic acid (PFOS)	9.5	2.0	0.64			1		EPA 533	3/24/22	3/28/22 12:18	BLH
Perfluorononanoic acid (PFNA)	0.64	2.0	0.51			1	J	EPA 533	3/24/22	3/28/22 12:18	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	75.8	50-200	3/28/22 12:18
M2-8:2FTS	85.8	50-200	3/28/22 12:18
MPFBA	97.7	50-200	3/28/22 12:18
M3HFPO-DA	106	50-200	3/28/22 12:18
M6PFDA	83.1	50-200	3/28/22 12:18
M3PFBS	108	50-200	3/28/22 12:18
M7PFUnA	91.1	50-200	3/28/22 12:18
M2-6:2FTS	69.8	50-200	3/28/22 12:18
M5PFPeA	108	50-200	3/28/22 12:18
M5PFHxA	104	50-200	3/28/22 12:18
M3PFHxS	96.9	50-200	3/28/22 12:18
M4PFHpA	93.8	50-200	3/28/22 12:18
M8PFOA	87.4	50-200	3/28/22 12:18
M8PFOS	95.6	50-200	3/28/22 12:18
M9PFNA	78.4	50-200	3/28/22 12:18
MPFDoA	98.6	50-200	3/28/22 12:18

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: Mid

Sampled: 3/17/2022 13:20

Sample ID: 22C1278-02

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst	
			DL	MA	ORSG							Units
Perfluorobutanoic acid (PFBA)	3.7	2.0	0.32			ng/L	1	EPA 533	3/29/22	4/1/22 18:21	BLH	
Perfluorobutanesulfonic acid (PFBS)	0.86	2.0	0.47			ng/L	1	J	EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoropentanoic acid (PFPeA)	2.6	2.0	0.30			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorohexanoic acid (PFHxA)	0.86	2.0	0.44			ng/L	1	J	EPA 533	3/29/22	4/1/22 18:21	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.59			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.50			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.39			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.98			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	1.1			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.43			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.56			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	0.33			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	1.6			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.44			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.38			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.34			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.59			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	1.2			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.54			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.40			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.55			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.39			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.46			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.63			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.50			ng/L	1		EPA 533	3/29/22	4/1/22 18:21	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	81.7	50-200	4/1/22 18:21
M2-8:2FTS	116	50-200	4/1/22 18:21
MPFBA	101	50-200	4/1/22 18:21
M3HFPO-DA	120	50-200	4/1/22 18:21
M6PFDA	113	50-200	4/1/22 18:21
M3PFBS	106	50-200	4/1/22 18:21
M7PFUnA	117	50-200	4/1/22 18:21
M2-6:2FTS	81.5	50-200	4/1/22 18:21
M5PFPeA	107	50-200	4/1/22 18:21
M5PFHxA	113	50-200	4/1/22 18:21
M3PFHxS	93.8	50-200	4/1/22 18:21
M4PFHpA	101	50-200	4/1/22 18:21
M8PFOA	105	50-200	4/1/22 18:21
M8PFOS	106	50-200	4/1/22 18:21
M9PFNA	92.5	50-200	4/1/22 18:21
MPFDoA	118	50-200	4/1/22 18:21

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: Eff

Sampled: 3/17/2022 13:15

Sample ID: 22C1278-03

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	ND	2.0	0.31		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	0.47		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.30		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0	0.43		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.59		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.49		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.39		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.96		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	1.1		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.42		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.56		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	0.33		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	1.6		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.43		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.37		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.33		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.58		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	1.1		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.53		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.39		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.54		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.38		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.46		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.62		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.49		ng/L	1		EPA 533	3/24/22	3/28/22 12:53	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	64.6	50-200	3/28/22 12:53
M2-8:2FTS	82.5	50-200	3/28/22 12:53
MPFBA	97.1	50-200	3/28/22 12:53
M3HFPO-DA	104	50-200	3/28/22 12:53
M6PFDA	78.6	50-200	3/28/22 12:53
M3PFBS	96.3	50-200	3/28/22 12:53
M7PFUnA	88.8	50-200	3/28/22 12:53
M2-6:2FTS	83.1	50-200	3/28/22 12:53
M5PFPeA	99.0	50-200	3/28/22 12:53
M5PFHxA	104	50-200	3/28/22 12:53
M3PFHxS	89.3	50-200	3/28/22 12:53
M4PFHpA	96.8	50-200	3/28/22 12:53
M8PFOA	84.7	50-200	3/28/22 12:53
M8PFOS	90.0	50-200	3/28/22 12:53
M9PFNA	74.3	50-200	3/28/22 12:53
MPFDoA	93.9	50-200	3/28/22 12:53

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Sampled: 3/17/2022 13:05

Field Sample #: DUP

Sample ID: 22C1278-04

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	ND	2.2	0.34			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.2	0.51			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.2	0.33			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.2	0.47			1		EPA 533	3/24/22	3/28/22 13:01	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.2	0.64			1		EPA 533	3/24/22	3/28/22 13:01	BLH
9Cl-PF3ONS (F53B Major)	ND	2.2	0.53			1		EPA 533	3/24/22	3/28/22 13:01	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.2	0.42			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.2	1.1			1		EPA 533	3/24/22	3/28/22 13:01	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.2	1.2			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorodecanoic acid (PFDA)	ND	2.2	0.46			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.2	0.61			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.2	0.36			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.2	1.7			1		EPA 533	3/24/22	3/28/22 13:01	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.2	0.47			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.2	0.41			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.2	0.36			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.2	0.64			1		EPA 533	3/24/22	3/28/22 13:01	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.2	1.3			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.2	0.58			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.2	0.43			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.2	0.59			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.2	0.42			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorooctanoic acid (PFOA)	ND	2.2	0.50			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.2	0.68			1		EPA 533	3/24/22	3/28/22 13:01	BLH
Perfluorononanoic acid (PFNA)	ND	2.2	0.54			1		EPA 533	3/24/22	3/28/22 13:01	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	75.3	50-200	3/28/22 13:01
M2-8:2FTS	95.4	50-200	3/28/22 13:01
MPFBA	82.0	50-200	3/28/22 13:01
M3HFPO-DA	80.5	50-200	3/28/22 13:01
M6PFDA	58.8	50-200	3/28/22 13:01
M3PFBS	106	50-200	3/28/22 13:01
M7PFUnA	82.8	50-200	3/28/22 13:01
M2-6:2FTS	81.3	50-200	3/28/22 13:01
M5PFPeA	81.9	50-200	3/28/22 13:01
M5PFHxA	83.3	50-200	3/28/22 13:01
M3PFHxS	101	50-200	3/28/22 13:01
M4PFHpA	78.3	50-200	3/28/22 13:01
M8PFOA	69.7	50-200	3/28/22 13:01
M8PFOS	102	50-200	3/28/22 13:01
M9PFNA	61.4	50-200	3/28/22 13:01
MPFDoA	86.5	50-200	3/28/22 13:01



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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: A-25%

Sampled: 3/17/2022 14:00

Sample ID: 22C1278-05

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	3.4	1.9	0.30			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorobutanesulfonic acid (PFBS)	7.5	1.9	0.45			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoropentanoic acid (PFPeA)	3.0	1.9	0.29			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorohexanoic acid (PFHxA)	2.9	1.9	0.41			1		EPA 533	3/24/22	3/28/22 13:08	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.57			1		EPA 533	3/24/22	3/28/22 13:08	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.47			1		EPA 533	3/24/22	3/28/22 13:08	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.37			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.93			1		EPA 533	3/24/22	3/28/22 13:08	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.41			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.54			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	0.32			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	1.5			1		EPA 533	3/24/22	3/28/22 13:08	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.42			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorohexanesulfonic acid (PFHxS)	1.2	1.9	0.36			1	J	EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.32			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.56			1		EPA 533	3/24/22	3/28/22 13:08	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.51			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.38			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.52			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluoroheptanoic acid (PFHpA)	1.8	1.9	0.37			1	J	EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorooctanoic acid (PFOA)	6.1	1.9	0.44			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorooctanesulfonic acid (PFOS)	4.5	1.9	0.60			1		EPA 533	3/24/22	3/28/22 13:08	BLH
Perfluorononanoic acid (PFNA)	0.55	1.9	0.48			1	J	EPA 533	3/24/22	3/28/22 13:08	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	67.8	50-200	3/28/22 13:08
M2-8:2FTS	96.3	50-200	3/28/22 13:08
MPFBA	96.9	50-200	3/28/22 13:08
M3HFPO-DA	88.9	50-200	3/28/22 13:08
M6PFDA	81.2	50-200	3/28/22 13:08
M3PFBS	101	50-200	3/28/22 13:08
M7PFUnA	88.5	50-200	3/28/22 13:08
M2-6:2FTS	74.5	50-200	3/28/22 13:08
M5PFPeA	107	50-200	3/28/22 13:08
M5PFHxA	96.5	50-200	3/28/22 13:08
M3PFHxS	95.3	50-200	3/28/22 13:08
M4PFHpA	92.5	50-200	3/28/22 13:08
M8PFOA	91.4	50-200	3/28/22 13:08
M8PFOS	96.6	50-200	3/28/22 13:08
M9PFNA	80.6	50-200	3/28/22 13:08
MPFDoA	84.7	50-200	3/28/22 13:08

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: A-50%

Sampled: 3/17/2022 13:50

Sample ID: 22C1278-06

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	3.2	1.8	0.28			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorobutanesulfonic acid (PFBS)	5.6	1.8	0.42			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoropentanoic acid (PFPeA)	3.2	1.8	0.27			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorohexanoic acid (PFHxA)	2.6	1.8	0.38			1		EPA 533	3/24/22	3/28/22 13:15	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.8	0.52			1		EPA 533	3/24/22	3/28/22 13:15	BLH
9Cl-PF3ONS (F53B Major)	ND	1.8	0.44			1		EPA 533	3/24/22	3/28/22 13:15	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.34			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.86			1		EPA 533	3/24/22	3/28/22 13:15	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.98			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorodecanoic acid (PFDA)	ND	1.8	0.38			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.50			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.8	0.29			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	1.4			1		EPA 533	3/24/22	3/28/22 13:15	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.39			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorohexanesulfonic acid (PFHxS)	0.75	1.8	0.33			1	J	EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.30			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.52			1		EPA 533	3/24/22	3/28/22 13:15	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	1.0			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.48			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.35			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.48			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluoroheptanoic acid (PFHpA)	1.3	1.8	0.34			1	J	EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorooctanoic acid (PFOA)	4.1	1.8	0.41			1		EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorooctanesulfonic acid (PFOS)	1.6	1.8	0.55			1	J	EPA 533	3/24/22	3/28/22 13:15	BLH
Perfluorononanoic acid (PFNA)	ND	1.8	0.44			1		EPA 533	3/24/22	3/28/22 13:15	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	62.8	50-200	3/28/22 13:15
M2-8:2FTS	80.6	50-200	3/28/22 13:15
MPFBA	101	50-200	3/28/22 13:15
M3HFPO-DA	98.3	50-200	3/28/22 13:15
M6PFDA	83.8	50-200	3/28/22 13:15
M3PFBS	97.0	50-200	3/28/22 13:15
M7PFUnA	91.2	50-200	3/28/22 13:15
M2-6:2FTS	82.0	50-200	3/28/22 13:15
M5PFPeA	112	50-200	3/28/22 13:15
M5PFHxA	101	50-200	3/28/22 13:15
M3PFHxS	91.4	50-200	3/28/22 13:15
M4PFHpA	99.7	50-200	3/28/22 13:15
M8PFOA	89.9	50-200	3/28/22 13:15
M8PFOS	94.4	50-200	3/28/22 13:15
M9PFNA	78.5	50-200	3/28/22 13:15
MPFDoA	94.9	50-200	3/28/22 13:15

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: A-75%

Sampled: 3/17/2022 13:45

Sample ID: 22C1278-07

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	3.6	1.9	0.31			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorobutanesulfonic acid (PFBS)	3.3	1.9	0.46			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoropentanoic acid (PFPeA)	3.5	1.9	0.29			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorohexanoic acid (PFHxA)	2.2	1.9	0.42			1		EPA 533	3/24/22	3/28/22 13:22	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.58			1		EPA 533	3/24/22	3/28/22 13:22	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.48			1		EPA 533	3/24/22	3/28/22 13:22	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.38			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.94			1		EPA 533	3/24/22	3/28/22 13:22	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.42			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.55			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	0.32			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	1.6			1		EPA 533	3/24/22	3/28/22 13:22	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.43			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.37			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.33			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.57			1		EPA 533	3/24/22	3/28/22 13:22	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.52			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.39			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.53			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluoroheptanoic acid (PFHpA)	0.63	1.9	0.37			1	J	EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorooctanoic acid (PFOA)	0.92	1.9	0.45			1	J	EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.61			1		EPA 533	3/24/22	3/28/22 13:22	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.48			1		EPA 533	3/24/22	3/28/22 13:22	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	63.4	50-200	3/28/22 13:22
M2-8:2FTS	81.3	50-200	3/28/22 13:22
MPFBA	94.5	50-200	3/28/22 13:22
M3HFPO-DA	91.0	50-200	3/28/22 13:22
M6PFDA	77.1	50-200	3/28/22 13:22
M3PFBS	92.9	50-200	3/28/22 13:22
M7PFUnA	83.8	50-200	3/28/22 13:22
M2-6:2FTS	69.9	50-200	3/28/22 13:22
M5PFPeA	99.0	50-200	3/28/22 13:22
M5PFHxA	91.4	50-200	3/28/22 13:22
M3PFHxS	86.8	50-200	3/28/22 13:22
M4PFHpA	83.4	50-200	3/28/22 13:22
M8PFOA	74.7	50-200	3/28/22 13:22
M8PFOS	83.6	50-200	3/28/22 13:22
M9PFNA	68.1	50-200	3/28/22 13:22
MPFDoA	87.4	50-200	3/28/22 13:22

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: B-25%

Sampled: 3/17/2022 13:40

Sample ID: 22C1278-08

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	4.6	1.9	0.30			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.45			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoropentanoic acid (PFPeA)	2.9	1.9	0.29			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.41			1		EPA 533	3/24/22	3/28/22 13:29	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.56			1		EPA 533	3/24/22	3/28/22 13:29	BLH
9Cl-PF3ONS (F53B Major)	ND	1.9	0.47			1		EPA 533	3/24/22	3/28/22 13:29	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.37			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.92			1		EPA 533	3/24/22	3/28/22 13:29	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorodecanoic acid (PFDA)	ND	1.9	0.41			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.53			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	0.31			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	1.5			1		EPA 533	3/24/22	3/28/22 13:29	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.42			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.36			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.32			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.56			1		EPA 533	3/24/22	3/28/22 13:29	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.51			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.38			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.52			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.37			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorooctanoic acid (PFOA)	ND	1.9	0.44			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.60			1		EPA 533	3/24/22	3/28/22 13:29	BLH
Perfluorononanoic acid (PFNA)	ND	1.9	0.47			1		EPA 533	3/24/22	3/28/22 13:29	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	68.9	50-200	3/28/22 13:29
M2-8:2FTS	74.9	50-200	3/28/22 13:29
MPFBA	96.8	50-200	3/28/22 13:29
M3HFPO-DA	98.2	50-200	3/28/22 13:29
M6PFDA	77.4	50-200	3/28/22 13:29
M3PFBS	95.9	50-200	3/28/22 13:29
M7PFUnA	88.0	50-200	3/28/22 13:29
M2-6:2FTS	75.2	50-200	3/28/22 13:29
M5PFPeA	99.7	50-200	3/28/22 13:29
M5PFHxA	101	50-200	3/28/22 13:29
M3PFHxS	87.1	50-200	3/28/22 13:29
M4PFHpA	92.5	50-200	3/28/22 13:29
M8PFOA	84.7	50-200	3/28/22 13:29
M8PFOS	79.4	50-200	3/28/22 13:29
M9PFNA	74.6	50-200	3/28/22 13:29
MPFDoA	90.1	50-200	3/28/22 13:29

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: B-50%

Sampled: 3/17/2022 13:35

Sample ID: 22C1278-09

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	5.9	1.8	0.28			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.42			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoropentanoic acid (PFPeA)	0.38	1.8	0.27			1	J	EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.39			1		EPA 533	3/24/22	3/28/22 13:37	BLH
11Cl-PF3OUdS (F53B Minor)	ND	1.8	0.53			1		EPA 533	3/24/22	3/28/22 13:37	BLH
9Cl-PF3ONS (F53B Major)	ND	1.8	0.44			1		EPA 533	3/24/22	3/28/22 13:37	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.35			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.86			1		EPA 533	3/24/22	3/28/22 13:37	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.98			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorodecanoic acid (PFDA)	ND	1.8	0.38			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.50			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.8	0.29			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	1.4			1		EPA 533	3/24/22	3/28/22 13:37	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.39			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.34			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.30			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.52			1		EPA 533	3/24/22	3/28/22 13:37	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	1.0			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.48			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.35			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.49			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.34			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorooctanoic acid (PFOA)	ND	1.8	0.41			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.56			1		EPA 533	3/24/22	3/28/22 13:37	BLH
Perfluorononanoic acid (PFNA)	ND	1.8	0.44			1		EPA 533	3/24/22	3/28/22 13:37	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	69.4	50-200	3/28/22 13:37
M2-8:2FTS	82.7	50-200	3/28/22 13:37
MPFBA	98.9	50-200	3/28/22 13:37
M3HFPO-DA	103	50-200	3/28/22 13:37
M6PFDA	83.1	50-200	3/28/22 13:37
M3PFBS	107	50-200	3/28/22 13:37
M7PFUnA	98.7	50-200	3/28/22 13:37
M2-6:2FTS	81.7	50-200	3/28/22 13:37
M5PFPeA	101	50-200	3/28/22 13:37
M5PFHxA	104	50-200	3/28/22 13:37
M3PFHxS	103	50-200	3/28/22 13:37
M4PFHpA	95.9	50-200	3/28/22 13:37
M8PFOA	89.1	50-200	3/28/22 13:37
M8PFOS	103	50-200	3/28/22 13:37
M9PFNA	79.0	50-200	3/28/22 13:37
MPFDoA	99.9	50-200	3/28/22 13:37

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

Project Location: New Windsor, NY

Sample Description:

Work Order: 22C1278

Date Received: 3/18/2022

Field Sample #: B-75%

Sampled: 3/17/2022 13:30

Sample ID: 22C1278-10

Sample Matrix: Drinking Water

## Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	MCL/SMCL			DF	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
			DL	MA	ORSG						
Perfluorobutanoic acid (PFBA)	2.9	2.0	0.32			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	0.47			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.30			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorohexanoic acid (PFHxA)	ND	2.0	0.43			1		EPA 533	3/24/22	3/28/22 13:44	BLH
11Cl-PF3OUdS (F53B Minor)	ND	2.0	0.59			1		EPA 533	3/24/22	3/28/22 13:44	BLH
9Cl-PF3ONS (F53B Major)	ND	2.0	0.49			1		EPA 533	3/24/22	3/28/22 13:44	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	0.39			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	0.96			1		EPA 533	3/24/22	3/28/22 13:44	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	1.1			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorodecanoic acid (PFDA)	ND	2.0	0.43			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorododecanoic acid (PFDoA)	ND	2.0	0.56			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	2.0	0.33			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	1.6			1		EPA 533	3/24/22	3/28/22 13:44	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	0.44			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	0.37			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	0.33			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	0.58			1		EPA 533	3/24/22	3/28/22 13:44	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	1.1			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	0.53			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoroundecanoic acid (PFUnA)	ND	2.0	0.39			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.54			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluoroheptanoic acid (PFHpA)	ND	2.0	0.38			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorooctanoic acid (PFOA)	ND	2.0	0.46			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	0.62			1		EPA 533	3/24/22	3/28/22 13:44	BLH
Perfluorononanoic acid (PFNA)	ND	2.0	0.49			1		EPA 533	3/24/22	3/28/22 13:44	BLH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
M2-4:2FTS	78.5	50-200	3/28/22 13:44
M2-8:2FTS	104	50-200	3/28/22 13:44
MPFBA	90.9	50-200	3/28/22 13:44
M3HFPO-DA	88.3	50-200	3/28/22 13:44
M6PFDA	82.8	50-200	3/28/22 13:44
M3PFBS	109	50-200	3/28/22 13:44
M7PFUnA	94.9	50-200	3/28/22 13:44
M2-6:2FTS	85.6	50-200	3/28/22 13:44
M5PFPeA	91.5	50-200	3/28/22 13:44
M5PFHxA	92.7	50-200	3/28/22 13:44
M3PFHxS	104	50-200	3/28/22 13:44
M4PFHpA	88.0	50-200	3/28/22 13:44
M8PFOA	77.5	50-200	3/28/22 13:44
M8PFOS	102	50-200	3/28/22 13:44
M9PFNA	72.6	50-200	3/28/22 13:44
MPFDoA	101	50-200	3/28/22 13:44

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

**Sample Extraction Data****Prep Method: EPA 533-EPA 533**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [mL]</b>	<b>Final [mL]</b>	<b>Date</b>
22C1278-01 [Raw Water]	B303626	247	1.00	03/24/22
22C1278-03 [Eff]	B303626	253	1.00	03/24/22
22C1278-04 [DUP]	B303626	232	1.00	03/24/22
22C1278-05 [A-25%]	B303626	263	1.00	03/24/22
22C1278-06 [A-50%]	B303626	284	1.00	03/24/22
22C1278-07 [A-75%]	B303626	258	1.00	03/24/22
22C1278-08 [B-25%]	B303626	264	1.00	03/24/22
22C1278-09 [B-50%]	B303626	282	1.00	03/24/22
22C1278-10 [B-75%]	B303626	253	1.00	03/24/22

**Prep Method: EPA 533-EPA 533**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [mL]</b>	<b>Final [mL]</b>	<b>Date</b>
22C1278-02RE1 [Mid]	B304213	250	1.00	03/29/22

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

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B303626 - EPA 533**
**Blank (B303626-BLK1)**

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorobutanoic acid (PFBA)	ND	1.9	0.30	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.44	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.28	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.41	ng/L							
11Cl-PF3OUdS (F53B Minor)	ND	1.9	0.56	ng/L							
9Cl-PF3ONS (F53B Major)	ND	1.9	0.46	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.37	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.91	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	1.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	0.40	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.53	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	0.31	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	1.5	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.41	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.35	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.31	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.55	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.51	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.37	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.52	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.36	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	0.43	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	0.59	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	0.47	ng/L							
Surrogate: M2-4:2FTS	30.7			ng/L	35.1		87.3	50-200			
Surrogate: M2-8:2FTS	37.7			ng/L	36.0		105	50-200			
Surrogate: MPFBA	34.3			ng/L	37.5		91.4	50-200			
Surrogate: M3HFPO-DA	40.3			ng/L	37.5		108	50-200			
Surrogate: M6PFDA	36.8			ng/L	37.5		98.3	50-200			
Surrogate: M3PFBS	36.3			ng/L	34.9		104	50-200			
Surrogate: M7PFUnA	42.0			ng/L	37.5		112	50-200			
Surrogate: M2-6:2FTS	28.0			ng/L	35.6		78.7	50-200			
Surrogate: M5PFPeA	35.5			ng/L	37.5		94.7	50-200			
Surrogate: M5PFHxA	40.0			ng/L	37.5		107	50-200			
Surrogate: M3PFHxS	30.6			ng/L	35.5		86.1	50-200			
Surrogate: M4PFHpA	34.3			ng/L	37.5		91.7	50-200			
Surrogate: M8PFOA	31.9			ng/L	37.5		85.1	50-200			
Surrogate: M8PFOS	32.4			ng/L	35.9		90.3	50-200			
Surrogate: M9PFNA	30.4			ng/L	37.5		81.1	50-200			
Surrogate: MPFDoA	42.0			ng/L	37.5		112	50-200			

**LCS (B303626-BS1)**

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorobutanoic acid (PFBA)	19.3	1.8	0.29	ng/L	17.9		108	70-130			
Perfluorobutanesulfonic acid (PFBS)	16.7	1.8	0.42	ng/L	15.9		105	70-130			
Perfluoropentanoic acid (PFPeA)	19.1	1.8	0.27	ng/L	17.9		107	70-130			
Perfluorohexanoic acid (PFHxA)	19.2	1.8	0.39	ng/L	17.9		107	70-130			
11Cl-PF3OUdS (F53B Minor)	20.4	1.8	0.53	ng/L	16.9		121	70-130			



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

**QUALITY CONTROL**

**Semivolatile Organic Compounds by - LC/MS-MS - Quality Control**

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B303626 - EPA 533**

**LCS (B303626-BS1)**

Prepared: 03/24/22 Analyzed: 03/28/22

9Cl-PF3ONS (F53B Major)	20.6	1.8	0.44	ng/L	16.7		123	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	16.3	1.8	0.35	ng/L	16.9		96.4	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	15.1	1.8	0.87	ng/L	17.9		84.5	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	19.0	1.8	0.99	ng/L	17.2		111	70-130			
Perfluorodecanoic acid (PFDA)	18.3	1.8	0.39	ng/L	17.9		102	70-130			
Perfluorododecanoic acid (PFDoA)	14.8	1.8	0.50	ng/L	17.9		82.7	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	16.3	1.8	0.30	ng/L	15.9		102	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	16.2	1.8	1.4	ng/L	17.1		94.5	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	18.7	1.8	0.39	ng/L	16.8		112	70-130			
Perfluorohexanesulfonic acid (PFHxS)	16.1	1.8	0.34	ng/L	16.4		98.3	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	20.2	1.8	0.30	ng/L	17.9		113	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	18.4	1.8	0.53	ng/L	17.9		103	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	20.0	1.8	1.0	ng/L	17.0		118	70-130			
Perfluoropetanesulfonic acid (PFPeS)	19.5	1.8	0.48	ng/L	16.8		116	70-130			
Perfluoroundecanoic acid (PFUnA)	19.9	1.8	0.36	ng/L	17.9		111	70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	16.6	1.8	0.49	ng/L	17.9		92.5	70-130			
Perfluoroheptanoic acid (PFHpA)	19.1	1.8	0.35	ng/L	17.9		107	70-130			
Perfluorooctanoic acid (PFOA)	19.2	1.8	0.41	ng/L	17.9		107	70-130			
Perfluorooctanesulfonic acid (PFOS)	17.3	1.8	0.56	ng/L	16.6		104	70-130			
Perfluorononanoic acid (PFNA)	21.0	1.8	0.45	ng/L	17.9		117	70-130			
Surrogate: M2-4:2FTS	33.9			ng/L	33.6		101	50-200			
Surrogate: M2-8:2FTS	36.7			ng/L	34.4		107	50-200			
Surrogate: MPFBA	37.2			ng/L	35.8		104	50-200			
Surrogate: M3HFPO-DA	46.5			ng/L	35.8		130	50-200			
Surrogate: M6PFDA	43.4			ng/L	35.8		121	50-200			
Surrogate: M3PFBS	40.6			ng/L	33.4		122	50-200			
Surrogate: M7PFUnA	46.2			ng/L	35.8		129	50-200			
Surrogate: M2-6:2FTS	32.0			ng/L	34.1		93.9	50-200			
Surrogate: M5PFPeA	39.5			ng/L	35.8		110	50-200			
Surrogate: M5PFHxA	46.8			ng/L	35.8		130	50-200			
Surrogate: M3PFHxS	34.4			ng/L	34.0		101	50-200			
Surrogate: M4PFHpA	41.9			ng/L	35.8		117	50-200			
Surrogate: M8PFOA	37.0			ng/L	35.8		103	50-200			
Surrogate: M8PFOS	37.3			ng/L	34.4		108	50-200			
Surrogate: M9PFNA	38.3			ng/L	35.8		107	50-200			
Surrogate: MPFDoA	49.4			ng/L	35.8		138	50-200			

**Matrix Spike (B303626-MS1)**

Source: 22C1278-03

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorobutanoic acid (PFBA)	21.6	2.0	0.32	ng/L	20.4	ND	106	70-130			
Perfluorobutanesulfonic acid (PFBS)	18.2	2.0	0.48	ng/L	18.0	ND	101	70-130			
Perfluoropentanoic acid (PFPeA)	21.3	2.0	0.31	ng/L	20.4	ND	105	70-130			
Perfluorohexanoic acid (PFHxA)	21.9	2.0	0.44	ng/L	20.4	ND	107	70-130			
11Cl-PF3OUdS (F53B Minor)	22.0	2.0	0.60	ng/L	19.2	ND	115	70-130			
9Cl-PF3ONS (F53B Major)	23.5	2.0	0.50	ng/L	19.0	ND	124	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.1	2.0	0.40	ng/L	19.2	ND	89.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	19.2	2.0	0.99	ng/L	20.4	ND	94.1	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	19.1	2.0	1.1	ng/L	19.5	ND	97.6	70-130			

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

**QUALITY CONTROL**
**Semivolatle Organic Compounds by - LC/MS-MS - Quality Control**

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B303626 - EPA 533**
**Matrix Spike (B303626-MS1)**
**Source: 22C1278-03**

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorodecanoic acid (PFDA)	23.9	2.0	0.44	ng/L	20.4	ND	118	70-130			
Perfluorododecanoic acid (PFDoA)	15.9	2.0	0.57	ng/L	20.4	ND	78.0	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	18.2	2.0	0.34	ng/L	18.1	ND	100	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	19.0	2.0	1.6	ng/L	19.4	ND	98.0	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	20.8	2.0	0.45	ng/L	19.0	ND	109	70-130			
Perfluorohexanesulfonic acid (PFHxS)	17.3	2.0	0.38	ng/L	18.6	ND	93.1	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	22.1	2.0	0.34	ng/L	20.4	ND	109	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	20.0	2.0	0.60	ng/L	20.4	ND	98.3	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	23.7	2.0	1.2	ng/L	19.3	ND	122	70-130			
Perfluoropetanesulfonic acid (PFPeS)	20.9	2.0	0.55	ng/L	19.1	ND	109	70-130			
Perfluoroundecanoic acid (PFUnA)	20.8	2.0	0.41	ng/L	20.4	ND	102	70-130			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	17.9	2.0	0.56	ng/L	20.4	ND	88.0	70-130			
Perfluoroheptanoic acid (PFHpA)	20.6	2.0	0.39	ng/L	20.4	ND	101	70-130			
Perfluorooctanoic acid (PFOA)	20.5	2.0	0.47	ng/L	20.4	ND	101	70-130			
Perfluorooctanesulfonic acid (PFOS)	19.9	2.0	0.64	ng/L	18.8	ND	106	70-130			
Perfluorononanoic acid (PFNA)	22.4	2.0	0.51	ng/L	20.4	ND	110	70-130			
Surrogate: M2-4:2FTS	33.7			ng/L	38.2		88.1	50-200			
Surrogate: M2-8:2FTS	41.5			ng/L	39.1		106	50-200			
Surrogate: MPFBA	44.0			ng/L	40.7		108	50-200			
Surrogate: M3HFPO-DA	45.7			ng/L	40.7		112	50-200			
Surrogate: M6PFDA	39.9			ng/L	40.7		98.1	50-200			
Surrogate: M3PFBS	45.1			ng/L	37.9		119	50-200			
Surrogate: M7PFUnA	47.4			ng/L	40.7		116	50-200			
Surrogate: M2-6:2FTS	32.0			ng/L	38.7		82.7	50-200			
Surrogate: M5PFPeA	46.1			ng/L	40.7		113	50-200			
Surrogate: M5PFHxA	50.9			ng/L	40.7		125	50-200			
Surrogate: M3PFHxS	40.6			ng/L	38.6		105	50-200			
Surrogate: M4PFHpA	46.9			ng/L	40.7		115	50-200			
Surrogate: M8PFOA	41.2			ng/L	40.7		101	50-200			
Surrogate: M8PFOS	39.8			ng/L	39.0		102	50-200			
Surrogate: M9PFNA	37.1			ng/L	40.7		91.1	50-200			
Surrogate: MPFDoA	49.8			ng/L	40.7		122	50-200			

**Matrix Spike Dup (B303626-MSD1)**
**Source: 22C1278-03**

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorobutanoic acid (PFBA)	22.5	1.9	0.31	ng/L	19.1	ND	118	70-130	4.37	30	
Perfluorobutanesulfonic acid (PFBS)	19.7	1.9	0.45	ng/L	16.9	ND	116	70-130	7.84	30	
Perfluoropentanoic acid (PFPeA)	22.6	1.9	0.29	ng/L	19.1	ND	118	70-130	5.78	30	
Perfluorohexanoic acid (PFHxA)	23.4	1.9	0.42	ng/L	19.1	ND	122	70-130	6.84	30	
11Cl-PF3OUdS (F53B Minor)	22.0	1.9	0.57	ng/L	18.0	ND	122	70-130	0.379	30	
<b>9Cl-PF3ONS (F53B Major)</b>	24.5	1.9	0.47	ng/L	17.8	ND	<b>137</b>	<b>*</b> 70-130	4.19	30	MS-22
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	18.1	1.9	0.37	ng/L	18.0	ND	100	70-130	5.41	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	17.8	1.9	0.93	ng/L	19.1	ND	93.3	70-130	7.10	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	20.2	1.9	1.1	ng/L	18.4	ND	110	70-130	5.78	30	
Perfluorodecanoic acid (PFDA)	20.2	1.9	0.41	ng/L	19.1	ND	106	70-130	16.8	30	
Perfluorododecanoic acid (PFDoA)	17.8	1.9	0.54	ng/L	19.1	ND	92.9	70-130	11.3	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	19.3	1.9	0.32	ng/L	17.0	ND	113	70-130	5.99	30	
Perfluoroheptanesulfonic acid (PFHpS)	18.9	1.9	1.5	ng/L	18.3	ND	103	70-130	0.820	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	21.0	1.9	0.42	ng/L	17.9	ND	118	70-130	1.27	30	

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

**QUALITY CONTROL**
**Semivolatle Organic Compounds by - LC/MS-MS - Quality Control**

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B303626 - EPA 533**
**Matrix Spike Dup (B303626-MSD1)**
**Source: 22C1278-03**

Prepared: 03/24/22 Analyzed: 03/28/22

Perfluorohexanesulfonic acid (PFHxS)	18.8	1.9	0.36	ng/L	17.5	ND	107	70-130	7.94	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	23.1	1.9	0.32	ng/L	19.1	ND	121	70-130	4.30	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	21.0	1.9	0.56	ng/L	19.1	ND	110	70-130	4.93	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	21.2	1.9	1.1	ng/L	18.2	ND	117	70-130	10.9	30	
Perfluoropentanesulfonic acid (PFPeS)	21.6	1.9	0.52	ng/L	18.0	ND	120	70-130	3.04	30	
Perfluoroundecanoic acid (PFUnA)	20.8	1.9	0.38	ng/L	19.1	ND	109	70-130	0.0563	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	19.5	1.9	0.53	ng/L	19.1	ND	102	70-130	8.60	30	
Perfluoroheptanoic acid (PFHpA)	21.9	1.9	0.37	ng/L	19.1	ND	114	70-130	6.13	30	
Perfluorooctanoic acid (PFOA)	21.0	1.9	0.44	ng/L	19.1	ND	110	70-130	2.40	30	
Perfluorooctanesulfonic acid (PFOS)	20.3	1.9	0.60	ng/L	17.7	ND	115	70-130	2.17	30	
Perfluorononanoic acid (PFNA)	22.0	1.9	0.48	ng/L	19.1	ND	115	70-130	1.86	30	
Surrogate: M2-4:2FTS	24.1			ng/L	35.9		67.2	50-200			
Surrogate: M2-8:2FTS	31.3			ng/L	36.7		85.4	50-200			
Surrogate: MPFBA	31.2			ng/L	38.3		81.5	50-200			
Surrogate: M3HFPO-DA	35.5			ng/L	38.3		92.8	50-200			
Surrogate: M6PFDA	29.2			ng/L	38.3		76.3	50-200			
Surrogate: M3PFBS	32.6			ng/L	35.7		91.3	50-200			
Surrogate: M7PFUnA	34.6			ng/L	38.3		90.5	50-200			
Surrogate: M2-6:2FTS	28.5			ng/L	36.4		78.4	50-200			
Surrogate: M5PFPeA	32.3			ng/L	38.3		84.3	50-200			
Surrogate: M5PFHxA	33.7			ng/L	38.3		88.0	50-200			
Surrogate: M3PFHxS	29.8			ng/L	36.3		82.3	50-200			
Surrogate: M4PFHpA	31.4			ng/L	38.3		82.0	50-200			
Surrogate: M8PFOA	28.4			ng/L	38.3		74.3	50-200			
Surrogate: M8PFOS	33.1			ng/L	36.7		90.3	50-200			
Surrogate: M9PFNA	26.7			ng/L	38.3		69.7	50-200			
Surrogate: MPFDoA	36.0			ng/L	38.3		94.2	50-200			

**Batch B304213 - EPA 533**
**Blank (B304213-BLK1)**

Prepared: 03/29/22 Analyzed: 04/01/22

Perfluorobutanoic acid (PFBA)	ND	1.8	0.28	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.42	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	0.27	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.39	ng/L							
11Cl-PF3OUdS (F53B Minor)	ND	1.8	0.53	ng/L							
9Cl-PF3ONS (F53B Major)	ND	1.8	0.44	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.35	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.87	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	0.38	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.50	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.8	0.30	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	1.4	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.39	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.34	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.30	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.53	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	1.0	ng/L							

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

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B304213 - EPA 533**
**Blank (B304213-BLK1)**

Prepared: 03/29/22 Analyzed: 04/01/22

Perfluoropetanesulfonic acid (PFPeS)	ND	1.8	0.48	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.35	ng/L							
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	ND	1.8	0.49	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.34	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	0.41	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.56	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	0.45	ng/L							
Surrogate: M2-4:2FTS	30.5			ng/L	33.4		91.3	50-200			
Surrogate: M2-8:2FTS	36.0			ng/L	34.2		105	50-200			
Surrogate: MPFBA	35.7			ng/L	35.6		100	50-200			
Surrogate: M3HFPO-DA	33.8			ng/L	35.6		94.9	50-200			
Surrogate: M6PFDA	34.9			ng/L	35.6		98.1	50-200			
Surrogate: M3PFBS	30.8			ng/L	33.2		92.7	50-200			
Surrogate: M7PFUnA	34.9			ng/L	35.6		98.0	50-200			
Surrogate: M2-6:2FTS	35.8			ng/L	33.9		106	50-200			
Surrogate: M5PFPeA	35.4			ng/L	35.6		99.3	50-200			
Surrogate: M5PFHxA	32.6			ng/L	35.6		91.5	50-200			
Surrogate: M3PFHxS	34.9			ng/L	33.8		104	50-200			
Surrogate: M4PFHpA	32.0			ng/L	35.6		89.8	50-200			
Surrogate: M8PFOA	35.5			ng/L	35.6		99.7	50-200			
Surrogate: M8PFOS	32.1			ng/L	34.1		94.2	50-200			
Surrogate: M9PFNA	31.5			ng/L	35.6		88.4	50-200			
Surrogate: MPFDoA	33.0			ng/L	35.6		92.8	50-200			

**LCS (B304213-BS1)**

Prepared: 03/29/22 Analyzed: 04/01/22

Perfluorobutanoic acid (PFBA)	9.32	1.8	0.29	ng/L	8.99		104	70-130			
Perfluorobutanesulfonic acid (PFBS)	8.03	1.8	0.42	ng/L	7.95		101	70-130			
Perfluoropentanoic acid (PFPeA)	9.11	1.8	0.27	ng/L	8.99		101	70-130			
Perfluorohexanoic acid (PFHxA)	9.45	1.8	0.39	ng/L	8.99		105	70-130			
11Cl-PF3OUdS (F53B Minor)	7.75	1.8	0.53	ng/L	8.46		91.6	70-130			
9Cl-PF3ONS (F53B Major)	8.19	1.8	0.44	ng/L	8.37		97.8	70-130			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	7.30	1.8	0.35	ng/L	8.46		86.2	70-130			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.46	1.8	0.88	ng/L	8.99		71.9	70-130			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.37	1.8	1.0	ng/L	8.63		97.1	70-130			
Perfluorodecanoic acid (PFDA)	9.57	1.8	0.39	ng/L	8.99		107	70-130			
Perfluorododecanoic acid (PFDoA)	7.75	1.8	0.51	ng/L	8.99		86.3	70-130			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	7.96	1.8	0.30	ng/L	8.00		99.5	70-130			
Perfluoroheptanesulfonic acid (PFHpS)	8.76	1.8	1.4	ng/L	8.58		102	70-130			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.76	1.8	0.40	ng/L	8.40		104	70-130			
Perfluorohexanesulfonic acid (PFHxS)	7.63	1.8	0.34	ng/L	8.22		92.8	70-130			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.36	1.8	0.30	ng/L	8.99		104	70-130			
Perfluoro-5-oxahexanoic acid (PFMBA)	8.57	1.8	0.53	ng/L	8.99		95.3	70-130			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.61	1.8	1.0	ng/L	8.54		101	70-130			
Perfluoropetanesulfonic acid (PFPeS)	7.70	1.8	0.49	ng/L	8.45		91.1	70-130			
Perfluoroundecanoic acid (PFUnA)	9.73	1.8	0.36	ng/L	8.99		108	70-130			
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	7.51	1.8	0.49	ng/L	8.99		83.6	70-130			
Perfluoroheptanoic acid (PFHpA)	8.94	1.8	0.35	ng/L	8.99		99.5	70-130			
Perfluorooctanoic acid (PFOA)	9.01	1.8	0.42	ng/L	8.99		100	70-130			

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

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

Analyte	Result	Reporting Limit	DL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B304213 - EPA 533**
**LCS (B304213-BS1)**

Prepared: 03/29/22 Analyzed: 04/01/22

Perfluorooctanesulfonic acid (PFOS)	8.34	1.8	0.57	ng/L	8.31		100	70-130			
Perfluorononanoic acid (PFNA)	9.86	1.8	0.45	ng/L	8.99		110	70-130			
Surrogate: M2-4:2FTS	32.1			ng/L	33.7		95.2	50-200			
Surrogate: M2-8:2FTS	46.1			ng/L	34.5		134	50-200			
Surrogate: MPFBA	37.5			ng/L	35.9		104	50-200			
Surrogate: M3HFPO-DA	39.4			ng/L	35.9		110	50-200			
Surrogate: M6PFDA	40.2			ng/L	35.9		112	50-200			
Surrogate: M3PFBS	32.1			ng/L	33.5		95.8	50-200			
Surrogate: M7PFUnA	39.4			ng/L	35.9		110	50-200			
Surrogate: M2-6:2FTS	35.7			ng/L	34.2		105	50-200			
Surrogate: M5PFPeA	38.6			ng/L	35.9		108	50-200			
Surrogate: M5PFHxA	36.5			ng/L	35.9		102	50-200			
Surrogate: M3PFHxS	35.3			ng/L	34.1		104	50-200			
Surrogate: M4PFHpA	37.6			ng/L	35.9		105	50-200			
Surrogate: M8PFOA	39.1			ng/L	35.9		109	50-200			
Surrogate: M8PFOS	34.7			ng/L	34.5		101	50-200			
Surrogate: M9PFNA	36.0			ng/L	35.9		100	50-200			
Surrogate: MPFDoA	35.6			ng/L	35.9		99.1	50-200			

**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
DL	Method Detection Limit
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-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.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>EPA 533 in Drinking Water</b>	
Perfluorobutanoic acid (PFBA)	VT-DW,ME,NJ,NH-P
Perfluorobutanesulfonic acid (PFBS)	VT-DW,ME,NJ,NH-P
Perfluoropentanoic acid (PFPeA)	VT-DW,ME,NJ,NH-P
Perfluorohexanoic acid (PFHxA)	VT-DW,ME,NJ,NH-P
11Cl-PF3OUdS (F53B Minor)	VT-DW,ME,NJ,NH-P
9Cl-PF3ONS (F53B Major)	VT-DW,ME,NJ,NH-P
4,8-dioxo-3H-perfluorononanoic acid (ADONA)	VT-DW,ME,NJ,NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	VT-DW,ME,NJ,NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	VT-DW,ME,NJ,NH-P
Perfluorodecanoic acid (PFDA)	VT-DW,ME,NJ,NH-P
Perfluorododecanoic acid (PFDoA)	VT-DW,ME,NJ,NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	VT-DW,ME,NJ,NH-P
Perfluoroheptanesulfonic acid (PFHpS)	VT-DW,ME,NJ,NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	VT-DW,ME,NJ,NH-P
Perfluorohexanesulfonic acid (PFHxS)	VT-DW,ME,NJ,NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	VT-DW,ME,NJ,NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	VT-DW,ME,NJ,NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	VT-DW,ME,NJ,NH-P
Perfluoropetanesulfonic acid (PFPeS)	VT-DW,ME,NJ,NH-P
Perfluoroundecanoic acid (PFUnA)	VT-DW,ME,NJ,NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	VT-DW,ME,NJ,NH-P
Perfluoroheptanoic acid (PFHpA)	VT-DW,ME,NJ,NH-P
Perfluorooctanoic acid (PFOA)	NH,NY,VT-DW,ME,NJ
Perfluorooctanesulfonic acid (PFOS)	NH,NY,VT-DW,ME,NJ
Perfluorononanoic acid (PFNA)	VT-DW,ME,NJ,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 Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
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

22C 1278



Phone: 413-525-2332

Fax: 413-525-6405

Access COC's and Support Requests

http://www.pacelabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Doc # 381 Rev 5\_07/13/2021

Page 1 of 2

Company Name:   
Address: **MSDC Central / PES**  
Phone: **625 Broadway Albany NY**  
Project Name: **Rollwell (SANG)**  
Project Location: **351 Mt Argill, New Windsor**  
Project Number: **Spill 336089**  
Project Manager: **Greg POS - Brown Newman**  
Pace Quote Name/Number:   
Invoice Recipient:   
Sampled By: **Michael Dudley**

Requested Turnaround Time			Discovered Matrix Samples			
7-Day	<input type="checkbox"/>	10-Day	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Field Filtered	
PFAS 10-Day (std)	<input type="checkbox"/>	Due Date:	<input type="checkbox"/>	<input type="checkbox"/>	Lab to Filter	
Rush-Approval Required			Orthophosphate Samples			
1-Day	<input type="checkbox"/>	3-Day	<input type="checkbox"/>	<input type="checkbox"/>	Field Filtered	
2-Day	<input type="checkbox"/>	4-Day	<input type="checkbox"/>	<input type="checkbox"/>	Lab to Filter	
Data Delivery						
Format:	PDF	<input type="checkbox"/>	EXCEL	<input type="checkbox"/>	<b>PCB ONLY</b>	
Other:						
CLP Like Data Pkg Required:	<input type="checkbox"/>				SOXHLET	<input type="checkbox"/>
Email To:					NON SOXHLET	<input type="checkbox"/>
Fax To #:						

Measured 5/3/23  
 PFAS

ANALYSIS REQUESTED

Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	Raw water	3-17-22	13:25	Grab	DW	0			3		
2	mid		13:20								
3	EFF		13:15								
4	DUP		13:05								
5	A-25%		14:00								
6	A-50%		13:50								
7	A-75%		13:45								
8	B-25%		13:40								
9	B-50%		13:35								
10	B-75%		13:30								

<sup>2</sup> Preservation Code

Courier Use Only

Total Number Of:

VIALS \_\_\_\_\_

GLASS \_\_\_\_\_

PLASTIC \_\_\_\_\_

BACTERIA \_\_\_\_\_

ENCORE \_\_\_\_\_

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

\*Pace Analytical is not responsible for missing samples from prepacked coolers

<sup>1</sup> Matrix Codes:

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

Relinquished by: (signature) *Michael Dudley* Date/Time: 3-17-22 16:00

Received by: (signature) *PAAC* Date/Time: 3-17-22 16:00

Relinquished by: (signature) *PAAC* Date/Time: 3-18-22

Received by: (signature) *PAAC* Date/Time: 3-18-22

Relinquished by: (signature) *PAAC* Date/Time: 3-18-22/535

Received by: (signature) *PAAC* Date/Time: 3/18/22/135

Relinquished by: (signature) *PAAC* Date/Time: 3/18/22/172

Received by: (signature) *PAAC* Date/Time: 3/18/22 1725

Client Comments: **CC: B.Neumann@pessmyinc.com \* Cat B Determinables**

Date/Time Limit Requirements	Special Requirements
MA <input type="checkbox"/>	MA MCP Required
CT <input type="checkbox"/>	MCP Certification Form Required
Other <input type="checkbox"/>	CT RCP Required
	RCP Certification Form Required
	MA State DW Required
PWSID #	NELAC and AIHA-LAP, LLC Accredited

Project Entity

Government  Municipality  MWRA  WRTA

Federal  21 J  School

City  Brownfield  MBTA

Other  Chromatogram

AIHA-LAP, LLC

<sup>2</sup> Preservation Codes:

I = Iced

H = HCL

M = Methanol

N = Nitric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

X = Sodium Hydroxide

T = Sodium Thiosulfate

O = Other (please define)

Comments:

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.



22C1278

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Doc # 381 Rev 5\_07/13/2021

39 Spruce Street  
East Longmeadow, MA 01028

http://www.pacelabs.com  
CHAIN OF CUSTODY RECORD

Phone: 413-525-2332  
Fax: 413-525-6405

Access, COC's and Support Requests

Address: 685 Blandford Hwy, Holyoke, MA  
Phone: 508-735-1111  
Project Location: 351 out of 4 rd new water  
Project Number: Spill 336089  
Project Manager: POS - Brian Robinson  
Pace Quote Name/Number:  
Invoice Recipient: M. Chan Daily

Sampled By: M. Chan Daily

Pace Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
	<u>EFF - MSO</u>	<u>3/17/22</u>	<u>13:15</u>	<u>Grab</u>	<u>DW</u>		<u>3</u>				
	<u>EFF - MS</u>	<u>3/17/22</u>	<u>13:15</u>	<u>↓</u>	<u>↓</u>		<u>3</u>				

Client Comments:

cc: brennan@psnynic.com X Cat B Delimites

Relinquished by (signature)	Date/Time:	3-17-22 16:00
Received by (signature)	Date/Time:	3-17-22 16:00
Relinquished by (signature)	Date/Time:	3-18-22
Received by (signature)	Date/Time:	3-18-22 15:30
Relinquished by (signature)	Date/Time:	3/18/22 17:20
Received by (signature)	Date/Time:	3/18/22 17:25

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std)	<input type="checkbox"/>	10-Day Due Date:	
1-Day	<input type="checkbox"/>	3-Day	<input type="checkbox"/>
2-Day	<input type="checkbox"/>	4-Day	<input type="checkbox"/>
Field Filtered Lab to Filter	<input type="checkbox"/>	Field Filtered Lab to Filter	<input type="checkbox"/>
Format: PDF	<input type="checkbox"/>	EXCEL	<input type="checkbox"/>
Other: SOXHLET	<input type="checkbox"/>	PCB ONLY	<input type="checkbox"/>
CLP Like Data Pig Required:	<input type="checkbox"/>	NON SOXHLET	<input type="checkbox"/>

Preservation Code

Courier Use Only	Total Number Of:
VIALS	
GLASS	
PLASTIC	
BACTERIA	
ENCORE	

Matrix Codes:

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

Preservation Codes:

- I = Iced
- H = HCL
- M = Methanol
- N = Nitric Acid
- S = Sulfuric Acid
- B = Sodium Bisulfate
- X = Sodium Hydroxide
- T = Sodium Thiosulfate
- O = Other (please define)

Matrix Codes:

- MA MCP Required
- MCP Certification Form Required
- CT RCP Required
- RCP Certification Form Required
- MA State DW Required
- PWSID #

Project Entity

Government	<input type="checkbox"/>	Municipality	<input type="checkbox"/>	MWRA	<input type="checkbox"/>	WRMA	<input type="checkbox"/>	Other	<input type="checkbox"/>
Federal	<input type="checkbox"/>	21 J	<input type="checkbox"/>	School	<input type="checkbox"/>	MBTA	<input type="checkbox"/>	Chromatogram	<input type="checkbox"/>
City	<input type="checkbox"/>	Brownfield	<input type="checkbox"/>					AIHA-LAP, LLC	<input type="checkbox"/>

NECAC and AIHA-LAP, LLC Accredited

Disclaimer: Pace Analytical is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Pace Analytical values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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 NYSDEL - Central / PES

Received By DK Date 3/18/02 Time 1725

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 - 2-0  
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 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? NA MS/MSD? F

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

Were trip blanks received? F On COC? T

Do all samples have the proper pH? AK Acid T 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	<u>30</u>	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: