NEW YORK STATE | Department of Environmental Conservation

Meadow Pond Elementary School

PFAS INVESTIGATION (SPILL NO. 2100460)

LEWISBORO, NY

June 2024

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1.0 Introduction

The Meadow Pond Elementary School (MPES), located in the Town of Lewisboro, is served by one drinking water supply well located on the property. As required by the State's public water supply regulations, public water systems across NYS began monitoring for PFOA, PFOS, and 1,4-dioxane in 2020. Initial sampling for PFOA, PFOS, and 1,4-dioxane was conducted by the Meadow Pond School in February 2021. Results showed levels of PFOA and PFOS above New York State (NYS) maximum contaminant levels (MCLs) at concentrations of 409 parts per trillion (ppt) and 135 ppt, respectively. In consultation with Westchester County Department of Health (WCDOH) and the NYS Department of Health (DOH), MPES was issued a Do Not Drink advisory on March 17, 2021. (MPES has been on bottled water since October 2018, as a precautionary measure due to elevated chloride and uranium levels detected in the supply well.) Retesting of the supply well in March 2021 confirmed that both PFOA and PFOS exceeded the MCLs, measuring 457 ppt and 129 ppt, respectively.

While NYS does not regulate private wells, out of an abundance of caution State and County DOH and DEC conducted a private well evaluation near the school involving testing of nearby private wells for per- and polyfluoroalkyl substances (PFAS). Sampling was conducted within an area of interest proximate to the school. Several homes had concentrations of PFOA and/or PFOS above the NYS MCLs. Exposures were addressed by providing residents with an alternate water supply.

DEC has performed desktop reviews and field reconnaissance of the school property and has not identified an obvious industrial or commercial source for PFAS contamination on or near the school property. There have been unsubstantiated allegations of aqueous film forming foam (AFFF) being discharged at the school during demonstration events or hose cleaning activities. DEC conducted a thorough interview with the local Vista Fire Department and they asserted that only dry training activities occur at the school, which are common for testing fire alarms and emergency preparedness.

Absent an obvious industrial or commercial source, wastewater generated onsite is being considered as a potential source for PFAS at the school. PFAS have been documented to be found in floor waxes, and other industrial cleaning products in peer reviewed literature (New Hampshire Department of Environmental Services, 2024). A number of these cleaning products are used by MPES maintenance staff.

Ultimately, a spill investigation was opened to determine if there is an exterior source for PFAS contamination, such as an unreported spill or use of AFFF on or near the school property. Additionally, sampling activities aimed at determining if septic effluent containing PFAS can be contributing to levels found in the school supply well were conducted.

In the fall of 2023, DEC completed a preliminary investigation at the MPES where contamination was initially identified. Field activities and subsequent environmental sample results are described herein.

2.0 Location

2.1 Area of Interest

The MPES is located in the Town of Lewisboro at the intersection of NYS Route 123 and Deer View Lane. The school property is bounded by NYS Route 123 to the west, and Deep Well Farms Rd to the east. The immediate surrounding area is primarily residential with no known commercial or industrial operations in the vicinity. A topographic map showing the MPES and surrounding land features is provided on **Figure 1**.

2.2 Geology and Hydrogeology

Surficial geology in the area consists of glacial till of variable thickness, between 3 and 150 feet (NYS Museum, 2003). Bedrock geology underlying the immediate area consists of Ordovician age basal amphibolite overlain by pelitic schists.

Groundwater depth across the site ranged from ranged from 17 feet below ground surface (bgs) to 22.5 feet bgs. Flow is generally toward the northeast.

2.3 Property Features and Use

The MPES property consists of a 12.14-acre parcel identified on Westchester County tax maps as parcel number 66.1-3-9. The parcel consists of the MPES school buildings, parking lots, and athletic fields. The main school building and parking lot is located on the northern half of the property and is accessible from Deer View Lane. Athletic fields and a smaller parking lot are located on the south side of the school. The MPES septic system is located in the center eastern portion of the parcel, to the immediate south of the main school building. The school's drinking water supply well is located on the north side of the school near the loading dock and the main parking lot.

A map showing the MPES and above-referenced features can be found on **Figure 2**.

2.4 Property History and Past Use

According to historical aerial imagery and from interviews with local and school officials, the MPES was constructed in 1967. Prior to 1967, the land was undeveloped. Additions to the elementary school were constructed between 1995 and 2005. These additions included a new library space, gym annex, and additional classrooms.

2.5 Topography and Drainage

The MPES property generally grades from the school building on the northern end of the property towards Deep Well Farms Road to the east. The northern half of the school property, including the front lawn, parking lot, and main school facility, are relatively flat.

Several surface water culverts and drainage ways are present throughout the property including along Deep Well Farms Rd.

3.0 Investigation Activities

Investigation field activities described in this section were completed by Precision Environmental Services of NY, Inc (Precision) and DEC in August, November, and December of 2023 in accordance with the *PFAS Assessment Work Plan, Meadow Pond School (August 2023)* developed and provided by DEC.

The completed field activities included the following:

- Catch basin water sampling;
- Surface soil sampling;
- Split spoon soil borings and subsurface soil sampling;
- Monitoring well installations;
- Groundwater sampling; and
- School cleaning product and floor stripping wastewater sampling

Field activities and associated field implementation methods are described in **Sections 3.1** through **3.5** below and are consistent with DEC's *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)*, April 2023 guidance document (DEC, 2023). Equipment and materials compatible with DEC recommendations for the collection and sampling of PFAS were used for each sampled media (i.e., stainless steel, high-density polyethylene [HDPE], and poly-vinyl chloride [PVC]). Water used for equipment decontamination was verified to be PFAS-free by public water supply data. A map showing the completed sample locations is presented on **Figure 3**.

Standard chain-of-custody procedures were followed for all collected samples. Laboratory quality assurance/quality control (QA/QC) samples including field duplicates and matrix spike/matrix spike duplicates (MS/MSDs), were collected where sample volume allowed at a minimum frequency of 1 per 20 samples. Field QA/QC samples including equipment blanks were collected at a frequency of one per day. All standard environmental samples were submitted to Pace Analytical (East Longmeadow, MA), with additional cleaning product samples delivered to Eurofins Environment Testing (Lancaster, PA) and artificial sweetener samples delivered to Eurofins Eaton Analytical, LLC (South Bend, IN). DEC Category B data deliverable packages were requested for all standard environmental samples and cleaning product samples.

3.1 Catch Basin Water Sampling

Catch Basin water sampling was completed by the DEC on December 6, 2023. Samples were collected at 6 locations in total (CB-01 through CB-06). Sample locations are displayed on **Figure 3**. Multiple catch basins were sampled along Deep Well Farms Rd. and on the school's property to assess potential surface water migration pathways for PFAS contamination.

No visual evidence of contamination was observed during the collection of any catch basin water sample. Catch basin water samples were collected using a stainless-steel cup. Water was then transferred directly from the stainless-steel cup into laboratory supplied sample bottles. The stainless-steel cup was decontaminated between sampling locations using Alconox and clean, PFAS-free water. All samples were preserved in a cooler with ice and submitted to Pace Analytical for the analysis of PFAS (40 compound list) by USEPA Method 1633.

3.2 Surface and Subsurface Soil Investigation

3.2.1 Private Utility Survey

Prior to the commencement of ground-intrusive activities, Precision confirmed that the drilling subcontractor, AARCO Environmental Services (AARCO), contacted Dig Safely New York, received/reviewed confirmation receipts from each utility, and verified public mark-outs prior to intrusive work.

On November 3, 2023, a private utility survey was conducted by Ground Penetrating Radar Systems (GPRS), to identify any subsurface utilities or anomalies within a 10-foot radius around each of the proposed soil boring/monitoring well locations. GPRS also identified underground utilities within 100 feet of the school building and attempted to confirm the extent of the septic system. Any detected subsurface structure within the investigated radius was identified on the ground surface with paint.

3.2.2 Community Air Monitoring

In accordance with DOH's Generic Community Air Monitoring Plan (CAMP) (DER-10, Appendix 1A), air monitoring was conducted during all ground intrusive investigation activities. The CAMP included monitoring for both fugitive dust and organic vapors.

Two CAMP enclosures were deployed at the work site on a daily basis; one in the upwind direction and one in the downwind direction of the drill rig. Both enclosures contained a Dust Trak II unit for dust monitoring and MiniRae 3000 photo-ionization detector (PID) for organic vapor monitoring. Additionally, one handheld PID was utilized within the work area to field screen soil samples/drill cuttings and monitor breathing air vapor concentrations.

The action levels were not exceeded (for either fugitive dust or organic vapors) during any of the ground intrusive activities.

3.2.3 Surface and Subsurface Soil Investigation

Between November 6 and November 10, 2023, AARCO installed 12 soil borings (SB-1 through SB-12) utilizing a split spoon hollow stem auger to terminal depths ranging from 6 to 22.5 feet below ground surface (bgs), the depth of drilling refusal or encountered groundwater table. Continuous soil cores were then collected from each boring location utilizing 2-inch diameter by 2-foot long stainless steel split spoon samplers. The locations of the completed soil borings were targeted around the perimeter of the property and around the presumed location of the septic system (**Figure 2).** Soil cores were visually classified and screened for the visual, olfactory, and photo-ionic evidence of contamination by Precision. The boring logs are provided in **Appendix B**.

Generally, dependent on boring depth and volume of soil recovered, two to three soil samples were collected from each boring location for laboratory analysis. Soil samples consisted of one surface soil sample collected just beneath the vegetative layer (0-2"), a near surface soil sample (2"-12") collected in the top 12", and a subsurface soil sample just above the observed groundwater table, at evidence of contamination, or at terminal depth if groundwater was not encountered. Elevated PID readings, visual, or olfactory signs of contamination were not identified in any completed soil boring and as a result, soil samples were collected above the water table or at terminal depth. Boreholes that were not selected for temporary well installations were backfilled with soil cuttings.

From the 12 soil borings, a total of 34 soil samples were collected. Soil was deposited into a stainless-steel bowl and homogenized before placing into the laboratory supplied sampling container. All samples were preserved in a cooler with ice and submitted to Pace Analytical for the PFAS (40 compound list) by USEPA Draft Method 1633. Additional QA/QC samples collected included 1 duplicate samples, 1 matrix spike samples, and 1 matrix spike duplicate samples. A subset of samples from the 2"-12" interval were additionally analyzed for pH by EPA Method 9045, total organic carbon (TOC) by Lloyd Kahn, and PFAS in leachate generated from the Synthetic Precipitation Leaching Procedure (SPLP) by EPA Method 1312.

3.3 Groundwater Investigation

3.3.1 Monitoring Well Installation

Seven overburden groundwater monitoring wells (MW-1, MW-3, MW-6, MW-7, MW-9, MW-10, and MW-12) were installed immediately after the respective soil boring was installed. Permanent wells were constructed utilizing 2-inch ID PVC riser and 10-feet of 0.01-inch slot screen and solid riser to grade. The annulus between the well PVC and the borehole wall was backfilled with No. 1 well sand around the well screen, followed by approximately 1 foot of bentonite, and then soil cuttings obtained from that borehole. Final well terminal depths ranged from 17 feet bgs (MW-3) to 22.5 feet bgs (MW-10). Monitoring well logs are provided in Appendix B. The locations of monitoring wells can be found on **Figure 2**.

Monitoring Well Information				
Well Name	Depth of well (ft)	Screen Length (ft)	Top Of Casing Elevation (ft)	Depth to Water (ft)
MW-1	20	9-20	724.72	13.71
MW-3	17	12-17	729.66	14.38
MW-6	20	10-20	732.05	17.09
MW-7	20	10-20	730.29	15.32
MW-9	21	11-21	728.77	15.18
MW-10	22.5	12.5-22.5	729.88	12.68
MW-12	20.7	10.7-20.7	735.46	12.75

3.3.2 Groundwater Sampling

Groundwater sampling occurred on November 21, 2023, November 28, 2023, and December 6, 2023. Groundwater grab samples were collected from seven overburden groundwater wells (MW-1, MW-3, MW-6, MW-7, M-9, MW-10, and MW-12) and one sample from an outdoor spigot nearest to the school's supply well. Samples from the well locations were collected using either HDPE bailers or a peristaltic pump equipped with HDPE and silicone tubing. Groundwater parameters (pH, conductivity, ORP, DO, and turbidity) were noted at time of sampling if adequate sample volume was present.

Groundwater Parameters								
Parameters								
Sample	Sample Date	Sample Time	Temperature (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
MW-1	11/28/2023	1100	14.44	6.08	189	9.83	214	2.35
MW-3[1,2]	11/21/2023	1440	-	-	-	-	-	-
MW-6[1,2]	11/21/2023	1315	-	-	-	-	-	-
MW-7[2]	11/21/2023	1410	9.94	6.2	115	0.17	0	8.26
MW-9	11/28/2023	940	13.33	6.03	215	0.339	-	3.39
MW-10	11/21/2023	1115	12.33	6.91	-119	0.627	0	1.22
MW-12	11/21/2023	1020	10.64	6.52	118	0.25	0	8.21

[1] Location did not yield sufficient water for the collection of groundwater parameters or turbidity was too high.

[2] Additional samples were collected on December 6th, 2023.

Samples were collected in laboratory supplied bottles, placed on ice, and submitted to the appropriate laboratory for analysis of PFAS (40 compound list) by USEPA draft Method 1633, artificial sweeteners (Acesulfame K, Sucralose), and hydrogeochemical parameters (Alkalinity to pH 4.5, Bicarbonate, Biochemical Oxygen Demand (BOD), Boron, Bromide, Calcium, Carbonate as CO3, Chloride as Cl, Chemical Oxygen Demand (COD), Hardness as CaCO3, Magnesium, Nitrogen, Ammonia (As N), Nitrogen, Total Kjeldahl, Nitrogen Nitrate, pH, Phosphorus, Total Orthophosphate, Potassium, Sodium, Sulfate, Total Dissolved Solids, and Total Organic Carbon. Additional QA/QC samples included a field duplicate, a matrix spike, and a matrix spike duplicate.

3.3.2 Supply Well Sampling

Supply well sampling occurred on December 6, 2023. DEC personnel located a spigot near the loading dock and closest to the supply well for sampling purposes. The spigot is not used for drinking water purposes. The spigot was turned on for 10 minutes to ensure that stagnant water was not sampled, and groundwater representative of the formation was collected. One sample and one duplicate were collected from the spigot. The results of this sampling were meant to assess the potential load of PFAS from current supply water to the school's septic system as well as cleaning operations.

3.4 Product and Wastewater Sampling

3.4.1 Wastewater Sampling

The use of PFAS in formulations of floor waxes and cleaning products has been well documented in literature (Zhou, 2022, Nordic Council, 2017). One potential source identified was the discharge from the floor stripping machine used during routine cleaning and maintenance activities. To assess this possibility, a targeted wastewater sampling event was conducted on August 29, 2023. The sampling point was chosen to capture the wastewater directly from the discharge basin of the floor stripping machine. A grab sample was collected and sent to Pace for analysis.

3.4.2 Product Sampling

DEC interviewed the school janitorial staff to understand what products are used most frequently and in highest volume, and what cleaning processes generate the greatest quantity of wastewater. Ten individual products were identified for sample collection and are provided in the table below.

Cleaning Products	
Name (sample code)	Purpose
Morning Mist (MM)	Disinfectant Cleaner
Raindance (Rain)	Floor Cleaner
Hot Springs (HS)	General Purpose Cleaner
CFR (CFR)	Defoamer
Ironstone (IS)	Floor Sealer
Vectra (VEC)	Floor Wax
G-Force (GF)	Multi-surface Cleaner
Facilpro 34 (F34)	Floor Cleaner
Buckeye (BI)	Defoamer
Simoniz (SIM)	Defoamer

Samples of each product were poured directly into laboratory provided containers and were preserved in a cooler with ice and submitted to Eurofins for pre and post TOP (Total Oxidizable Precursor) assay analysis via method 537. The TOP assay is a method that oxidizes unknown PFAS precursors into more stable PFAS with available analytical methods. Samples were exposed to the harshest conditions in the laboratory and are not likely representative of the exact oxidation processes that occur in the environment. Considering that these products will undergo various stages of oxidation once released into the environment, it is important to understand the potential for PFAS transformation and mobility. The results of product sampling coupled with available data on school water usage can be used to extrapolate the potential for PFAS to enter the school's septic system.

Through use of the geochemical parameter testing outlined below, these results may be used to conclude if the school's septic system is a contributor to PFAS contamination.

3.4.3 Hydrogeochemical Parameter Sampling

To better understand surface water/groundwater interactions and to determine the level of septic effluent persistence in shallow groundwater a comprehensive suite of hydrogeochemical variables and water quality parameters were analyzed. The complete list of analytes can be found in the table below.

Hydrogeochemical Parameters	
Name	Description
Alkalinity to pH 4.5	Indicates the presence of bicarbonate, carbonate, and hydroxide ions
Bicarbonate	Major anion. Results from the dissolution of minerals and atmospheric interaction
Biochemical Oxygen Demand (BOD)	Measures the amount of oxygen consumed by microorganisms during organic matter decomposition. High BOD indicates organic pollution, impacting dissolved oxygen levels
Boron	Trace element. Conservative and can be used to track groundwater flow
Bromide	Trace element. Conservative and can be used to track groundwater flow
Calcium	Major cation. Used to assess water hardness and mineral content
Carbonate (As CO_3)	Major anion. Results from the dissolution of minerals and atmospheric interaction
Chloride (As Cl)	Major anion. may indicate seawater intrusion or contamination from road salt, wastewater, or fertilizers
COD - Chemical Oxygen Demand	Measures organic matter content based on oxygen needed for oxidation
Hardness (As $CaCO_3$)	Reflects the concentration of calcium and magnesium ions
Magnesium	Major cation. Also used to assess water hardness and mineral content
Nitrogen, Ammonia (As N)	May indicate organic decay and fertilizer runoff
Nitrogen, Kjeldahl, Total	Organic and ammonia nitrogen
Nitrogen, Nitrate (As N)	Results from nitrogen oxidation
Phosphorus, Total Orthophosphate (As P)	Ortho-P reflects nutrient availability
Potassium	Minor cation. Used to assess mineralization of groundwater and agricultural runoff
Sulfate (As SO_4)	Major anion. Reflects mineral dissolution processes
Total Dissolved Solids (Residue, Filterable)	Represents all dissolved ions and substances
Total Organic Carbon	Measures organic carbon content

As discussed in the previous section, the groundwater table is shallow throughout the school property. As a result, its physical and chemical characteristics can be impacted by surface activities, such as the application of road salt, use of fertilizers, or subsurface contributions from septic field effluent.

Groundwater samples were collected via two methods: low-flow sampling and bailer. The results of this first phase of sampling have revealed that the two sampling methods have a wide range of results for the geochemical parameter directly influenced by the amount of dissolved and suspended solids.

A follow-up sampling event using only low-flow methodology is planned for the summer of 2024.

4.0 Discussion of Results

The following subsections discuss the regulatory standards, criteria, and guidance (SCGs) used to evaluate all field observations and sample analytical results. Data collected for this project has not been validated. The complete laboratory reports provided by Pace Analytical and Eurofins TestAmerica are provided in **Appendix C**.

4.1 Standards, Criteria, and Guidance

The SCGs used to evaluate the storm water, soil, and groundwater analytical results are outlined below:

- **Catch Basin Water** – Results were conservatively compared to NYSDEC Guidelines for Sampling and Analysis of PFAS, June 2021 NYSDEC TOGS 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values and Groundwater Effluent Limitations, Class A, June 1998 and 2023 Addendum.
- **Soil** – NYSDEC Guidelines for Sampling and Analysis of PFAS, April 2023.
- **Groundwater** – NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Class GA, June 1998 and 2023 Addendum.

4.2 Catch Basin Water Results

A summary of the surface water analytical results is presented below. PFOA and PFOS results for catch basin water samples can be found on **Figure 4**. A summary of the catch basin water sample analytical results can be found in **Table 1**.

CB-06, which is the closest catch basin to the school's supply well, had a total depth of approximately 30 feet. Depth to water at CB-06 was approximately 15 feet.

PFAS compounds were detected in all six catch basin water samples collected, (CB-1 through CB-6), PFOS was detected in all six catch basin samples, ranging from 0.45 ppt to 100 ppt, exceeding the 2.7 ppt NYS AWQS guidance value at locations CB-1, CB-3, and CB-6. PFOA was detected in all six catch basin water samples with detections ranging from 0.51 ppt to 370 ppt, exceeding the 6.7 ppt NYS AWQS guidance value at locations CB-1, CB-3, and CB-6. CB-6, located closest to the school's supply well had the highest detection of PFOA with a value of 370 ppt. CB-1, located at the eastern edge of the school's property near the entrance to the print shop, had the second highest detection of PFOA with a value of 33 ppt. Other PFAS compounds that were detected, but do not have corresponding SCGs or MCLs include:

PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFDoA, PFBS, PFPeS, PFHxS, PFHpS, PFDS,6:2 FTS, PFOSA, NEtFOSA, and NEtFOSAA. These detections ranged from 0.22 ppt to 550 ppt.

4.3 Supply Well Water Results

The supply well water analytical results are summarized below. PFOA and PFOS results for the supply well spigot sample can be found on **Figure 5**. A summary of the supply well spigot sample analytical results is presented in **Table 2**.

PFOS was detected at 240 ppt. PFOA was detected at 480 ppt. Other PFAS compounds that were detected, but do not have corresponding SCGs or MCLs include: PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFDoA, PFBS, PFPeS, PFHxS, PFHpS, ,6:2 FTS, and PFOSA. These detections ranged from 1.3 ppt to 610 ppt.

4.4 Wastewater Results

A summary of the wastewater analytical results is presented below. A summary of the wastewater analytical results can be found in **Table 3**.

PFOS was detected in this sample at 270 ppt. PFOA was detected in this sample at 680 ppt. Other PFAS compounds that were detected, but do not have corresponding SCGs or MCLs include: PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFDoA, PFBS, PFPeS, PFHxS, PFHpS, 6:2 FTS, and PFOSA. These detections ranged from 6.7 ppt to 1,800 ppt.

4.5 Soil Results

As observed from the 12 soil borings, soils primarily consisted of silt and sand, with varying amounts of gravel. Soils encountered during this investigation are consistent with regional surficial and bedrock geology (as described above in **Section 2.2**). Shallow groundwater was encountered in 11 borings and ranged from 6 feet bgs (SB-8) to 22.5 feet bgs (SB-10).

At all boring locations, screened soils did not exhibit any visual, olfactory, or photo-ionic evidence of contamination. PID measurements were less than 1.0 ppm for all field screened soils.

A summary of the soil analytical results is provided below. PFOA and PFOS soil samples results can be found on **Figure 6**. A summary of the soil sample analytical results is provided in **Tables 4, 5, and 6**.

Of the 34 soil samples submitted for analysis, 34 sampled intervals across 12 locations had one or more PFAS compounds detected. PFOA was detected at 18 intervals across 12 locations and ranged in concentration from 0.045 µg/kg to 0.69 µg/kg, all below the Unrestricted Use guidance value of 0.66 µg/kg with the exception of the 2-12'' interval at SB-11 with a value of 0.69 µg/kg. PFOS was detected at 23 sampled intervals across 12 locations and ranged in concentration from 0.039 µg/kg to 1.8 µg/kg. PFOS was detected above the Unrestricted Use guidance value of 0.88 µg/kg, and above the Protection of Groundwater guidance value of 1.0 µg/kg in samples SB-4 (2-in); SB-5 (2-in & 12-in); SB-9 (2-in &12-in); SB-12 (2-in & 12-in). Other PFAS compounds that were detected, but do not have corresponding guidance values include: PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFDoA, PFBS, PFPeS, PFHxS, PFHpS, PFDS,6:2 FTS, PFOSA, NEtFOSA, and NEtFOSAA. These detections ranged from 0.69 µg/kg to 7.6 µg/kg.

A summary of the SPLP analytical results is provided below. A summary of the soil sample analytical results is provided in **Table 6**.

Of the 7 soil samples submitted for analysis, 7 sampled intervals across 6 locations had one or more PFAS compounds detected. PFOA was detected at 5 intervals across 6 locations and ranged in concentration from 2.6 ng/l to 6.6 ng/l and were all below the ambient water quality guidance value of 6.7 ppt. PFOS was detected at 6 intervals across 6 locations and ranged in concentration from 2 ng/l to 23 ng/l. PFOS was detected above the ambient water quality guidance value of 2.7 ppt at 3 locations; SB-3, SB-6, and SB-12. Other PFAs compounds that were detected, but do not have corresponding guidance values include: PFBA, PFDS, PFDA,PFHpA, PFHxA, PFNA, and PFPeA. These detections ranged from 0.88 ng/l to 7.6 ppt.

4.5 Groundwater Results

MW-03, the monitoring well closest to the school's supply well, was measured to have a depth of 15.56 feet. Depth to water was measured at 13.91 feet.

A summary of the groundwater analytical results is provided below. PFOA and PFOS results for groundwater samples can be found on **Figure 5**. A summary of the groundwater analytical results is presented in **Table 2 and Table 7**.

Seven groundwater grab samples were collected. Of those, 7 well locations had one or more PFAS compounds detected. PFOS was detected in 2 wells, with one well exceeding the AWQS guidance value of 6.7 ppt, with concentrations ranging from 3.1 ppt to 570 ppt. PFOA was detected in 4 wells, with concentrations ranging from 0.49 ppt to 260 ppt. Three locations, MW-1 located on the northeastern corner of the school property, MW-9 located near the playground on the east side of the school property, and MW-12 located on the southwestern most side of the school property, exhibited concentrations above the AWQS guidance value of 2.7 ppt at 19 ppt, 18 ppt, and 260 ppt, respectively. Other PFAS compounds that were detected, but do not have corresponding SCGs or MCLs include: PFBA, PFPeA, PFHxA PFHpA, PFNA, PFDA, PFUnA, PFDoA, PFTrDA, PFTeDA, PFBS, PFPeS, PFHxS, and PFHpS. These detections ranged from 0.95 ppt to 610 ppt.

4.6 Cleaning Product Results

A summary of the cleaning product analytical results is presented below. A summary of the cleaning water analytical results can be found in **Tables 8 and 9**.

PFOS was detected in one sample (Gforce) pre-TOP at 7.3 ppb. PFOA was not detected at any pre-TOP sample. Other PFAS compounds that were detected pre-TOP include 5:3 FTCA, NMeFOSE, PFBS, and PFBA. These detections ranged from 1.5 ppb to 140 ppb. The product that had the highest total PFAS concentration pre-TOP was Hotsprings, with a total PFAS detection of 180 ppb.

PFOS was detected in two samples post-TOP (GForce and Vectra) at 1.9 ppb and 2.1 ppb, respectively. PFOA wasn't detected in any sample post-TOP. Other PFAS compounds detected post-TOP include 3:3 FTCA, HFPO-DA, NEtFOSE, NMeFOSE, PFDS, PFHpA, and PFPeA. These detections ranged from 1.3 ppb to 610 ppb. The product that had the highest total PFAS detection post-TOP was Vectra with a total PFAS detection of 942 ppb.

4.7 Hydrogeochemical Parameter Results

Initial results show that MW-1 and MW-3 (located in paved areas) present high chloride levels, 5200 and 2800 mg/L respectively, indicating influence from road salt application. MW-7,MW-9 and MW-10 (located in unpaved areas) show chloride levels 3 orders of magnitude lower. Similarly, MW-6, located in the grass near the sidewalk, presented elevated levels of Calcium, Magnesium and Potassium which are also present in ice melting products and reportedly applied on the sidewalks.

Total Dissolved Solids (TDS) for MW-1 and MW-3 are respectively, 5,200 and 2,800 mg/L. These wells were sampled with hand bailers, which is known to increase turbidity and consequently TDS.

Total Kjeldahl Nitrogen measures organic Nitrogen, which could be associated with proteins from the influence of septic wastewater. MW-6, the closest to the septic field, was the location that presented the highest level of Kjeldahl Nitrogen at 13 g/L. The remaining Monitoring Wells showed results between 0.6 and 2.8 g/L.

Boron is an ingredient in cleaning products and is generally found at lower levels in the environment and can therefore be used as tracer for potential contamination by septic fields (USGS, 2006). Levels of boron were detected in MW-3 and MW-6, at 0.04 and 0.03 mg/L respectively.

Analysis of samples from MW-3 and MW-6 also detected artificial sweeteners (0.33 μg/L of sucralose in MW-3 and 0.02 μg/l of acesulfame-k in MW-6). Sweeteners were also utilized in this suite of additional analytes as an indicator of septic effluent. Artificial sweeteners do not readily breakdown in the environment and pass through septic systems (Sang et. Al, 2014). Their presence in groundwater, when not located to other sources for artificial sweeteners (landfills, factories, etc.), can be an indicator for septic contributions.

Artificial sweeteners were detected in MW-12 at 0.26 ug/L. This well is located south of the septic field. Additionally, this well presented the highest levels of total PFAS at 1,509 ng/L while MW-10, located on the southeastern side of the school had a total PFAS level three orders of magnitude lower at 3.1 ng/L.

4.8 PFAS Fingerprinting Results

A summary of the PFAS fingerprinting results is presented below. A summary of the wastewater, supply well water, and catch basin stormwater can be found in **Figures 8 and 9**.

Radar plots enable a visual comparison of the relative abundance of multiple variables across different samples. In the context of PFAS analysis, these can be likened to a “fingerprint” of the specific composition of PFAS compounds present in a sample. The plot can reveal if the contamination originates from a common source, with a common signature or if different sources are contributing (dissimilar signatures). Additionally, the relative prominence of each spoke in the plot can indicate the presence of dominant PFAS compounds, which can be helpful in identifying potential source categories (e.g., long-chain PFAS vs. shorter-chain PFAS).

The radar plots in **Figure 9** shows the relative concentrations of various PFAS compounds in wastewater, stormwater drain (CB-06), and tap water samples. While the PFAS signatures appear to be similar across all three samples, the concentration magnitudes are notably different. The wastewater sample exhibits the highest concentrations of all PFAS compounds detected, with the highest order of magnitude in shorter chain compounds, PFPeA and PFHxA. The stormwater catch basin sample (CB-06) shows lower concentrations of the same PFAS compounds compared to the wastewater sample, with the exception of PFDOA.

The supply well water sample exhibited similar concentrations to CB-06, with a notably higher concentration of PFOS at 240 ppt. It is important to note that the wastewater generated during cleaning operations originates from the supply well water, therefore it is reasonable to expect that the PFAS signature observed in the tap water sample would also be present in the wastewater, at a higher concentration. The wastewater radar plot shows significantly higher concentrations for all PFAS compounds compared to the tap water, which suggests additional sources of PFAS are contributing to the wastewater stream besides the tap water itself.

5.0 Findings and Recommendations

5.1 Findings Summary

Catch Basin Water

- No physical evidence of contamination was observed in any catch basin stormwater sample.
- Three of six samples collected from the surrounding catch basins exhibited a detection of PFOS above the 2.7 ppt ambient groundwater guidance value.
- Three of six samples collected from the surrounding catch basins exhibited a detection of PFOA above the 6.7 ppt ambient groundwater guidance value.
- CB-6, which is closest to the school's supply well contained the highest PFOS & PFOA concentrations at 100 ppt and 370 ppt, respectively.

Soil

- Subsurface geology within the investigation area primarily consisted of silt and sand, with varying amounts of gravel. Refusal was encountered at 1 boring location at 19 feet bgs (SB-4).
- No physical evidence of contamination (visual, olfactory, or photo-ionic) was observed in any screened soil sample.
- PFOS was detected at 23 sampled intervals across 12 locations and ranged in concentration from 0.039 µg/kg to 1.8 µg/kg. PFOS was detected above the Unrestricted Use guidance value of 0.88 µg/kg,

and above the Protection of Groundwater guidance value of 1.0 µg/kg in samples SB-4 2-in; SB-5 2-in & 12-in; SB-9 2-in &12-in; SB-12 2-in, & 12-in.

- Of the 35 surface and near surface soil samples submitted for analysis, PFOA was detected at 18 intervals across 12 locations and ranged in concentration from 0.045 µg/kg to 0.69 µg/kg and were all below the Unrestricted Use guidance value of 0.66 µg/kg with the exception of the 2-12'' interval at SB-11 with a value of 0.69 µg/kg.

Soil SPLP

- PFOA was detected at 5 intervals across 6 locations and ranged in concentration from 2.6 ng/l to 6.6 ng/l and were all below the ambient water quality guidance value of 6.7 ppt.
- PFOS was detected at 6 intervals across 6 locations and ranged in concentration from 2 ng/l to 23 ng/l. PFOS was detected above the ambient water quality guidance value of 2.7 ppt at 3 locations; SB-3, SB-6, and SB-12.

Groundwater

- No physical evidence of contamination was observed in any groundwater sample.
- PFOA was detected in five samples above the 6.7 ppt ambient water quality guidance value, SB-1/MW-1 and SB-9/MW-9, and SB-12/MW-12 at concentrations of 19 ppt, 18 ppt, and 260 ppt, respectively. The highest detection at SB-12/MW-12 is located on the south side of the school property.
- PFOS was detected in two well samples; with concentrations exceeding the 2.7 ppt ambient water quality guidance value at both locations, 3.1 ppt at SB-9/MW-9; and 570 ppt at SB-12/MW-12.

Product and Wastewater Sampling

- PFOS was detected at 270 ppt for the wastewater sample.
- Other PFAS detections in the wastewater sample ranged from 6.7 ppt to 1800 ppt.
- PFOS was detected in one product sample (Gforce) pre-TOP at 7.3 ppb.
- PFOS was detected in two product samples post-TOP, GForce and Vectra at 1.9 ppb and 2.1 ppb, respectively.
- PFOA was detected at 680 ppt for the wastewater sample.
- No PFOA detected in either pre-TOP or post-TOP product samples.

- Other PFAS detections in product samples ranged from 1.5 ppb to 140 ppb pre-TOP; and 1.3 ppb to 610 ppb post-TOP.
- PFBA was the highest PFAS compound detected from the post-TOP assay. The Vectra Floor Finish product was detected at 610 ppb. PFBA is a common industry replacement for PFOA.

5.2 Recommendations

Based on the information gathered from this investigation, additional sampling activities are warranted to determine potential sources of contamination. Next steps should include:

- Downhole pressure transducer deployment in the existing wells. Down hole pressure transducers measure pressure fluctuations in the groundwater column. Pressure is calibrated and equated to groundwater depth. Transducers should be deployed for sufficient time to capture multiple precipitation events.
- Resampling of all wells with low-flow sampling methodology.
- Sampling of wastewater as it flows across the septic baffles.
- Sampling of floor stripping wastewater during summer cleaning operations. Use of PFAS free water in process to understand load of PFAS from stripping operations.
- Additional soil and groundwater investigations in the vicinity of MW-12.

6.0 References

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FIGURES

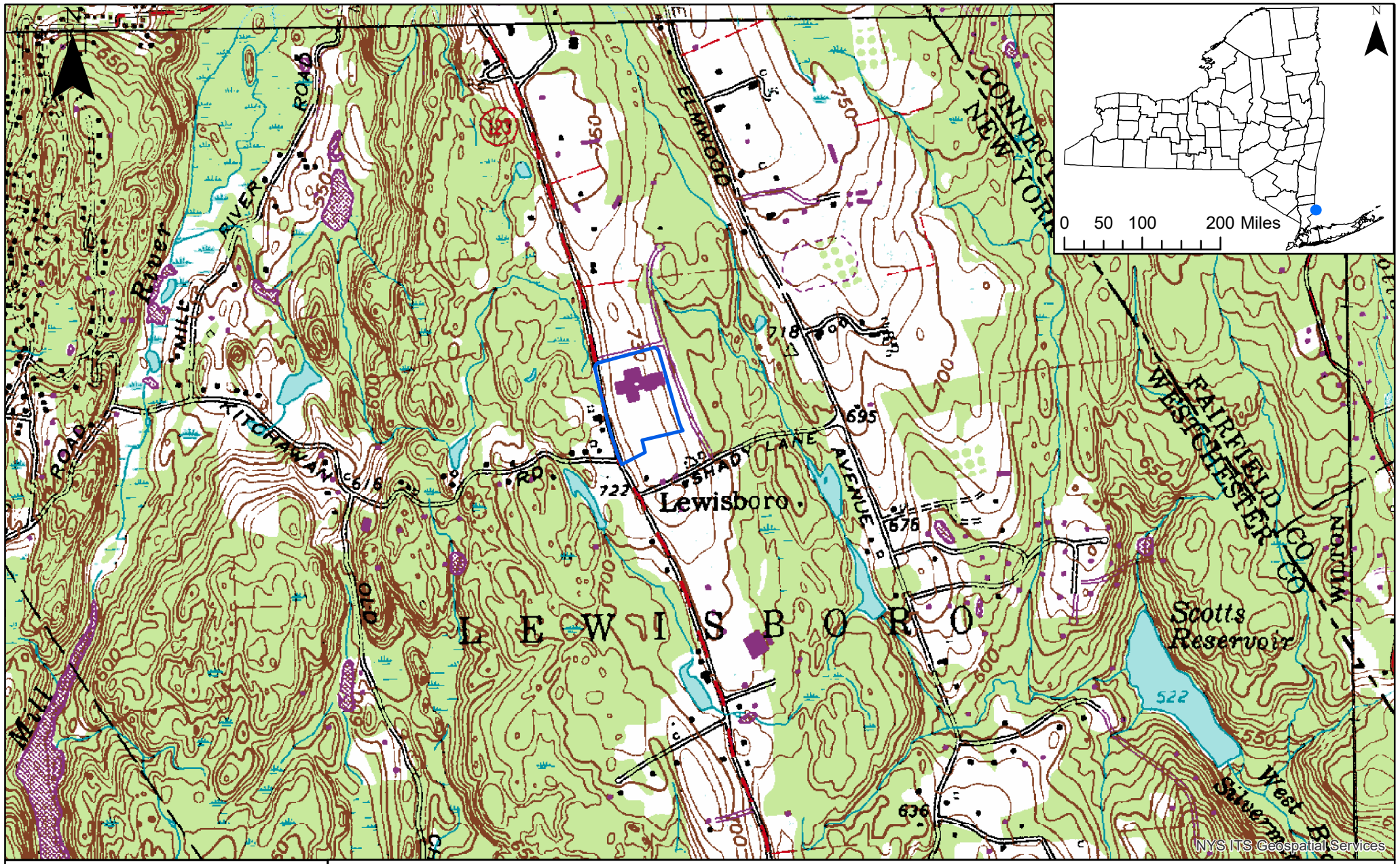


Figure 1

Meadow Pond School
Topographic Map

Meadow Pond
Elementary School
Spill # 2100460

Legend

Meadow Pond Elementary

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Figure 2

Meadow Pond School Property Boundary

Meadow Pond Elementary School Spill # 2100460

Legend

Meadow Pond Elementary

Local Streets

0 250 500 1,000 Feet

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Figure 3

Meadow Pond School
Sample Locations

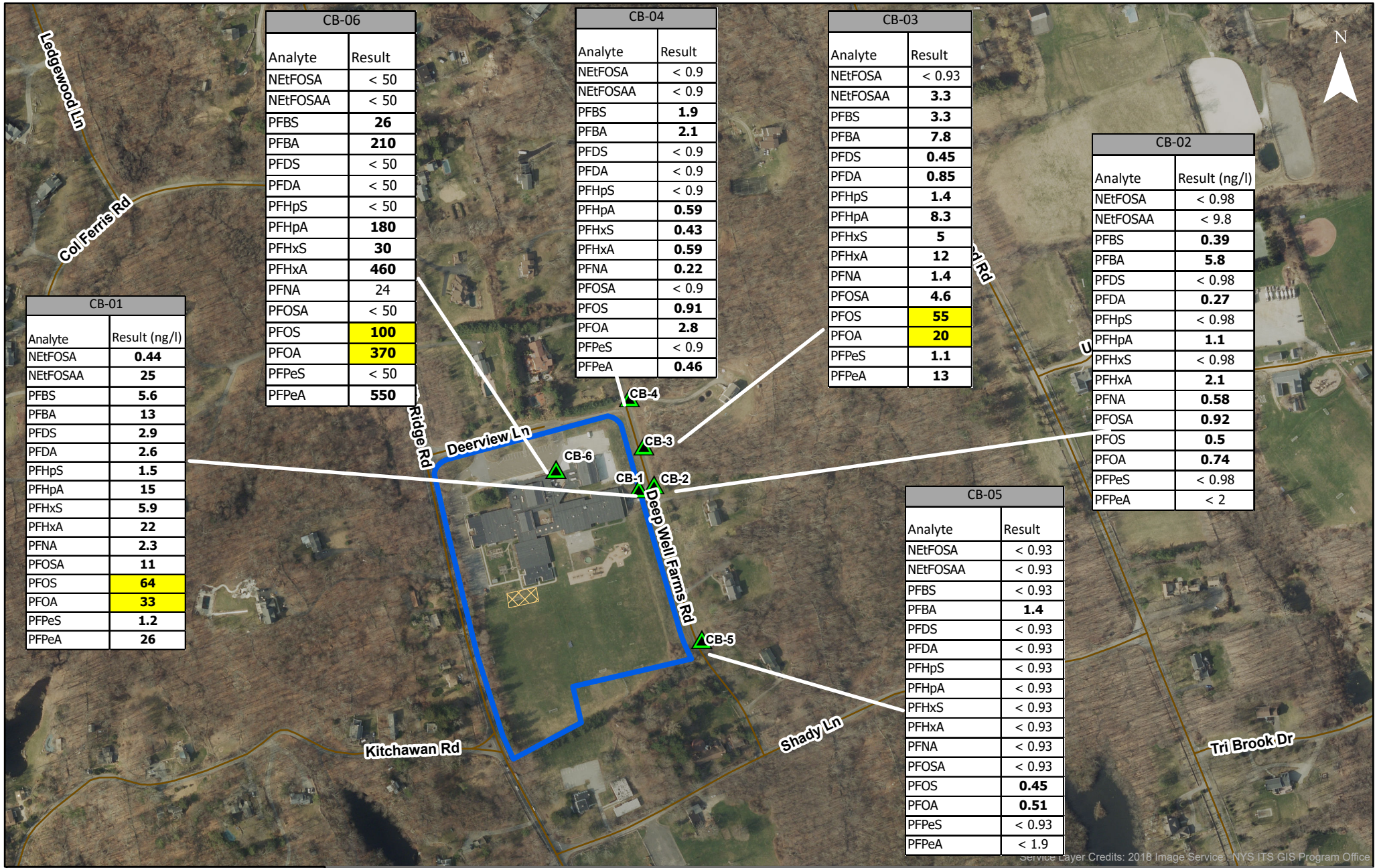
Meadow Pond
Elementary School
Spill # 2100460

Legend

- Meadow Pond Elementary
- Septic Field
- Local Streets
- Public Supply Well
- Soil Boring
- Catch Basin
- Overburden Monitoring Well

0 125 250 500 Feet

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CB-06

Analyte	Result
NEtFOSA	< 50
NEtFOSAA	< 50
PFBS	**26**
PFBA	**210**
PFDS	< 50
PFDA	< 50
PFHpS	< 50
PFHpA	**180**
PFHxS	**30**
PFHxA	**460**
PFNA	24
PFOSA	< 50
PFOS	**100**
PFOA	**370**
PFPeS	< 50
PFPeA	**550**

CB-04

Analyte	Result
NEtFOSA	< 0.9
NEtFOSAA	< 0.9
PFBS	**1.9**
PFBA	**2.1**
PFDS	< 0.9
PFDA	< 0.9
PFHpS	< 0.9
PFHpA	**0.59**
PFHxS	**0.43**
PFHxA	**0.59**
PFNA	**0.22**
PFOSA	< 0.9
PFOS	**0.91**
PFOA	**2.8**
PFPeS	< 0.9
PFPeA	**0.46**

CB-03

Analyte	Result
NEtFOSA	< 0.93
NEtFOSAA	**3.3**
PFBS	**3.3**
PFBA	**7.8**
PFDS	**0.45**
PFDA	**0.85**
PFHpS	**1.4**
PFHpA	**8.3**
PFHxS	**5**
PFHxA	**12**
PFNA	**1.4**
PFOSA	**4.6**
PFOS	**55**
PFOA	**20**
PFPeS	**1.1**
PFPeA	**13**

CB-02

Analyte	Result (ng/l)
NEtFOSA	< 0.98
NEtFOSAA	< 9.8
PFBS	**0.39**
PFBA	**5.8**
PFDS	< 0.98
PFDA	**0.27**
PFHpS	< 0.98
PFHpA	**1.1**
PFHxS	< 0.98
PFHxA	**2.1**
PFNA	**0.58**
PFOSA	**0.92**
PFOS	**0.5**
PFOA	**0.74**
PFPeS	< 0.98
PFPeA	< 2

CB-01

Analyte	Result (ng/l)
NEtFOSA	**0.44**
NEtFOSAA	**25**
PFBS	**5.6**
PFBA	**13**
PFDS	**2.9**
PFDA	**2.6**
PFHpS	**1.5**
PFHpA	**15**
PFHxS	**5.9**
PFHxA	**22**
PFNA	**2.3**
PFOSA	**11**
PFOS	**64**
PFOA	**33**
PFPeS	**1.2**
PFPeA	**26**

CB-05

Analyte	Result
NEtFOSA	< 0.93
NEtFOSAA	< 0.93
PFBS	< 0.93
PFBA	**1.4**
PFDS	< 0.93
PFDA	< 0.93
PFHpS	< 0.93
PFHpA	< 0.93
PFHxS	< 0.93
PFHxA	< 0.93
PFNA	< 0.93
PFOSA	< 0.93
PFOS	**0.45**
PFOA	**0.51**
PFPeS	< 0.93
PFPeA	< 1.9

Figure 4

PFAS Results
Stormwater

Meadow Pond
Elementary School
Spill # 2100460

Legend

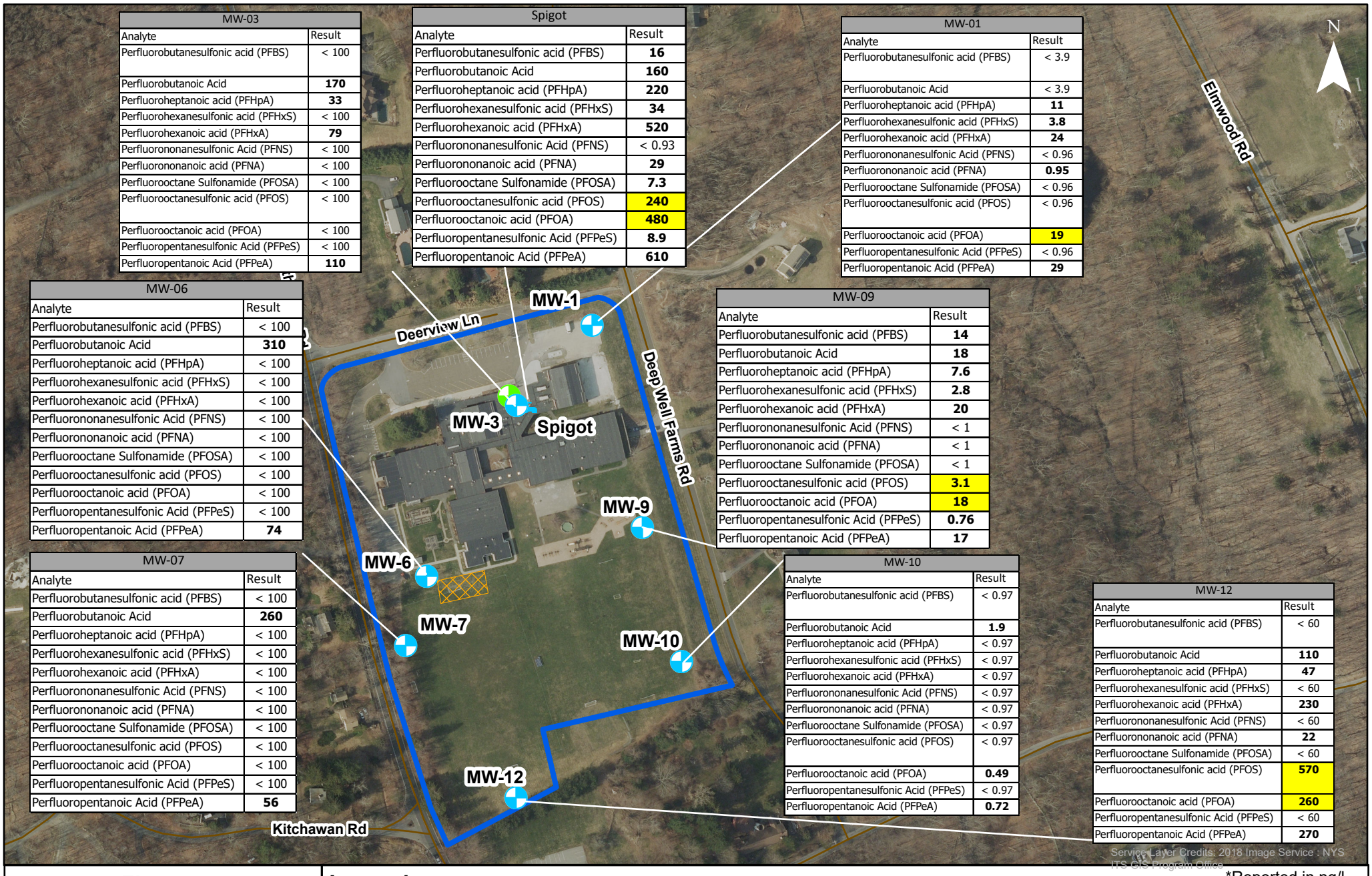
- Catch Basin
- Septic Field
- Meadow Pond Elementary
- Local Streets

0 250 500 1,000 Feet

ng/l = ppt

Analyte	NYS Class A H(WS)	Unit
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l
Perfluorooctanoic acid (PFOA)	6.7	ng/l

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MW-03	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 100
Perfluorobutanoic Acid	**170**
Perfluoroheptanoic acid (PFHpA)	**33**
Perfluorohexanesulfonic acid (PFHxS)	< 100
Perfluorohexanoic acid (PFHxA)	**79**
Perfluorononanesulfonic Acid (PFNS)	< 100
Perfluorononanoic acid (PFNA)	< 100
Perfluorooctane Sulfonamide (PFOSA)	< 100
Perfluorooctanesulfonic acid (PFOS)	< 100
Perfluorooctanoic acid (PFOA)	< 100
Perfluoropentanesulfonic Acid (PFPeS)	< 100
Perfluoropentanoic Acid (PFPeA)	**110**

Spigot	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	**16**
Perfluorobutanoic Acid	**160**
Perfluoroheptanoic acid (PFHpA)	**220**
Perfluorohexanesulfonic acid (PFHxS)	**34**
Perfluorohexanoic acid (PFHxA)	**520**
Perfluorononanesulfonic Acid (PFNS)	< 0.93
Perfluorononanoic acid (PFNA)	**29**
Perfluorooctane Sulfonamide (PFOSA)	**7.3**
Perfluorooctanesulfonic acid (PFOS)	**240**
Perfluorooctanoic acid (PFOA)	**480**
Perfluoropentanesulfonic Acid (PFPeS)	**8.9**
Perfluoropentanoic Acid (PFPeA)	**610**

MW-01	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 3.9
Perfluorobutanoic Acid	< 3.9
Perfluoroheptanoic acid (PFHpA)	**11**
Perfluorohexanesulfonic acid (PFHxS)	**3.8**
Perfluorohexanoic acid (PFHxA)	**24**
Perfluorononanesulfonic Acid (PFNS)	< 0.96
Perfluorononanoic acid (PFNA)	**0.95**
Perfluorooctane Sulfonamide (PFOSA)	< 0.96
Perfluorooctanesulfonic acid (PFOS)	< 0.96
Perfluorooctanoic acid (PFOA)	**19**
Perfluoropentanesulfonic Acid (PFPeS)	< 0.96
Perfluoropentanoic Acid (PFPeA)	**29**

MW-06	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 100
Perfluorobutanoic Acid	**310**
Perfluoroheptanoic acid (PFHpA)	< 100
Perfluorohexanesulfonic acid (PFHxS)	< 100
Perfluorohexanoic acid (PFHxA)	< 100
Perfluorononanesulfonic Acid (PFNS)	< 100
Perfluorononanoic acid (PFNA)	< 100
Perfluorooctane Sulfonamide (PFOSA)	< 100
Perfluorooctanesulfonic acid (PFOS)	< 100
Perfluorooctanoic acid (PFOA)	< 100
Perfluoropentanesulfonic Acid (PFPeS)	< 100
Perfluoropentanoic Acid (PFPeA)	**74**

MW-09	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	**14**
Perfluorobutanoic Acid	**18**
Perfluoroheptanoic acid (PFHpA)	**7.6**
Perfluorohexanesulfonic acid (PFHxS)	**2.8**
Perfluorohexanoic acid (PFHxA)	**20**
Perfluorononanesulfonic Acid (PFNS)	< 1
Perfluorononanoic acid (PFNA)	< 1
Perfluorooctane Sulfonamide (PFOSA)	< 1
Perfluorooctanesulfonic acid (PFOS)	**3.1**
Perfluorooctanoic acid (PFOA)	**18**
Perfluoropentanesulfonic Acid (PFPeS)	**0.76**
Perfluoropentanoic Acid (PFPeA)	**17**

MW-07	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 100
Perfluorobutanoic Acid	**260**
Perfluoroheptanoic acid (PFHpA)	< 100
Perfluorohexanesulfonic acid (PFHxS)	< 100
Perfluorohexanoic acid (PFHxA)	< 100
Perfluorononanesulfonic Acid (PFNS)	< 100
Perfluorononanoic acid (PFNA)	< 100
Perfluorooctane Sulfonamide (PFOSA)	< 100
Perfluorooctanesulfonic acid (PFOS)	< 100
Perfluorooctanoic acid (PFOA)	< 100
Perfluoropentanesulfonic Acid (PFPeS)	< 100
Perfluoropentanoic Acid (PFPeA)	**56**

MW-10	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 0.97
Perfluorobutanoic Acid	**1.9**
Perfluoroheptanoic acid (PFHpA)	< 0.97
Perfluorohexanesulfonic acid (PFHxS)	< 0.97
Perfluorohexanoic acid (PFHxA)	< 0.97
Perfluorononanesulfonic Acid (PFNS)	< 0.97
Perfluorononanoic acid (PFNA)	< 0.97
Perfluorooctane Sulfonamide (PFOSA)	< 0.97
Perfluorooctanesulfonic acid (PFOS)	< 0.97
Perfluorooctanoic acid (PFOA)	**0.49**
Perfluoropentanesulfonic Acid (PFPeS)	< 0.97
Perfluoropentanoic Acid (PFPeA)	**0.72**

MW-12	
Analyte	Result
Perfluorobutanesulfonic acid (PFBS)	< 60
Perfluorobutanoic Acid	**110**
Perfluoroheptanoic acid (PFHpA)	**47**
Perfluorohexanesulfonic acid (PFHxS)	< 60
Perfluorohexanoic acid (PFHxA)	**230**
Perfluorononanesulfonic Acid (PFNS)	< 60
Perfluorononanoic acid (PFNA)	**22**
Perfluorooctane Sulfonamide (PFOSA)	< 60
Perfluorooctanesulfonic acid (PFOS)	**570**
Perfluorooctanoic acid (PFOA)	**260**
Perfluoropentanesulfonic Acid (PFPeS)	< 60
Perfluoropentanoic Acid (PFPeA)	**270**

Figure 5

PFAS Results
Groundwater

Meadow Pond
Elementary School
Spill # 2100460

Legend

- Meadow Pond Elementary
- Septic Field
- Local Streets
- Public Supply Well
- Spigot
- Overburden Monitoring Well

0 125 250 500 Feet

*Reported in ng/l
1 ng/l = 1 ppt

Analyte	NYS Class GA	Unit
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l
Perfluorooctanoic acid (PFOA)	6.7	ng/l

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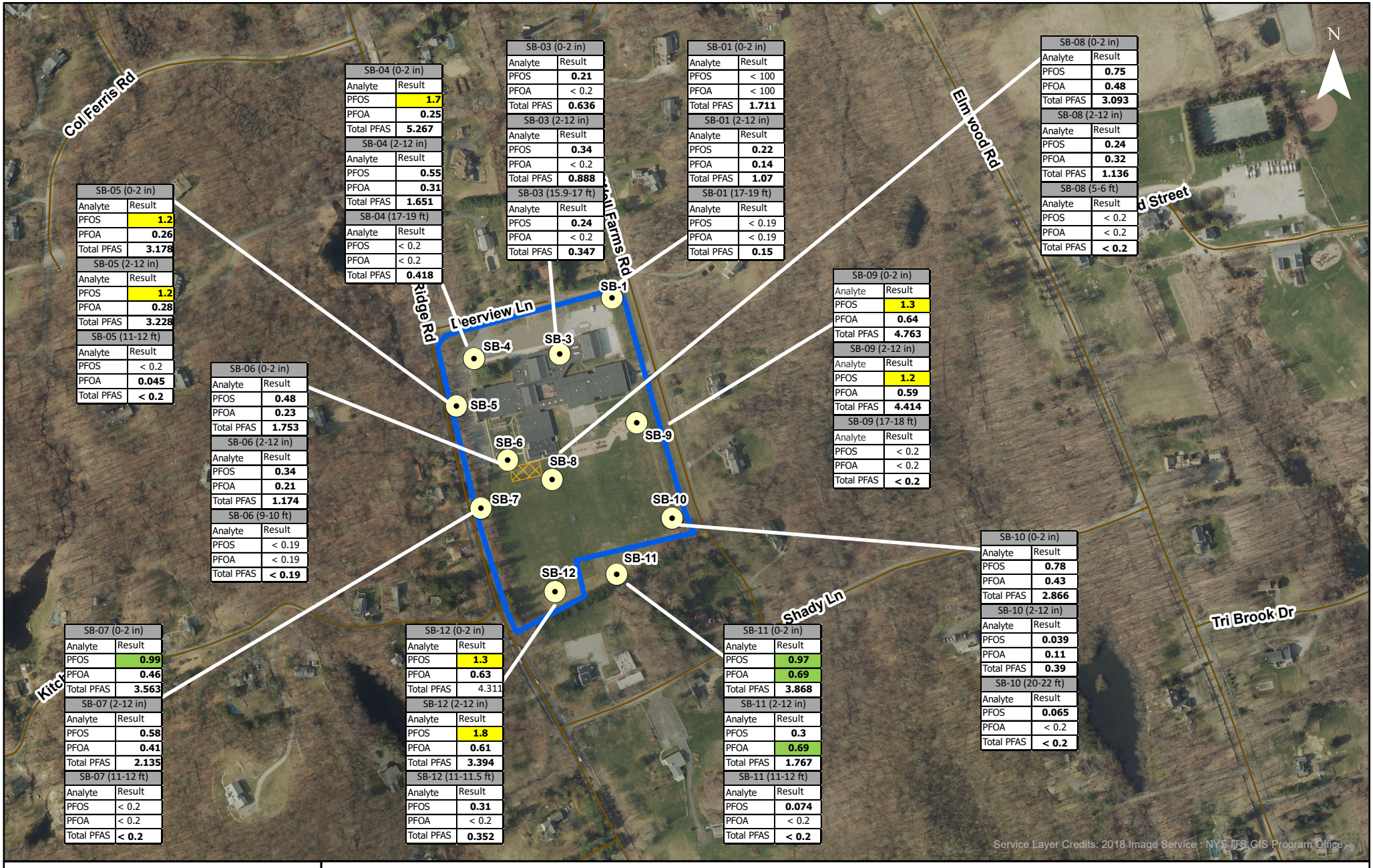


Figure 6

PFAS Results
Soil Borings

Meadow Pond
Elementary School
Spill # 2100460

Legend

Meadow Pond Elementary

Septic Field

SB

Local Streets

0 250 500 1,000 Feet

1 µg = 1 ppb

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Protection of Groundwater	0.8	1



Figure 7

Overburden Groundwater Contours

Meadow Pond Elementary School Spill # 2100460

Legend

- Meadow Pond Elementary
- 1Ft Contour
- Septic Field
- Local Streets
- Public Supply Well
- Overburden Monitoring Well
- Groundwater Flow Direction

0 125 250 500 Feet

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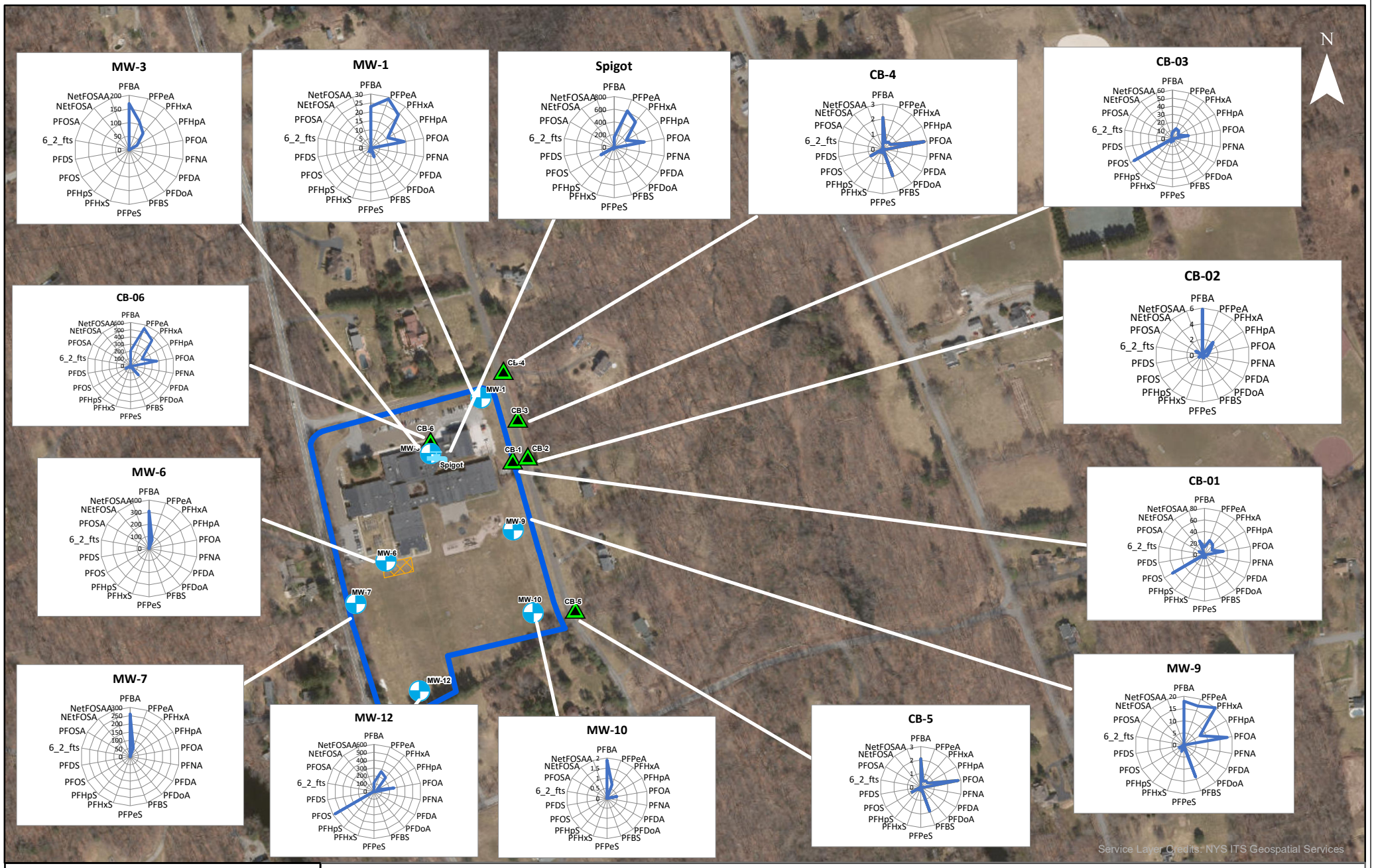


Figure 8

Groundwater and Stormwater
PFAS Results
Radar Plots

Meadow Pond
Elementary School
Spill # 2100460

Legend

- Spigot
- Catch Basin
- Monitoring Well
- Septic Field
- Meadow Pond Elementary

0 125 250 375 500 1,000 Feet

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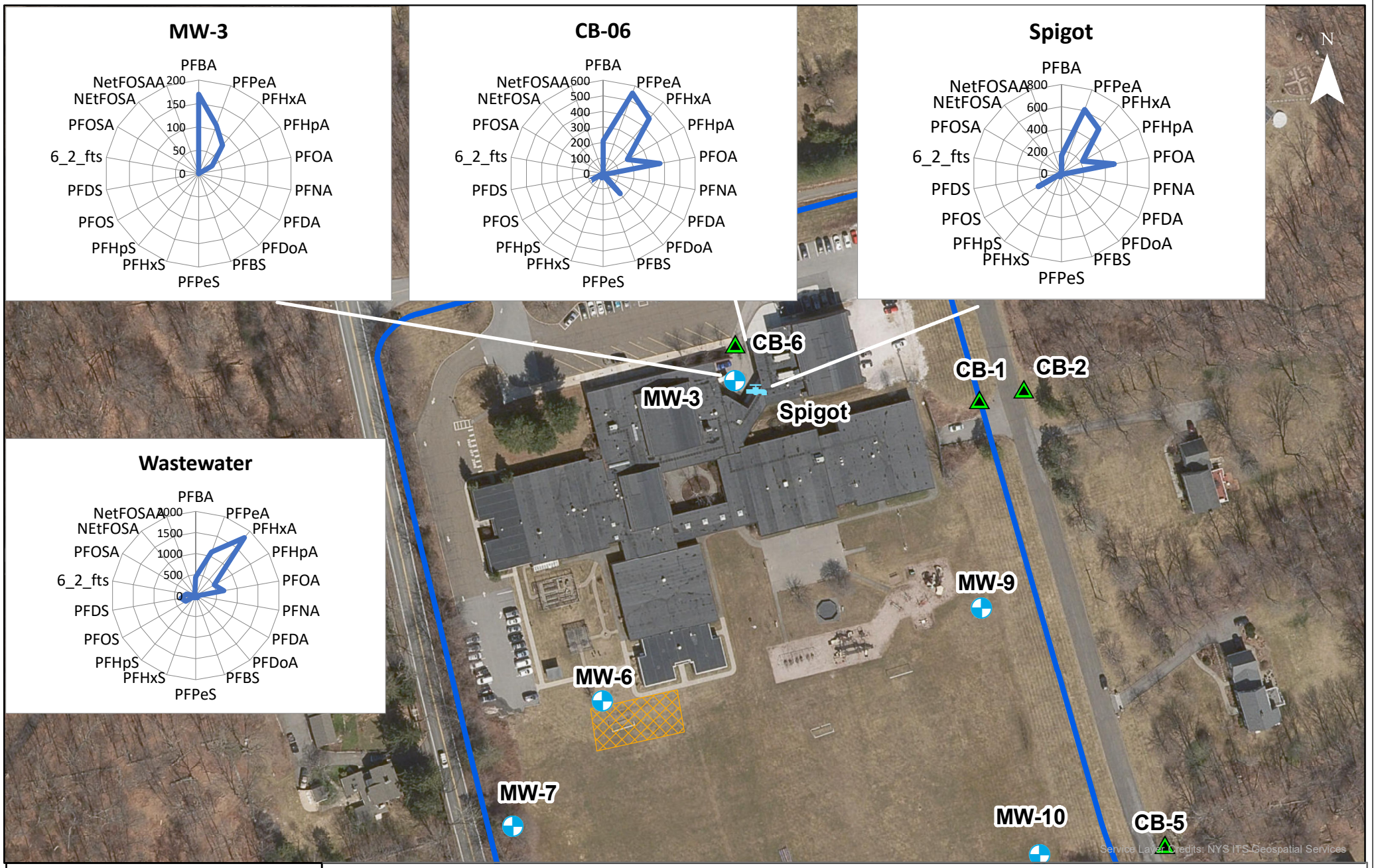


Figure 9

Various Media
PFAS Compounds
Radar Plots

Meadow Pond
Elementary School
Spill # 2100460

Legend

- Spigot
- Catch Basin
- Monitoring Well
- Septic Field
- Meadow Pond Elementary

0 40 80 120 160 320 Feet

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TABLES

Table 1
PFAS Results
Stormwater

			Location	CB-01		CB-01		CB-02		CB-03	
			Sample Date	12/6/23		12/6/23		12/6/23		12/6/23	
			Sample Type	N		FD		N		N	
			Sample Interval	0 - 6 in		0 - 6 in		0 - 6 in		0 - 6 in	
Analyte	NYS Class A H(WS)	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l		< 3.9	U	**10**		< 3.9	U	< 3.7	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l		< 48	U	< 49	U	< 49	U	< 47	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l		< 48	U	< 49	U	< 49	U	< 47	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l		< 9.7	U	< 9.8	U	< 9.8	U	< 9.3	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l		< 3.9	U	< 3.9	U	< 3.9	U	< 3.7	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l		**0.44**	**J**	**0.5**	**J**	< 0.98	U	< 0.93	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l		**25**		**26**		< 0.98	U	**3.3**	
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l		< 9.7	U	< 9.8	U	< 9.8	U	< 9.3	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l		< 9.7	U	< 9.8	U	< 9.8	U	< 9.3	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l		< 1.9	U	< 2	U	< 2	U	< 1.9	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l		< 1.9	U	< 2	U	< 2	U	< 1.9	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l		< 1.9	U	< 2	U	< 2	U	< 1.9	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l		< 1.9	U	< 2	U	< 2	U	< 1.9	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l		**5.6**		**5.4**		**0.39**	**J**	**3.3**	
Perfluorobutanoic Acid	NC	ng/l		**13**		**13**		**5.8**		**7.8**	
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l		**2.9**		**3.1**		< 0.98	U	**0.45**	**J**
Perfluorodecanoic acid (PFDA)	NC	ng/l		**2.6**		**2.3**		**0.27**	**J**	**0.85**	**J**
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l		**1.5**		**1.3**		< 0.98	U	**1.4**	
Perfluoroheptanoic acid (PFHpA)	NC	ng/l		**15**		**15**		**1.1**		**8.3**	
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l		**5.9**		**5.7**		< 0.98	U	**5**	
Perfluorohexanoic acid (PFHxA)	NC	ng/l		**22**		**23**		**2.1**		**12**	
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Perfluorononanoic acid (PFNA)	NC	ng/l		**2.3**		**2.3**		**0.58**	**J**	**1.4**	
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l		**11**		**12**		**0.92**	**J**	**4.6**	
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l		**64**		**63**		**0.5**	**J**	**55**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l		**33**		**34**		**0.74**	**J**	**20**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l		**1.2**		**1.3**		< 0.98	U	**1.1**	
Perfluoropentanoic Acid (PFPeA)	NC	ng/l		**26**		**26**		< 2	U	**13**	
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l		< 0.97	U	< 0.98	U	< 0.98	U	< 0.93	U
Total Suspended Solids	NC	mg/l		< 10	U	**10**		**12**		< 10	U

See attached Notes page for definitions

Table 1
PFAS Results
Stormwater

	Location		CB-04		CB-05		CB-06	
	Sample Date		12/6/23		12/6/23		12/6/23	
	Sample Type		N		N		N	
	Sample Interval		0 - 6 in		0 - 6 in		0 - 6 in	
Analyte	NYS Class A H(WS)	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l	< 45	U	< 47	U	< 2500	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l	< 45	U	< 47	U	< 2500	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l	< 9	U	< 9.3	U	< 500	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l	< 3.6	U	< 3.7	U	< 200	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l	< 9	U	< 9.3	U	< 500	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l	< 9	U	< 9.3	U	< 500	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l	< 1.8	U	< 1.9	U	< 100	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l	< 1.8	U	< 1.9	U	< 100	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l	< 1.8	U	< 1.9	U	< 100	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l	< 1.8	U	< 1.9	U	< 100	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l	**1.9**		< 0.93	U	**26**	**J**
Perfluorobutanoic Acid	NC	ng/l	**2.1**	**J**	**1.4**	**J**	**210**	
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorodecanoic acid (PFDA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l	< 0.9	U	< 0.93	U	**170**	
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluoroheptanoic acid (PFHpA)	NC	ng/l	**0.59**	**J**	< 0.93	U	**180**	
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l	**0.43**	**J**	< 0.93	U	**30**	**J**
Perfluorohexanoic acid (PFHxA)	NC	ng/l	**0.59**	**J**	< 0.93	U	**460**	
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorononanoic acid (PFNA)	NC	ng/l	**0.22**	**J**	< 0.93	U	24	J
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l	**0.91**		**0.45**	**J**	**100**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l	**2.8**		**0.51**	**J**	**370**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluoropentanoic Acid (PFPeA)	NC	ng/l	**0.46**	**J**	< 1.9	U	**550**	
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l	< 0.9	U	< 0.93	U	< 50	U
Total Suspended Solids	NC	mg/l	< 10	U	< 10	U	**64**	

See attached Notes page for definitions

Table 2
PFAS Results
Groundwater

			Location	MW-1		MW-1		MW-3		MW-6		MW-7	
			Sample Date	11/28/23		11/28/23		11/21/23		11/21/23		11/21/23	
			Sample Type	N		FD		N		N		N	
			Sample Interval	10 - 20 ft		10 - 20 ft		12 - 17 ft		10 - 20 ft		10 - 20 ft	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l		< 48	U	< 53	U	< 5000	U	< 5000	U	< 5000	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l		< 48	U	< 53	U	< 5000	U	< 5000	U	< 5000	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l		< 9.6	U	< 11	U	< 1000	U	< 1000	U	< 1000	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l		< 3.9	U	< 4.2	U	< 400	U	< 400	U	< 400	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l		< 9.6	U	< 11	U	< 1000	U	< 1000	U	< 1000	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l		< 9.6	U	< 11	U	< 1000	U	< 1000	U	< 1000	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l		< 1.9	U	< 2.1	U	< 200	U	< 200	U	< 200	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l		< 1.9	U	< 2.1	U	< 200	U	< 200	U	< 200	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l		< 1.9	U	< 2.1	U	< 200	U	< 200	U	< 200	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l		< 1.9	U	< 2.1	U	< 200	U	< 200	U	< 200	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l		**5.4**		**4.8**		< 100	U	< 100	U	< 100	U
Perfluorobutanoic Acid	NC	ng/l		**23**		**23**		**170**	**J**	**310**	**J**	**260**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorodecanoic acid (PFDA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluoroheptanoic acid (PFHpA)	NC	ng/l		**11**		**10**		**33**	**J**	< 100	U	< 100	U
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l		**3.8**		**3.2**		< 100	U	< 100	U	< 100	U
Perfluorohexanoic acid (PFHxA)	NC	ng/l		**24**		**23**		**79**	**J**	< 100	U	< 100	U
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorononanoic acid (PFNA)	NC	ng/l		**0.95**	**J**	**0.99**	**J**	< 100	U	< 100	U	< 100	U
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorooctanoic acid (PFOA)	6.7	ng/l		**19**		**19**		< 100	U	< 100	U	< 100	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluoropentanoic Acid (PFPeA)	NC	ng/l		**29**		**26**		**110**	**J**	**74**	**J**	**56**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l		< 0.96	U	< 1.1	U	< 100	U	< 100	U	< 100	U
Total Suspended Solids	NC	mg/l		**14**		**28**		**6200**		**37000**		**66000**	

See attached Notes page for definitions

Table 2
PFAS Results
Groundwater

	Location		MW-9		MW-10		MW-12		SPIGOT		SPIGOT	
	Sample Date		11/28/23		11/21/23		11/21/23		12/6/23		12/6/23	
	Sample Type		N		N		N		N		FD	
	Sample Interval		11 - 21 ft		12.5 - 22.5 ft		10.7 - 20.7 ft		20 - 700+ ft		20 - 700+ ft	
Analyte	NYS Class GA	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l	< 4	U	< 3.9	U	< 240	U	2.3	J	2.1	J
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l	< 50	U	< 49	U	< 3000	U	< 47	U	< 51	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l	< 50	U	< 49	U	< 3000	U	< 47	U	< 51	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l	< 10	U	< 9.7	U	< 600	U	< 9.3	U	< 10	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l	< 4	U	< 3.9	U	< 240	U	< 3.7	U	< 4.1	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l	< 10	U	< 9.7	U	< 600	U	< 9.3	U	< 10	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l	< 10	U	< 9.7	U	< 600	U	< 9.3	U	< 10	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l	< 2	U	< 1.9	U	< 120	U	< 1.9	U	< 2	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l	< 2	U	< 1.9	U	< 120	U	< 1.9	U	< 2	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l	< 2	U	< 1.9	U	< 120	U	< 1.9	U	< 2	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l	< 2	U	< 1.9	U	< 120	U	< 1.9	U	< 2	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l	**14**		< 0.97	U	< 60	U	**16**		**17**	
Perfluorobutanoic Acid	NC	ng/l	**18**		**1.9**	**J**	**110**	**J**	**160**		**160**	
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluorodecanoic acid (PFDA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	**1.3**		**1.4**	
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	**8.8**		**8.1**	
Perfluoroheptanoic acid (PFHpA)	NC	ng/l	**7.6**		< 0.97	U	**47**	**J**	**220**		**230**	
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l	**2.8**		< 0.97	U	< 60	U	**34**		**36**	
Perfluorohexanoic acid (PFHxA)	NC	ng/l	**20**		< 0.97	U	**230**		**520**		**510**	
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluorononanoic acid (PFNA)	NC	ng/l	< 1	U	< 0.97	U	**22**	**J**	**29**		**30**	
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	**7.3**		**6.7**	
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l	**3.1**		< 0.97	U	**570**		**240**		**230**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l	**18**		**0.49**	**J**	**260**		**480**		**490**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l	**0.76**	**J**	< 0.97	U	< 60	U	**8.9**		**9.4**	
Perfluoropentanoic Acid (PFPeA)	NC	ng/l	**17**		**0.72**	**J**	**270**		**610**		**600**	
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l	< 1	U	< 0.97	U	< 60	U	< 0.93	U	< 1	U
Total Suspended Solids	NC	mg/l	**64**		**24**		**17000**		< 10	U	< 10	U

See attached Notes page for definitions

Table 3
PFAS Results
Wastewater

			Location	STRP-WW1		STRP-WW1	
			Sample Date	8/29/2023		8/29/2023	
			Sample Type	FD		N	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l		< 80	U	< 80	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l		**37**	**J**	**52**	**J**
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l		< 80	U	< 80	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l		**190**		**220**	
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l		**210**	**J**	**350**	**J**
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l		< 1000	U	< 1000	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l		< 200	U	< 200	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l		< 80	U	< 80	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l		< 80	U	< 80	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l		< 80	U	< 80	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l		< 20	U	< 20	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l		**49**		**58**	
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l		< 200	U	< 200	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l		< 20	U	< 20	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l		< 20	U	< 20	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l		< 200	U	< 200	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l		< 40	U	< 40	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l		< 40	U	< 40	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l		< 40	U	< 40	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l		< 40	U	< 40	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l		**24**		**42**	
Perfluorobutanoic Acid	NC	ng/l		**410**		**440**	
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l		**270**		**350**	
Perfluorodecanoic acid (PFDA)	NC	ng/l		**21**		**26**	
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l		< 20	U	< 20	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l		**65**		**70**	
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l		< 20	U	**10**	**J**
Perfluoroheptanoic acid (PFHpA)	NC	ng/l		**450**		**510**	
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l		**47**		**56**	
Perfluorohexanoic acid (PFHxA)	NC	ng/l		**1600**		**1800**	
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l		< 20	U	< 20	U
Perfluorononanoic acid (PFNA)	NC	ng/l		**25**		**32**	
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l		< 20	U	< 20	U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l		**210**		**270**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l		**580**		**680**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l		**15**	**J**	**15**	**J**
Perfluoropentanoic Acid (PFPeA)	NC	ng/l		**960**		**1100**	
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l		**5.1**	**J**	**6.7**	**J**
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l		< 20	U	< 20	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l		< 20	U	< 20	U
Total Suspended Solids	NC	mg/l		**2800**		**2600**	

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-1		SB-1		SB-1	
				Sample Date	11/10/23		11/10/23		11/10/23	
				Sample Type	N		N		N	
				Sample Interval	0 - 2 in		2 - 12 in		17 - 19 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 10	U	< 10	U	< 9.7	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 10	U	< 10	U	< 9.7	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.77	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.39	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.39	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.39	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.39	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.3**	**J**	**0.18**	**J**	**0.15**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.25**		**0.099**	**J**	< 0.19	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.12**	**J**	**0.072**	**J**	< 0.19	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	**0.068**	**J**	**0.03**	**J**	< 0.19	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	**0.043**	**J**	< 0.19	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.06**	**J**	**0.054**	**J**	< 0.19	U
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	**0.12**	**J**	**0.091**	**J**	< 0.19	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.38**		**0.22**		< 0.19	U
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	**0.15**	**J**	**0.14**	**J**	< 0.19	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.076**	**J**	**0.067**	**J**	< 0.39	U
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	**0.043**	**J**	**0.027**	**J**	< 0.19	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	**0.049**	**J**	< 0.2	U	< 0.19	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.095**	**J**	**0.047**	**J**	< 0.19	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-3		SB-3		SB-3	
				Sample Date	11/7/23		11/7/23		11/7/23	
				Sample Type	N		N		N	
				Sample Interval	0 - 2 in		2 - 12 in		15.9 - 17 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.9	U	< 10	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.9	U	< 10	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	< 0.78	U	< 0.79	U	< 0.8	U
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.28**		**0.41**		< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.05**	**J**	**0.11**	**J**	< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.022**	**J**	< 0.2	U	**0.025**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	**0.049**	**J**
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.21**		**0.34**		**0.24**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.041**	**J**	**0.028**	**J**	**0.033**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.033**	**J**	< 0.2	U	< 0.2	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-4		SB-4		SB-4	
				Sample Date	11/7/23		11/7/23		11/7/23	
				Sample Type	N		N		N	
				Sample Interval	0 - 2 in		2 - 12 in		17 - 19 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.79	U	**0.39**	**J**
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 9.9	U	< 10	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 9.9	U	< 10	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.79	U	< 0.79	U	< 0.8	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	**0.15**	**J**	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.29**	**J**	**0.18**	**J**	< 0.8	U
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.9**		**0.089**	**J**	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.51**		**0.077**	**J**	< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	**0.34**		< 0.2	U	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	**0.079**	**J**	**0.061**	**J**	< 0.2	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.13**	**J**	**0.058**	**J**	< 0.2	U
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	**0.2**		**0.14**	**J**	< 0.2	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**1.7**		**0.55**		< 0.2	U
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	**0.25**		**0.31**		< 0.2	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.19**	**J**	**0.083**	**J**	**0.028**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	**0.076**	**J**	**0.019**	**J**	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	**0.092**	**J**	**0.027**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.36**		**0.057**	**J**	< 0.2	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-5		SB-5		SB-5	
				Sample Date	11/8/23		11/8/23		11/8/23	
				Sample Type	N		N		N	
				Sample Interval	0 - 2 in		2 - 12 in		11 - 12 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 10	U	< 10	U	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 10	U	< 10	U	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.8	U	< 0.8	U	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U	< 0.4	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.23**	**J**	**0.28**	**J**	**0.15**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.23**		**0.18**	**J**	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.21**		**0.2**		< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	**0.16**	**J**	**0.13**	**J**	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	**0.078**	**J**	**0.095**	**J**	< 0.2	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.056**	**J**	**0.093**	**J**	**0.024**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	**0.23**		**0.25**		< 0.2	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**1.2**		**1.2**		< 0.2	U
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	**0.26**		**0.28**		**0.045**	**J**
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.078**	**J**	**0.13**	**J**	**0.05**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	**0.086**	**J**	**0.08**	**J**	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	**0.13**	**J**	**0.11**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.23**		**0.2**	**J**	< 0.2	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-6		SB-6		SB-6	
				Sample Date	11/9/23		11/9/23		11/9/23	
				Sample Type	N		N		N	
				Sample Interval	0 - 2 in		2 - 12 in		9 - 10 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 10	U	< 9.7	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 10	U	< 9.7	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.79	U	< 0.8	U	< 0.77	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 1.9	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.39	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.39	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.39	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.39	U	< 0.4	U	< 0.39	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.3**	**J**	**0.23**	**J**	**0.17**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.11**	**J**	**0.12**	**J**	< 0.19	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.085**	**J**	< 0.2	U	< 0.19	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	**0.038**	**J**	< 0.2	U	< 0.19	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	**0.079**	**J**	**0.057**	**J**	< 0.19	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.11**	**J**	**0.057**	**J**	< 0.19	U
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	**0.12**	**J**	**0.05**	**J**	< 0.19	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.48**		**0.34**		< 0.19	U
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	**0.23**		**0.21**		< 0.19	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.11**	**J**	**0.11**	**J**	< 0.39	U
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	**0.019**	**J**	< 0.2	U	< 0.19	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.19	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.072**	**J**	< 0.2	U	< 0.19	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-7		SB-7		SB-7	
				Sample Date	11/9/23		11/9/23		11/9/23	
				Sample Type	N		N		FD	
				Sample Interval	0 - 2 in		2 - 12 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 12	U	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 12	U	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2.3	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.78	U	< 0.93	U	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2.3	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2.3	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.39	U	< 0.47	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.39	U	< 0.47	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.39	U	< 0.47	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.39	U	< 0.47	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.39**	**J**	**0.21**	**J**	**0.33**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	**0.074**	**J**	< 0.23	U	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	**0.23**		**0.11**	**J**	**0.15**	**J**
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	**0.13**	**J**	**0.059**	**J**	**0.08**	**J**
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	**0.16**	**J**	**0.11**	**J**	**0.13**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.15**	**J**	**0.12**	**J**	**0.12**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	**0.29**		**0.16**	**J**	**0.21**	
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.99**		**0.58**		**0.71**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	**0.46**		**0.41**		**0.46**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.23	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.2**	**J**	**0.15**	**J**	**0.17**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	**0.089**	**J**	**0.047**	**J**	**0.05**	**J**
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	**0.12**	**J**	**0.059**	**J**	**0.081**	**J**
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	**0.28**		**0.12**	**J**	**0.17**	**J**

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-7		SB-8		SB-8	
				Sample Date	11/9/23		11/9/23		11/9/23	
				Sample Type	N		N		N	
				Sample Interval	11 - 12 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg		< 9.9	U	< 9.9	U	< 10	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg		< 9.9	U	< 9.9	U	< 10	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg		< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg		< 0.79	U	< 0.79	U	< 0.8	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg		< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg		< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg		< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg		< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg		< 0.4	U	< 0.4	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg		< 0.4	U	< 0.4	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg		< 0.79	U	**0.36**	**J**	**0.22**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg		< 0.2	U	**0.2**		< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg		< 0.2	U	**0.18**	**J**	< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg		< 0.2	U	**0.088**	**J**	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg		< 0.2	U	**0.13**	**J**	**0.076**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg		< 0.2	U	**0.17**	**J**	**0.083**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg		< 0.2	U	**0.25**		**0.057**	**J**
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg		< 0.2	U	**0.75**		**0.24**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg		< 0.2	U	**0.48**		**0.32**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg		< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg		**0.029**	**J**	**0.21**	**J**	**0.11**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg		< 0.2	U	**0.04**	**J**	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg		< 0.2	U	**0.065**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg		< 0.2	U	**0.17**	**J**	**0.03**	**J**

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-8		SB-9		SB-9	
				Sample Date	11/9/23		11/10/23		11/10/23	
				Sample Type	N		N		N	
				Sample Interval	5 - 6 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 10	U	< 9.8	U	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 10	U	< 9.8	U	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.18**	**J**	**0.37**	**J**	**0.4**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	< 0.2	U	**0.39**		**0.39**	
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	< 0.2	U	**0.38**		**0.36**	
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U	**0.14**	**J**	**0.12**	**J**
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	**0.16**	**J**	**0.13**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	< 0.2	U	**0.32**		**0.21**	
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U	**0.39**		**0.35**	
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	< 0.2	U	**1.3**		**1.2**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U	**0.64**		**0.59**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.03**	**J**	**0.27**	**J**	**0.31**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U	**0.065**	**J**	**0.046**	**J**
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	**0.088**	**J**	**0.078**	**J**
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	< 0.2	U	**0.25**		**0.23**	

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-9		SB-10		SB-10	
				Sample Date	11/10/23		11/8/23		11/8/23	
				Sample Type	N		N		N	
				Sample Interval	17 - 18 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.8	U	< 10	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.8	U	< 10	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.8	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	**0.19**	**J**	**0.3**	**J**	**0.15**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	< 0.2	U	**0.2**		< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U	**0.11**	**J**	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	**0.082**	**J**	**0.024**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.039**	**J**	**0.074**	**J**	**0.023**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U	**0.32**		< 0.2	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	< 0.2	U	**0.78**		**0.039**	**J**
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U	**0.43**		**0.11**	**J**
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.063**	**J**	**0.15**	**J**	**0.044**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U	**0.048**	**J**	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	**0.092**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	< 0.2	U	**0.28**		< 0.2	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-10		SB-11		SB-11	
				Sample Date	11/8/23		11/8/23		11/8/23	
				Sample Type	N		N		N	
				Sample Interval	20 - 22 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 9.7	U	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.9	U	< 9.7	U	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 1.9	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.8	U	< 0.78	U	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 1.9	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 1.9	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U	< 0.39	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	**0.058**	**J**
Perfluorobutanoic Acid	NC	NC	ug/kg	< 0.8	U	**0.53**	**J**	**0.23**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	< 0.2	U	**0.071**	**J**	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	< 0.2	U	**0.2**		< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U	**0.12**	**J**	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	**0.19**	**J**	**0.11**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	**0.03**	**J**	**0.067**	**J**
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.025**	**J**	**0.18**	**J**	**0.14**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U	**0.31**		**0.062**	**J**
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.065**	**J**	**0.97**		**0.3**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U	**0.6**		**0.69**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.19	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.04**	**J**	**0.3**	**J**	**0.11**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U	**0.069**	**J**	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	**0.088**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	< 0.2	U	**0.21**		< 0.2	U

See attached Notes page for definitions

Table 4
PFAS Results
Soil

				Location	SB-11		SB-12		SB-12	
				Sample Date	11/8/23		11/6/23		11/6/23	
				Sample Type	N		N		N	
				Sample Interval	11 - 12 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.8	U	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.8	U	< 9.8	U	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.78	U	< 0.78	U	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	**0.053**	**J**
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U	< 2	U	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.39	U	< 0.39	U	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U	**0.027**	**J**	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	< 0.78	U	**0.57**	**J**	**0.33**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	< 0.2	U	**0.052**	**J**	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	< 0.2	U	**0.21**		**0.043**	**J**
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U	**0.1**	**J**	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U	**0.21**		**0.13**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U	**0.029**	**J**	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.021**	**J**	**0.18**	**J**	**0.16**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U	**0.35**		**0.088**	**J**
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.074**	**J**	**1.3**		**1.8**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U	**0.63**		**0.61**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U	< 0.2	U	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.037**	**J**	**0.27**	**J**	**0.17**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U	**0.043**	**J**	**0.024**	**J**
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U	**0.09**	**J**	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	< 0.2	U	**0.25**		**0.039**	**J**

See attached Notes page for definitions

Table 4
PFAS Results
Soil

			Location	SB-12	
			Sample Date	11/6/23	
			Sample Type	N	
			Sample Interval	11 - 11.5 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	NC	ug/kg	< 0.79	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	NC	ug/kg	< 0.79	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	NC	ug/kg	< 0.79	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	NC	ug/kg	< 0.79	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	NC	ug/kg	< 9.9	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	NC	ug/kg	< 9.9	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	NC	ug/kg	< 2	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	NC	ug/kg	< 0.79	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	NC	ug/kg	< 0.79	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	NC	ug/kg	< 0.79	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	NC	ug/kg	< 0.2	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	NC	ug/kg	< 0.2	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	NC	ug/kg	< 2	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	NC	ug/kg	< 0.2	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	NC	ug/kg	< 0.2	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	NC	ug/kg	< 2	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	NC	ug/kg	< 0.4	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	NC	ug/kg	< 0.4	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	NC	ug/kg	< 0.4	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	NC	ug/kg	< 0.4	U
Perfluorobutanesulfonic acid (PFBS)	NC	NC	ug/kg	< 0.2	U
Perfluorobutanoic Acid	NC	NC	ug/kg	< 0.79	U
Perfluorodecanesulfonic acid (PFDS)	NC	NC	ug/kg	< 0.2	U
Perfluorodecanoic acid (PFDA)	NC	NC	ug/kg	< 0.2	U
Perfluorododecanesulfonic acid (PFDoS)	NC	NC	ug/kg	< 0.2	U
Perfluorododecanoic acid (PFDoA)	NC	NC	ug/kg	< 0.2	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	NC	ug/kg	< 0.2	U
Perfluoroheptanoic acid (PFHpA)	NC	NC	ug/kg	< 0.2	U
Perfluorohexanesulfonic acid (PFHxS)	NC	NC	ug/kg	< 0.2	U
Perfluorohexanoic acid (PFHxA)	NC	NC	ug/kg	**0.015**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	NC	ug/kg	< 0.2	U
Perfluorononanoic acid (PFNA)	NC	NC	ug/kg	< 0.2	U
Perfluorooctane Sulfonamide (PFOSA)	NC	NC	ug/kg	< 0.2	U
Perfluorooctanesulfonic acid (PFOS)	0.88	1	ug/kg	**0.31**	
Perfluorooctanoic acid (PFOA)	0.66	0.8	ug/kg	< 0.2	U
Perfluoropentanesulfonic Acid (PFPeS)	NC	NC	ug/kg	< 0.2	U
Perfluoropentanoic Acid (PFPeA)	NC	NC	ug/kg	**0.027**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	NC	ug/kg	< 0.2	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	NC	ug/kg	< 0.2	U
Perfluoroundecanoic Acid (PFUnA)	NC	NC	ug/kg	< 0.2	U

See attached Notes page for definitions

Table 5
SPLP PFAS Results
Soil

			Location	SB-3		SB-6		SB-7		SB-7	
			Sample Date	11/7/23		11/9/23		11/9/23		11/9/23	
			Sample Type	N		N		N		FD	
			Sample Interval	2 -12 in		2 -12 in		2 -12 in		2 -12 in	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l		< 250	U	< 90	U	< 89	U	< 93	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l		< 250	U	< 90	U	< 89	U	< 93	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l		< 50	U	< 18	U	< 18	U	< 19	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l		< 20	U	< 7.2	U	< 7.1	U	< 7.4	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l		< 50	U	< 18	U	< 18	U	< 19	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l		< 50	U	< 18	U	< 18	U	< 19	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l		< 10	U	< 3.6	U	< 3.6	U	< 3.7	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l		< 10	U	< 3.6	U	< 3.6	U	< 3.7	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l		< 10	U	< 3.6	U	< 3.6	U	< 3.7	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l		< 10	U	< 3.6	U	< 3.6	U	< 3.7	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorobutanoic Acid	NC	ng/l		< 20	U	**6.2**	**J**	**2.6**	**J**	< 7.4	U
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l		**4.5**	**J**	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorodecanoic acid (PFDA)	NC	ng/l		**4.3**	**J**	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluoroheptanoic acid (PFHpA)	NC	ng/l		< 5	U	**1.4**	**J**	< 1.8	U	< 1.9	U
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorohexanoic acid (PFHxA)	NC	ng/l		< 5	U	**1**	**J**	< 1.8	U	< 1.9	U
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	**3.7**	
Perfluorononanoic acid (PFNA)	NC	ng/l		**0.97**	**J**	< 1.8	U	**0.88**	**J**	< 1.9	U
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l		**23**		**4.2**		< 1.8	U	**2.6**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l		< 5	U	**6.2**		**3.2**		**2.6**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluoropentanoic Acid (PFPeA)	NC	ng/l		< 10	U	**1.5**	**J**	< 3.6	U	< 3.7	U
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l		< 5	U	< 1.8	U	< 1.8	U	< 1.9	U

See attached Notes page for definitions

Table 5
SPLP PFAS Results
Soil

			Location	SB-9		SB-10		SB-12	
			Sample Date	11/10/23		11/8/23		11/6/23	
			Sample Type	N		N		N	
			Sample Interval	2 -12 in		2 -12 in		2 -12 in	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NC	ng/l		**3**	**J**	< 20	U	< 7.2	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	NC	ng/l		< 110	U	< 250	U	< 90	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	NC	ng/l		< 110	U	< 250	U	< 90	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	NC	ng/l		< 21	U	< 51	U	< 18	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NC	ng/l		< 8.5	U	< 20	U	< 7.2	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	NC	ng/l		< 21	U	< 51	U	< 18	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	NC	ng/l		< 21	U	< 51	U	< 18	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NC	ng/l		< 4.3	U	< 10	U	< 3.6	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NC	ng/l		< 4.3	U	< 10	U	< 3.6	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	NC	ng/l		< 4.3	U	< 10	U	< 3.6	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	NC	ng/l		< 4.3	U	< 10	U	< 3.6	U
Perfluorobutanesulfonic acid (PFBS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorobutanoic Acid	NC	ng/l		**6.5**	J	**7.6**	**J**	**4.3**	**J**
Perfluorodecanesulfonic acid (PFDS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorodecanoic acid (PFDA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorododecanesulfonic acid (PFDoS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorododecanoic acid (PFDoA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluoroheptanesulfonic acid (PFHpS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluoroheptanoic acid (PFHpA)	NC	ng/l		**0.69**	**J**	< 5.1	U	**1.4**	**J**
Perfluorohexanesulfonic acid (PFHxS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorohexanoic acid (PFHxA)	NC	ng/l		**1**	**J**	< 5.1	U	**0.92**	**J**
Perfluorononanesulfonic Acid (PFNS)	NC	ng/l		< 2.1	U	< 5.1	U	**4.2**	
Perfluorononanoic acid (PFNA)	NC	ng/l		< 2.1	U	< 5.1	U	**1.1**	**J**
Perfluorooctane Sulfonamide (PFOSA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/l		**2.6**		**2**	**J**	**6.8**	
Perfluorooctanoic acid (PFOA)	6.7	ng/l		**4.4**		< 5.1	U	**6.6**	
Perfluoropentanesulfonic Acid (PFPeS)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluoropentanoic Acid (PFPeA)	NC	ng/l		**1.4**	**J**	**1.8**	**J**	**1.2**	**J**
Perfluorotetradecanoic acid (PFTeDA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U
Perfluoroundecanoic Acid (PFUnA)	NC	ng/l		< 2.1	U	< 5.1	U	< 1.8	U

See attached Notes page for definitions

Table 6
Additional Results
Soil

			Location	SB-1		SB-1		SB-1		SB-3	
			Sample Date	10 Nov 2023		10 Nov 2023		10 Nov 2023		07 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	0 - 2 in		2 - 12 in		17 - 19 ft		0 - 2 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**82**		**88.6**		**89**		**89**	
Total Organic Carbon	NC	NC	mg/kg	NS		NS		NS		NS	
pH	NC	NC	ph units	NS		NS		NS		NS	

			Location	SB-3		SB-3		SB-4		SB-4	
			Sample Date	07 Nov 2023		07 Nov 2023		07 Nov 2023		07 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	2 - 12 in		15.9 - 17 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**89.4**		**91.7**		**74.9**		**87.6**	
Total Organic Carbon	NC	NC	mg/kg	**2300**		NS		NS		NS	
pH	NC	NC	ph units	**8.4**		NS		NS		NS	

			Location	SB-4		SB-5		SB-5		SB-5	
			Sample Date	07 Nov 2023		08 Nov 2023		08 Nov 2023		08 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	17 - 19 ft		0 - 2 in		2 - 12 in		11 -12 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**89.9**		**78.9**		**82.1**		**89.3**	
Total Organic Carbon	NC	NC	mg/kg	NS		NS		NS		NS	
pH	NC	NC	ph units	NS		NS		NS		NS	

See attached Notes page for definitions

Table 6
Additional Results
Soil

			Location	SB-6		SB-6		SB-6		SB-7	
			Sample Date	09 Nov 2023		09 Nov 2023		09 Nov 2023		09 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	0 - 2 in		2 - 12 in		9 -10 ft		0 - 2 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**77.8**		**86.3**		**90.4**		**69.3**	
Total Organic Carbon	NC	NC	mg/kg	NS		**18000**		NS		NS	
pH	NC	NC	ph units	NS		**7.5**		NS		NS	

			Location	SB-7		SB-7		SB-8		SB-8	
			Sample Date	09 Nov 2023		09 Nov 2023		09 Nov 2023		09 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	2 - 12 in		11 - 12 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**76.2**		**88.7**		**70.3**		**78**	
Total Organic Carbon	NC	NC	mg/kg	22000		NS		NS		NS	
pH	NC	NC	ph units	6.4		NS		NS		NS	

			Location	SB-8		SB-9		SB-9		SB-9	
			Sample Date	09 Nov 2023		10 Nov 2023		10 Nov 2023		10 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	5 -6 ft		0 - 2 in		2 - 12 in		17 - 18 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**89.9**		**74**		**72.9**		**85.7**	
Total Organic Carbon	NC	NC	mg/kg	NS		NS		**19000**		NS	
pH	NC	NC	ph units	NS		NS		**6.6**		NS	

See attached Notes page for definitions

Table 6
Additional Results
Soil

			Location	SB-10		SB-10		SB-10		SB-11	
			Sample Date	08 Nov 2023		08 Nov 2023		08 Nov 2023		08 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	0 - 2 in		2 - 12 in		20 -22 ft		0 - 2 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**64.9**		**88.2**		**86.6**		**77**	
Total Organic Carbon	NC	NC	mg/kg	NS		**1800**		NS		NS	
pH	NC	NC	ph units	NS		**6.9**		NS		NS	

			Location	SB-11		SB-11		SB-12		SB-12	
			Sample Date	08 Nov 2023		08 Nov 2023		06 Nov 2023		06 Nov 2023	
			Sample Type	N		N		N		N	
			Sample Interval	2 - 12 in		11 -12 ft		0 - 2 in		2 - 12 in	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Solids, Percent	NC	NC	%	**83**		**88.5**		**71.9**		**81.3**	
Total Organic Carbon	NC	NC	mg/kg	NS		NS		NS		**4100**	
pH	NC	NC	ph units	NS		NS		NS		**6.2**	

			Location	SB-12	
			Sample Date	06 Nov 2023	
			Sample Type	N	
			Sample Interval	11 - 11.5 ft	
Analyte	Unrestricted Use	Protection of Groundwater	Unit	Result	Qualifier
Solids, Percent	NC	NC	%	**89.1**	
Total Organic Carbon	NC	NC	mg/kg	NS	
pH	NC	NC	ph units	NS	

See attached Notes page for definitions

Table 7
Hydrogeochemical
Results Groundwater

			Location	MW-1		MW-1		MW-3	
			Sample Date	11/28/23		11/28/23		12/6/23	
			Sample Type	N		FD		N	
			Sample Interval	10 - 20 ft		10 - 20 ft		12 - 17 ft	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer
Acesulfame K	NC	ug/l		NS		NS			
Alkalinity to pH 4.5	NC	mg/l		**420**		**410**		**910**	
Bicarbonate	NC	mg/l		**420**		**410**		**910**	
Biochemical Oxygen Demand (BOD)	NC	mg/l		< 30	U	< 30	U	< 200	U
Boron	1	mg/l		< 0.1	U	< 0.1	U	**0.046**	**J**
Bromide	2	mg/l		**0.63**		**0.63**		**0.65**	
Calcium	NC	mg/l		**440**		**450**		**350**	
Carbonate (As CO3)	NC	mg/l		**0.16**		**0.15**		**2.7**	
Chloride (As Cl)	250	mg/l		**2800**	**D**	**2800**	**D**	**1500**	**D**
COD - Chemical Oxygen Demand	NC	mg/l		**170**	**D**	**170**	**D**	**200**	**D**
Hardness (As CaCO3)	NC	mg/l		**1500**		**1600**		**1400**	
Magnesium	35	mg/l		**110**		**110**		**120**	
Nitrogen, Ammonia (As N)	2	mg/l		**0.1**		**0.3**		< 0.1	U
Nitrogen, Kjeldahl, Total	NC	mg/l		**1.1**		**1.1**		**2.2**	
Nitrogen, Nitrate (As N)	10	mg/l		**3.2**		**3.2**		**0.56**	
pH	NC	ph units		**6.6**		**6.6**		**7.5**	
Phosphorus, Total Orthophosphate (As P)	NC	mg/l		**0.035**	**J**	**0.091**		**0.14**	
Potassium	NC	mg/l		**13**		**13**		**25**	
Sodium	20	mg/l		**1400**	**D**	**1400**	**D**	**380**	
Sucralose	NC	ug/l		NS		NS		**0.33**	
Sulfate (As SO4)	250	mg/l		**120**	**D**	**120**	**D**	**78**	**D**
Total Dissolved Solids (Residue, Filterable)	NC	mg/l		**5200**		**5000**		**2800**	
Total Organic Carbon	NC	mg/l		**5.2**		**5.2**		**4.2**	

See attached Notes page for definitions

Table 7
Hydrogeochemical
Results Groundwater

			Location	MW-6		MW-7		MW-9	
			Sample Date	11/28/23; 12/6/23		11/28/23; 12/6/23		11/28/23	
			Sample Type	N		N		N	
			Sample Interval	10 - 20 ft		10 - 20 ft		11 - 21 ft	
Analyte	NYS Class GA	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer
Acesulfame K	NC	ug/l		**0.02**		< 0.020	U	NS	
Alkalinity to pH 4.5	NC	mg/l		**300**		**42**		**150**	
Bicarbonate	NC	mg/l		**300**		**42**		**150**	
Biochemical Oxygen Demand (BOD)	NC	mg/l		< 12	U	< 12	U	< 4	U
Boron	1	mg/l		**0.032**	**J**	< 0.1	U	< 0.1	U
Bromide	2	mg/l		**0.29**	**J**	**0.26**	**J**	**0.28**	**J**
Calcium	NC	mg/l		**1200**	**D**	**11**		**41**	
Carbonate (As CO3)	NC	mg/l		**1.1**		**0.012**		**0.18**	
Chloride (As Cl)	250	mg/l		**14**		**1.8**		**2.5**	
COD - Chemical Oxygen Demand	NC	mg/l		**160**	**D**	< 15	U	< 15	U
Hardness (As CaCO3)	NC	mg/l		**6000**	**D**	**62**		**150**	
Magnesium	35	mg/l		**760**	**D**	**8.3**		**11**	
Nitrogen, Ammonia (As N)	2	mg/l		< 0.1	U	< 0.1	U	< 0.1	U
Nitrogen, Kjeldahl, Total	NC	mg/l		**13**		**1.7**		**0.56**	**J**
Nitrogen, Nitrate (As N)	10	mg/l		< 0.1	U	**0.62**		**0.54**	
pH	NC	ph units		**7.6**		**6.5**		**7.1**	
Phosphorus, Total Orthophosphate (As P)	NC	mg/l		**0.38**		**0.14**		**0.17**	
Potassium	NC	mg/l		**550**	**D**	**2.5**		**1.8**	**J**
Sodium	20	mg/l		**26**		**3.7**		**5.2**	
Sucralose	NC	ug/l		< 0.10	U	< 0.10	U	NS	
Sulfate (As SO4)	250	mg/l		**29**		**4.7**		**6.7**	
Total Dissolved Solids (Residue, Filterable)	NC	mg/l		**210**		**190**		**180**	
Total Organic Carbon	NC	mg/l		**2.9**		**1.4**		**1.8**	

See attached Notes page for definitions

Table 7
Hydrogeochemical
Results Groundwater

			Location	MW-10	
			Sample Date	11/21/23	
			Sample Type	N	
			Sample Interval	12.5. - 22.5 ft	
Analyte	NYS Class GA	Unit		Result	Qualifer
Acesulfame K	NC	ug/l		NS	
Alkalinity to pH 4.5	NC	mg/l		**250**	
Bicarbonate	NC	mg/l		**250**	
Biochemical Oxygen Demand (BOD)	NC	mg/l		< 4	U
Boron	1	mg/l		< 0.1	U
Bromide	2	mg/l		**0.3**	**J**
Calcium	NC	mg/l		**79**	
Carbonate (As CO3)	NC	mg/l		**0.3**	
Chloride (As Cl)	250	mg/l		**1.2**	
COD - Chemical Oxygen Demand	NC	mg/l		< 15	U
Hardness (As CaCO3)	NC	mg/l		**300**	
Magnesium	35	mg/l		**24**	
Nitrogen, Ammonia (As N)	2	mg/l		< 0.1	U
Nitrogen, Kjeldahl, Total	NC	mg/l		**0.56**	**J**
Nitrogen, Nitrate (As N)	10	mg/l		< 0.1	U
pH	NC	ph units		**7.1**	
Phosphorus, Total Orthophosphate (As P)	NC	mg/l		**0.047**	**J**
Potassium	NC	mg/l		**2.8**	
Sodium	20	mg/l		**7.2**	
Sucralose	NC	ug/l		NS	
Sulfate (As SO4)	250	mg/l		**15**	
Total Dissolved Solids (Residue, Filterable)	NC	mg/l		**230**	
Total Organic Carbon	NC	mg/l		**2.7**	

See attached Notes page for definitions

Table 7
Hydrogeochemical
Results Groundwater

		Location	MW-12	
		Sample Date	11/21/23	
		Sample Type	N	
		Sample Interval	10.7 - 20.7 ft	
Analyte	NYS Class GA	Unit	Result	Qualifer
Acesulfame K	NC	ug/l	**0.044**	
Alkalinity to pH 4.5	NC	mg/l	**86**	
Bicarbonate	NC	mg/l	**86**	
Biochemical Oxygen Demand (BOD)	NC	mg/l	< 12	U
Boron	1	mg/l	< 0.1	U
Bromide	2	mg/l	< 0.5	U
Calcium	NC	mg/l	**26**	
Carbonate (As CO3)	NC	mg/l	**0.41**	
Chloride (As Cl)	250	mg/l	**14**	
COD - Chemical Oxygen Demand	NC	mg/l	**69**	
Hardness (As CaCO3)	NC	mg/l	**130**	
Magnesium	35	mg/l	**16**	
Nitrogen, Ammonia (As N)	2	mg/l	**0.079**	**J**
Nitrogen, Kjeldahl, Total	NC	mg/l	**2.8**	
Nitrogen, Nitrate (As N)	10	mg/l	**1.7**	
pH	NC	ph units	**7.7**	
Phosphorus, Total Orthophosphate (As P)	NC	mg/l	**0.13**	
Potassium	NC	mg/l	**11**	
Sodium	20	mg/l	**10**	
Sucralose	NC	ug/l	**0.26**	
Sulfate (As SO4)	250	mg/l	**7.4**	
Total Dissolved Solids (Residue, Filterable)	NC	mg/l	**110**	
Total Organic Carbon	NC	mg/l	**1.7**	

See attached Notes page for definitions

Table 8
Pre TOP Assay,PFAS Results
Product Samples

		Location	BUCKEYEDEFOAM		CFRDEFOAM		F34		GFORCE	
		Sample Date	12/6/2023		12/6/2023		12/6/2023		12/6/2023	
		Sample Type	N		N		N		N	
Analyte	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT	< 3.0	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**3**	**T**
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT	< 3.0	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g		< 2.0	UHT	< 2.0	UHT	**71**	**HT**	**34**	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorobutanesulfonic acid (PFBS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	**28**	**T**
Perfluorobutanoic Acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	**2.2**	
Perfluorodecanesulfonic acid (PFDS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorodecanoic acid (PFDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorododecanesulfonic acid (PFDoS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	U
Perfluorododecanoic acid (PFDoA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoroheptanesulfonic acid (PFHpS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**14**	**T**
Perfluoroheptanoic acid (PFHpA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**1.5**	**T**
Perfluorohexanesulfonic acid (PFHxS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorohexanoic acid (PFHxA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorononanesulfonic Acid (PFNS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorononanoic acid (PFNA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorooctane Sulfonamide (PFOSA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorooctanesulfonic acid (PFOS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**7.3**	**T**
Perfluorooctanoic acid (PFOA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoropentanesulfonic Acid (PFPeS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoropentanoic Acid (PFPeA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorotetradecanoic acid (PFTeDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U
Perfluoroundecanoic Acid (PFUnA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	U

See attached Notes page for definitions

Table 8
Pre TOP Assay,PFAS Results
Product Samples

		Location	HOTSPRINGS		IRONSTONE		MORNINGMIST		RAINDANCE	
		Sample Date	12/6/2023		12/6/2023		12/6/2023		12/6/2023	
		Sample Type	N		N		N		N	
Analyte	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT	< 3.0	UHT
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT	< 3.0	UHT
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g		< 2.0	UHT	**1.9**	**JHTEMPC**	< 2.0	UHT	< 2.0	UHT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g		**40**	**HT**	**3.3**	**HT**	< 2.0	UHT	**25**	**HT**
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g		**140**	**HT**	**1.9**	**JHT**	< 2.0	UHT	**79**	**HT**
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**0.59**	**JHT**
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorobutanesulfonic acid (PFBS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Perfluorobutanoic Acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	**2.1**	**HT**
Perfluorodecanesulfonic acid (PFDS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorodecanoic acid (PFDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorododecanesulfonic acid (PFDoS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Perfluorododecanoic acid (PFDoA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroheptanesulfonic acid (PFHpS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroheptanoic acid (PFHpA)	ng/g		< 0.60	UHT	**0.23**	**JHT**	< 0.60	UHT	< 0.60	UHT
Perfluorohexanesulfonic acid (PFHxS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorohexanoic acid (PFHxA)	ng/g		< 0.60	UHT	**0.95**	**HT**	< 0.60	UHT	< 0.60	UHT
Perfluorononanesulfonic Acid (PFNS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorononanoic acid (PFNA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorooctane Sulfonamide (PFOSA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorooctanesulfonic acid (PFOS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	**0.2**	**JHTEMPC**
Perfluorooctanoic acid (PFOA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoropentanesulfonic Acid (PFPeS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoropentanoic Acid (PFPeA)	ng/g		< 0.60	UHT	**0.26**	**JHT**	< 0.60	UHT	**1.6**	**HT**
Perfluorotetradecanoic acid (PFTeDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroundecanoic Acid (PFUnA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT	< 0.60	UHT

See attached Notes page for definitions

Table 8
Pre TOP Assay,PFAS Results
Product Samples

		Location	SIMONIZ		VECTRA		VECTRA	
		Sample Date	12/6/2023		12/6/2023		12/6/2023	
		Sample Type	N		FD		N	
Analyte	Unit		Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g		< 3.0	UHT	< 3.0	UHT	< 3.0	UHT
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UTHT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UTHT
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorobutanesulfonic acid (PFBS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Perfluorobutanoic Acid	ng/g		< 2.0	UHT	**9.4**	**HT**	**11**	**THT**
Perfluorodecanesulfonic acid (PFDS)	ng/g		< 0.60	UHT	**0.35**	**JHTEMPC**	**0.4**	**JHTEMPC**
Perfluorodecanoic acid (PFDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorododecanesulfonic acid (PFDoS)	ng/g		< 2.0	UHT	< 2.0	UHT	< 2.0	UHT
Perfluorododecanoic acid (PFDoA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroheptanesulfonic acid (PFHpS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroheptanoic acid (PFHpA)	ng/g		< 0.60	UHT	< 0.60	UHT	0.2	JHT
Perfluorohexanesulfonic acid (PFHxS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorohexanoic acid (PFHxA)	ng/g		< 0.60	UHT	**0.67**	**HT**	**0.69**	**HT**
Perfluorononanesulfonic Acid (PFNS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorononanoic acid (PFNA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorooctane Sulfonamide (PFOSA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorooctanesulfonic acid (PFOS)	ng/g		< 0.60	UHT	**0.35**	**JHTEMPC**	**< 0.60**	**UHT**
Perfluorooctanoic acid (PFOA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoropentanesulfonic Acid (PFPeS)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoropentanoic Acid (PFPeA)	ng/g		< 0.60	UHT	**0.21**	**JHT**	**0.21**	**JHT**
Perfluorotetradecanoic acid (PFTeDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT
Perfluoroundecanoic Acid (PFUnA)	ng/g		< 0.60	UHT	< 0.60	UHT	< 0.60	UHT

See attached Notes page for definitions

Table 9
Post TOP Assay PFAS Results
Product Samples

Location		BUCKEYEDEFOAM		CFRDEFOAM		F34		GFORCE	
Sample Date		12/6/2023		12/6/2023		12/6/2023		12/6/2023	
Sample Type		N		N		N		N	
Analyte	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g	< 3.0	U	< 3.0	U	< 3.0	U	< 3.0	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g	**0.21**	**BJ**	< 0.60	U	< 0.60	U	< 0.60	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	**2.4**	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g	< 3.0	U	< 3.0	U	< 3.0	U	< 3.0	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	**2**	
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g	< 2.0	U	< 2.0	U	**15**		**7.5**	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorobutanesulfonic acid (PFBS)	ng/g	< 2.0	U	< 2.0	U	**0.44**	**JTEMPC**	< 2.0	U
Perfluorobutanoic Acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorodecanesulfonic acid (PFDS)	ng/g	< 0.60	U	< 0.60	U	**0.62**	**T**	< 0.60	U
Perfluorodecanoic acid (PFDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorododecanesulfonic acid (PFDoS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorododecanoic acid (PFDoA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroheptanesulfonic acid (PFHpS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroheptanoic acid (PFHpA)	ng/g	< 0.60	U	**0.26**	**BJ**	< 0.60	U	**6.6**	**BEMPC**
Perfluorohexanesulfonic acid (PFHxS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	**0.87**	**T**
Perfluorohexanoic acid (PFHxA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorononanesulfonic Acid (PFNS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorononanoic acid (PFNA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctane Sulfonamide (PFOSA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctanesulfonic acid (PFOS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	**1.9**	**T**
Perfluorooctanoic acid (PFOA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoropentanesulfonic Acid (PFPeS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoropentanoic Acid (PFPeA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorotetradecanoic acid (PFTeDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroundecanoic Acid (PFUnA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U

See attached Notes page for definitions

Table 9
Post TOP Assay PFAS Results
Product Samples

Location		HOTSPRINGS		IRONSTONE		MORNINGMIST		RAINDANCE	
Sample Date		12/6/2023		12/6/2023		12/6/2023		12/6/2023	
Sample Type		N		N		N		N	
Analyte	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g	< 3.0	U	< 3.0	U	< 3.0	U	< 3.0	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g	< 0.60	U	**0.25**	**J**	< 0.60	U	< 0.60	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g	**0.28**	**BJ**	< 0.60	U	< 0.60	UT	**0.3**	**BJ**
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g	< 0.60	U	**0.43**	**J**	< 0.60	U	< 0.60	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g	< 3.0	U	**1.3**	**J**	< 3.0	U	< 3.0	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g	**9.7**		< 2.0	U	< 2.0	U	**0.6**	**J**
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g	**29**		< 2.0	U	< 2.0	U	**47**	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorobutanesulfonic acid (PFBS)	ng/g	**0.71**	**JEMPC**	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorobutanoic Acid	ng/g	< 2.0	U	**86**	**B**	< 2.0	U	**2.7**	**B**
Perfluorodecanesulfonic acid (PFDS)	ng/g	**1.3**	**EMPC**	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorodecanoic acid (PFDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorododecanesulfonic acid (PFDoS)	ng/g	< 2.0	U	< 2.0	U	**0.48**	**J**	**0.74**	**J**
Perfluorododecanoic acid (PFDoA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroheptanesulfonic acid (PFHpS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	**0.2**	**JEMPC**
Perfluoroheptanoic acid (PFHpA)	ng/g	< 0.60	U	**0.31**	**BJEMPC**	< 0.60	U	< 0.60	U
Perfluorohexanesulfonic acid (PFHxS)	ng/g	< 0.60	U	< 0.60	U	**2.7**	**EMPC**	< 0.60	U
Perfluorohexanoic acid (PFHxA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorononanesulfonic Acid (PFNS)	ng/g	< 0.60	U	< 0.60	U	**0.24**	**JEMPC**	< 0.60	U
Perfluorononanoic acid (PFNA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctane Sulfonamide (PFOSA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctanesulfonic acid (PFOS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctanoic acid (PFOA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoropentanesulfonic Acid (PFPeS)	ng/g	< 0.60	U	< 0.60	U	**0.95**	**EMPC**	**1.9**	**EMPC**
Perfluoropentanoic Acid (PFPeA)	ng/g	< 0.60	U	**130**		< 0.60	U	< 0.60	U
Perfluorotetradecanoic acid (PFTeDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroundecanoic Acid (PFUnA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U	< 0.60	U

See attached Notes page for definitions

Table 9
Post TOP Assay PFAS Results
Product Samples

	Location	SIMONIZ		VECTRA		VECTRA	
	Sample Date	12/6/2023		12/6/2023		12/6/2023	
	Sample Type	N		FD		N	
Analyte	Unit	Result	Qualifer	Result	Qualifer	Result	Qualifer
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/g	< 3.0	U	< 3.0	U	< 3.0	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	UT
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/g	< 0.60	U	**0.78**		**1.5**	
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/g	**0.22**	**BJ**	< 0.60	U	< 0.60	UT
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/g	< 0.60	U	**0.24**	**J**	**0.2**	**J**
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/g	< 3.0	U	**1.3**	**J**	**6**	**T**
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorobutanesulfonic acid (PFBS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorobutanoic Acid	ng/g	< 2.0	U	**320**	**B**	**610**	**B**
Perfluorodecanesulfonic acid (PFDS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorodecanoic acid (PFDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorododecanesulfonic acid (PFDoS)	ng/g	< 2.0	U	< 2.0	U	< 2.0	U
Perfluorododecanoic acid (PFDoA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroheptanesulfonic acid (PFHpS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroheptanoic acid (PFHpA)	ng/g	**0.28**	**BJ**	**0.28**	**BJEMPC**	**0.35**	**BJEMPC**
Perfluorohexanesulfonic acid (PFHxS)	ng/g	< 0.60	U	< 0.60	U	**1.2**	
Perfluorohexanoic acid (PFHxA)	ng/g	< 0.60	U	< 0.60	U	**12**	**T**
Perfluorononanesulfonic Acid (PFNS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorononanoic acid (PFNA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctane Sulfonamide (PFOSA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorooctanesulfonic acid (PFOS)	ng/g	< 0.60	U	< 0.60	U	**2.1**	
Perfluorooctanoic acid (PFOA)	ng/g	**0.2**	**BJEMPC**	< 0.60	U	< 0.60	U
Perfluoropentanesulfonic Acid (PFPeS)	ng/g	< 0.60	U	< 0.60	U	< 0.60	UT
Perfluoropentanoic Acid (PFPeA)	ng/g	< 0.60	U	**330**		**330**	
Perfluorotetradecanoic acid (PFTeDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U
Perfluoroundecanoic Acid (PFUnA)	ng/g	< 0.60	U	< 0.60	U	< 0.60	U

See attached Notes page for definitions

Table 10
PFAS Results
Equipment Blanks

Sample Code		EQB11062023		EQPT BLANK 1		EQPT BLNK 2		CB-EB-20231206	
Sample Date		11/6/2023		11/21/2023		11/28/2023		12/6/2023	
Sample Type		EB		EB		EB		EB	
Analyte	Unit	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	ng/l	< 4.4	U	< 4	U	**5.6**		< 3.9	U
2H,2H,3H,3H-Perfluorooctanoic acid (5:3FTCA)	ng/l	< 55	U	< 50	U	< 50	U	< 49	U
3-Perfluoroheptyl propanoic acid (7:3FTCA)	ng/l	< 55	U	< 50	U	< 50	U	< 49	U
3-Perfluoropropyl propanoic acid (3:3 FTCA)	ng/l	< 11	U	< 10	U	< 10	U	< 9.8	U
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9Cl-PF3ONS)	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ng/l	< 4.4	U	< 4	U	< 4	U	< 3.9	U
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	ng/l	< 11	U	< 10	U	< 10	U	< 9.8	U
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	ng/l	< 11	U	< 10	U	< 10	U	< 9.8	U
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ng/l	< 2.2	U	< 2	U	< 2	U	< 2	U
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ng/l	< 2.2	U	< 2	U	< 2	U	< 2	U
Perfluoro-3-methoxypropanoic acid (PFMPA)	ng/l	< 2.2	U	< 2	U	< 2	U	< 2	U
Perfluoro-4-methoxybutanoic acid (PFMBA)	ng/l	< 2.2	U	< 2	U	< 2	U	< 2	U
Perfluorobutanesulfonic acid (PFBS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorobutanoic Acid	ng/l	**2.1**	**J**	< 4	U	< 4	U	< 3.9	U
Perfluorodecanesulfonic acid (PFDS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorodecanoic acid (PFDA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorododecanesulfonic acid (PFDoS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorododecanoic acid (PFDoA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluoroheptanesulfonic acid (PFHpS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluoroheptanoic acid (PFHpA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorohexanesulfonic acid (PFHxS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorohexanoic acid (PFHxA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorononanesulfonic Acid (PFNS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorononanoic acid (PFNA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorooctane Sulfonamide (PFOSA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorooctanesulfonic acid (PFOS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorooctanoic acid (PFOA)	ng/l	< 1.1	U	< 1	U	< 1	U	**0.39**	**J**
Perfluoropentanesulfonic Acid (PFPeS)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluoropentanoic Acid (PFPeA)	ng/l	< 2.2	U	< 2	U	< 2	U	< 2	U
Perfluorotetradecanoic acid (PFTeDA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Perfluoroundecanoic Acid (PFUnA)	ng/l	< 1.1	U	< 1	U	< 1	U	< 0.98	U
Total Suspended Solids	mg/l	< 10	U	< 10	U	< 10	U		

See attached Notes page for definitions

Tables 1 - 10

Notes

DEFINITIONS:

Sample Type Code:

N: Normal sample

FD: Field Duplicate

Units:

ng/l : parts per trillion

ug/l, ug/kg, and ng/g : parts per billion

mg/l and mg/kg : parts per million

NC : No standards, criteria, or guidance values

NS : Not sampled

Qualifiers:

U : Analyte not detected at the reporting limit shown

J : The reported value is estimated

T: Indicates that a quality control parameter has exceeded laboratory limits

EMPC : Estimated maximum possible concentration

B : Indicates that the analyte is detected in the associated blank as well as the sample

HT : Exceeds holding time

Other qualifers listed in the tables are a combination of the above.

Standards, Criteria, or Guidance Values (SCGs):

Groundwater, Wastewater, Synthetic Precipitation Leaching Procedure (SPLP):

No SCGs currently exist for SPLP results; however, results were conservatively compared to groundwater guidance values.

Wastewater results were compared to groundwater guidance values as it is expected wastewater will entire the environment via the septic leach field.

New York State Department of Environmental Conservation, Technical and Operational Guidance Series (1.1.1), Class GA Standards and Guidance Values, Revised June 1998 and 2023 Addendum.

Stormwater:

No SCGs currently exist for stormwater samples; however, results were conservatively compared to:

New York State Department of Environmental Conservation, Technical and Operational Guidance Series (1.1.1), Class A Standards and Guidance Values, Revised June 1998 and 2023 Addendum.

Soil:

New York State Department of Environmental Conservation, Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS), April 2023.

Product Samples:

No SCGs currently exist for Total Oxidizable Precursor Assay PFAS results.

APPENDIX B

Unauthorized alteration or addition to this survey is a violation of section 7209, subdivision 2, of the New York State Education Law. Copies of this survey map not bearing the land surveyor's inked or embossed seal shall not be considered to be a valid copy.

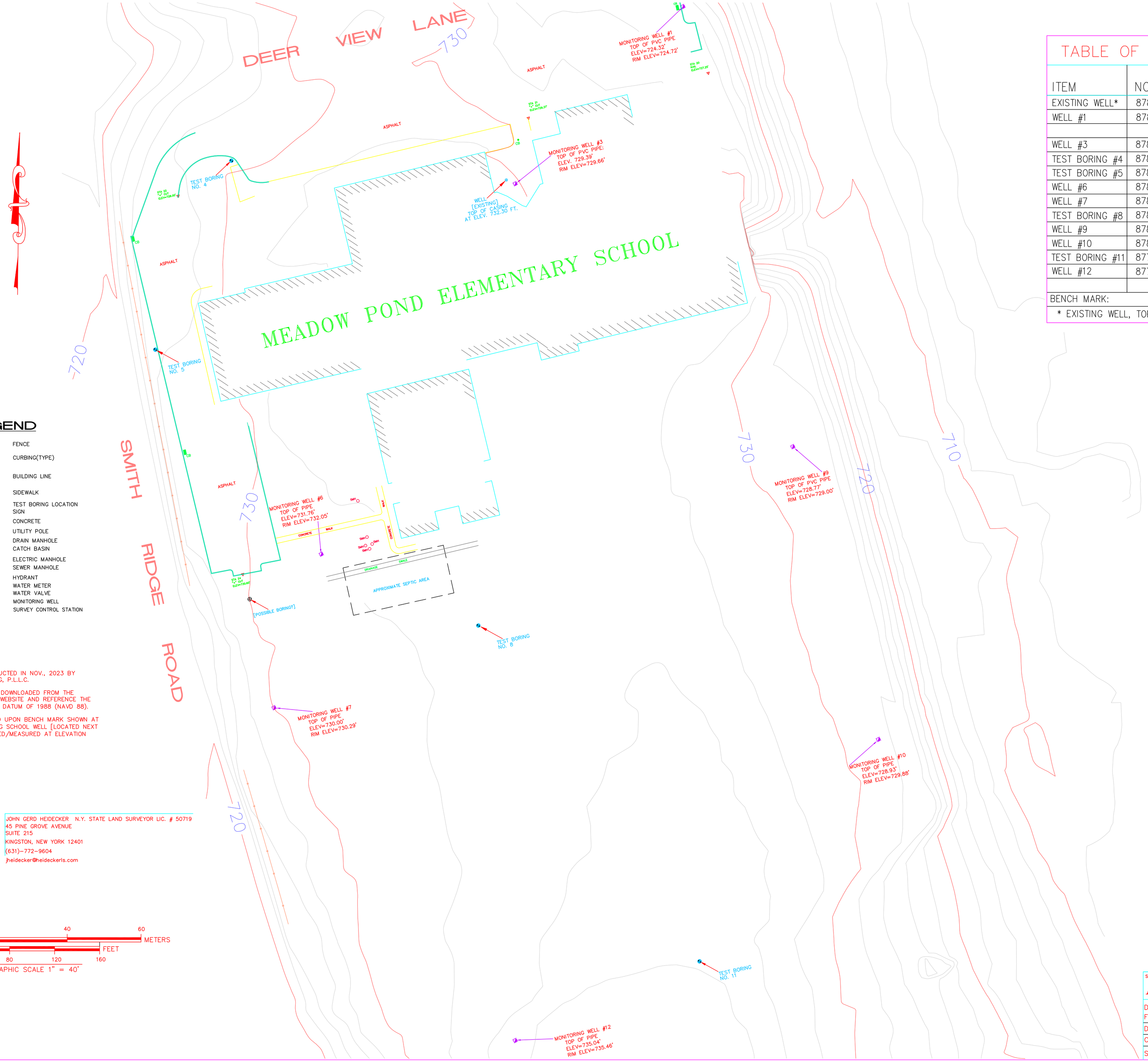


TABLE OF COODINATES/ELEVATIONS [IN FEET]

ITEM	NORTHING	EASTING	TOP OF PVC ELEVATION	GROUND ELEVATION
EXISTING WELL*	878636.1	760748.1		
WELL #1	878790.1	760905.0	724.32	724.7
WELL #3	878632.8	760756.0	729.39	729.7
TEST BORING #4	878653.2	760503.8		730.3
TEST BORING #5	878485.5	760436.2		728.0
WELL #6	878303.8	760583.7	731.76	732.0
WELL #7	878167.4	760541.7	730.00	730.3
TEST BORING #8	878240.4	760723.4		733.0
WELL #9	878399.3	761002.6	728.77	729.0
WELL #10	878139.3	761078.7	728.93	730.0
TEST BORING #11	877942.2	760919.8		736.1
WELL #12	877871.8	760756.0	735.04	735.5

BENCH MARK:

* EXISTING WELL, TOP OF UPRIGHT CASING HELD @ ELEV. 732.30 FT.

COORDINATE/ELEVATION NOTES:

1. HORIZON CONTROL [REFERENCE THE NORTH AMERICAN DATUM OF 1983 (NAD 83)] IS BASED UPON CLOSED TRAVERSE BY HEIDECKER LAND SURVEYING, P.L.L.C., CLOSURE ERROR @ +/– 0.02 FEET.

2. BENCH MARK SHOWN [TOP OF CASING OF EXISTING SCHOOL WELL] WAS HELD FOR THIS SURVEY, AS INFERRED NAVD88 ELEVATION 732.30 FEET.

3. ELEVATIONS SHOWN ABOVE FOR TOP OF PVC HAVE ACCURACY IN THE VERTICAL OF +/– 0.02 FEET.

LEGEND

x	FENCE
	CURBING(TYPE)
	BUILDING LINE
	SIDEWALK
BORING / S	TEST BORING LOCATION / SIGN
CONC	CONCRETE
UP	UTILITY POLE
DMH	DRAIN MANHOLE
CB	CATCH BASIN
EMH	ELECTRIC MANHOLE
SMH	SEWER MANHOLE
FH	HYDRANT
WM	WATER METER
WV	WATER VALVE
	MONITORING WELL
	SURVEY CONTROL STATION

NOTES

1. FIELD WORK WAS CONDUCTED IN NOV., 2023 BY HEIDECKER LAND SURVEYING, P.L.L.C.

2. CONTOURS HAVE BEEN DOWNLOADED FROM THE WESTCHESTER COUNTY GIS WEBSITE AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

3. ELEVATIONS ARE BASED UPON BENCH MARK SHOWN AT TOP OF CASING OF EXISTING SCHOOL WELL [LOCATED NEXT TO WELL NO. 3], DETERMINED/MEASURED AT ELEVATION 732.30 FEET.

JOHN GERD HEIDECKER N.Y. STATE LAND SURVEYOR LIC. # 50719
45 PINE GROVE AVENUE
SUITE 215
KINGSTON, NEW YORK 12401
(631)–772–9604
jheidecker@heideckerls.com

0 20 40 60 METERS
0 40 80 120 160 FEET
GRAPHIC SCALE 1" = 40'

HEIDECKER LAND SURVEYING

SURVEY PREPARED FOR:
Precision Environmental Services, Inc.

DATE: FEBRUARY 9, 2024
DRAWN BY: J.H.
CHK BY: W.J.W.
SCALE: 1"= 40'

MONITORING WELL SURVEY
MEADOW POND ELEMENTARY SCHOOL
TOWN OF LEWISBORO, SOUTH SALEM
WESTCHESTER COUNTY, NEW YORK

SHEET NO. 1 OF 1
PROJ. NO. 23HLS80–1056
CAD FILE: 23HLS80FP.DWG

FR1

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4398
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-1

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg and Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ ROTARY HSA 4¼" ID

Date Drilled: 11-10-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 20'

Boring Diameter: 8¼" Screen Diameter: 2" Length: —

Slot Size: 20 Riser Diameter: 2" Length: —

Type: PVC Sched 40 Sand Pack: #2 Bentonite Seal: —

Protective Casing: Flush Road Box, Conc. apron.

see map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0					Grass/topsoil 10"
1		24	0-2'		SILT, brown, moist, with little f-c sand, trace gravels
2					
3		24	2-4'		Con't
4	Cuttings				
5		20	4-6'		con't
6					
7		6"	6-8'	0.1	
8	8 bentonite				Dark brown to gray brown SILT some organic odor (slight)
9	9 sand #2	20	8-10'		
10					SILT (same as 0-2)
11		14	10-12'		
12					
13		14	12-14'		Con't
14					
15		20	14-16'		Con't
16	▽ ?			15-17	
17			16-18'		Cont Stiff = (water zone?)
18		18		17-19	Con't not stiff
19		3	18-20'		
20	▽ 19.8'				spoon refusal at 20', wet at tip of spoon 19.8' auger refusal at 20'
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					

Blow Counts Not Required

FIELD BLANK
FB20231110 1633
8:15
SB-1(0'-2") 1633
8:15
SB-1(2'-12') 1633
8:20
SB-1(17'-19') 1633
5:38

NOTE: DEC doesn't want parameters! TOC Ph SPLP on this bore.

TUES

PRECISION ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4415
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-3a

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ROTARY AUGER HSA 4¼ ID ~~GeoProbe/Direct Push~~

Date Drilled: 11-7-23 Date Developed: N/A

TOC Elevation: N/A Total Depth of Hole: 11'

Boring Diameter: 8¼ Screen Diameter: ____ Length: ____

Slot Size: See SB-3b ~~Riser Diameter:~~ ____ Length: ____

Type: ____ Sand Pack: ____ Bentonite Seal: ____

Protective Casing: ____

See map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification	
					Asphalt, 6" Subbase (SB-3 1633 0-2")	SB-3 10:07 1633 FEAS SPLP PH/TOC 2-(2')
0	See MW-3b For Well	14"	SB-3 0-2' 0-2'	0	Fine SAND, br, little gravel, moist/dry	
1						
2			SB-3, 2-12'			
3		2"	2-4'	0	Con't	
4						
5		2"	4-6'	0	Con't	
6					med	
7		12"	6-8'	0	TILL, br, w/some silt sand, moist/dry hard + dense	
8						
9		8"	8-10'		Con't	
10				0		
11	Spoon Refusal @ 11' Auger Refusal 11'6	9"	10-12'		Con't moister	
12				0	END AT 11' DUE TO REFUSAL WILL Attempt to try bore 3' south	See SB-3b
13			12-14'			
14						
15			14-16'			
16						
17			16-18'			
18						
19			18-20'			
20						
21			20-22'			
22						
23			22-24'			
24						
25			24-26'			
26						
27			26-28'			
28						
29			28-30'			
30					BLOW COUNTS NOT REQUIRED	

TUE 5

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-3b/MW-3

Project: Meadow Pond School Client: NYSDEC
Project No: Spill #2100460 Location: South Salem, NY
Driller: Greg + Logan Logged by: BN/CC (PES)
Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ Rotary HSA 4¼ ID
Date Drilled: 11-7-23 Date Developed: —
TOC Elevation: — Total Depth of Hole: 17'
Boring Diameter: 8¼ Screen Diameter: 2" Length: 5'
Slot Size: 20 Riser Diameter: 2" Length: 12'
Type: Sched 40 PVC Sand Pack: 9-17', #2 Bentonite Seal: 8'-9'
Protective Casing: Flush Road Box

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0	Flush road box 9/16" bolts Concrete pad	Auger to 10'	0-2'		Second attempt at SB-3 moved bore 3' South
1					
2					
3	Cuttings to surface		2-4'		
4					
5			4-6'		
6					
7			6-8'		
8	Bentonite				
9			8-10'		
10					
11	Sandpack 12 10-17'	14"	10-12'	0	TILL, hard + dense, br, with little f-c sand (may be TILL), dry trace gravel
12					
13		24"	12-14'	0	Con't
14					
15	▽ ?	18"	14-16'	0	Con't wet at 15.9' to 16'
16					
17		24"	16-18'	0	Con't but moist to dry
18					END AT 17' DUE TO REFUSAL
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		NOTE: overnight roadbox, soft concrete, and traffic cone run over and disturbed Road box and concrete. Needs repair. PVC well is OK.
28					
29			28-30'		
30					

1633
SB-3 (15.9-17)
1715
spoon refusal @ 17'

BLOW COUNTS NOT REQUIRED

TVES

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-4

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: GeoProbe/Direct Push

Date Drilled: 11-7-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 19'

Boring Diameter: 8"/4 Screen Diameter: — Length: —

Slot Size: — Riser Diameter: — Length: —

Type: — Sand Pack: — Bentonite Seal: —

Protective Casing: —

See map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification	
					GRASS/TOPSOIL 12"	SB-4 (0-2") 1633 2:30
0	NO WELL SET	14"	0-2'	0	TILL, brn/F-C Sand, trace gravel moist	SB-4 (2-12') 1633 2:40
1						
2						
3		4"	2-4'	0	Con't, hard+dense, dry	
4						
5		24"	4-6'	0	Con't	
6						
7		9"	6-8'	0	Con't	
8						
9		19"	8-10'	0	Con't	
10						
11		17"	10-12'	0	Con't	
12						
13		24"	12-14'	0	Con't (poss sand layer at 13.9'-14')	Spoon refusal 12'
14						
15		24	~~14-16'~~ 15-17	0	Auger thru spoon refusal pick-up at 15'-17'	
16						
17		24	~~16-18'~~ 17-19	0	Con't, more gravels Con't dry	SB-4 (17-19) 1633 4:40
18					Refusal spoon+auger at 19'	
19			18-20'			
20						
21			20-22'			
22						
23			22-24'			
24						
25			24-26'			
26						
27			26-28'			
28						
29			28-30'			
30					BLOW COUNTS NOT REQUIRED	

WED

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-5

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ Rotary HSA w/ 4¼" ID

Date Drilled: 11-8-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 14'

Boring Diameter: 8¼ Screen Diameter: — Length: —

Slot Size: — Riser Diameter: — Length: —

Type: — Sand Pack: — Bentonite Seal: —

Protective Casing: —

see map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification	
					GRASS / TOPSOIL 7"	4:30 1633
0						SB-5 (0'-2") 1633
1	NO WELL	15"	0-2'	0	SILT, br, msst, w/ little sand, trace gravels firm	
2						SB-5 (2'-12") 1635
3		4"	2-4'	0	Con't	
4						
5		10"	4-6'	0	Con't	
6						
7		18"	6-8'		Con't	
8						
9		24"	8-10'		Con't softer	
10						
11		24"	10-12'		Con't, wet	SB-5 (11'-12') 1633
12	▽ 12'					515
13		24"	12-14'			
14						
15			14-16'		END AT 14'	
16						
17			16-18'			
18						
19			18-20'			
20						
21			20-22'			
22						
23			22-24'			
24						
25			24-26'			
26						
27			26-28'			
28						
29			28-30'			
30					Blow Counts not required	

THURS

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-6/MW-6

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg & Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: Rotary HSA w/ 4¼" ID ~~GeoProbe/Direct Push~~

Date Drilled: 11-9-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 16/20

Boring Diameter: 8¼ Screen Diameter: 2" Length: 10'-20'

Slot Size: #20 Riser Diameter: 2" Length: 0'-10'

Type: Sched 40 PVC Sand Pack: #2 8-20' Bentonite Seal: 7'-8'

Protective Casing: Flush Road box

See map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0					GRASS/TOPSOIL 8"
1		24"	0-2'	0	SILT, brown, w/f-c sand, trace gravels, moist — Line SB-6 (0'-2') 1633
2					SB-6 (2'-2')
3		24"	2-4'		Con't — 1633 TOC PA SMP 11:45
4					
5		24"	4-6'		Con't
6					
7	7' bentonite	24"	6-8'		Con't
8	8' #2 sand				
9		5"	8-10'		Con't (may be wet @ 10' very soft, some water 10' 2" wet zone — SB-6 (9-10') 1:15 1633
10	▽				
11		24"	10-12'		Con't
12					
13		24	12-14'		Con't
14	▽				
15		14"	14-16'		SILT wet w/ organics at 14-15 6" wet zone
16					15-16 SILT brown, moist, gravels — END BORING AT 16 — Set well at 20'
17			16-18'		
18					
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					Blow Counts Not Required

THURS

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-7/MW-7

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg - Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: Rotary HSA w/4¼" ID GeoProbe/Direct Rush

Date Drilled: 11-9-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 20'

Boring Diameter: 8¼ Screen Diameter: 2 Length: 10'

Slot Size: #20 Riser Diameter: 10' Length: 10'

Type: Sch 40 PVC Sand Pack: #2 8-20' Bentonite Seal: 7-8'

Protective Casing: —

see map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
					Grass/Topsoil, 12"
0		16"	0-2'	0	SILT, w/f-m sand, moist, brown
1					
2					
3	Cuttings	24"	2-4'		Cont but grey, organics (same mat'l)
4					
5		24"	4-6'		Cont trace gravels
6					
7	7 bentonite	24"	6-8'		Cont, trends sandy @ 8' moist/soft at 6'
8					
9	#2 sand	24	8-10'		Cont w/f-m sand, moist, brown trace gravels
10	10				Cont
11		24	10-12'		
12	▽ wet				
13		16"	12-14'		SAND W/SILT, f-m, rust brown, poor graded
14					END BORING AT 14'
15			14-16'		
16					
17			16-18'		
18					
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					

SB-9(0"-2") 1633 7:50

SB-9(2-4') 1633 8:00?

ALSO DUP

SB-9(4"-12") 1633 9:20?

Blow Counts not required

THURS

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-8

Project: Meadow Pond School Client: NYSDEC
Project No: Spill #2100460 Location: South Salem, NY
Driller: Greg + Logan Logged by: BN/CC (PES)
Drilling Contractor: AARCO Drilling Method: ~~Geoprobe/Direct Push~~ Rotary HSA w/ 4¼"
Date Drilled: 11-9-23 Date Developed: —
TOC Elevation: — Total Depth of Hole: 6'
Boring Diameter: 8¼ Screen Diameter: — Length: —
Slot Size: — Riser Diameter: — Length: —
Type: — Sand Pack: — Bentonite Seal: —
Protective Casing: —

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0					Grass/Topsoil 12"
1		24"	0-2'	0	SILT, br, moist, little f-c sand, trace gravels
2					
3		24"	2-4'	0	Con't
4					
5		15"	4-6'	0	Con't Very wet @ 6'
6					
7			6-8'		END BORING AT 6'
8					
9			8-10'		
10					
11			10-12'		
12					
13			12-14'		
14					
15			14-16'		
16					
17			16-18'		
18					
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					

1633
4:30 SB-8(0'-2")
4:40 SB-8(2-12")
1633
4:55 SB-8(5'-6')
1637

Blow Counts Not Required

FR1

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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-9a

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ROTARY HSA w/ 4¼" ID

Date Drilled: 11-10-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 7'

Boring Diameter: 8¼ Screen Diameter: 2" Length: —

Slot Size: 20 Riser Diameter: 2" Length: —

Type: PVC Sch 40 Sand Pack: #2 Bentonite Seal: —

Protective Casing: Flush Mt Box

See map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
					Grass / Topsoil 10"
0					
1		24"	0-2'	0	SILT, brown, little f-c sand, trace gravels, moist
2					
3	No	15	2-4'	0	Con't (softer @ 4')
4	WELL				
5	SET	13'	4-6'	0	Con't Soft, very moist auger refusal 7' (bulder?)
6					
7		12"	6-8'		(6-7') Con't "
8					
9			8-10'		Auger refusal at 7'
10					See SB-9b + SB-9c
11			10-12'		
12					
13			12-14'		
14					
15			14-16'		
16					
17			16-18'		
18					
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					

1	SB-9(0'-2") 7:40	1633
3	SB-9(2'-12") 7:45	1633 FB TOC SCLD
2	ABG MS/MSD	↑

FR1

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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-9b

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~ROTARY HSA 4¼" ID~~ Geoprobe Direct Push

Date Drilled: 11-10-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: _____

Boring Diameter: 8¼ Screen Diameter: 2" Length: _____

Slot Size: 20 Riser Diameter: 2" Length: _____

Type: PVC sched 40 Sand Pack: #2 Bentonite Seal: _____

Protective Casing: Flush Road Box

moved hole 3' N

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0	See SB9c				
1		auger to 7'	0-2'	—	
2					
3	NO WELL SET		2-4'	—	see SB-9a
4					
5			4-6'	—	
6					
7			6-8'		NO SAMPLE OR CORE
8				—	rough augering 7'-8.5'
9			8-10'		then auger refusal.
10					see SB-9a + SB-9c
11			10-12'		
12					
13			12-14'		
14					
15			14-16'		
16					
17			16-18'		
18					
19			18-20'		
20					
21			20-22'		
22					
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					

PRECISION
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-9c / MW-9

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg + Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ROTARY HSA 4¼ ID ~~GeoProbe/Direct Push~~

Date Drilled: 11-10-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 21

Boring Diameter: 8¼ Screen Diameter: 2" Length: 11'-21'

Slot Size: 20 Riser Diameter: 2" Length: 0-11'

Type: Sched 40 PVC Sand Pack: #2 9'-21' Bentonite Seal: 8-9'

Protective Casing: Flush Road Box

moved hole 4' SW from SB-9a

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0	conc. curtain				
1			0-2'	0	
2					See SB-9a + SB-9b
3	cuttings		2-4'		
4					
5			4-6'		
6					
7			6-8'		
8	bentonite	10"	7-9		SILT, brown, w/ little f-c sand, trace gravel, moist soft
9			~~8-10'~~		
10		24"	9-11		Gray SILT, soft, organics, trace gravel (9-9.5')
11			~~10-12'~~		
12		12"	11-13		1143 Con't, 9.5-11 continues brown SILT similar to 0-7'
13			~~12-14'~~		
14	sand pack	24	13-15		some organics 11.5-12.0, rest same
15			~~14-16'~~		SILT, brown, w/ little f-c sand, moist soft 1633 SB-9(17-18')
16		20	15-17		CON'T (rust colored) sand lense, dry (16.7-16.8) 2330
17			~~16-18'~~		soft from 17-19, may be wet
18		24	17-19		
19			~~18-20'~~		
20	▽?	24	19-21		Con't, very soft (guess water table 20') not flowing
21			20-22'		END BORING AT 21'
22					See SB-9a + SB-9b
23			22-24'		
24					
25			24-26'		
26					
27			26-28'		
28					
29			28-30'		
30					Blow Counts Not Required

WED

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TEL: 518-885-4399
FAX: 518-885-4418
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-10/MW10

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg and Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ Rotary HSA to 4¼" ID

Date Drilled: 11-8-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 22.5'

Boring Diameter: 8¼ Screen Diameter: 2" Length: 10'

Slot Size: 20 Riser Diameter: 2" Length: 125'

Type: PVC Sch. 40 Sand Pack: #2 to 10.5' Bentonite Seal: 9.5-10.5 Chips hydrated

Protective Casing: Flush Road Box

See map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification	
0	Flush Rd box, Conc. Curb, 9/16" bolts				GRASS SURFACE/TOPSOIL TOPSOIL 12", very wet	SB-10 (0'-2") 1633
1		16"	0-2'	0	SILT, br, moist, w/ little fine sand and trace gravel	9:45 SB-10 (2"-12") 10:00 1633 TCL PCB SVOC
2						
3	riser	24"	2-4'	0	Con't	
4					Mostly very soft	
5	Cuttings	24"	4-6'	0		
6					Con't not soft	
7		24"	6-8'	0		
8					Con't to 9'	
9	9.5 bentonite chips	24"	8-10'		Gray to dark brown SILT w/ little sand, trace gravel, trace organics, moist	
10						
11	10.5 Sand #2	24	10-12'			
12					Con't	
13		24	12-14'		Brown again Con't SILT	
14						
15		5"	14-16'		Con't very moist	
16						
17		17"	16-18'		Con't moist slightly	
18						
19		24"	18-20'		Con't, stiff Spoon refusal 18'	
20						
21	21	6"	20-22'		Con't, very moist	SB-10, 20-22', 11:30 1633
22					wet cuttings, Auger refusal 22'	
23			22-24'		BORING TERMINATED AT 22.5' AT AUGER REFUSAL	
24						
25			24-26'			
26						
27			26-28'			
28						
29			28-30'			
30					Blow counts not required	

WED

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TEL: 518-885-4399
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-11

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: Greg and Logan Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ Rotary HSA w/ 4¼" ID

Date Drilled: 11-8-23 Date Developed: —

TOC Elevation: — Total Depth of Hole: 14

Boring Diameter: 8¼ Screen Diameter: — Length: —

Slot Size: — Riser Diameter: — Length: —

Type: — Sand Pack: — Bentonite Seal: —

Protective Casing: —

see map

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification	
					GRASS SURFACE / TOPSOIL 12"	SB-11 (0"-2") 1633 8'05
0	NO WELL SET	19"	0-2'	0	SILT, br, moist, little fine sand	
1						
2						
3		24"	2-4'	0	SAND w/ SILT, br, moist fine-med sand	SB-11 (2"-12") 1633 8.20
4						
5		24"	4-6'		SILT w/ fine sand, br, moist, trace Gravel	
6						
7		24"	6-8'		Cont	
8						
9		24"	8-10'		Cont	
10						
11		24"	10-12'		Cont moister	
12	▽ 12				Saturated at 12',	SB-11 (11-12") 1633 9'00
13		24"	12-14'		Cont	
14						
15			14-16'		TERMINATED AT 14'	
16						
17			16-18'			
18						
19			18-20'			
20						
21			20-22'			
22						
23			22-24'			
24						
25			24-26'			
26						
27			26-28'			
28						
29			28-30'			
30					Blow counts not required	

MON

PRECISION ENVIRONMENTAL SERVICES, INC.
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TEL: 518-885-4399
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG

Well/ Boring No.: SB-12

Project: Meadow Pond School Client: NYSDEC

Project No: Spill #2100460 Location: South Salem, NY

Driller: GREG + LOGAN Logged by: BN/CC (PES)

Drilling Contractor: AARCO Drilling Method: ~~GeoProbe/Direct Push~~ B-57 4¼" ID HSA

Date Drilled: 11-6-23 Date Developed: TBD

TOC Elevation: _____ Total Depth of Hole: 21' 10.7-20.7 SEE MAP

Boring Diameter: 8¼" Screen Diameter: 2" Length: 10' (~~0.01~~)

Slot Size: 20slot Riser Diameter: 2" Length: _____

Type: PVC, Sch 40 Sand Pack: #2, 6-50lb bags Bentonite Seal: 9.5-8.5

Protective Casing: FLUSH ROAD BOX

Depth (ft.)	Well Construction	% Recovery	Sample Type/ #	PID (ppm)	Description / Soil Classification
0		1.5/20	0-2'	Ø	1250 SB-12(2"-12") 1633, pH/TOC, SPLP PFAS; 1245 SB-12(0"-2") 1633 TOPSOIL w/ GRASS/ROOTS 0-4"
1					4"-2' Lt Brown SILT, few fine sand, S moist
2					
3		2/2	2-4'	Ø	2'-4' Same as Above, moist
4					3.2'-3.5' Gray/Black fine sand layer., moist
5		2/2	4-6'	Ø	Same 2'-4' Above, moist.
6					
7		1'-3"/2	6-8'	Ø	Same w/ f-m sand, @ base gravel sized, drill broke mete-rite. V moist to wet at base
8					
9		1'-5"/2	8-10'	Ø	8-8.5 Same 8.5-9.5 Pulverized meta-rx from hammer & sampler (f-c sized)
10	-9.5 sand				9.5-10 Gray brown Silt, little f sand, S moist
11	←10.7	2/2	10-12'	Ø	10"-Brown f sand, little silt, moist 11-11.6" Brown f-m sand trace silt, v. moist
12					
13		1.8/2	12-14'	Ø	11-6"→12 Lt Gray-White f-m sand (pulverized rock)
14					12-14 Same as 11-6 to 12'
15		0.6/2	14-16'	Ø	Same as Above, S moist — weathered/dry surface of boulder.
16					
17	Only ↑ Augered ↓		16-18'	NA	16-19 AUGER ONLY
18					
19			18-20'	Ø	19-20.5 Lt Gray f SAND, little silt, very weathered rx
HSA 20	-20.7	1.5/2	Refusal	.55	SB-12(11-11.5) @ 1415 1633
21	Auger to 21' Refusal		20-22'		
22					
23			22-24'		Equipt blanks collected after SB-12
24					1445 EQB11062023-1633
25			24-26'		water from lab over split spoon
26					sampler + PES SS spoon
27			26-28'		
28					
29			28-30'		
30					

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW-1

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.28.23 Time: _____ Well Locked? Yes ____ No ____

(a) Total Sounded Well Depth 19.20 (feet)

(b) Depth to Water (below measuring point) 13.73 (feet)

(c) Height of Water Column _____ (feet)

*Volume Factors (circle one): 2-inch well = 0.163 gal/ft X
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft
8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = _____ feet x _____ gallons/foot = _____ gallons

PURGE DATA Date: 11.28.23 Time: 1045 start _____ finish

Method: Low flow with peripump and HDPE tubing
(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = _____ volumes x _____ gallons/volume = _____ gallons

Did well dry out? Yes ____ No ____ Number of times ____ Actual Volume Removed: _____ gallons

PURGE/SAMPLING DATA

Time	Temp (C°)	pH	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity
1050	14.20	6.08	10.7	2.52	198	214
1054	14.42	6.11	10.5	1.89	189	86.4
1057	14.32	6.10	10.1	2.05	190	50.0
1100	14.44	6.08	9.83	2.35	189	32.0

Appearance (visual turbidity) clear Color H brown Odor NO

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

MW-1 @ 1100
duplicate "Dup A" collected here @ 1130

Personnel: Brian Neumann ~~and Pat Sokolowski~~

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ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW-3

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.21.23 Time: _____ Well Locked? Yes ____ No X

(a) Total Sounded Well Depth 15.80 (feet)

(b) Depth to Water (below measuring point) 14.38 (feet)

(c) Height of Water Column 1.42 (feet)

*Volume Factors (circle one): 2-inch well = 0.163 gal/ft X
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft
8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 1.42 feet x 0.163 gallons/foot = 0.23 gallons

PURGE DATA Date: ~~11.21.23~~ Time: NA start NA finish

Method: ~~Low flow with peripump and HDPE tubing~~ bailed sample only - not enough water
(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = ____ volumes x ____ gallons/volume = ____ gallons

Did well dry out? Yes ____ No ____ Number of times ____ Actual Volume Removed: ____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity

Appearance (visual turbidity) turbid brown Color brown Odor No

Sampling Method: ~~Low flow with peripump and HDPE tubing~~ PFAS free bailer

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

1440 Sample for PFAS only

Personnel: Brian Neumann and Pat Sokolowski

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW- 6

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.21.23 Time: 1315 Well Locked? Yes ____ No X

(a) Total Sounded Well Depth 18.80 (feet)

(b) Depth to Water (below measuring point) 17.09 (feet)

(c) Height of Water Column 1.71 (feet)

*Volume Factors: (circle one)
2-inch well = 0.163 gal/ft X
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft
8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 1.71 feet x .17 gallons/foot = .29 gallons

PURGE DATA Date: 11.21.23 Time: ~~start~~ start _____ finish

Method: Low flow with peripump and HDPE tubing
(Waterra, bailer, submersible pump, etc.)

None

Purge Volume (3 to 5 times well volume) = _____ volumes x _____ gallons/volume = _____ gallons

Did well dry out? Yes ____ No ____ Number of times ____ Actual Volume Removed: _____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity

→ unable to get parameters due to volume/silt in well

Appearance (visual turbidity) _____ Color _____ Odor _____

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

Sampled for just PFAS w/ bailer

Personnel: Brian Neumann and Pat Sokolowski

PRECISION
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BALLSTON SPA, NY 12020
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CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW- 7

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.21.23 Time: 1230 Well Locked? Yes ____ No X

(a) Total Sounded Well Depth 17.85 (feet)

(b) Depth to Water (below measuring point) 15.32 (feet)

(c) Height of Water Column 2.53 (feet)

*Volume Factors (circle one): 2-inch well = 0.163 gal/ft X; 4-inch well = 0.653 gal/ft; 6-inch well = 1.468 gal/ft; 8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 2.53 feet x .17 gallons/foot = .43 gallons

PURGE DATA Date: 11.21.23 Time: 1249 start _____ finish

Method: Low flow with peripump and HDPE tubing 1 ~1' from bottom

(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = _____ volumes x _____ gallons/volume = _____ gallons

Did well dry out? Yes ____ No ____ Number of times ____ Actual Volume Removed: _____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity
1250	9.07	7.23	.178	8.31	163	0.0 → turbid
1255	9.94	6.20	.170	8.26	115	0.0 → Dry @ 1259; let sit while we get equipment blank sample
1300						

Appearance (visual turbidity) _____ Color _____ Odor _____

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

Sampled well @ 1410

Personnel: Brian Neumann and Pat Sokolowski

12/7/23

PRECISION
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BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW- 9

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.28.23 Time: _____ Well Locked? Yes____ No____

(a) Total Sounded Well Depth 19.70 (feet)

(b) Depth to Water (below measuring point) 15.18 (feet)

(c) Height of Water Column 4.52 (feet)

*Volume Factors: (circle one) 2-inch well = 0.163 gal/ft X
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft
8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 4.52 feet x 0.163 gallons/foot = 0.74 gallons

PURGE DATA Date: 11.28.23 Time: 918 start _____ finish

Method: Low flow with peripump and HDPE tubing
(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = _____ volumes x _____ gallons/volume = _____ gallons

Did well dry out? Yes____ No____ Number of times____ Actual Volume Removed: _____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity
0920	16.35	7.88	0.546	3.4	143	–
0924	12.45	6.88	0.390	2.56	171	–
0927	12.87	6.77	0.326	3.22	197	–
0930	12.69	6.10	0.348	3.57	209	–
0933	13.31	6.05	0.345	3.4	213	–
0935	13.33	6.03	0.339	3.39	215	–

Appearance (visual turbidity) ~~slight~~ clear Color none-H brown Odor NO

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
MW-9 @ 0940			yes___ no X
			yes___ no X
			yes___ no X

COMMENTS

14 bottles

Personnel: Brian Neumann ~~and Pat Sokolowski~~

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW-10

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.21.23 Time: 0950 Well Locked? Yes ____ No X

(a) Total Sounded Well Depth 20.50 (feet)

(b) Depth to Water (below measuring point) 12.68 (feet)

(c) Height of Water Column 7.82 (feet)

*Volume Factors (circle one): 2-inch well = 0.163 gal/ft X; 4-inch well = 0.653 gal/ft; 6-inch well = 1.468 gal/ft; 8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 7.82 feet x .17 gallons/foot = 1.32 gallons

PURGE DATA Date: 11.21.23 Time: 1045 start ____ finish

Method: Low flow with peripump and HDPE tubing - ~2' from bottom / pumping @ ~200ml/per minute
(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = — volumes x — gallons/volume = — gallons

Did well dry out? Yes ____ No X Number of times ____ Actual Volume Removed: ____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity
1050	10.35	6.54	.626	2.84	-26	800
1055	10.77	6.73	.638	1.83	-112	800
1100	11.34	6.85	.638	1.40	-128	0.0
1105	11.96	6.90	.631	1.22	-129	0.0
1110	12.37	6.91	.627	1.22	-119	0.0

→ Not working properly; look turbid

Appearance (visual turbidity) ~~None~~ Slight Color ~~Clear~~ Brown Odor None

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

Sampled @ 1115 / MS-MSD taken here

Personnel: Brian Neumann and Pat Sokolowski

PRECISION
ENVIRONMENTAL SERVICES, INC.
631 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

GROUND WATER MONITOR WELL FIELD DATA SHEET

Project Name: Meadow Pond School Project Number: 2100460 Well ID: MW-12

Weather: Cloudy, rain late day, low 40 degree F, 5 mph east wind

WATER LEVEL DATA Date: 11.21.23 Time: 0930 Well Locked? Yes ____ No X

(a) Total Sounded Well Depth 17.80 (feet)

(b) Depth to Water (below measuring point) 12.79 (feet)

(c) Height of Water Column 5.01 (feet)

*Volume Factors: (circle one) 2-inch well = 0.163 gal/ft X
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft
8-inch well = 2.611 gal/ft

Well Volume ([c] x volume factor*) = 5.01 feet x .17 gallons/foot = .85 gallons

PURGE DATA Date: 11.21.23 Time: 0935 start 1020 finish

Method: Low flow with peripump and HDPE tubing; ~1' from bottom
(Waterra, bailer, submersible pump, etc.)

Purge Volume (3 to 5 times well volume) = — volumes x — gallons/volume = — gallons

Did well dry out? Yes ____ No X Number of times ____ Actual Volume Removed: ____ gallons

PURGE/SAMPLING DATA

Time	Temp	pH	Conductivity	DO	ORP	Turbidity
0940	7.92	7.34	.279	8.72	4	800
0945	9.11	6.78	.257	9.21	73	0.0 → very turbid; not working
0950	—	—	—	—	—	— → well dry or line plugged; line plugged pulled up another 1'
0955	—	—	—	—	—	—
1000	9.30	6.46	.250	8.87	21	464
1005	9.55	6.50	.256	9.17	93	Bar
1010	10.38	6.52	.253	9.18	128	6.0
1015	10.64	6.52	.250	9.21	118	0.0

Appearance (visual turbidity) Slight / Color light brown Odor None

Sampling Method: Low flow with peripump and HDPE tubing

Constituents Sampled	Container Description	Preservative	Filtered?
			yes ___ no X
			yes ___ no X
			yes ___ no X

COMMENTS

Sampled @ 1020

Personnel: Brian Neumann and Pat Sokolowski

APPENDIX C

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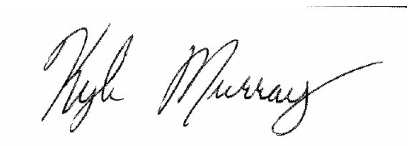
December 28, 2023

Brian Neumann
NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020

Project Location: Meadow Pond School, South Salem, NY
Client Job Number:
Project Number: 2100460
Laboratory Work Order Number: 23K1858

Enclosed are results of analyses for samples as received by the laboratory on November 14, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/28/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K1858

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

PROJECT LOCATION: Meadow Pond School, South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-12 (0"-2")	23K1858-01	Soil		Draft Method 1633	
				SM 2540G	
SB-12 (2"-12")	23K1858-02	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-12 (11-11.5)	23K1858-03	Soil		Draft Method 1633	
				SM 2540G	
EQB11062023	23K1858-04	Equipment Blank Water		Draft Method 1633	
SB-3 (0"-2")	23K1858-05	Soil		Draft Method 1633	
				SM 2540G	
SB-3 (2"-12")	23K1858-06	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-3 (15.9"-17")	23K1858-07	Soil		Draft Method 1633	
				SM 2540G	
SB-4 (0"-2")	23K1858-08	Soil		Draft Method 1633	
				SM 2540G	
SB-4 (2"-12")	23K1858-09	Soil		Draft Method 1633	
				SM 2540G	
SB-4 (17'-19')	23K1858-10	Soil		Draft Method 1633	
				SM 2540G	
SB-11 (2"-12")	23K1858-11	Soil		Draft Method 1633	
				SM 2540G	
SB-11 (0"-2")	23K1858-12	Soil		Draft Method 1633	
				SM 2540G	
SB-11 (11"-12")	23K1858-13	Soil		Draft Method 1633	
				SM 2540G	
SB-10 (0"-2")	23K1858-14	Soil		Draft Method 1633	
				SM 2540G	
SB-10 (2"-12")	23K1858-15	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-10 (20-22')	23K1858-16	Soil		Draft Method 1633	
				SM 2540G	
SB-5 (0"-2")	23K1858-17	Soil		Draft Method 1633	
				SM 2540G	
SB-5 (2"-12")	23K1858-18	Soil		Draft Method 1633	
				SM 2540G	

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/28/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K1858

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

PROJECT LOCATION: Meadow Pond School, South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-5 (11'-12')	23K1858-19	Soil		Draft Method 1633	
				SM 2540G	
SB-7 (11'-12')	23K1858-20	Soil		Draft Method 1633	
				SM 2540G	

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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.

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Draft Method 1633

Qualifications:

B-05

Data is not affected by elevated level in laboratory blank since sample(s) result is "Not Detected".

Analyte & Samples(s) Qualified:

Perfluorobutanoic acid (PFBA)
23K1858-04[EQB11062023]

D-01

Sample extracted/prepared at a dilution due to sample matrix.

Analyte & Samples(s) Qualified:

23K1858-02[SB-12 (2"-12")], 23K1858-06RE1[SB-3 (2"-12")], 23K1858-15RE1[SB-10 (2"-12")]

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

13C2-8:2FTS
23K1858-10RE1[SB-4 (17'-19')], 23K1858-15RE1[SB-10 (2"-12")]

1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS
23K1858-10RE1[SB-4 (17'-19')], 23K1858-15RE1[SB-10 (2"-12")]

PF-17C

Extracted internal standard is outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23K1858-05RE1[SB-3 (0"-2")], 23K1858-09RE1[SB-4 (2"-12")], B358251-MRL1, B360405-BLK1, B360405-MRL1, B361296-BLK1, B361296-BS1, B361296-MRL1

13C2-6:2FTS
23K1858-02RE1[SB-12 (2"-12")], 23K1858-03RE1[SB-12 (11-11.5)], 23K1858-05RE1[SB-3 (0"-2")], 23K1858-06RE1[SB-3 (2"-12")], 23K1858-07RE1[SB-3 (15.9"-17")], 23K1858-08RE1[SB-4 (0"-2")], 23K1858-09RE1[SB-4 (2"-12")], 23K1858-10RE1[SB-4 (17'-19')], 23K1858- 11RE1[SB-11 (2"-12")], 23K1858-13RE1[SB-11 (11"-12")], 23K1858-15RE1[SB-10 (2"-12")], 23K1858-16RE1[SB-10 (20-22')], 23K1858-19RE1[SB-5 (11'-12')], 23K1858-20RE1[SB-7 (11'-12')], B361296-BLK1, B361296-BS1, B361296-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS
23K1858-05RE1[SB-3 (0"-2")], 23K1858-09RE1[SB-4 (2"-12")], B358251-MRL1, B360405-BLK1, B360405-MRL1, B361296-BLK1, B361296-BS1, B361296-MRL1

1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS
23K1858-02RE1[SB-12 (2"-12")], 23K1858-03RE1[SB-12 (11-11.5)], 23K1858-05RE1[SB-3 (0"-2")], 23K1858-06RE1[SB-3 (2"-12")], 23K1858-07RE1[SB-3 (15.9"-17")], 23K1858-08RE1[SB-4 (0"-2")], 23K1858-09RE1[SB-4 (2"-12")], 23K1858-10RE1[SB-4 (17'-19')], 23K1858- 11RE1[SB-11 (2"-12")], 23K1858-13RE1[SB-11 (11"-12")], 23K1858-15RE1[SB-10 (2"-12")], 23K1858-16RE1[SB-10 (20-22')], 23K1858-19RE1[SB-5 (11'-12')], 23K1858-20RE1[SB-7 (11'-12')], B361296-BLK1, B361296-BS1, B361296-MRL1

PF-18

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

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23K1858-02RE1[SB-12 (2"-12")], 23K1858-03RE1[SB-12 (11-11.5)], 23K1858-06RE1[SB-3 (2"-12")], 23K1858-07RE1[SB-3 (15.9"-17")], 23K1858-08RE1[SB-4 (0"-2")], 23K1858-10[SB-4 (17'-19')], 23K1858-10RE1[SB-4 (17'-19')], 23K1858- 11RE1[SB-11 (2"-12")], 23K1858-12RE1[SB-11 (0"-2")], 23K1858-13RE1[SB-11 (11"-12")], 23K1858-16RE1[SB-10 (20-22')], 23K1858-18RE1[SB-5 (2"-12")], 23K1858-19RE1[SB-5 (11'-12')], 23K1858-20RE1[SB-7 (11'-12')], B358251-MSD1

13C2-6:2FTS
23K1858-15RE1[SB-10 (2"-12")], B361062-MSD1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS
23K1858-02RE1[SB-12 (2"-12")], 23K1858-03RE1[SB-12 (11-11.5)], 23K1858-06RE1[SB-3 (2"-12")], 23K1858-07RE1[SB-3 (15.9"-17")], 23K1858-08RE1[SB-4 (0"-2")], 23K1858-10[SB-4 (17'-19')], 23K1858-10RE1[SB-4 (17'-19')], 23K1858- 11RE1[SB-11 (2"-12")], 23K1858-12RE1[SB-11 (0"-2")], 23K1858-13RE1[SB-11 (11"-12")], 23K1858-16RE1[SB-10 (20-22')], 23K1858-18RE1[SB-5 (2"-12")], 23K1858-19RE1[SB-5 (11'-12')], 23K1858-20RE1[SB-7 (11'-12')], B358251-MSD1

1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS
B361062-MSD1

D3-NMeFOSA
B358251-MS1

D5-NEtFOSA
B358251-MS1, B358251-MSD1

N-ethyl perfluorooctanesulfonamide (NEtFOSA)
B358251-MS1, B358251-MSD1

N-methyl perfluoroocatnesulfonamide (NMeFOSA)
B358251-MS1

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S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

13C8-PFOA
23K1858-10RE1[SB-4 (17'-19')]

D3-NMeFOSA
B358251-MRL1

D3-NMeFOSAA
23K1858-13RE1[SB-11 (11"-12")]

D5-NEtFOSA
B358251-MRL1

N-ethyl perfluorooctanesulfonamide (NEtFOSA)
B358251-MRL1

N-MeFOSAA (NMeFOSAA)
23K1858-13RE1[SB-11 (11"-12")]

N-methyl perfluoroocatnesulfonamide (NMeFOSA)
B358251-MRL1

Perfluorooctanoic acid (PFOA)
23K1858-10RE1[SB-4 (17'-19')]

Z-01

Analyte detected in method blank >1/3 MRL

Analyte & Samples(s) Qualified:

Perfluorobutanoic acid (PFBA)
B359416-BLK1

SM 2540G

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

% Solids
23K1858-01[SB-12 (0"-2")], 23K1858-02[SB-12 (2"-12")], 23K1858-03[SB-12 (11-11.5)], 23K1858-05[SB-3 (0"-2")], 23K1858-06[SB-3 (2"-12")], 23K1858-07[SB-3 (15.9"-17")], 23K1858-08[SB-4 (0"-2")], 23K1858-09[SB-4 (2"-12")], 23K1858-10[SB-4 (17'-19')], 23K1858- 11[SB-11 (2"-12")], 23K1858-12[SB-11 (0"-2")], 23K1858-13[SB-11 (11"-12")], 23K1858-14[SB-10 (0"-2")], 23K1858-15[SB-10 (2"-12")], 23K1858-16[SB-10 (20-22')], 23K1858-17[SB-5 (0"-2")], 23K1858-18[SB-5 (2"-12")], 23K1858-19[SB-5 (11'-12')], 23K1858-20[SB-7 (11'-12')]

SW 846 9060A

Qualifications:

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Total Organic Carbon
23K1858-02[SB-12 (2"-12")], B358388-MS1, B358388-MSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

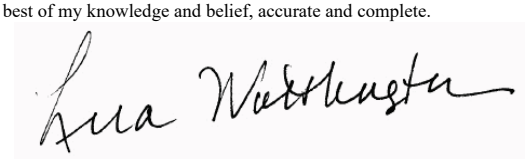
Analyte & Samples(s) Qualified:

pH
23K1858-02[SB-12 (2"-12")], 23K1858-06[SB-3 (2"-12")], 23K1858-15[SB-10 (2"-12")]

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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: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (0"-2") Sampled: 11/6/2023 12:45

Sample ID: 23K1858-01

Sample Matrix: Soil

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)	0.57	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoropentanoic acid (PFPeA)	0.27	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorohexanoic acid (PFHxA)	0.18	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoroheptanoic acid (PFHpA)	0.21	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorooctanoic acid (PFOA)	0.63	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorononanoic acid (PFNA)	0.35	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorodecanoic acid (PFDA)	0.21	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoroundecanoic acid (PFUnA)	0.25	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorododecanoic acid (PFDoA)	0.10	0.20	0.021	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorotridecanoic acid (PFTrDA)	0.090	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.043	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorobutanesulfonic acid (PFBS)	0.027	0.20	0.019	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.029	0.20	0.025	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorooctanesulfonic acid (PFOS)	1.3	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorodecanesulfonic acid (PFDS)	0.052	0.20	0.044	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (0"-2") Sampled: 11/6/2023 12:45

Sample ID: 23K1858-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:21	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	64.2	10-130		12/27/23 18:21
13C5-PFPeA	67.1	35-150		12/27/23 18:21
13C5-PFHxA	63.4	55-150		12/27/23 18:21
13C4-PFHpA	62.6	55-150		12/27/23 18:21
13C8-PFOA	64.5	60-140		12/27/23 18:21
13C9-PFNA	65.3	55-140		12/27/23 18:21
13C6-PFDA	64.9	50-140		12/27/23 18:21
13C7-PFUnA	64.0	30-140		12/27/23 18:21
13C2-PFDoA	67.6	10-150		12/27/23 18:21
13C2-PFTeDA	64.6	10-130		12/27/23 18:21
13C3-PFBS	66.1	55-150		12/27/23 18:21
13C3-PFHxS	66.6	55-150		12/27/23 18:21
13C8-PFOS	63.4	45-140		12/27/23 18:21
13C2-4:2FTS	64.8	60-200		12/27/23 18:21
13C2-6:2FTS	80.3	60-200		12/27/23 18:21
13C2-8:2FTS	186	50-200		12/27/23 18:21
13C8-PFOSA	69.4	30-130		12/27/23 18:21
D3-NMeFOSA	52.7	15-130		12/27/23 18:21
D5-NEtFOSA	45.7	10-130		12/27/23 18:21
D3-NMeFOSAA	87.7	45-200		12/27/23 18:21
D5-NEtFOSAA	89.9	10-200		12/27/23 18:21
D7-NMeFOSE	54.7	10-150		12/27/23 18:21
D9-NEtFOSE	48.6	10-150		12/27/23 18:21
13C3-HFPO-DA	65.4	25-160		12/27/23 18:21

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (0"-2") Sampled: 11/6/2023 12:45

Sample ID: 23K1858-01

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (2"-12") Sampled: 11/6/2023 12:50

Sample ID: 23K1858-02

Sample Matrix: Soil

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)	0.33	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoropentanoic acid (PFPeA)	0.17	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorohexanoic acid (PFHxA)	0.16	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoroheptanoic acid (PFHpA)	0.13	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorooctanoic acid (PFOA)	0.61	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorononanoic acid (PFNA)	0.088	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorodecanoic acid (PFDA)	0.043	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoroundecanoic acid (PFUnA)	0.039	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.024	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorooctanesulfonic acid (PFOS)	1.8	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-EtFOSAA (NEtFOSAA)	0.053	0.20	0.042	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (2"-12") Sampled: 11/6/2023 12:50

Sample ID: 23K1858-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:37	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	60.4		10-130		12/27/23 18:37
13C5-PFPeA	65.6		35-150		12/27/23 18:37
13C5-PFHxA	60.5		55-150		12/27/23 18:37
13C4-PFHpA	59.4		55-150		12/27/23 18:37
13C8-PFOA	62.2		60-140		12/27/23 18:37
13C9-PFNA	61.5		55-140		12/27/23 18:37
13C6-PFDA	64.1		50-140		12/27/23 18:37
13C7-PFUnA	60.4		30-140		12/27/23 18:37
13C2-PFDoA	62.2		10-150		12/27/23 18:37
13C2-PFTeDA	60.7		10-130		12/27/23 18:37
13C3-PFBS	62.7		55-150		12/27/23 18:37
13C3-PFHxS	62.8		55-150		12/27/23 18:37
13C8-PFOS	62.3		45-140		12/27/23 18:37
13C2-4:2FTS	**50.5**	*	60-200	PF-18	12/27/23 18:37
13C2-6:2FTS	**46.1**	*	60-200	PF-17C	12/27/23 18:37
13C2-8:2FTS	153		50-200		12/27/23 18:37
13C8-PFOSA	61.3		30-130		12/27/23 18:37
D3-NMeFOSA	46.8		15-130		12/27/23 18:37
D5-NEtFOSA	38.7		10-130		12/27/23 18:37
D3-NMeFOSAA	55.4		45-200		12/27/23 18:37
D5-NEtFOSAA	51.0		10-200		12/27/23 18:37
D7-NMeFOSE	48.1		10-150		12/27/23 18:37
D9-NEtFOSE	44.5		10-150		12/27/23 18:37
13C3-HFPO-DA	63.2		25-160		12/27/23 18:37

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (2"-12") Sampled: 11/6/2023 12:50

Sample ID: 23K1858-02

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.3			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @20°C	6.2			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	4100	120	80	mg/Kg dry	1	MS-11	SW 846 9060A	11/17/23	11/17/23 11:31	NRH

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (2"-12") Sampled: 11/6/2023 12:50

Sample ID: 23K1858-02

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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)	4.3	7.2	2.6	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoropentanoic acid (PFPeA)	1.2	3.6	0.63	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorohexanoic acid (PFHxA)	0.92	1.8	0.39	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoroheptanoic acid (PFHpA)	1.4	1.8	0.46	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorooctanoic acid (PFOA)	6.6	1.8	0.41	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorononanoic acid (PFNA)	1.1	1.8	0.35	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.33	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.49	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.49	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.43	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.37	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorooctanesulfonic acid (PFOS)	6.8	1.8	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorononanesulfonic acid (PFNS)	4.2	1.8	0.53	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	1.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	2.0	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	0.75	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	0.56	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.80	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.40	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	4.7	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	4.4	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	1.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	1.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
9Cl-PF3ONS (F53B Minor)	ND	7.2	1.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
11Cl-PF3OUdS (F53B Major)	ND	7.2	1.7	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	3.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	90	18	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	90	16	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	0.89	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	0.90	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (2"-12") Sampled: 11/6/2023 12:50

Sample ID: 23K1858-02

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	0.73	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	1.6	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:05	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	77.4	10-130		12/13/23 22:05
13C5-PFPeA	82.8	35-150		12/13/23 22:05
13C5-PFHxA	84.8	55-150		12/13/23 22:05
13C4-PFHpA	87.3	55-150		12/13/23 22:05
13C8-PFOA	83.1	60-140		12/13/23 22:05
13C9-PFNA	78.4	55-140		12/13/23 22:05
13C6-PFDA	80.1	50-140		12/13/23 22:05
13C7-PFUnA	76.1	30-140		12/13/23 22:05
13C2-PFDoA	72.3	10-150		12/13/23 22:05
13C2-PFTeDA	55.9	10-130		12/13/23 22:05
13C3-PFBS	70.5	55-150		12/13/23 22:05
13C3-PFHxS	86.7	55-150		12/13/23 22:05
13C8-PFOS	81.1	45-140		12/13/23 22:05
13C2-4:2FTS	60.1	60-200		12/13/23 22:05
13C2-6:2FTS	91.8	60-200		12/13/23 22:05
13C2-8:2FTS	100	50-200		12/13/23 22:05
13C8-PFOSA	64.1	30-130		12/13/23 22:05
D3-NMeFOSA	52.4	15-130		12/13/23 22:05
D5-NEtFOSA	52.0	10-130		12/13/23 22:05
D3-NMeFOSAA	78.8	45-200		12/13/23 22:05
D5-NEtFOSAA	79.0	10-200		12/13/23 22:05
D7-NMeFOSE	63.5	10-150		12/13/23 22:05
D9-NEtFOSE	64.6	10-150		12/13/23 22:05
13C3-HFPO-DA	79.2	25-160		12/13/23 22:05

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (11-11.5) Sampled: 11/6/2023 14:15

Sample ID: 23K1858-03

Sample Matrix: Soil

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	0.79	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoropentanoic acid (PFPeA)	0.027	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorohexanoic acid (PFHxA)	0.015	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorooctanesulfonic acid (PFOS)	0.31	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 18:52	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 18:52	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (11-11.5) Sampled: 11/6/2023 14:15

Sample ID: 23K1858-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 18:52	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	61.6		10-130		12/27/23 18:52
13C5-PFPeA	65.7		35-150		12/27/23 18:52
13C5-PFHxA	60.9		55-150		12/27/23 18:52
13C4-PFHpA	58.3		55-150		12/27/23 18:52
13C8-PFOA	62.6		60-140		12/27/23 18:52
13C9-PFNA	60.0		55-140		12/27/23 18:52
13C6-PFDA	61.5		50-140		12/27/23 18:52
13C7-PFUnA	57.9		30-140		12/27/23 18:52
13C2-PFDoA	55.9		10-150		12/27/23 18:52
13C2-PFTeDA	48.1		10-130		12/27/23 18:52
13C3-PFBS	62.8		55-150		12/27/23 18:52
13C3-PFHxS	62.7		55-150		12/27/23 18:52
13C8-PFOS	60.7		45-140		12/27/23 18:52
13C2-4:2FTS	**48.5**	*	60-200	PF-18	12/27/23 18:52
13C2-6:2FTS	**41.1**	*	60-200	PF-17C	12/27/23 18:52
13C2-8:2FTS	125		50-200		12/27/23 18:52
13C8-PFOSA	62.4		30-130		12/27/23 18:52
D3-NMeFOSA	50.6		15-130		12/27/23 18:52
D5-NEtFOSA	47.2		10-130		12/27/23 18:52
D3-NMeFOSAA	46.1		45-200		12/27/23 18:52
D5-NEtFOSAA	42.3		10-200		12/27/23 18:52
D7-NMeFOSE	45.2		10-150		12/27/23 18:52
D9-NEtFOSE	37.6		10-150		12/27/23 18:52
13C3-HFPO-DA	62.8		25-160		12/27/23 18:52

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-12 (11-11.5) Sampled: 11/6/2023 14:15

Sample ID: 23K1858-03

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: EQB11062023 Sampled: 11/6/2023 14:45

Sample ID: 23K1858-04

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	2.1	4.4	1.6	ng/L	1	B-05, J	Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoropentanoic acid (PFPeA)	ND	2.2	0.38	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.1	0.24	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorooctanoic acid (PFOA)	ND	1.1	0.25	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorononanoic acid (PFNA)	ND	1.1	0.21	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorodecanoic acid (PFDA)	ND	1.1	0.20	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.1	0.30	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.1	0.30	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.1	0.27	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.1	0.28	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.1	0.26	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.1	0.23	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.1	0.33	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.1	0.35	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.1	0.32	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.1	0.34	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.1	0.29	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.4	0.76	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.4	1.1	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.4	1.2	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.1	0.34	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.1	0.45	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.1	0.34	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.1	0.48	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.1	0.24	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	11	2.9	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	11	2.7	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.4	1.1	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.4	0.75	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.4	0.93	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.4	1.1	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	11	2.0	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	55	11	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	55	9.6	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.2	0.54	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.2	0.55	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: EQB11062023 Sampled: 11/6/2023 14:45

Sample ID: 23K1858-04

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.2	0.44	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.2	0.95	ng/L	1		Draft Method 1633	12/7/23	12/9/23 6:40	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	84.4	10-130		12/9/23 6:40
13C5-PFPeA	87.3	35-150		12/9/23 6:40
13C5-PFHxA	90.5	55-150		12/9/23 6:40
13C4-PFHpA	90.3	55-150		12/9/23 6:40
13C8-PFOA	87.9	60-140		12/9/23 6:40
13C9-PFNA	89.1	55-140		12/9/23 6:40
13C6-PFDA	88.1	50-140		12/9/23 6:40
13C7-PFUnA	82.6	30-140		12/9/23 6:40
13C2-PFDoA	77.4	10-150		12/9/23 6:40
13C2-PFTeDA	71.7	10-130		12/9/23 6:40
13C3-PFBS	88.9	55-150		12/9/23 6:40
13C3-PFHxS	92.6	55-150		12/9/23 6:40
13C8-PFOS	84.8	45-140		12/9/23 6:40
13C2-4:2FTS	73.4	60-200		12/9/23 6:40
13C2-6:2FTS	89.0	60-200		12/9/23 6:40
13C2-8:2FTS	85.8	50-200		12/9/23 6:40
13C8-PFOSA	79.0	30-130		12/9/23 6:40
D3-NMeFOSA	78.5	15-130		12/9/23 6:40
D5-NEtFOSA	77.3	10-130		12/9/23 6:40
D3-NMeFOSAA	87.2	45-200		12/9/23 6:40
D5-NEtFOSAA	82.1	10-200		12/9/23 6:40
D7-NMeFOSE	72.8	10-150		12/9/23 6:40
D9-NEtFOSE	74.3	10-150		12/9/23 6:40
13C3-HFPO-DA	87.8	25-160		12/9/23 6:40

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: EQB11062023 Sampled: 11/6/2023 14:45

Sample ID: 23K1858-04

Sample Matrix: Equipment Blank Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10		mg/L	1		Draft Method 1633	11/16/23	11/16/23 13:45	LL

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (0"-2") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-05

Sample Matrix: Soil

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	0.78	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoropentanoic acid (PFPeA)	0.041	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorohexanoic acid (PFHxA)	0.022	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorodecanoic acid (PFDA)	0.050	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoroundecanoic acid (PFUnA)	0.033	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.024	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorooctanesulfonic acid (PFOS)	0.21	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorodecanesulfonic acid (PFDS)	0.28	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 19:08	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (0"-2") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:08	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	63.6		10-130		12/27/23 19:08
13C5-PFPeA	67.9		35-150		12/27/23 19:08
13C5-PFHxA	62.7		55-150		12/27/23 19:08
13C4-PFHpA	59.8		55-150		12/27/23 19:08
13C8-PFOA	64.8		60-140		12/27/23 19:08
13C9-PFNA	64.5		55-140		12/27/23 19:08
13C6-PFDA	64.2		50-140		12/27/23 19:08
13C7-PFUnA	61.0		30-140		12/27/23 19:08
13C2-PFDoA	60.5		10-150		12/27/23 19:08
13C2-PFTeDA	53.3		10-130		12/27/23 19:08
13C3-PFBS	65.3		55-150		12/27/23 19:08
13C3-PFHxS	65.1		55-150		12/27/23 19:08
13C8-PFOS	61.8		45-140		12/27/23 19:08
13C2-4:2FTS	**50.2**	*	60-200	PF-17C	12/27/23 19:08
13C2-6:2FTS	**44.3**	*	60-200	PF-17C	12/27/23 19:08
13C2-8:2FTS	176		50-200		12/27/23 19:08
13C8-PFOSA	64.1		30-130		12/27/23 19:08
D3-NMeFOSA	58.2		15-130		12/27/23 19:08
D5-NEtFOSA	56.5		10-130		12/27/23 19:08
D3-NMeFOSAA	48.4		45-200		12/27/23 19:08
D5-NEtFOSAA	43.7		10-200		12/27/23 19:08
D7-NMeFOSE	51.0		10-150		12/27/23 19:08
D9-NEtFOSE	44.9		10-150		12/27/23 19:08
13C3-HFPO-DA	66.0		25-160		12/27/23 19:08

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (0"-2") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-05

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.0			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (2"-12") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-06

Sample Matrix: Soil

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	0.79	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoropentanoic acid (PFPeA)	0.028	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	0.013	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorodecanoic acid (PFDA)	0.11	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorooctanesulfonic acid (PFOS)	0.34	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorodecanesulfonic acid (PFDS)	0.41	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 19:24	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 19:24	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (2"-12") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:24	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	63.0		10-130		12/27/23 19:24
13C5-PFPeA	67.4		35-150		12/27/23 19:24
13C5-PFHxA	61.9		55-150		12/27/23 19:24
13C4-PFHpA	58.3		55-150		12/27/23 19:24
13C8-PFOA	64.9		60-140		12/27/23 19:24
13C9-PFNA	62.2		55-140		12/27/23 19:24
13C6-PFDA	62.3		50-140		12/27/23 19:24
13C7-PFUnA	59.7		30-140		12/27/23 19:24
13C2-PFDoA	57.6		10-150		12/27/23 19:24
13C2-PFTeDA	52.5		10-130		12/27/23 19:24
13C3-PFBS	65.5		55-150		12/27/23 19:24
13C3-PFHxS	65.3		55-150		12/27/23 19:24
13C8-PFOS	62.6		45-140		12/27/23 19:24
13C2-4:2FTS	**50.7**	*	60-200	PF-18	12/27/23 19:24
13C2-6:2FTS	**43.9**	*	60-200	PF-17C	12/27/23 19:24
13C2-8:2FTS	99.1		50-200		12/27/23 19:24
13C8-PFOSA	59.5		30-130		12/27/23 19:24
D3-NMeFOSA	51.3		15-130		12/27/23 19:24
D5-NEtFOSA	49.2		10-130		12/27/23 19:24
D3-NMeFOSAA	47.4		45-200		12/27/23 19:24
D5-NEtFOSAA	41.6		10-200		12/27/23 19:24
D7-NMeFOSE	44.5		10-150		12/27/23 19:24
D9-NEtFOSE	36.6		10-150		12/27/23 19:24
13C3-HFPO-DA	66.5		25-160		12/27/23 19:24

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (2"-12") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-06

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.4			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @19.7°C	8.4			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	2300	110	73	mg/Kg dry	1		SW 846 9060A	11/17/23	11/17/23 13:07	NRH

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (2"-12") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-06

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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	20	7.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoropentanoic acid (PFPeA)	ND	10	1.7	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorohexanoic acid (PFHxA)	ND	5.0	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoroheptanoic acid (PFHpA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorooctanoic acid (PFOA)	ND	5.0	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorononanoic acid (PFNA)	0.97	5.0	0.96	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorodecanoic acid (PFDA)	4.3	5.0	0.93	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoroundecanoic acid (PFUnA)	ND	5.0	1.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorododecanoic acid (PFDoA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	5.0	1.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	5.0	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	5.0	1.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	5.0	1.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	5.0	1.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorooctanesulfonic acid (PFOS)	23	5.0	1.6	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorononanesulfonic acid (PFNS)	ND	5.0	1.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorodecanesulfonic acid (PFDS)	4.5	5.0	1.6	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	5.0	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	4.9	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	5.0	1.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	5.0	2.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	5.0	1.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-MeFOSAA (NMeFOSAA)	ND	5.0	2.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-EtFOSAA (NEtFOSAA)	ND	5.0	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	50	13	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	50	12	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	3.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
9Cl-PF3ONS (F53B Minor)	ND	20	4.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
11Cl-PF3OUdS (F53B Major)	ND	20	4.9	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	50	9.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	250	51	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	250	44	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	10	2.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	10	2.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (2"-12") Sampled: 11/7/2023 10:07

Sample ID: 23K1858-06

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	10	2.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	10	4.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 3:59	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	78.4	10-130		12/27/23 3:59
13C5-PFPeA	81.5	35-150		12/27/23 3:59
13C5-PFHxA	80.3	55-150		12/27/23 3:59
13C4-PFHpA	76.4	55-150		12/27/23 3:59
13C8-PFOA	82.2	60-140		12/27/23 3:59
13C9-PFNA	79.8	55-140		12/27/23 3:59
13C6-PFDA	81.6	50-140		12/27/23 3:59
13C7-PFUnA	74.4	30-140		12/27/23 3:59
13C2-PFDoA	71.8	10-150		12/27/23 3:59
13C2-PFTeDA	69.2	10-130		12/27/23 3:59
13C3-PFBS	83.2	55-150		12/27/23 3:59
13C3-PFHxS	83.8	55-150		12/27/23 3:59
13C8-PFOS	78.0	45-140		12/27/23 3:59
13C2-4:2FTS	70.1	60-200		12/27/23 3:59
13C2-6:2FTS	60.9	60-200		12/27/23 3:59
13C2-8:2FTS	87.7	50-200		12/27/23 3:59
13C8-PFOSA	70.9	30-130		12/27/23 3:59
D3-NMeFOSA	52.0	15-130		12/27/23 3:59
D5-NEtFOSA	47.0	10-130		12/27/23 3:59
D3-NMeFOSAA	68.3	45-200		12/27/23 3:59
D5-NEtFOSAA	60.5	10-200		12/27/23 3:59
D7-NMeFOSE	61.0	10-150		12/27/23 3:59
D9-NEtFOSE	61.8	10-150		12/27/23 3:59
13C3-HFPO-DA	82.5	25-160		12/27/23 3:59

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (15.9"-17") Sampled: 11/7/2023 13:15

Sample ID: 23K1858-07

Sample Matrix: Soil

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	0.80	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoropentanoic acid (PFPeA)	0.033	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorohexanoic acid (PFHxA)	0.025	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorononanoic acid (PFNA)	0.049	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorooctanesulfonic acid (PFOS)	0.24	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 19:39	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 19:39	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (15.9"-17") Sampled: 11/7/2023 13:15

Sample ID: 23K1858-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:39	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	60.6		10-130		12/27/23 19:39
13C5-PFPeA	66.1		35-150		12/27/23 19:39
13C5-PFHxA	59.8		55-150		12/27/23 19:39
13C4-PFHpA	57.4		55-150		12/27/23 19:39
13C8-PFOA	62.5		60-140		12/27/23 19:39
13C9-PFNA	59.5		55-140		12/27/23 19:39
13C6-PFDA	62.6		50-140		12/27/23 19:39
13C7-PFUnA	62.3		30-140		12/27/23 19:39
13C2-PFDoA	64.3		10-150		12/27/23 19:39
13C2-PFTeDA	55.7		10-130		12/27/23 19:39
13C3-PFBS	62.3		55-150		12/27/23 19:39
13C3-PFHxS	63.1		55-150		12/27/23 19:39
13C8-PFOS	60.8		45-140		12/27/23 19:39
13C2-4:2FTS	**47.9**	*	60-200	PF-18	12/27/23 19:39
13C2-6:2FTS	**40.2**	*	60-200	PF-17C	12/27/23 19:39
13C2-8:2FTS	113		50-200		12/27/23 19:39
13C8-PFOSA	62.7		30-130		12/27/23 19:39
D3-NMeFOSA	52.7		15-130		12/27/23 19:39
D5-NEtFOSA	48.7		10-130		12/27/23 19:39
D3-NMeFOSAA	46.6		45-200		12/27/23 19:39
D5-NEtFOSAA	41.2		10-200		12/27/23 19:39
D7-NMeFOSE	51.7		10-150		12/27/23 19:39
D9-NEtFOSE	51.6		10-150		12/27/23 19:39
13C3-HFPO-DA	65.5		25-160		12/27/23 19:39

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-3 (15.9"-17") Sampled: 11/7/2023 13:15

Sample ID: 23K1858-07

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.7			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (0"-2") Sampled: 11/7/2023 14:30

Sample ID: 23K1858-08

Sample Matrix: Soil

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)	0.29	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoropentanoic acid (PFPeA)	0.19	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorohexanoic acid (PFHxA)	0.13	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoroheptanoic acid (PFHpA)	0.079	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorooctanoic acid (PFOA)	0.25	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorononanoic acid (PFNA)	0.20	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorodecanoic acid (PFDA)	0.51	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoroundecanoic acid (PFUnA)	0.36	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorododecanoic acid (PFDoA)	0.34	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorotridecanoic acid (PFTrDA)	0.092	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.076	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorooctanesulfonic acid (PFOS)	1.7	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorodecanesulfonic acid (PFDS)	0.90	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-EtFOSAA (NEtFOSAA)	0.15	0.20	0.042	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (0"-2") Sampled: 11/7/2023 14:30

Sample ID: 23K1858-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 19:55	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	61.6		10-130		12/27/23 19:55
13C5-PFPeA	65.1		35-150		12/27/23 19:55
13C5-PFHxA	61.9		55-150		12/27/23 19:55
13C4-PFHpA	59.7		55-150		12/27/23 19:55
13C8-PFOA	62.3		60-140		12/27/23 19:55
13C9-PFNA	64.1		55-140		12/27/23 19:55
13C6-PFDA	62.6		50-140		12/27/23 19:55
13C7-PFUnA	61.5		30-140		12/27/23 19:55
13C2-PFDoA	64.7		10-150		12/27/23 19:55
13C2-PFTeDA	61.2		10-130		12/27/23 19:55
13C3-PFBS	61.3		55-150		12/27/23 19:55
13C3-PFHxS	63.9		55-150		12/27/23 19:55
13C8-PFOS	61.3		45-140		12/27/23 19:55
13C2-4:2FTS	**48.8**	*	60-200	PF-18	12/27/23 19:55
13C2-6:2FTS	**54.6**	*	60-200	PF-17C	12/27/23 19:55
13C2-8:2FTS	140		50-200		12/27/23 19:55
13C8-PFOSA	63.0		30-130		12/27/23 19:55
D3-NMeFOSA	53.3		15-130		12/27/23 19:55
D5-NEtFOSA	48.6		10-130		12/27/23 19:55
D3-NMeFOSAA	67.0		45-200		12/27/23 19:55
D5-NEtFOSAA	68.0		10-200		12/27/23 19:55
D7-NMeFOSE	53.0		10-150		12/27/23 19:55
D9-NEtFOSE	47.7		10-150		12/27/23 19:55
13C3-HFPO-DA	62.4		25-160		12/27/23 19:55

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (0"-2") Sampled: 11/7/2023 14:30

Sample ID: 23K1858-08

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (2"-12") Sampled: 11/7/2023 14:40

Sample ID: 23K1858-09

Sample Matrix: Soil

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)	0.18	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoropentanoic acid (PFPeA)	0.083	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorohexanoic acid (PFHxA)	0.058	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoroheptanoic acid (PFHpA)	0.061	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorooctanoic acid (PFOA)	0.31	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorononanoic acid (PFNA)	0.14	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorodecanoic acid (PFDA)	0.077	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoroundecanoic acid (PFUnA)	0.057	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorotridecanoic acid (PFTrDA)	0.027	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.019	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorooctanesulfonic acid (PFOS)	0.55	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorodecanesulfonic acid (PFDS)	0.089	0.20	0.044	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 20:11	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (2"-12") Sampled: 11/7/2023 14:40

Sample ID: 23K1858-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:11	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	64.7		10-130		12/27/23 20:11
13C5-PFPeA	68.8		35-150		12/27/23 20:11
13C5-PFHxA	63.3		55-150		12/27/23 20:11
13C4-PFHpA	59.8		55-150		12/27/23 20:11
13C8-PFOA	62.7		60-140		12/27/23 20:11
13C9-PFNA	65.1		55-140		12/27/23 20:11
13C6-PFDA	68.0		50-140		12/27/23 20:11
13C7-PFUnA	63.5		30-140		12/27/23 20:11
13C2-PFDoA	62.6		10-150		12/27/23 20:11
13C2-PFTeDA	57.4		10-130		12/27/23 20:11
13C3-PFBS	67.1		55-150		12/27/23 20:11
13C3-PFHxS	66.6		55-150		12/27/23 20:11
13C8-PFOS	63.0		45-140		12/27/23 20:11
13C2-4:2FTS	**49.8**	*	60-200	PF-17C	12/27/23 20:11
13C2-6:2FTS	**44.4**	*	60-200	PF-17C	12/27/23 20:11
13C2-8:2FTS	114		50-200		12/27/23 20:11
13C8-PFOSA	66.3		30-130		12/27/23 20:11
D3-NMeFOSA	55.5		15-130		12/27/23 20:11
D5-NEtFOSA	51.7		10-130		12/27/23 20:11
D3-NMeFOSAA	54.8		45-200		12/27/23 20:11
D5-NEtFOSAA	49.3		10-200		12/27/23 20:11
D7-NMeFOSE	53.7		10-150		12/27/23 20:11
D9-NEtFOSE	48.4		10-150		12/27/23 20:11
13C3-HFPO-DA	66.4		25-160		12/27/23 20:11

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (2"-12") Sampled: 11/7/2023 14:40

Sample ID: 23K1858-09

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.6			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (17'-19') Sampled: 11/7/2023 16:40

Sample ID: 23K1858-10

Sample Matrix: Soil

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	0.80	0.14	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorobutanoic acid (PFBA)	ND	0.80	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoropentanoic acid (PFPeA)	0.028	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	0.014	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	0.014	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1	S-29	Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1	PF-18	Draft Method 1633	12/13/23	12/19/23 4:04	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 20:26	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.39	0.80	0.082	µg/kg dry	1	J	Draft Method 1633	12/13/23	12/19/23 4:04	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.095	0.80	0.082	µg/kg dry	1	PF-17C, J	Draft Method 1633	12/20/23	12/27/23 20:26	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (17'-19') Sampled: 11/7/2023 16:40

Sample ID: 23K1858-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1	PF-17	Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (17'-19') Sampled: 11/7/2023 16:40

Sample ID: 23K1858-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/13/23	12/19/23 4:04	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:26	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	70.5		10-130		12/19/23 4:04
13C4-PFBA	60.2		10-130		12/27/23 20:26
13C5-PFPeA	71.1		35-150		12/19/23 4:04
13C5-PFPeA	57.8		35-150		12/27/23 20:26
13C5-PFHxA	70.8		55-150		12/19/23 4:04
13C5-PFHxA	60.5		55-150		12/27/23 20:26
13C4-PFHpA	70.1		55-150		12/19/23 4:04
13C4-PFHpA	58.5		55-150		12/27/23 20:26
13C8-PFOA	71.2		60-140		12/19/23 4:04
13C8-PFOA	**59.5**	*	60-140	S-29	12/27/23 20:26
13C9-PFNA	69.9		55-140		12/19/23 4:04
13C9-PFNA	60.8		55-140		12/27/23 20:26
13C6-PFDA	71.5		50-140		12/19/23 4:04
13C6-PFDA	62.7		50-140		12/27/23 20:26
13C7-PFUnA	69.5		30-140		12/19/23 4:04
13C7-PFUnA	60.8		30-140		12/27/23 20:26
13C2-PFDoA	65.3		10-150		12/19/23 4:04
13C2-PFDoA	58.7		10-150		12/27/23 20:26
13C2-PFTeDA	60.3		10-130		12/19/23 4:04
13C2-PFTeDA	52.9		10-130		12/27/23 20:26
13C3-PFBS	62.2		55-150		12/19/23 4:04
13C3-PFBS	60.6		55-150		12/27/23 20:26
13C3-PFHxS	72.9		55-150		12/19/23 4:04
13C3-PFHxS	62.2		55-150		12/27/23 20:26
13C8-PFOS	69.2		45-140		12/19/23 4:04
13C8-PFOS	59.5		45-140		12/27/23 20:26
13C2-4:2FTS	**54.0**	*	60-200	PF-18	12/19/23 4:04
13C2-4:2FTS	**45.1**	*	60-200	PF-18	12/27/23 20:26
13C2-6:2FTS	81.9		60-200		12/19/23 4:04
13C2-6:2FTS	**41.4**	*	60-200	PF-17C	12/27/23 20:26
13C2-8:2FTS	91.1		50-200		12/19/23 4:04
13C2-8:2FTS	**253**	*	50-200	PF-17	12/27/23 20:26
13C8-PFOSA	62.7		30-130		12/19/23 4:04
13C8-PFOSA	63.8		30-130		12/27/23 20:26
D3-NMeFOSA	37.8		15-130		12/19/23 4:04
D3-NMeFOSA	61.1		15-130		12/27/23 20:26
D5-NEtFOSA	23.8		10-130		12/19/23 4:04
D5-NEtFOSA	53.6		10-130		12/27/23 20:26
D3-NMeFOSAA	73.4		45-200		12/19/23 4:04
D3-NMeFOSAA	50.1		45-200		12/27/23 20:26
D5-NEtFOSAA	72.7		10-200		12/19/23 4:04
D5-NEtFOSAA	44.6		10-200		12/27/23 20:26
D7-NMeFOSE	55.7		10-150		12/19/23 4:04
D7-NMeFOSE	53.4		10-150		12/27/23 20:26
D9-NEtFOSE	52.0		10-150		12/19/23 4:04

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (17'-19') Sampled: 11/7/2023 16:40

Sample ID: 23K1858-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surrogates		**% Recovery**		**Recovery Limits**		**Flag/Qual**				
D9-NEtFOSE		43.8		10-150					12/27/23 20:26	
13C3-HFPO-DA		72.1		25-160					12/19/23 4:04	
13C3-HFPO-DA		62.9		25-160					12/27/23 20:26	

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-4 (17'-19') Sampled: 11/7/2023 16:40

Sample ID: 23K1858-10

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (2"-12") Sampled: 11/8/2023 08:20

Sample ID: 23K1858-11

Sample Matrix: Soil

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)	0.23	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoropentanoic acid (PFPeA)	0.11	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorohexanoic acid (PFHxA)	0.14	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoroheptanoic acid (PFHpA)	0.11	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorooctanoic acid (PFOA)	0.69	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorononanoic acid (PFNA)	0.062	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorobutanesulfonic acid (PFBS)	0.058	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.067	0.20	0.025	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorooctanesulfonic acid (PFOS)	0.30	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 20:42	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (2"-12") Sampled: 11/8/2023 08:20

Sample ID: 23K1858-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 20:42	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	63.1		10-130		12/27/23 20:42
13C5-PFPeA	67.9		35-150		12/27/23 20:42
13C5-PFHxA	62.8		55-150		12/27/23 20:42
13C4-PFHpA	61.4		55-150		12/27/23 20:42
13C8-PFOA	64.6		60-140		12/27/23 20:42
13C9-PFNA	62.2		55-140		12/27/23 20:42
13C6-PFDA	65.0		50-140		12/27/23 20:42
13C7-PFUnA	61.8		30-140		12/27/23 20:42
13C2-PFDoA	61.8		10-150		12/27/23 20:42
13C2-PFTeDA	60.3		10-130		12/27/23 20:42
13C3-PFBS	62.9		55-150		12/27/23 20:42
13C3-PFHxS	63.4		55-150		12/27/23 20:42
13C8-PFOS	61.5		45-140		12/27/23 20:42
13C2-4:2FTS	**48.2**	*	60-200	PF-18	12/27/23 20:42
13C2-6:2FTS	**42.1**	*	60-200	PF-17C	12/27/23 20:42
13C2-8:2FTS	153		50-200		12/27/23 20:42
13C8-PFOSA	62.1		30-130		12/27/23 20:42
D3-NMeFOSA	56.0		15-130		12/27/23 20:42
D5-NEtFOSA	51.8		10-130		12/27/23 20:42
D3-NMeFOSAA	51.4		45-200		12/27/23 20:42
D5-NEtFOSAA	45.8		10-200		12/27/23 20:42
D7-NMeFOSE	52.9		10-150		12/27/23 20:42
D9-NEtFOSE	47.8		10-150		12/27/23 20:42
13C3-HFPO-DA	64.3		25-160		12/27/23 20:42

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (2"-12") Sampled: 11/8/2023 08:20

Sample ID: 23K1858-11

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.0			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (0"-2") Sampled: 11/8/2023 08:05

Sample ID: 23K1858-12

Sample Matrix: Soil

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)	0.53	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoropentanoic acid (PFPeA)	0.30	0.39	0.025	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorohexanoic acid (PFHxA)	0.18	0.19	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoroheptanoic acid (PFHpA)	0.19	0.19	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorooctanoic acid (PFOA)	0.60	0.19	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorononanoic acid (PFNA)	0.31	0.19	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorodecanoic acid (PFDA)	0.20	0.19	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoroundecanoic acid (PFUnA)	0.21	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorododecanoic acid (PFDoA)	0.12	0.19	0.021	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorotridecanoic acid (PFTrDA)	0.088	0.19	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.069	0.19	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.19	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.030	0.19	0.024	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.19	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorooctanesulfonic acid (PFOS)	0.97	0.19	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorodecanesulfonic acid (PFDS)	0.071	0.19	0.044	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 21:29	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.072	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.19	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.19	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1.9	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1.9	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1.9	0.16	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.7	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.7	0.95	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (0"-2") Sampled: 11/8/2023 08:05

Sample ID: 23K1858-12

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:29	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	59.9		10-130		12/27/23 21:29
13C5-PFPeA	62.2		35-150		12/27/23 21:29
13C5-PFHxA	59.0		55-150		12/27/23 21:29
13C4-PFHpA	57.9		55-150		12/27/23 21:29
13C8-PFOA	60.6		60-140		12/27/23 21:29
13C9-PFNA	58.0		55-140		12/27/23 21:29
13C6-PFDA	62.7		50-140		12/27/23 21:29
13C7-PFUnA	60.7		30-140		12/27/23 21:29
13C2-PFDoA	65.1		10-150		12/27/23 21:29
13C2-PFTeDA	61.9		10-130		12/27/23 21:29
13C3-PFBS	60.5		55-150		12/27/23 21:29
13C3-PFHxS	59.9		55-150		12/27/23 21:29
13C8-PFOS	59.2		45-140		12/27/23 21:29
13C2-4:2FTS	**59.9**	*	60-200	PF-18	12/27/23 21:29
13C2-6:2FTS	67.8		60-200		12/27/23 21:29
13C2-8:2FTS	165		50-200		12/27/23 21:29
13C8-PFOSA	62.6		30-130		12/27/23 21:29
D3-NMeFOSA	48.0		15-130		12/27/23 21:29
D5-NEtFOSA	41.8		10-130		12/27/23 21:29
D3-NMeFOSAA	68.2		45-200		12/27/23 21:29
D5-NEtFOSAA	73.8		10-200		12/27/23 21:29
D7-NMeFOSE	49.2		10-150		12/27/23 21:29
D9-NEtFOSE	47.4		10-150		12/27/23 21:29
13C3-HFPO-DA	59.2		25-160		12/27/23 21:29

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (0"-2") Sampled: 11/8/2023 08:05

Sample ID: 23K1858-12

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.0			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (11"-12") Sampled: 11/8/2023 09:00

Sample ID: 23K1858-13

Sample Matrix: Soil

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	0.78	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoropentanoic acid (PFPeA)	0.037	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorohexanoic acid (PFHxA)	0.021	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.024	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorooctanesulfonic acid (PFOS)	0.074	0.20	0.035	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1	S-29	Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (11"-12") Sampled: 11/8/2023 09:00

Sample ID: 23K1858-13

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 21:45	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	60.0		10-130		12/27/23 21:45
13C5-PFPeA	64.4		35-150		12/27/23 21:45
13C5-PFHxA	59.0		55-150		12/27/23 21:45
13C4-PFHpA	56.3		55-150		12/27/23 21:45
13C8-PFOA	62.1		60-140		12/27/23 21:45
13C9-PFNA	59.6		55-140		12/27/23 21:45
13C6-PFDA	62.7		50-140		12/27/23 21:45
13C7-PFUnA	59.2		30-140		12/27/23 21:45
13C2-PFDoA	55.7		10-150		12/27/23 21:45
13C2-PFTeDA	52.3		10-130		12/27/23 21:45
13C3-PFBS	62.6		55-150		12/27/23 21:45
13C3-PFHxS	62.0		55-150		12/27/23 21:45
13C8-PFOS	60.3		45-140		12/27/23 21:45
13C2-4:2FTS	**46.1**	*	60-200	PF-18	12/27/23 21:45
13C2-6:2FTS	**40.1**	*	60-200	PF-17C	12/27/23 21:45
13C2-8:2FTS	126		50-200		12/27/23 21:45
13C8-PFOSA	61.9		30-130		12/27/23 21:45
D3-NMeFOSA	59.5		15-130		12/27/23 21:45
D5-NEtFOSA	56.3		10-130		12/27/23 21:45
D3-NMeFOSAA	**43.6**	*	45-200	S-29	12/27/23 21:45
D5-NEtFOSAA	40.3		10-200		12/27/23 21:45
D7-NMeFOSE	52.3		10-150		12/27/23 21:45
D9-NEtFOSE	42.9		10-150		12/27/23 21:45
13C3-HFPO-DA	65.1		25-160		12/27/23 21:45

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-11 (11"-12") Sampled: 11/8/2023 09:00

Sample ID: 23K1858-13

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.5			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (0"-2") Sampled: 11/8/2023 09:45

Sample ID: 23K1858-14

Sample Matrix: Soil

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)	0.30	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoropentanoic acid (PFPeA)	0.15	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorohexanoic acid (PFHxA)	0.074	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoroheptanoic acid (PFHpA)	0.082	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorooctanoic acid (PFOA)	0.43	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorononanoic acid (PFNA)	0.32	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorodecanoic acid (PFDA)	0.20	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoroundecanoic acid (PFUnA)	0.28	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorododecanoic acid (PFDoA)	0.11	0.20	0.021	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorotridecanoic acid (PFTrDA)	0.092	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.048	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.024	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorooctanesulfonic acid (PFOS)	0.78	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (0"-2") Sampled: 11/8/2023 09:45

Sample ID: 23K1858-14

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:00	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	61.0	10-130		12/27/23 22:00
13C5-PFPeA	64.4	35-150		12/27/23 22:00
13C5-PFHxA	62.2	55-150		12/27/23 22:00
13C4-PFHpA	61.7	55-150		12/27/23 22:00
13C8-PFOA	60.7	60-140		12/27/23 22:00
13C9-PFNA	62.2	55-140		12/27/23 22:00
13C6-PFDA	65.4	50-140		12/27/23 22:00
13C7-PFUnA	64.4	30-140		12/27/23 22:00
13C2-PFDoA	65.3	10-150		12/27/23 22:00
13C2-PFTeDA	57.7	10-130		12/27/23 22:00
13C3-PFBS	61.0	55-150		12/27/23 22:00
13C3-PFHxS	65.3	55-150		12/27/23 22:00
13C8-PFOS	62.3	45-140		12/27/23 22:00
13C2-4:2FTS	80.7	60-200		12/27/23 22:00
13C2-6:2FTS	101	60-200		12/27/23 22:00
13C2-8:2FTS	180	50-200		12/27/23 22:00
13C8-PFOSA	65.6	30-130		12/27/23 22:00
D3-NMeFOSA	44.9	15-130		12/27/23 22:00
D5-NEtFOSA	35.4	10-130		12/27/23 22:00
D3-NMeFOSAA	89.7	45-200		12/27/23 22:00
D5-NEtFOSAA	98.5	10-200		12/27/23 22:00
D7-NMeFOSE	45.8	10-150		12/27/23 22:00
D9-NEtFOSE	40.3	10-150		12/27/23 22:00
13C3-HFPO-DA	63.6	25-160		12/27/23 22:00

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (0"-2") Sampled: 11/8/2023 09:45

Sample ID: 23K1858-14

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	64.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (2"-12") Sampled: 11/8/2023 10:00

Sample ID: 23K1858-15

Sample Matrix: Soil

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)	0.15	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoropentanoic acid (PFPeA)	0.044	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorohexanoic acid (PFHxA)	0.023	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoroheptanoic acid (PFHpA)	0.024	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorooctanoic acid (PFOA)	0.11	0.20	0.029	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorooctanesulfonic acid (PFOS)	0.039	0.20	0.036	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1	PF-17	Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (2"-12") Sampled: 11/8/2023 10:00

Sample ID: 23K1858-15

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.041	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:16	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	78.7		10-130		12/27/23 22:16
13C5-PFPeA	84.1		35-150		12/27/23 22:16
13C5-PFHxA	78.9		55-150		12/27/23 22:16
13C4-PFHpA	76.1		55-150		12/27/23 22:16
13C8-PFOA	80.4		60-140		12/27/23 22:16
13C9-PFNA	80.2		55-140		12/27/23 22:16
13C6-PFDA	80.5		50-140		12/27/23 22:16
13C7-PFUnA	76.5		30-140		12/27/23 22:16
13C2-PFDoA	72.4		10-150		12/27/23 22:16
13C2-PFTeDA	63.8		10-130		12/27/23 22:16
13C3-PFBS	80.8		55-150		12/27/23 22:16
13C3-PFHxS	83.1		55-150		12/27/23 22:16
13C8-PFOS	79.2		45-140		12/27/23 22:16
13C2-4:2FTS	63.5		60-200		12/27/23 22:16
13C2-6:2FTS	**55.8**	*	60-200	PF-17C	12/27/23 22:16
13C2-8:2FTS	**207**	*	50-200	PF-17	12/27/23 22:16
13C8-PFOSA	79.8		30-130		12/27/23 22:16
D3-NMeFOSA	69.4		15-130		12/27/23 22:16
D5-NEtFOSA	69.2		10-130		12/27/23 22:16
D3-NMeFOSAA	61.9		45-200		12/27/23 22:16
D5-NEtFOSAA	54.3		10-200		12/27/23 22:16
D7-NMeFOSE	64.6		10-150		12/27/23 22:16
D9-NEtFOSE	56.0		10-150		12/27/23 22:16
13C3-HFPO-DA	83.5		25-160		12/27/23 22:16

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (2"-12") Sampled: 11/8/2023 10:00

Sample ID: 23K1858-15

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.2			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @20.1°C	6.9			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	1800	110	74	mg/Kg dry	1		SW 846 9060A	11/17/23	11/17/23 13:44	NRH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (2"-12") Sampled: 11/8/2023 10:00

Sample ID: 23K1858-15

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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)	7.6	20	7.4	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoropentanoic acid (PFPeA)	1.8	10	1.8	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorohexanoic acid (PFHxA)	ND	5.1	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoroheptanoic acid (PFHpA)	ND	5.1	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorooctanoic acid (PFOA)	ND	5.1	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorononanoic acid (PFNA)	ND	5.1	0.97	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorodecanoic acid (PFDA)	ND	5.1	0.94	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoroundecanoic acid (PFUnA)	ND	5.1	1.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorododecanoic acid (PFDoA)	ND	5.1	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	5.1	1.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	5.1	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	5.1	1.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	5.1	1.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	5.1	1.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	5.1	1.6	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorooctanesulfonic acid (PFOS)	2.0	5.1	1.6	ng/L	1	J	Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorononanesulfonic acid (PFNS)	ND	5.1	1.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	5.1	1.6	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	5.1	1.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	5.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	5.1	1.6	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	5.1	2.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	5.1	1.6	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-MeFOSAA (NMeFOSAA)	ND	5.1	2.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-EtFOSAA (NEtFOSAA)	ND	5.1	1.1	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	51	13	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	51	12	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	3.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
9Cl-PF3ONS (F53B Minor)	ND	20	4.3	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
11Cl-PF3OUdS (F53B Major)	ND	20	4.9	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	51	9.2	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	250	52	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	250	45	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	10	2.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	10	2.5	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (2"-12") Sampled: 11/8/2023 10:00

Sample ID: 23K1858-15

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	10	2.0	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	10	4.4	ng/L	1		Draft Method 1633	12/21/23	12/27/23 4:15	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	77.8		10-130		12/27/23 4:15
13C5-PFPeA	79.9		35-150		12/27/23 4:15
13C5-PFHxA	75.9		55-150		12/27/23 4:15
13C4-PFHpA	74.6		55-150		12/27/23 4:15
13C8-PFOA	78.6		60-140		12/27/23 4:15
13C9-PFNA	77.0		55-140		12/27/23 4:15
13C6-PFDA	78.9		50-140		12/27/23 4:15
13C7-PFUnA	75.9		30-140		12/27/23 4:15
13C2-PFDoA	72.5		10-150		12/27/23 4:15
13C2-PFTeDA	67.5		10-130		12/27/23 4:15
13C3-PFBS	78.4		55-150		12/27/23 4:15
13C3-PFHxS	80.1		55-150		12/27/23 4:15
13C8-PFOS	74.8		45-140		12/27/23 4:15
13C2-4:2FTS	63.4		60-200		12/27/23 4:15
13C2-6:2FTS	**57.2**	*	60-200	PF-18	12/27/23 4:15
13C2-8:2FTS	79.6		50-200		12/27/23 4:15
13C8-PFOSA	57.3		30-130		12/27/23 4:15
D3-NMeFOSA	38.3		15-130		12/27/23 4:15
D5-NEtFOSA	36.1		10-130		12/27/23 4:15
D3-NMeFOSAA	63.4		45-200		12/27/23 4:15
D5-NEtFOSAA	57.9		10-200		12/27/23 4:15
D7-NMeFOSE	58.6		10-150		12/27/23 4:15
D9-NEtFOSE	61.0		10-150		12/27/23 4:15
13C3-HFPO-DA	79.2		25-160		12/27/23 4:15

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (20-22') Sampled: 11/8/2023 11:30

Sample ID: 23K1858-16

Sample Matrix: Soil

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	0.80	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoropentanoic acid (PFPeA)	0.040	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorohexanoic acid (PFHxA)	0.025	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorooctanesulfonic acid (PFOS)	0.065	0.20	0.036	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 22:32	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 22:32	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (20-22') Sampled: 11/8/2023 11:30

Sample ID: 23K1858-16

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:32	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	71.9		10-130		12/27/23 22:32
13C5-PFPeA	76.7		35-150		12/27/23 22:32
13C5-PFHxA	70.5		55-150		12/27/23 22:32
13C4-PFHpA	67.6		55-150		12/27/23 22:32
13C8-PFOA	73.6		60-140		12/27/23 22:32
13C9-PFNA	72.5		55-140		12/27/23 22:32
13C6-PFDA	73.2		50-140		12/27/23 22:32
13C7-PFUnA	68.1		30-140		12/27/23 22:32
13C2-PFDoA	67.6		10-150		12/27/23 22:32
13C2-PFTeDA	62.5		10-130		12/27/23 22:32
13C3-PFBS	73.9		55-150		12/27/23 22:32
13C3-PFHxS	72.7		55-150		12/27/23 22:32
13C8-PFOS	70.3		45-140		12/27/23 22:32
13C2-4:2FTS	**58.1**	*	60-200	PF-18	12/27/23 22:32
13C2-6:2FTS	**50.5**	*	60-200	PF-17C	12/27/23 22:32
13C2-8:2FTS	112		50-200		12/27/23 22:32
13C8-PFOSA	70.7		30-130		12/27/23 22:32
D3-NMeFOSA	61.3		15-130		12/27/23 22:32
D5-NEtFOSA	60.6		10-130		12/27/23 22:32
D3-NMeFOSAA	56.1		45-200		12/27/23 22:32
D5-NEtFOSAA	49.0		10-200		12/27/23 22:32
D7-NMeFOSE	59.7		10-150		12/27/23 22:32
D9-NEtFOSE	54.2		10-150		12/27/23 22:32
13C3-HFPO-DA	73.7		25-160		12/27/23 22:32

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-10 (20-22') Sampled: 11/8/2023 11:30

Sample ID: 23K1858-16

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.6			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (0"-2") Sampled: 11/8/2023 16:30

Sample ID: 23K1858-17

Sample Matrix: Soil

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)	0.23	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoropentanoic acid (PFPeA)	0.078	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorohexanoic acid (PFHxA)	0.056	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoroheptanoic acid (PFHpA)	0.078	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorooctanoic acid (PFOA)	0.26	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorononanoic acid (PFNA)	0.23	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorodecanoic acid (PFDA)	0.21	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoroundecanoic acid (PFUnA)	0.23	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorododecanoic acid (PFDoA)	0.16	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorotridecanoic acid (PFTrDA)	0.13	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.086	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorooctanesulfonic acid (PFOS)	1.2	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorodecanesulfonic acid (PFDS)	0.23	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (0"-2") Sampled: 11/8/2023 16:30

Sample ID: 23K1858-17

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 22:47	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	72.1	10-130		12/27/23 22:47
13C5-PFPeA	75.8	35-150		12/27/23 22:47
13C5-PFHxA	73.3	55-150		12/27/23 22:47
13C4-PFHpA	71.4	55-150		12/27/23 22:47
13C8-PFOA	71.8	60-140		12/27/23 22:47
13C9-PFNA	72.0	55-140		12/27/23 22:47
13C6-PFDA	72.6	50-140		12/27/23 22:47
13C7-PFUnA	81.2	30-140		12/27/23 22:47
13C2-PFDoA	74.7	10-150		12/27/23 22:47
13C2-PFTeDA	73.0	10-130		12/27/23 22:47
13C3-PFBS	73.9	55-150		12/27/23 22:47
13C3-PFHxS	74.7	55-150		12/27/23 22:47
13C8-PFOS	72.4	45-140		12/27/23 22:47
13C2-4:2FTS	66.9	60-200		12/27/23 22:47
13C2-6:2FTS	80.8	60-200		12/27/23 22:47
13C2-8:2FTS	197	50-200		12/27/23 22:47
13C8-PFOSA	76.6	30-130		12/27/23 22:47
D3-NMeFOSA	55.5	15-130		12/27/23 22:47
D5-NEtFOSA	46.2	10-130		12/27/23 22:47
D3-NMeFOSAA	94.8	45-200		12/27/23 22:47
D5-NEtFOSAA	122	10-200		12/27/23 22:47
D7-NMeFOSE	60.6	10-150		12/27/23 22:47
D9-NEtFOSE	50.5	10-150		12/27/23 22:47
13C3-HFPO-DA	74.7	25-160		12/27/23 22:47

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (0"-2") Sampled: 11/8/2023 16:30

Sample ID: 23K1858-17

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (2"-12") Sampled: 11/8/2023 16:35

Sample ID: 23K1858-18

Sample Matrix: Soil

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)	0.28	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoropentanoic acid (PFPeA)	0.13	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorohexanoic acid (PFHxA)	0.093	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoroheptanoic acid (PFHpA)	0.095	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorooctanoic acid (PFOA)	0.28	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorononanoic acid (PFNA)	0.25	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorodecanoic acid (PFDA)	0.20	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoroundecanoic acid (PFUnA)	0.20	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorododecanoic acid (PFDoA)	0.13	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorotridecanoic acid (PFTrDA)	0.11	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.080	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorooctanesulfonic acid (PFOS)	1.2	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorodecanesulfonic acid (PFDS)	0.18	0.20	0.045	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 23:03	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (2"-12") Sampled: 11/8/2023 16:35

Sample ID: 23K1858-18

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:03	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	70.5		10-130		12/27/23 23:03
13C5-PFPeA	74.2		35-150		12/27/23 23:03
13C5-PFHxA	70.0		55-150		12/27/23 23:03
13C4-PFHpA	67.8		55-150		12/27/23 23:03
13C8-PFOA	69.6		60-140		12/27/23 23:03
13C9-PFNA	70.4		55-140		12/27/23 23:03
13C6-PFDA	72.6		50-140		12/27/23 23:03
13C7-PFUnA	76.0		30-140		12/27/23 23:03
13C2-PFDoA	74.9		10-150		12/27/23 23:03
13C2-PFTeDA	78.3		10-130		12/27/23 23:03
13C3-PFBS	69.6		55-150		12/27/23 23:03
13C3-PFHxS	72.9		55-150		12/27/23 23:03
13C8-PFOS	69.6		45-140		12/27/23 23:03
13C2-4:2FTS	**57.2**	*	60-200	PF-18	12/27/23 23:03
13C2-6:2FTS	60.8		60-200		12/27/23 23:03
13C2-8:2FTS	163		50-200		12/27/23 23:03
13C8-PFOSA	72.2		30-130		12/27/23 23:03
D3-NMeFOSA	56.9		15-130		12/27/23 23:03
D5-NEtFOSA	47.5		10-130		12/27/23 23:03
D3-NMeFOSAA	74.9		45-200		12/27/23 23:03
D5-NEtFOSAA	79.7		10-200		12/27/23 23:03
D7-NMeFOSE	63.3		10-150		12/27/23 23:03
D9-NEtFOSE	56.3		10-150		12/27/23 23:03
13C3-HFPO-DA	71.4		25-160		12/27/23 23:03

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (2"-12") Sampled: 11/8/2023 16:35

Sample ID: 23K1858-18

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.1			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (11'-12') Sampled: 11/8/2023 17:15

Sample ID: 23K1858-19

Sample Matrix: Soil

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)	0.15	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoropentanoic acid (PFPeA)	0.050	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorohexanoic acid (PFHxA)	0.024	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorooctanoic acid (PFOA)	0.045	0.20	0.029	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 23:18	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (11'-12') Sampled: 11/8/2023 17:15

Sample ID: 23K1858-19

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:18	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	70.8		10-130		12/27/23 23:18
13C5-PFPeA	75.9		35-150		12/27/23 23:18
13C5-PFHxA	70.3		55-150		12/27/23 23:18
13C4-PFHpA	69.6		55-150		12/27/23 23:18
13C8-PFOA	70.8		60-140		12/27/23 23:18
13C9-PFNA	69.4		55-140		12/27/23 23:18
13C6-PFDA	73.7		50-140		12/27/23 23:18
13C7-PFUnA	71.2		30-140		12/27/23 23:18
13C2-PFDoA	69.6		10-150		12/27/23 23:18
13C2-PFTeDA	68.7		10-130		12/27/23 23:18
13C3-PFBS	71.8		55-150		12/27/23 23:18
13C3-PFHxS	74.2		55-150		12/27/23 23:18
13C8-PFOS	72.7		45-140		12/27/23 23:18
13C2-4:2FTS	**54.3**	*	60-200	PF-18	12/27/23 23:18
13C2-6:2FTS	**46.8**	*	60-200	PF-17C	12/27/23 23:18
13C2-8:2FTS	121		50-200		12/27/23 23:18
13C8-PFOSA	71.4		30-130		12/27/23 23:18
D3-NMeFOSA	62.7		15-130		12/27/23 23:18
D5-NEtFOSA	59.4		10-130		12/27/23 23:18
D3-NMeFOSAA	57.2		45-200		12/27/23 23:18
D5-NEtFOSAA	52.8		10-200		12/27/23 23:18
D7-NMeFOSE	61.6		10-150		12/27/23 23:18
D9-NEtFOSE	54.7		10-150		12/27/23 23:18
13C3-HFPO-DA	73.7		25-160		12/27/23 23:18

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-5 (11'-12') Sampled: 11/8/2023 17:15

Sample ID: 23K1858-19

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.3			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-7 (11'-12') Sampled: 11/9/2023 09:05

Sample ID: 23K1858-20

Sample Matrix: Soil

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	0.79	0.14	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoropentanoic acid (PFPeA)	0.029	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	0.013	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1	PF-18	Draft Method 1633	12/20/23	12/27/23 23:34	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1	PF-17C	Draft Method 1633	12/20/23	12/27/23 23:34	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-7 (11'-12') Sampled: 11/9/2023 09:05

Sample ID: 23K1858-20

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/20/23	12/27/23 23:34	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	70.1		10-130		12/27/23 23:34
13C5-PFPeA	75.5		35-150		12/27/23 23:34
13C5-PFHxA	70.5		55-150		12/27/23 23:34
13C4-PFHpA	66.5		55-150		12/27/23 23:34
13C8-PFOA	70.5		60-140		12/27/23 23:34
13C9-PFNA	72.3		55-140		12/27/23 23:34
13C6-PFDA	72.4		50-140		12/27/23 23:34
13C7-PFUnA	67.2		30-140		12/27/23 23:34
13C2-PFDoA	66.4		10-150		12/27/23 23:34
13C2-PFTeDA	63.5		10-130		12/27/23 23:34
13C3-PFBS	72.7		55-150		12/27/23 23:34
13C3-PFHxS	72.8		55-150		12/27/23 23:34
13C8-PFOS	69.6		45-140		12/27/23 23:34
13C2-4:2FTS	**55.8**	*	60-200	PF-18	12/27/23 23:34
13C2-6:2FTS	**48.2**	*	60-200	PF-17C	12/27/23 23:34
13C2-8:2FTS	177		50-200		12/27/23 23:34
13C8-PFOSA	70.6		30-130		12/27/23 23:34
D3-NMeFOSA	63.0		15-130		12/27/23 23:34
D5-NEtFOSA	60.5		10-130		12/27/23 23:34
D3-NMeFOSAA	53.6		45-200		12/27/23 23:34
D5-NEtFOSAA	48.8		10-200		12/27/23 23:34
D7-NMeFOSE	60.6		10-150		12/27/23 23:34
D9-NEtFOSE	52.1		10-150		12/27/23 23:34
13C3-HFPO-DA	74.8		25-160		12/27/23 23:34

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1858

Date Received: 11/14/2023

Field Sample #: SB-7 (11'-12') Sampled: 11/9/2023 09:05

Sample ID: 23K1858-20

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.7			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Sample Extraction Data

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1858-10 [SB-4 (17'-19')]	B358251	5.57	5.00	12/13/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 11/16/2023 per SW-846 1312 in Batch B358302**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1858-02 [SB-12 (2"-12")]	B360405	277	5.00	12/11/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 11/16/2023 per SW-846 1312 in Batch B358302**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1858-06RE1 [SB-3 (2"-12")]	B361062	99.8	5.00	12/21/23
23K1858-15RE1 [SB-10 (2"-12")]	B361062	98.2	5.00	12/21/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1858-01RE1 [SB-12 (0"-2")]	B361296	7.09	5.00	12/20/23
23K1858-02RE1 [SB-12 (2"-12")]	B361296	6.22	5.00	12/20/23
23K1858-03RE1 [SB-12 (11-11.5)]	B361296	5.68	5.00	12/20/23
23K1858-05RE1 [SB-3 (0"-2")]	B361296	5.74	5.00	12/20/23
23K1858-06RE1 [SB-3 (2"-12")]	B361296	5.65	5.00	12/20/23
23K1858-07RE1 [SB-3 (15.9"-17")]	B361296	5.46	5.00	12/20/23
23K1858-08RE1 [SB-4 (0"-2")]	B361296	6.73	5.00	12/20/23
23K1858-09RE1 [SB-4 (2"-12")]	B361296	5.78	5.00	12/20/23
23K1858-10RE1 [SB-4 (17'-19')]	B361296	5.58	5.00	12/20/23
23K1858-11RE1 [SB-11 (2"-12")]	B361296	6.08	5.00	12/20/23
23K1858-12RE1 [SB-11 (0"-2")]	B361296	6.67	5.00	12/20/23
23K1858-13RE1 [SB-11 (11"-12")]	B361296	5.77	5.00	12/20/23
23K1858-14RE1 [SB-10 (0"-2")]	B361296	7.87	5.00	12/20/23
23K1858-15RE1 [SB-10 (2"-12")]	B361296	5.67	5.00	12/20/23
23K1858-16RE1 [SB-10 (20-22')]	B361296	5.81	5.00	12/20/23
23K1858-17RE1 [SB-5 (0"-2")]	B361296	6.36	5.00	12/20/23
23K1858-18RE1 [SB-5 (2"-12")]	B361296	6.11	5.00	12/20/23
23K1858-19RE1 [SB-5 (11'-12')]	B361296	5.65	5.00	12/20/23
23K1858-20RE1 [SB-7 (11'-12')]	B361296	5.70	5.00	12/20/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K1858-04 [EQB11062023]	B358369	50.0	11/16/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 11/16/2023 per NO PREP in Batch B358369**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K1858-04 [EQB11062023]	B359416	456	5.00	12/07/23

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Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K1858-01 [SB-12 (0"-2")]	B358325	11/16/23
23K1858-02 [SB-12 (2"-12")]	B358325	11/16/23
23K1858-03 [SB-12 (11-11.5)]	B358325	11/16/23
23K1858-05 [SB-3 (0"-2")]	B358325	11/16/23
23K1858-06 [SB-3 (2"-12")]	B358325	11/16/23
23K1858-07 [SB-3 (15.9"-17")]	B358325	11/16/23
23K1858-08 [SB-4 (0"-2")]	B358325	11/16/23
23K1858-09 [SB-4 (2"-12")]	B358325	11/16/23
23K1858-10 [SB-4 (17'-19')]	B358325	11/16/23
23K1858-11 [SB-11 (2"-12")]	B358325	11/16/23
23K1858-12 [SB-11 (0"-2")]	B358325	11/16/23
23K1858-13 [SB-11 (11"-12")]	B358325	11/16/23
23K1858-14 [SB-10 (0"-2")]	B358325	11/16/23
23K1858-15 [SB-10 (2"-12")]	B358325	11/16/23
23K1858-16 [SB-10 (20-22')]	B358325	11/16/23
23K1858-17 [SB-5 (0"-2")]	B358325	11/16/23
23K1858-18 [SB-5 (2"-12")]	B358325	11/16/23
23K1858-19 [SB-5 (11'-12')]	B358325	11/16/23
23K1858-20 [SB-7 (11'-12')]	B358325	11/16/23

SW 846 9060A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1858-02 [SB-12 (2"-12")]	B358388	1.00	1.00	11/17/23
23K1858-06 [SB-3 (2"-12")]	B358388	1.00	1.00	11/17/23
23K1858-15 [SB-10 (2"-12")]	B358388	1.00	1.00	11/17/23

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
23K1858-02 [SB-12 (2"-12")]	B358237	20.0	11/15/23
23K1858-06 [SB-3 (2"-12")]	B358237	20.0	11/15/23
23K1858-15 [SB-10 (2"-12")]	B358237	20.0	11/15/23

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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 B358251 - Draft Method 1633										
Blank (B358251-BLK1)				Prepared: 12/13/23 Analyzed: 12/19/23						
Perfluorobutanoic acid (PFBA)	ND	0.79	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg wet							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg wet							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg wet							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	µg/kg wet							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.15	0.79	µg/kg wet							J
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	µg/kg wet							
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg wet							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg wet							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg wet							
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg wet							
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg wet							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg wet							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	µg/kg wet							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.79	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.79	µg/kg wet							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg wet							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	µg/kg wet							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg wet							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Surrogate: 13C4-PFBA	*7.69*		µg/kg wet	9.87		77.9	10-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358251 - Draft Method 1633										
Blank (B358251-BLK1)				Prepared: 12/13/23 Analyzed: 12/19/23						
Surrogate: 13C5-PFPeA	*3.83*		µg/kg wet	4.93		77.5	35-150			
Surrogate: 13C5-PFHxA	*1.92*		µg/kg wet	2.47		77.8	55-150			
Surrogate: 13C4-PFHpA	*1.94*		µg/kg wet	2.47		78.7	55-150			
Surrogate: 13C8-PFOA	*1.92*		µg/kg wet	2.47		77.6	60-140			
Surrogate: 13C9-PFNA	*0.962*		µg/kg wet	1.23		78.0	55-140			
Surrogate: 13C6-PFDA	*0.934*		µg/kg wet	1.23		75.7	50-140			
Surrogate: 13C7-PFUnA	*0.931*		µg/kg wet	1.23		75.5	30-140			
Surrogate: 13C2-PFDoA	*0.881*		µg/kg wet	1.23		71.4	10-150			
Surrogate: 13C2-PFTeDA	*0.794*		µg/kg wet	1.23		64.3	10-130			
Surrogate: 13C3-PFBS	*1.71*		µg/kg wet	2.47		69.4	55-150			
Surrogate: 13C3-PFHxS	*2.00*		µg/kg wet	2.47		81.1	55-150			
Surrogate: 13C8-PFOS	*1.88*		µg/kg wet	2.47		76.1	45-140			
Surrogate: 13C2-4:2FTS	*2.99*		µg/kg wet	4.93		60.6	60-200			
Surrogate: 13C2-6:2FTS	*4.88*		µg/kg wet	4.93		98.9	60-200			
Surrogate: 13C2-8:2FTS	*5.20*		µg/kg wet	4.93		105	50-200			
Surrogate: 13C8-PFOSA	*1.74*		µg/kg wet	2.47		70.5	30-130			
Surrogate: D3-NMeFOSA	*1.09*		µg/kg wet	2.47		44.4	15-130			
Surrogate: D5-NEtFOSA	*0.762*		µg/kg wet	2.47		30.9	10-130			
Surrogate: D3-NMeFOSAA	*4.32*		µg/kg wet	4.93		87.6	45-200			
Surrogate: D5-NEtFOSAA	*4.33*		µg/kg wet	4.93		87.8	10-200			
Surrogate: D7-NMeFOSE	*14.4*		µg/kg wet	24.7		58.3	10-150			
Surrogate: D9-NEtFOSE	*13.6*		µg/kg wet	24.7		55.0	10-150			
Surrogate: 13C3-HFPO-DA	*7.59*		µg/kg wet	9.87		76.9	25-160			
LCS (B358251-BS1)				Prepared: 12/13/23 Analyzed: 12/19/23						
Perfluorobutanoic acid (PFBA)	11.8	0.78	µg/kg wet	9.41		126	58-148			
Perfluoropentanoic acid (PFPeA)	5.70	0.39	µg/kg wet	4.71		121	54-152			
Perfluorohexanoic acid (PFHxA)	2.91	0.20	µg/kg wet	2.35		124	55-152			
Perfluoroheptanoic acid (PFHpA)	2.82	0.20	µg/kg wet	2.35		120	54-154			
Perfluorooctanoic acid (PFOA)	2.81	0.20	µg/kg wet	2.35		120	52-161			
Perfluorononanoic acid (PFNA)	2.94	0.20	µg/kg wet	2.35		125	59-149			
Perfluorodecanoic acid (PFDA)	2.86	0.20	µg/kg wet	2.35		122	52-147			
Perfluoroundecanoic acid (PFUnA)	2.88	0.20	µg/kg wet	2.35		123	48-159			
Perfluorododecanoic acid (PFDoA)	3.00	0.20	µg/kg wet	2.35		127	64-142			
Perfluorotridecanoic acid (PFTrDA)	2.95	0.20	µg/kg wet	2.35		125	49-148			
Perfluorotetradecanoic acid (PFTeDA)	2.96	0.20	µg/kg wet	2.35		126	47-161			
Perfluorobutanesulfonic acid (PFBS)	2.60	0.20	µg/kg wet	2.09		124	62-144			
Perfluoropentanesulfonic acid (PFPeS)	2.70	0.20	µg/kg wet	2.21		122	59-151			
Perfluorohexanesulfonic acid (PFHxS)	2.48	0.20	µg/kg wet	2.15		115	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	2.73	0.20	µg/kg wet	2.24		122	55-152			
Perfluorooctanesulfonic acid (PFOS)	2.48	0.20	µg/kg wet	2.18		114	58-149			
Perfluorononanesulfonic acid (PFNS)	2.73	0.20	µg/kg wet	2.26		120	52-148			
Perfluorodecanesulfonic acid (PFDS)	2.68	0.20	µg/kg wet	2.27		118	51-147			
Perfluorododecanesulfonic acid (PFDoS)	2.48	0.20	µg/kg wet	2.28		109	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	11.2	0.78	µg/kg wet	8.82		127	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	12.2	0.78	µg/kg wet	8.94		137	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	12.3	0.78	µg/kg wet	9.06		135	63-152			
Perfluorooctanesulfonamide (PFOSA)	2.94	0.20	µg/kg wet	2.35		125	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.74	0.20	µg/kg wet	2.35		116	63-145			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358251 - Draft Method 1633										
LCS (B358251-BS1)				Prepared: 12/13/23 Analyzed: 12/19/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.58	0.20	µg/kg wet	2.35		110	65-139			
N-MeFOSAA (NMeFOSAA)	2.78	0.20	µg/kg wet	2.35		118	58-144			
N-EtFOSAA (NEtFOSAA)	3.00	0.20	µg/kg wet	2.35		127	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	28.8	2.0	µg/kg wet	23.5		123	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	29.3	2.0	µg/kg wet	23.5		125	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	11.0	0.78	µg/kg wet	9.41		117	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.0	0.78	µg/kg wet	8.88		113	68-146			
9Cl-PF3ONS (F53B Minor)	10.2	0.78	µg/kg wet	8.82		115	56-156			
11Cl-PF3OUdS (F53B Major)	10.3	0.78	µg/kg wet	8.88		116	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	18.9	2.0	µg/kg wet	23.5		80.4	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	99.8	9.8	µg/kg wet	118		84.8	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	100	9.8	µg/kg wet	118		85.4	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	5.09	0.39	µg/kg wet	4.19		121	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	5.06	0.39	µg/kg wet	4.71		108	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	5.35	0.39	µg/kg wet	4.71		114	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6.11	0.39	µg/kg wet	4.71		130	48-161			
Surrogate: 13C4-PFBA	*7.03*		µg/kg wet	9.80		71.7	10-130			
Surrogate: 13C5-PFPeA	*3.49*		µg/kg wet	4.90		71.2	35-150			
Surrogate: 13C5-PFHxA	*1.73*		µg/kg wet	2.45		70.5	55-150			
Surrogate: 13C4-PFHpA	*1.73*		µg/kg wet	2.45		70.8	55-150			
Surrogate: 13C8-PFOA	*1.84*		µg/kg wet	2.45		74.9	60-140			
Surrogate: 13C9-PFNA	*0.852*		µg/kg wet	1.23		69.5	55-140			
Surrogate: 13C6-PFDA	*0.881*		µg/kg wet	1.23		71.9	50-140			
Surrogate: 13C7-PFUnA	*0.875*		µg/kg wet	1.23		71.4	30-140			
Surrogate: 13C2-PFDoA	*0.808*		µg/kg wet	1.23		66.0	10-150			
Surrogate: 13C2-PFTeDA	*0.762*		µg/kg wet	1.23		62.2	10-130			
Surrogate: 13C3-PFBS	*1.63*		µg/kg wet	2.45		66.5	55-150			
Surrogate: 13C3-PFHxS	*1.81*		µg/kg wet	2.45		74.0	55-150			
Surrogate: 13C8-PFOS	*1.77*		µg/kg wet	2.45		72.2	45-140			
Surrogate: 13C2-4:2FTS	*3.11*		µg/kg wet	4.90		63.4	60-200			
Surrogate: 13C2-6:2FTS	*4.82*		µg/kg wet	4.90		98.4	60-200			
Surrogate: 13C2-8:2FTS	*5.20*		µg/kg wet	4.90		106	50-200			
Surrogate: 13C8-PFOSA	*1.55*		µg/kg wet	2.45		63.2	30-130			
Surrogate: D3-NMeFOSA	*1.11*		µg/kg wet	2.45		45.1	15-130			
Surrogate: D5-NEtFOSA	*0.984*		µg/kg wet	2.45		40.2	10-130			
Surrogate: D3-NMeFOSAA	*3.98*		µg/kg wet	4.90		81.2	45-200			
Surrogate: D5-NEtFOSAA	*3.81*		µg/kg wet	4.90		77.8	10-200			
Surrogate: D7-NMeFOSE	*14.6*		µg/kg wet	24.5		59.5	10-150			
Surrogate: D9-NEtFOSE	*14.3*		µg/kg wet	24.5		58.3	10-150			
Surrogate: 13C3-HFPO-DA	*6.88*		µg/kg wet	9.80		70.1	25-160			
MRL Check (B358251-MRL1)				Prepared: 12/13/23 Analyzed: 12/19/23						
Perfluorobutanoic acid (PFBA)	0.860	0.78	µg/kg wet	0.781		110	44-157			
Perfluoropentanoic acid (PFPeA)	0.406	0.39	µg/kg wet	0.391		104	57-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358251 - Draft Method 1633										
MRL Check (B358251-MRL1)				Prepared: 12/13/23 Analyzed: 12/19/23						
Perfluorohexanoic acid (PFHxA)	0.195	0.20	µg/kg wet	0.195		99.7	62-149			J
Perfluoroheptanoic acid (PFHpA)	0.192	0.20	µg/kg wet	0.195		98.1	56-150			J
Perfluorooctanoic acid (PFOA)	0.178	0.20	µg/kg wet	0.195		91.1	57-161			J
Perfluorononanoic acid (PFNA)	0.195	0.20	µg/kg wet	0.195		100	53-157			
Perfluorodecanoic acid (PFDA)	0.199	0.20	µg/kg wet	0.195		102	43-158			
Perfluoroundecanoic acid (PFUnA)	0.191	0.20	µg/kg wet	0.195		97.7	50-155			J
Perfluorododecanoic acid (PFDoA)	0.211	0.20	µg/kg wet	0.195		108	60-141			
Perfluorotridecanoic acid (PFTrDA)	0.186	0.20	µg/kg wet	0.195		95.2	52-140			J
Perfluorotetradecanoic acid (PFTeDA)	0.199	0.20	µg/kg wet	0.195		102	52-156			
Perfluorobutanesulfonic acid (PFBS)	0.171	0.20	µg/kg wet	0.173		98.6	63-145			J
Perfluoropentanesulfonic acid (PFPeS)	0.187	0.20	µg/kg wet	0.184		102	58-144			J
Perfluorohexanesulfonic acid (PFHxS)	0.174	0.20	µg/kg wet	0.179		97.3	44-158			J
Perfluoroheptanesulfonic acid (PFHpS)	0.190	0.20	µg/kg wet	0.186		102	51-150			J
Perfluorooctanesulfonic acid (PFOS)	0.210	0.20	µg/kg wet	0.181		116	43-162			
Perfluorononanesulfonic acid (PFNS)	0.192	0.20	µg/kg wet	0.188		102	46-151			J
Perfluorodecanesulfonic acid (PFDS)	0.188	0.20	µg/kg wet	0.188		99.8	50-144			J
Perfluorododecanesulfonic acid (PFDoS)	0.159	0.20	µg/kg wet	0.189		83.9	30-138			J
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	0.759	0.78	µg/kg wet	0.732		104	52-158			PF-17C, J
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.898	0.78	µg/kg wet	0.742		121	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	0.848	0.78	µg/kg wet	0.752		113	46-165			
Perfluorooctanesulfonamide (PFOSA)	0.212	0.20	µg/kg wet	0.195		109	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	0.221	0.20	µg/kg wet	0.195		113	54-155			S-29
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.191	0.20	µg/kg wet	0.195		97.9	49-156			S-29, J
N-MeFOSAA (NMeFOSAA)	0.180	0.20	µg/kg wet	0.195		92.3	32-160			J
N-EtFOSAA (NEtFOSAA)	0.196	0.20	µg/kg wet	0.195		101	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	2.00	2.0	µg/kg wet	1.95		102	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	2.11	2.0	µg/kg wet	1.95		108	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.739	0.78	µg/kg wet	0.781		94.6	58-154			J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.679	0.78	µg/kg wet	0.737		92.1	61-148			J
9Cl-PF3ONS (F53B Minor)	0.717	0.78	µg/kg wet	0.732		97.9	44-167			J
11Cl-PF3OUdS (F53B Major)	0.707	0.78	µg/kg wet	0.737		95.9	36-158			J
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1.61	2.0	µg/kg wet	1.95		82.4	32-161			J
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	7.60	9.8	µg/kg wet	9.76		77.9	39-156			J
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	7.88	9.8	µg/kg wet	9.76		80.7	36-149			J
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.337	0.39	µg/kg wet	0.348		97.0	56-144			J
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.358	0.39	µg/kg wet	0.391		91.7	48-150			J
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.362	0.39	µg/kg wet	0.391		92.7	49-154			J
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.449	0.39	µg/kg wet	0.391		115	47-160			
Surrogate: 13C4-PFBA	*6.77*		µg/kg wet	9.76		69.4	10-130			
Surrogate: 13C5-PFPeA	*3.36*		µg/kg wet	4.88		68.8	35-150			
Surrogate: 13C5-PFHxA	*1.68*		µg/kg wet	2.44		68.8	55-150			

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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 B358251 - Draft Method 1633											
MRL Check (B358251-MRL1)				Prepared: 12/13/23 Analyzed: 12/19/23							
Surrogate: 13C4-PFHpA	*1.65*		µg/kg wet	2.44		67.6		55-150			
Surrogate: 13C8-PFOA	*1.64*		µg/kg wet	2.44		67.4		60-140			
Surrogate: 13C9-PFNA	*0.800*		µg/kg wet	1.22		65.6		55-140			
Surrogate: 13C6-PFDA	*0.851*		µg/kg wet	1.22		69.7		50-140			
Surrogate: 13C7-PFUnA	*0.812*		µg/kg wet	1.22		66.6		30-140			
Surrogate: 13C2-PFDoA	*0.788*		µg/kg wet	1.22		64.5		10-150			
Surrogate: 13C2-PFTeDA	*0.715*		µg/kg wet	1.22		58.6		10-130			
Surrogate: 13C3-PFBS	*1.52*		µg/kg wet	2.44		62.3		55-150			
Surrogate: 13C3-PFHxS	*1.71*		µg/kg wet	2.44		70.2		55-150			
Surrogate: 13C8-PFOS	*1.62*		µg/kg wet	2.44		66.3		45-140			
Surrogate: 13C2-4:2FTS	*2.71*		µg/kg wet	4.88		**55.5**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*4.32*		µg/kg wet	4.88		88.5		60-200			
Surrogate: 13C2-8:2FTS	*4.48*		µg/kg wet	4.88		91.8		50-200			
Surrogate: 13C8-PFOSA	*1.48*		µg/kg wet	2.44		60.7		30-130			
Surrogate: D3-NMeFOSA	*0.0432*		µg/kg wet	2.44		**1.77**	*	15-130			S-29
Surrogate: D5-NEtFOSA	*0.0148*		µg/kg wet	2.44		**0.605**	*	10-130			S-29
Surrogate: D3-NMeFOSAA	*3.74*		µg/kg wet	4.88		76.6		45-200			
Surrogate: D5-NEtFOSAA	*3.66*		µg/kg wet	4.88		74.9		10-200			
Surrogate: D7-NMeFOSE	*5.07*		µg/kg wet	24.4		20.8		10-150			
Surrogate: D9-NEtFOSE	*3.89*		µg/kg wet	24.4		15.9		10-150			
Surrogate: 13C3-HFPO-DA	*6.65*		µg/kg wet	9.76		68.1		25-160			
Matrix Spike (B358251-MS1)	**Source: 23K1858-01**			Prepared: 12/13/23 Analyzed: 12/19/23							
Perfluorobutanoic acid (PFBA)	12.6	0.80	µg/kg dry	9.56	0.597	126		58-148			
Perfluoropentanoic acid (PFPeA)	6.17	0.40	µg/kg dry	4.78	0.280	123		54-152			
Perfluorohexanoic acid (PFHxA)	3.11	0.20	µg/kg dry	2.39	0.173	123		55-152			
Perfluoroheptanoic acid (PFHpA)	3.22	0.20	µg/kg dry	2.39	0.209	126		54-154			
Perfluorooctanoic acid (PFOA)	3.65	0.20	µg/kg dry	2.39	0.689	124		52-161			
Perfluorononanoic acid (PFNA)	3.41	0.20	µg/kg dry	2.39	0.319	129		59-149			
Perfluorodecanoic acid (PFDA)	3.15	0.20	µg/kg dry	2.39	0.152	125		52-147			
Perfluoroundecanoic acid (PFUnA)	3.19	0.20	µg/kg dry	2.39	0.201	125		48-159			
Perfluorododecanoic acid (PFDoA)	3.16	0.20	µg/kg dry	2.39	0.0837	129		64-142			
Perfluorotridecanoic acid (PFTrDA)	3.10	0.20	µg/kg dry	2.39	0.0787	126		49-148			
Perfluorotetradecanoic acid (PFTeDA)	3.08	0.20	µg/kg dry	2.39	0.0401	127		47-161			
Perfluorobutanesulfonic acid (PFBS)	2.68	0.20	µg/kg dry	2.12	0.0236	125		62-144			
Perfluoropentanesulfonic acid (PFPeS)	2.71	0.20	µg/kg dry	2.25	ND	120		59-151			
Perfluorohexanesulfonic acid (PFHxS)	2.51	0.20	µg/kg dry	2.19	ND	115		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	2.77	0.20	µg/kg dry	2.28	ND	121		55-152			
Perfluorooctanesulfonic acid (PFOS)	3.88	0.20	µg/kg dry	2.22	1.30	117		58-149			
Perfluorononanesulfonic acid (PFNS)	2.85	0.20	µg/kg dry	2.30	ND	124		52-148			
Perfluorodecanesulfonic acid (PFDS)	3.01	0.20	µg/kg dry	2.31	ND	130		51-147			
Perfluorododecanesulfonic acid (PFDoS)	2.61	0.20	µg/kg dry	2.32	ND	113		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	11.9	0.80	µg/kg dry	8.96	ND	132		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	12.2	0.80	µg/kg dry	9.08	0.125	132		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	12.1	0.80	µg/kg dry	9.20	ND	131		63-152			
Perfluorooctanesulfonamide (PFOSA)	3.07	0.20	µg/kg dry	2.39	ND	128		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.54	0.20	µg/kg dry	2.39	ND	106		63-145			PF-18
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.76	0.20	µg/kg dry	2.39	ND	115		65-139			PF-18
N-MeFOSAA (NMeFOSAA)	2.73	0.20	µg/kg dry	2.39	ND	114		58-144			

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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 B358251 - Draft Method 1633											
Matrix Spike (B358251-MS1)	**Source: 23K1858-01**			Prepared: 12/13/23 Analyzed: 12/19/23							
N-EtFOSAA (NEtFOSAA)	3.00	0.20	µg/kg dry	2.39	ND	125		59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	28.9	2.0	µg/kg dry	23.9	ND	121		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	28.7	2.0	µg/kg dry	23.9	ND	120		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.6	0.80	µg/kg dry	9.56	ND	111		63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.98	0.80	µg/kg dry	9.02	ND	111		68-146			
9Cl-PF3ONS (F53B Minor)	10.4	0.80	µg/kg dry	8.96	ND	116		56-156			
11Cl-PF3OUdS (F53B Major)	11.4	0.80	µg/kg dry	9.02	ND	127		46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	15.6	2.0	µg/kg dry	23.9	ND	65.2		62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	75.6	10	µg/kg dry	120	ND	63.3		63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	107	10	µg/kg dry	120	ND	89.9		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	5.20	0.40	µg/kg dry	4.25	ND	122		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	5.22	0.40	µg/kg dry	4.78	ND	109		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	5.51	0.40	µg/kg dry	4.78	ND	115		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.77	0.40	µg/kg dry	4.78	ND	121		48-161			
Surrogate: 13C4-PFBA	*6.54*		µg/kg dry	9.96		65.6		10-130			
Surrogate: 13C5-PFPeA	*3.22*		µg/kg dry	4.98		64.6		35-150			
Surrogate: 13C5-PFHxA	*1.63*		µg/kg dry	2.49		65.4		55-150			
Surrogate: 13C4-PFHpA	*1.63*		µg/kg dry	2.49		65.5		55-150			
Surrogate: 13C8-PFOA	*1.66*		µg/kg dry	2.49		66.6		60-140			
Surrogate: 13C9-PFNA	*0.792*		µg/kg dry	1.24		63.6		55-140			
Surrogate: 13C6-PFDA	*0.825*		µg/kg dry	1.24		66.3		50-140			
Surrogate: 13C7-PFUnA	*0.838*		µg/kg dry	1.24		67.3		30-140			
Surrogate: 13C2-PFDoA	*0.832*		µg/kg dry	1.24		66.8		10-150			
Surrogate: 13C2-PFTeDA	*0.687*		µg/kg dry	1.24		55.2		10-130			
Surrogate: 13C3-PFBS	*1.44*		µg/kg dry	2.49		58.0		55-150			
Surrogate: 13C3-PFHxS	*1.66*		µg/kg dry	2.49		66.8		55-150			
Surrogate: 13C8-PFOS	*1.70*		µg/kg dry	2.49		68.2		45-140			
Surrogate: 13C2-4:2FTS	*3.07*		µg/kg dry	4.98		61.7		60-200			
Surrogate: 13C2-6:2FTS	*4.69*		µg/kg dry	4.98		94.1		60-200			
Surrogate: 13C2-8:2FTS	*5.45*		µg/kg dry	4.98		109		50-200			
Surrogate: 13C8-PFOSA	*1.51*		µg/kg dry	2.49		60.5		30-130			
Surrogate: D3-NMeFOSA	*0.177*		µg/kg dry	2.49		**7.11**	*	15-130			PF-18
Surrogate: D5-NEtFOSA	*0.0906*		µg/kg dry	2.49		**3.64**	*	10-130			PF-18
Surrogate: D3-NMeFOSAA	*4.02*		µg/kg dry	4.98		80.7		45-200			
Surrogate: D5-NEtFOSAA	*4.14*		µg/kg dry	4.98		83.1		10-200			
Surrogate: D7-NMeFOSE	*7.71*		µg/kg dry	24.9		31.0		10-150			
Surrogate: D9-NEtFOSE	*6.59*		µg/kg dry	24.9		26.5		10-150			
Surrogate: 13C3-HFPO-DA	*6.48*		µg/kg dry	9.96		65.1		25-160			
Matrix Spike Dup (B358251-MSD1)	**Source: 23K1858-01**			Prepared: 12/13/23 Analyzed: 12/19/23							
Perfluorobutanoic acid (PFBA)	13.0	0.79	µg/kg dry	9.50	0.597	130		58-148	2.73	20	
Perfluoropentanoic acid (PFPeA)	6.36	0.40	µg/kg dry	4.75	0.280	128		54-152	3.01	20	
Perfluorohexanoic acid (PFHxA)	3.22	0.20	µg/kg dry	2.38	0.173	128		55-152	3.51	25	
Perfluoroheptanoic acid (PFHpA)	3.19	0.20	µg/kg dry	2.38	0.209	126		54-154	0.980	25	
Perfluorooctanoic acid (PFOA)	3.69	0.20	µg/kg dry	2.38	0.689	126		52-161	1.09	25	

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358251 - Draft Method 1633										
Matrix Spike Dup (B358251-MSD1)	**Source: 23K1858-01**			Prepared: 12/13/23 Analyzed: 12/19/23						
Perfluorononanoic acid (PFNA)	3.38	0.20	µg/kg dry	2.38	0.319	129	59-149	1.06	25	
Perfluorodecanoic acid (PFDA)	3.15	0.20	µg/kg dry	2.38	0.152	126	52-147	0.192	25	
Perfluoroundecanoic acid (PFUnA)	3.28	0.20	µg/kg dry	2.38	0.201	129	48-159	2.77	30	
Perfluorododecanoic acid (PFDoA)	3.15	0.20	µg/kg dry	2.38	0.0837	129	64-142	0.278	25	
Perfluorotridecanoic acid (PFTrDA)	3.10	0.20	µg/kg dry	2.38	0.0787	127	49-148	0.298	25	
Perfluorotetradecanoic acid (PFTeDA)	3.17	0.20	µg/kg dry	2.38	0.0401	132	47-161	2.80	25	
Perfluorobutanesulfonic acid (PFBS)	2.83	0.20	µg/kg dry	2.11	0.0236	133	62-144	5.53	20	
Perfluoropentanesulfonic acid (PFPeS)	2.69	0.20	µg/kg dry	2.23	ND	121	59-151	0.590	25	
Perfluorohexanesulfonic acid (PFHxS)	2.46	0.20	µg/kg dry	2.17	ND	113	57-146	1.97	25	
Perfluoroheptanesulfonic acid (PFHpS)	2.98	0.20	µg/kg dry	2.26	ND	132	55-152	7.51	25	
Perfluorooctanesulfonic acid (PFOS)	3.89	0.20	µg/kg dry	2.20	1.30	118	58-149	0.174	20	
Perfluorononanesulfonic acid (PFNS)	3.03	0.20	µg/kg dry	2.29	ND	132	52-148	5.82	25	
Perfluorodecanesulfonic acid (PFDS)	3.13	0.20	µg/kg dry	2.29	ND	137	51-147	4.05	25	
Perfluorododecanesulfonic acid (PFDoS)	2.32	0.20	µg/kg dry	2.30	ND	101	36-145	11.6	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	12.0	0.79	µg/kg dry	8.91	ND	135	67-146	1.35	25	PF-18
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	13.0	0.79	µg/kg dry	9.03	0.125	143	61-151	6.80	30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	12.8	0.79	µg/kg dry	9.15	ND	140	63-152	6.37	30	
Perfluorooctanesulfonamide (PFOSA)	3.13	0.20	µg/kg dry	2.38	ND	132	61-148	2.13	20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	3.08	0.20	µg/kg dry	2.38	ND	130	63-145	19.3	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.85	0.20	µg/kg dry	2.38	ND	120	65-139	3.09	25	PF-18
N-MeFOSAA (NMeFOSAA)	2.94	0.20	µg/kg dry	2.38	ND	124	58-144	7.66	25	
N-EtFOSAA (NEtFOSAA)	3.18	0.20	µg/kg dry	2.38	ND	134	59-146	5.91	25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	29.5	2.0	µg/kg dry	23.8	ND	124	71-136	1.96	20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	30.1	2.0	µg/kg dry	23.8	ND	127	69-137	4.79	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	11.6	0.79	µg/kg dry	9.50	ND	122	63-144	8.77	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.5	0.79	µg/kg dry	8.97	ND	117	68-146	5.29	20	
9Cl-PF3ONS (F53B Minor)	11.2	0.79	µg/kg dry	8.91	ND	126	56-156	7.70	30	
11Cl-PF3OUdS (F53B Major)	11.9	0.79	µg/kg dry	8.97	ND	133	46-156	4.18	35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	16.1	2.0	µg/kg dry	23.8	ND	67.7	62-129	3.11	20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	76.7	9.9	µg/kg dry	119	ND	64.6	63-134	1.47	20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	107	9.9	µg/kg dry	119	ND	90.4	50-138	0.0175	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	5.05	0.40	µg/kg dry	4.23	ND	119	56-151	2.91	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	5.00	0.40	µg/kg dry	4.75	ND	105	51-145	4.34	25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	5.31	0.40	µg/kg dry	4.75	ND	112	55-148	3.81	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.66	0.40	µg/kg dry	4.75	ND	119	48-161	2.00	35	
Surrogate: 13C4-PFBA	*6.28*		µg/kg dry	9.90		63.5	10-130			
Surrogate: 13C5-PFPeA	*3.06*		µg/kg dry	4.95		61.9	35-150			
Surrogate: 13C5-PFHxA	*1.54*		µg/kg dry	2.47		62.3	55-150			
Surrogate: 13C4-PFHpA	*1.58*		µg/kg dry	2.47		64.0	55-150			
Surrogate: 13C8-PFOA	*1.61*		µg/kg dry	2.47		65.2	60-140			
Surrogate: 13C9-PFNA	*0.759*		µg/kg dry	1.24		61.3	55-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B358251 - Draft Method 1633											
Matrix Spike Dup (B358251-MSD1)		**Source: 23K1858-01**		Prepared: 12/13/23 Analyzed: 12/19/23							
Surrogate: 13C6-PFDA	*0.793*		µg/kg dry	1.24		64.1		50-140			
Surrogate: 13C7-PFUnA	*0.786*		µg/kg dry	1.24		63.5		30-140			
Surrogate: 13C2-PFDoA	*0.768*		µg/kg dry	1.24		62.1		10-150			
Surrogate: 13C2-PFTeDA	*0.573*		µg/kg dry	1.24		46.3		10-130			
Surrogate: 13C3-PFBS	*1.39*		µg/kg dry	2.47		56.1		55-150			
Surrogate: 13C3-PFHxS	*1.63*		µg/kg dry	2.47		66.1		55-150			
Surrogate: 13C8-PFOS	*1.55*		µg/kg dry	2.47		62.6		45-140			
Surrogate: 13C2-4:2FTS	*2.83*		µg/kg dry	4.95		**57.1**	*	60-200			PF-18
Surrogate: 13C2-6:2FTS	*4.34*		µg/kg dry	4.95		87.7		60-200			
Surrogate: 13C2-8:2FTS	*5.04*		µg/kg dry	4.95		102		50-200			
Surrogate: 13C8-PFOSA	*1.36*		µg/kg dry	2.47		54.8		30-130			
Surrogate: D3-NMeFOSA	*0.377*		µg/kg dry	2.47		15.2		15-130			
Surrogate: D5-NEtFOSA	*0.237*		µg/kg dry	2.47		**9.56**	*	10-130			PF-18
Surrogate: D3-NMeFOSAA	*3.63*		µg/kg dry	4.95		73.4		45-200			
Surrogate: D5-NEtFOSAA	*3.67*		µg/kg dry	4.95		74.2		10-200			
Surrogate: D7-NMeFOSE	*8.10*		µg/kg dry	24.7		32.7		10-150			
Surrogate: D9-NEtFOSE	*6.83*		µg/kg dry	24.7		27.6		10-150			
Surrogate: 13C3-HFPO-DA	*6.14*		µg/kg dry	9.90		62.0		25-160			
Batch B359416 - Draft Method 1633											
Blank (B359416-BLK1)				Prepared: 12/07/23 Analyzed: 12/09/23							
Perfluorobutanoic acid (PFBA)	1.5	3.9	ng/L								Z-01, J
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	0.97	ng/L								
Perfluoroheptanoic acid (PFHpA)	ND	0.97	ng/L								
Perfluorooctanoic acid (PFOA)	ND	0.97	ng/L								
Perfluorononanoic acid (PFNA)	ND	0.97	ng/L								
Perfluorodecanoic acid (PFDA)	ND	0.97	ng/L								
Perfluoroundecanoic acid (PFUnA)	ND	0.97	ng/L								
Perfluorododecanoic acid (PFDoA)	ND	0.97	ng/L								
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	ng/L								
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	ng/L								
Perfluorobutanesulfonic acid (PFBS)	ND	0.97	ng/L								
Perfluoropentanesulfonic acid (PFPeS)	ND	0.97	ng/L								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.97	ng/L								
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.97	ng/L								
Perfluorooctanesulfonic acid (PFOS)	ND	0.97	ng/L								
Perfluorononanesulfonic acid (PFNS)	ND	0.97	ng/L								
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	ng/L								
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	ng/L								
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L								
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L								
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L								
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	ng/L								
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.97	ng/L								
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	ng/L								
N-MeFOSAA (NMeFOSAA)	ND	0.97	ng/L								
N-EtFOSAA (NEtFOSAA)	ND	0.97	ng/L								

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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 B359416 - Draft Method 1633										
Blank (B359416-BLK1)				Prepared: 12/07/23 Analyzed: 12/09/23						
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Surrogate: 13C4-PFBA	*95.0*		ng/L	97.1		97.9	10-130			
Surrogate: 13C5-PFPeA	*46.9*		ng/L	48.6		96.6	35-150			
Surrogate: 13C5-PFHxA	*24.1*		ng/L	24.3		99.1	55-150			
Surrogate: 13C4-PFHpA	*24.1*		ng/L	24.3		99.4	55-150			
Surrogate: 13C8-PFOA	*23.8*		ng/L	24.3		97.9	60-140			
Surrogate: 13C9-PFNA	*11.5*		ng/L	12.1		94.9	55-140			
Surrogate: 13C6-PFDA	*11.4*		ng/L	12.1		93.5	50-140			
Surrogate: 13C7-PFUnA	*11.1*		ng/L	12.1		91.1	30-140			
Surrogate: 13C2-PFDoA	*10.7*		ng/L	12.1		88.2	10-150			
Surrogate: 13C2-PFTeDA	*10.6*		ng/L	12.1		87.0	10-130			
Surrogate: 13C3-PFBS	*21.8*		ng/L	24.3		89.7	55-150			
Surrogate: 13C3-PFHxS	*23.7*		ng/L	24.3		97.6	55-150			
Surrogate: 13C8-PFOS	*23.6*		ng/L	24.3		97.0	45-140			
Surrogate: 13C2-4:2FTS	*35.7*		ng/L	48.6		73.6	60-200			
Surrogate: 13C2-6:2FTS	*47.1*		ng/L	48.6		97.0	60-200			
Surrogate: 13C2-8:2FTS	*44.9*		ng/L	48.6		92.4	50-200			
Surrogate: 13C8-PFOSA	*21.4*		ng/L	24.3		88.0	30-130			
Surrogate: D3-NMeFOSA	*19.9*		ng/L	24.3		82.0	15-130			
Surrogate: D5-NEtFOSA	*21.2*		ng/L	24.3		87.1	10-130			
Surrogate: D3-NMeFOSAA	*48.9*		ng/L	48.6		101	45-200			
Surrogate: D5-NEtFOSAA	*45.2*		ng/L	48.6		93.1	10-200			
Surrogate: D7-NMeFOSE	*211*		ng/L	243		86.9	10-150			
Surrogate: D9-NEtFOSE	*222*		ng/L	243		91.4	10-150			
Surrogate: 13C3-HFPO-DA	*96.2*		ng/L	97.1		99.0	25-160			
LCS (B359416-BS1)				Prepared: 12/07/23 Analyzed: 12/09/23						
Perfluorobutanoic acid (PFBA)	103	4.0	ng/L	95.6		107	58-148			
Perfluoropentanoic acid (PFPeA)	49.0	2.0	ng/L	47.8		103	54-152			
Perfluorohexanoic acid (PFHxA)	24.5	1.0	ng/L	23.9		103	55-152			
Perfluoroheptanoic acid (PFHpA)	24.4	1.0	ng/L	23.9		102	54-154			
Perfluorooctanoic acid (PFOA)	23.9	1.0	ng/L	23.9		100	52-161			
Perfluorononanoic acid (PFNA)	25.1	1.0	ng/L	23.9		105	59-149			

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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 B359416 - Draft Method 1633										
LCS (B359416-BS1)				Prepared: 12/07/23 Analyzed: 12/09/23						
Perfluorodecanoic acid (PFDA)	25.0	1.0	ng/L	23.9		105	52-147			
Perfluoroundecanoic acid (PFUnA)	24.6	1.0	ng/L	23.9		103	48-159			
Perfluorododecanoic acid (PFDoA)	24.7	1.0	ng/L	23.9		103	64-142			
Perfluorotridecanoic acid (PFTrDA)	24.3	1.0	ng/L	23.9		102	49-148			
Perfluorotetradecanoic acid (PFTeDA)	25.0	1.0	ng/L	23.9		105	47-161			
Perfluorobutanesulfonic acid (PFBS)	21.2	1.0	ng/L	21.2		99.7	62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.1	1.0	ng/L	22.5		103	59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.9	1.0	ng/L	21.9		95.6	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	23.7	1.0	ng/L	22.8		104	55-152			
Perfluorooctanesulfonic acid (PFOS)	22.0	1.0	ng/L	22.2		99.2	58-149			
Perfluorononanesulfonic acid (PFNS)	22.9	1.0	ng/L	23.0		99.7	52-148			
Perfluorodecanesulfonic acid (PFDS)	22.7	1.0	ng/L	23.1		98.5	51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.8	1.0	ng/L	23.2		93.9	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	98.6	4.0	ng/L	89.6		110	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	99.1	4.0	ng/L	90.8		109	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	106	4.0	ng/L	92.0		115	63-152			
Perfluorooctanesulfonamide (PFOSA)	24.8	1.0	ng/L	23.9		104	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	24.8	1.0	ng/L	23.9		104	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.6	1.0	ng/L	23.9		98.9	65-139			
N-MeFOSAA (NMeFOSAA)	23.8	1.0	ng/L	23.9		99.4	58-144			
N-EtFOSAA (NEtFOSAA)	26.0	1.0	ng/L	23.9		109	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	249	10	ng/L	239		104	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	250	10	ng/L	239		105	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	81.0	4.0	ng/L	95.6		84.7	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	74.9	4.0	ng/L	90.2		83.1	68-146			
9Cl-PF3ONS (F53B Minor)	74.0	4.0	ng/L	89.6		82.6	56-156			
11Cl-PF3OUdS (F53B Major)	74.3	4.0	ng/L	90.2		82.3	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	209	10	ng/L	239		87.3	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1080	50	ng/L	1190		90.4	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1030	50	ng/L	1190		86.4	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	43.9	2.0	ng/L	42.5		103	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	42.6	2.0	ng/L	47.8		89.1	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	46.1	2.0	ng/L	47.8		96.5	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.0	2.0	ng/L	47.8		98.4	48-161			
Surrogate: 13C4-PFBA	*96.1*		ng/L	99.6		96.5	10-130			
Surrogate: 13C5-PFPeA	*47.4*		ng/L	49.8		95.2	35-150			
Surrogate: 13C5-PFHxA	*24.0*		ng/L	24.9		96.6	55-150			
Surrogate: 13C4-PFHpA	*24.4*		ng/L	24.9		97.9	55-150			
Surrogate: 13C8-PFOA	*23.2*		ng/L	24.9		93.0	60-140			
Surrogate: 13C9-PFNA	*12.0*		ng/L	12.4		96.4	55-140			
Surrogate: 13C6-PFDA	*11.9*		ng/L	12.4		95.5	50-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359416 - Draft Method 1633										
LCS (B359416-BS1)				Prepared: 12/07/23 Analyzed: 12/09/23						
Surrogate: 13C7-PFUnA	*11.5*		ng/L	12.4		92.0	30-140			
Surrogate: 13C2-PFDoA	*11.3*		ng/L	12.4		91.0	10-150			
Surrogate: 13C2-PFTeDA	*10.9*		ng/L	12.4		87.8	10-130			
Surrogate: 13C3-PFBS	*23.1*		ng/L	24.9		92.9	55-150			
Surrogate: 13C3-PFHxS	*24.7*		ng/L	24.9		99.4	55-150			
Surrogate: 13C8-PFOS	*23.5*		ng/L	24.9		94.5	45-140			
Surrogate: 13C2-4:2FTS	*40.3*		ng/L	49.8		80.9	60-200			
Surrogate: 13C2-6:2FTS	*52.3*		ng/L	49.8		105	60-200			
Surrogate: 13C2-8:2FTS	*51.4*		ng/L	49.8		103	50-200			
Surrogate: 13C8-PFOSA	*21.6*		ng/L	24.9		86.6	30-130			
Surrogate: D3-NMeFOSA	*20.5*		ng/L	24.9		82.3	15-130			
Surrogate: D5-NEtFOSA	*21.7*		ng/L	24.9		87.1	10-130			
Surrogate: D3-NMeFOSAA	*48.9*		ng/L	49.8		98.2	45-200			
Surrogate: D5-NEtFOSAA	*44.7*		ng/L	49.8		89.7	10-200			
Surrogate: D7-NMeFOSE	*218*		ng/L	249		87.5	10-150			
Surrogate: D9-NEtFOSE	*222*		ng/L	249		89.1	10-150			
Surrogate: 13C3-HFPO-DA	*99.2*		ng/L	99.6		99.6	25-160			
MRL Check (B359416-MRL1)				Prepared: 12/07/23 Analyzed: 12/09/23						
Perfluorobutanoic acid (PFBA)	11.7	3.9	ng/L	7.83		150	44-157			
Perfluoropentanoic acid (PFPeA)	5.04	2.0	ng/L	3.91		129	57-148			
Perfluorohexanoic acid (PFHxA)	2.55	0.98	ng/L	1.96		130	62-149			
Perfluoroheptanoic acid (PFHpA)	2.24	0.98	ng/L	1.96		114	56-150			
Perfluorooctanoic acid (PFOA)	2.30	0.98	ng/L	1.96		118	57-161			
Perfluorononanoic acid (PFNA)	2.24	0.98	ng/L	1.96		115	53-157			
Perfluorodecanoic acid (PFDA)	2.31	0.98	ng/L	1.96		118	43-158			
Perfluoroundecanoic acid (PFUnA)	2.28	0.98	ng/L	1.96		116	50-155			
Perfluorododecanoic acid (PFDoA)	2.30	0.98	ng/L	1.96		117	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.29	0.98	ng/L	1.96		117	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.40	0.98	ng/L	1.96		123	52-156			
Perfluorobutanesulfonic acid (PFBS)	2.09	0.98	ng/L	1.74		120	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.29	0.98	ng/L	1.84		125	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.35	0.98	ng/L	1.79		132	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.25	0.98	ng/L	1.86		121	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.18	0.98	ng/L	1.81		120	43-162			
Perfluorononanesulfonic acid (PFNS)	2.25	0.98	ng/L	1.88		120	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.17	0.98	ng/L	1.89		115	50-144			
Perfluorododecanesulfonic acid (PFDoS)	2.14	0.98	ng/L	1.90		113	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	9.25	3.9	ng/L	7.34		126	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	9.59	3.9	ng/L	7.43		129	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	10.0	3.9	ng/L	7.53		133	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.47	0.98	ng/L	1.96		126	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.31	0.98	ng/L	1.96		118	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.24	0.98	ng/L	1.96		114	49-156			
N-MeFOSAA (NMeFOSAA)	2.24	0.98	ng/L	1.96		115	32-160			
N-EtFOSAA (NEtFOSAA)	2.80	0.98	ng/L	1.96		143	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	21.4	9.8	ng/L	19.6		110	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.1	9.8	ng/L	19.6		108	60-147			

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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 B359416 - Draft Method 1633										
MRL Check (B359416-MRL1)				Prepared: 12/07/23 Analyzed: 12/09/23						
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.96	3.9	ng/L	7.83		115	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.34	3.9	ng/L	7.38		113	61-148			
9Cl-PF3ONS (F53B Minor)	8.12	3.9	ng/L	7.34		111	44-167			
11Cl-PF3OUdS (F53B Major)	8.54	3.9	ng/L	7.38		116	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.4	9.8	ng/L	19.6		89.1	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	86.6	49	ng/L	97.8		88.5	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	87.4	49	ng/L	97.8		89.4	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.61	2.0	ng/L	3.48		104	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.73	2.0	ng/L	3.91		95.4	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.68	2.0	ng/L	3.91		94.0	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.01	2.0	ng/L	3.91		102	47-160			
Surrogate: 13C4-PFBA	*87.0*		ng/L	97.8		88.9	10-130			
Surrogate: 13C5-PFPeA	*44.1*		ng/L	48.9		90.2	35-150			
Surrogate: 13C5-PFHxA	*22.2*		ng/L	24.5		90.8	55-150			
Surrogate: 13C4-PFHpA	*23.0*		ng/L	24.5		93.9	55-150			
Surrogate: 13C8-PFOA	*22.5*		ng/L	24.5		91.9	60-140			
Surrogate: 13C9-PFNA	*10.9*		ng/L	12.2		88.9	55-140			
Surrogate: 13C6-PFDA	*10.6*		ng/L	12.2		86.7	50-140			
Surrogate: 13C7-PFUnA	*10.5*		ng/L	12.2		85.8	30-140			
Surrogate: 13C2-PFDoA	*10.3*		ng/L	12.2		84.6	10-150			
Surrogate: 13C2-PFTeDA	*10.0*		ng/L	12.2		81.8	10-130			
Surrogate: 13C3-PFBS	*20.2*		ng/L	24.5		82.6	55-150			
Surrogate: 13C3-PFHxS	*22.0*		ng/L	24.5		89.9	55-150			
Surrogate: 13C8-PFOS	*22.2*		ng/L	24.5		90.8	45-140			
Surrogate: 13C2-4:2FTS	*36.0*		ng/L	48.9		73.6	60-200			
Surrogate: 13C2-6:2FTS	*48.9*		ng/L	48.9		100	60-200			
Surrogate: 13C2-8:2FTS	*62.8*		ng/L	48.9		128	50-200			
Surrogate: 13C8-PFOSA	*21.2*		ng/L	24.5		86.5	30-130			
Surrogate: D3-NMeFOSA	*17.6*		ng/L	24.5		71.8	15-130			
Surrogate: D5-NEtFOSA	*18.5*		ng/L	24.5		75.6	10-130			
Surrogate: D3-NMeFOSAA	*46.6*		ng/L	48.9		95.3	45-200			
Surrogate: D5-NEtFOSAA	*46.3*		ng/L	48.9		94.6	10-200			
Surrogate: D7-NMeFOSE	*192*		ng/L	245		78.5	10-150			
Surrogate: D9-NEtFOSE	*194*		ng/L	245		79.2	10-150			
Surrogate: 13C3-HFPO-DA	*88.2*		ng/L	97.8		90.1	25-160			
Batch B361296 - Draft Method 1633										
Blank (B361296-BLK1)				Prepared: 12/20/23 Analyzed: 12/27/23						
Perfluorobutanoic acid (PFBA)	ND	0.79	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg wet							

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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 B361296 - Draft Method 1633										
Blank (B361296-BLK1)				Prepared: 12/20/23 Analyzed: 12/27/23						
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg wet							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg wet							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg wet							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	µg/kg wet							PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	µg/kg wet							PF-17C
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	µg/kg wet							
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg wet							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg wet							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg wet							
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg wet							
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg wet							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg wet							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	µg/kg wet							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.79	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.79	µg/kg wet							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg wet							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	µg/kg wet							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg wet							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Surrogate: 13C4-PFBA	*7.20*		µg/kg wet	9.86		73.1	10-130			
Surrogate: 13C5-PFPeA	*3.90*		µg/kg wet	4.93		79.0	35-150			
Surrogate: 13C5-PFHxA	*1.81*		µg/kg wet	2.47		73.3	55-150			
Surrogate: 13C4-PFHpA	*1.75*		µg/kg wet	2.47		70.9	55-150			
Surrogate: 13C8-PFOA	*1.77*		µg/kg wet	2.47		71.9	60-140			
Surrogate: 13C9-PFNA	*0.910*		µg/kg wet	1.23		73.8	55-140			
Surrogate: 13C6-PFDA	*0.953*		µg/kg wet	1.23		77.3	50-140			
Surrogate: 13C7-PFUnA	*0.881*		µg/kg wet	1.23		71.4	30-140			
Surrogate: 13C2-PFDoA	*0.845*		µg/kg wet	1.23		68.6	10-150			

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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 B361296 - Draft Method 1633											
Blank (B361296-BLK1)				Prepared: 12/20/23 Analyzed: 12/27/23							
Surrogate: 13C2-PFTeDA	*0.758*		µg/kg wet	1.23		61.5		10-130			
Surrogate: 13C3-PFBS	*1.87*		µg/kg wet	2.47		75.9		55-150			
Surrogate: 13C3-PFHxS	*1.90*		µg/kg wet	2.47		76.9		55-150			
Surrogate: 13C8-PFOS	*1.77*		µg/kg wet	2.47		71.6		45-140			
Surrogate: 13C2-4:2FTS	*2.95*		µg/kg wet	4.93		**59.9**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*2.56*		µg/kg wet	4.93		**52.0**	*	60-200			PF-17C
Surrogate: 13C2-8:2FTS	*7.51*		µg/kg wet	4.93		152		50-200			
Surrogate: 13C8-PFOSA	*1.84*		µg/kg wet	2.47		74.5		30-130			
Surrogate: D3-NMeFOSA	*1.51*		µg/kg wet	2.47		61.4		15-130			
Surrogate: D5-NEtFOSA	*1.47*		µg/kg wet	2.47		59.6		10-130			
Surrogate: D3-NMeFOSAA	*2.95*		µg/kg wet	4.93		59.8		45-200			
Surrogate: D5-NEtFOSAA	*2.60*		µg/kg wet	4.93		52.7		10-200			
Surrogate: D7-NMeFOSE	*13.9*		µg/kg wet	24.7		56.5		10-150			
Surrogate: D9-NEtFOSE	*11.3*		µg/kg wet	24.7		45.9		10-150			
Surrogate: 13C3-HFPO-DA	*7.58*		µg/kg wet	9.86		76.9		25-160			
LCS (B361296-BS1)				Prepared: 12/20/23 Analyzed: 12/27/23							
Perfluorobutanoic acid (PFBA)	11.0	0.79	µg/kg wet	9.50		116		58-148			
Perfluoropentanoic acid (PFPeA)	5.36	0.40	µg/kg wet	4.75		113		54-152			
Perfluorohexanoic acid (PFHxA)	2.63	0.20	µg/kg wet	2.37		111		55-152			
Perfluoroheptanoic acid (PFHpA)	2.68	0.20	µg/kg wet	2.37		113		54-154			
Perfluorooctanoic acid (PFOA)	2.65	0.20	µg/kg wet	2.37		112		52-161			
Perfluorononanoic acid (PFNA)	2.66	0.20	µg/kg wet	2.37		112		59-149			
Perfluorodecanoic acid (PFDA)	2.63	0.20	µg/kg wet	2.37		111		52-147			
Perfluoroundecanoic acid (PFUnA)	2.75	0.20	µg/kg wet	2.37		116		48-159			
Perfluorododecanoic acid (PFDoA)	2.77	0.20	µg/kg wet	2.37		116		64-142			
Perfluorotridecanoic acid (PFTrDA)	2.62	0.20	µg/kg wet	2.37		110		49-148			
Perfluorotetradecanoic acid (PFTeDA)	2.64	0.20	µg/kg wet	2.37		111		47-161			
Perfluorobutanesulfonic acid (PFBS)	2.47	0.20	µg/kg wet	2.11		117		62-144			
Perfluoropentanesulfonic acid (PFPeS)	2.55	0.20	µg/kg wet	2.23		114		59-151			
Perfluorohexanesulfonic acid (PFHxS)	2.32	0.20	µg/kg wet	2.17		107		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	2.76	0.20	µg/kg wet	2.26		122		55-152			
Perfluorooctanesulfonic acid (PFOS)	2.46	0.20	µg/kg wet	2.20		112		58-149			
Perfluorononanesulfonic acid (PFNS)	2.78	0.20	µg/kg wet	2.28		122		52-148			
Perfluorodecanesulfonic acid (PFDS)	2.53	0.20	µg/kg wet	2.29		111		51-147			
Perfluorododecanesulfonic acid (PFDoS)	2.27	0.20	µg/kg wet	2.30		98.4		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	10.7	0.79	µg/kg wet	8.90		120		67-146			PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	10.2	0.79	µg/kg wet	9.02		113		61-151			PF-17C
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	11.1	0.79	µg/kg wet	9.14		121		63-152			
Perfluorooctanesulfonamide (PFOSA)	2.70	0.20	µg/kg wet	2.37		114		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.51	0.20	µg/kg wet	2.37		106		63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.53	0.20	µg/kg wet	2.37		107		65-139			
N-MeFOSAA (NMeFOSAA)	2.60	0.20	µg/kg wet	2.37		110		58-144			
N-EtFOSAA (NEtFOSAA)	2.77	0.20	µg/kg wet	2.37		117		59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	28.0	2.0	µg/kg wet	23.7		118		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	27.4	2.0	µg/kg wet	23.7		116		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.2	0.79	µg/kg wet	9.50		108		63-144			

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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 B361296 - Draft Method 1633											
LCS (B361296-BS1)				Prepared: 12/20/23 Analyzed: 12/27/23							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.90	0.79	µg/kg wet	8.96		99.3		68-146			
9Cl-PF3ONS (F53B Minor)	8.49	0.79	µg/kg wet	8.90		95.3		56-156			
11Cl-PF3OUdS (F53B Major)	9.01	0.79	µg/kg wet	8.96		101		46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	24.3	2.0	µg/kg wet	25.9		94.0		62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	131	9.9	µg/kg wet	129		102		63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	128	9.9	µg/kg wet	129		98.9		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	4.41	0.40	µg/kg wet	4.23		104		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.91	0.40	µg/kg wet	4.75		103		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	5.10	0.40	µg/kg wet	4.75		107		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.34	0.40	µg/kg wet	4.75		112		48-161			
Surrogate: 13C4-PFBA	*6.27*		µg/kg wet	9.89		63.4		10-130			
Surrogate: 13C5-PFPeA	*3.44*		µg/kg wet	4.95		69.5		35-150			
Surrogate: 13C5-PFHxA	*1.60*		µg/kg wet	2.47		64.8		55-150			
Surrogate: 13C4-PFHpA	*1.51*		µg/kg wet	2.47		61.1		55-150			
Surrogate: 13C8-PFOA	*1.62*		µg/kg wet	2.47		65.3		60-140			
Surrogate: 13C9-PFNA	*0.793*		µg/kg wet	1.24		64.2		55-140			
Surrogate: 13C6-PFDA	*0.811*		µg/kg wet	1.24		65.6		50-140			
Surrogate: 13C7-PFUnA	*0.750*		µg/kg wet	1.24		60.7		30-140			
Surrogate: 13C2-PFDoA	*0.725*		µg/kg wet	1.24		58.6		10-150			
Surrogate: 13C2-PFTeDA	*0.644*		µg/kg wet	1.24		52.1		10-130			
Surrogate: 13C3-PFBS	*1.61*		µg/kg wet	2.47		65.0		55-150			
Surrogate: 13C3-PFHxS	*1.67*		µg/kg wet	2.47		67.3		55-150			
Surrogate: 13C8-PFOS	*1.52*		µg/kg wet	2.47		61.5		45-140			
Surrogate: 13C2-4:2FTS	*2.74*		µg/kg wet	4.95		**55.4**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*2.45*		µg/kg wet	4.95		**49.6**	*	60-200			PF-17C
Surrogate: 13C2-8:2FTS	*8.90*		µg/kg wet	4.95		180		50-200			
Surrogate: 13C8-PFOSA	*1.60*		µg/kg wet	2.47		64.7		30-130			
Surrogate: D3-NMeFOSA	*1.26*		µg/kg wet	2.47		51.1		15-130			
Surrogate: D5-NEtFOSA	*1.21*		µg/kg wet	2.47		49.0		10-130			
Surrogate: D3-NMeFOSAA	*2.53*		µg/kg wet	4.95		51.2		45-200			
Surrogate: D5-NEtFOSAA	*2.20*		µg/kg wet	4.95		44.5		10-200			
Surrogate: D7-NMeFOSE	*11.4*		µg/kg wet	24.7		46.1		10-150			
Surrogate: D9-NEtFOSE	*9.73*		µg/kg wet	24.7		39.4		10-150			
Surrogate: 13C3-HFPO-DA	*6.77*		µg/kg wet	9.89		68.4		25-160			
MRL Check (B361296-MRL1)				Prepared: 12/20/23 Analyzed: 12/27/23							
Perfluorobutanoic acid (PFBA)	1.03	0.79	µg/kg wet	0.789		130		44-157			
Perfluoropentanoic acid (PFPeA)	0.472	0.39	µg/kg wet	0.394		120		57-148			
Perfluorohexanoic acid (PFHxA)	0.240	0.20	µg/kg wet	0.197		122		62-149			
Perfluoroheptanoic acid (PFHpA)	0.223	0.20	µg/kg wet	0.197		113		56-150			
Perfluorooctanoic acid (PFOA)	0.229	0.20	µg/kg wet	0.197		116		57-161			
Perfluorononanoic acid (PFNA)	0.233	0.20	µg/kg wet	0.197		118		53-157			
Perfluorodecanoic acid (PFDA)	0.221	0.20	µg/kg wet	0.197		112		43-158			
Perfluoroundecanoic acid (PFUnA)	0.229	0.20	µg/kg wet	0.197		116		50-155			
Perfluorododecanoic acid (PFDoA)	0.225	0.20	µg/kg wet	0.197		114		60-141			
Perfluorotridecanoic acid (PFTrDA)	0.207	0.20	µg/kg wet	0.197		105		52-140			
Perfluorotetradecanoic acid (PFTeDA)	0.231	0.20	µg/kg wet	0.197		117		52-156			

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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 B361296 - Draft Method 1633										
MRL Check (B361296-MRL1)				Prepared: 12/20/23 Analyzed: 12/27/23						
Perfluorobutanesulfonic acid (PFBS)	0.194	0.20	µg/kg wet	0.175		111	63-145			J
Perfluoropentanesulfonic acid (PFPeS)	0.205	0.20	µg/kg wet	0.185		111	58-144			
Perfluorohexanesulfonic acid (PFHxS)	0.206	0.20	µg/kg wet	0.180		114	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	0.211	0.20	µg/kg wet	0.188		112	51-150			
Perfluorooctanesulfonic acid (PFOS)	0.215	0.20	µg/kg wet	0.183		118	43-162			
Perfluorononanesulfonic acid (PFNS)	0.227	0.20	µg/kg wet	0.190		119	46-151			
Perfluorodecanesulfonic acid (PFDS)	0.223	0.20	µg/kg wet	0.190		117	50-144			
Perfluorododecanesulfonic acid (PFDoS)	0.190	0.20	µg/kg wet	0.191		99.2	30-138			J
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	0.930	0.79	µg/kg wet	0.739		126	52-158			PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.898	0.79	µg/kg wet	0.749		120	48-158			PF-17C
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	0.975	0.79	µg/kg wet	0.759		128	46-165			
Perfluorooctanesulfonamide (PFOSA)	0.250	0.20	µg/kg wet	0.197		127	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	0.213	0.20	µg/kg wet	0.197		108	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.208	0.20	µg/kg wet	0.197		106	49-156			
N-MeFOSAA (NMeFOSAA)	0.256	0.20	µg/kg wet	0.197		130	32-160			
N-EtFOSAA (NEtFOSAA)	0.230	0.20	µg/kg wet	0.197		117	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	2.34	2.0	µg/kg wet	1.97		119	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	2.31	2.0	µg/kg wet	1.97		117	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.813	0.79	µg/kg wet	0.789		103	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.723	0.79	µg/kg wet	0.744		97.2	61-148			J
9Cl-PF3ONS (F53B Minor)	0.696	0.79	µg/kg wet	0.739		94.1	44-167			J
11Cl-PF3OUdS (F53B Major)	0.718	0.79	µg/kg wet	0.744		96.5	36-158			J
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1.93	2.0	µg/kg wet	1.97		97.8	32-161			J
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	10.2	9.9	µg/kg wet	9.86		103	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	9.56	9.9	µg/kg wet	9.86		97.0	36-149			J
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.362	0.39	µg/kg wet	0.351		103	56-144			J
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.411	0.39	µg/kg wet	0.394		104	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.417	0.39	µg/kg wet	0.394		106	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.433	0.39	µg/kg wet	0.394		110	47-160			
Surrogate: 13C4-PFBA	*6.44*		µg/kg wet	9.86		65.3	10-130			
Surrogate: 13C5-PFPeA	*3.38*		µg/kg wet	4.93		68.5	35-150			
Surrogate: 13C5-PFHxA	*1.54*		µg/kg wet	2.46		62.5	55-150			
Surrogate: 13C4-PFHpA	*1.51*		µg/kg wet	2.46		61.4	55-150			
Surrogate: 13C8-PFOA	*1.61*		µg/kg wet	2.46		65.4	60-140			
Surrogate: 13C9-PFNA	*0.777*		µg/kg wet	1.23		63.1	55-140			
Surrogate: 13C6-PFDA	*0.789*		µg/kg wet	1.23		64.0	50-140			
Surrogate: 13C7-PFUnA	*0.749*		µg/kg wet	1.23		60.8	30-140			
Surrogate: 13C2-PFDoA	*0.717*		µg/kg wet	1.23		58.2	10-150			
Surrogate: 13C2-PFTeDA	*0.621*		µg/kg wet	1.23		50.4	10-130			
Surrogate: 13C3-PFBS	*1.66*		µg/kg wet	2.46		67.2	55-150			
Surrogate: 13C3-PFHxS	*1.66*		µg/kg wet	2.46		67.5	55-150			

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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 B361296 - Draft Method 1633											
MRL Check (B361296-MRL1)				Prepared: 12/20/23 Analyzed: 12/27/23							
Surrogate: 13C8-PFOS	*1.61*		µg/kg wet	2.46		65.4		45-140			
Surrogate: 13C2-4:2FTS	*2.55*		µg/kg wet	4.93		**51.7**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*2.20*		µg/kg wet	4.93		**44.7**	*	60-200			PF-17C
Surrogate: 13C2-8:2FTS	*5.95*		µg/kg wet	4.93		121		50-200			
Surrogate: 13C8-PFOSA	*1.62*		µg/kg wet	2.46		65.9		30-130			
Surrogate: D3-NMeFOSA	*1.36*		µg/kg wet	2.46		55.2		15-130			
Surrogate: D5-NEtFOSA	*1.39*		µg/kg wet	2.46		56.6		10-130			
Surrogate: D3-NMeFOSAA	*2.58*		µg/kg wet	4.93		52.4		45-200			
Surrogate: D5-NEtFOSAA	*2.26*		µg/kg wet	4.93		45.9		10-200			
Surrogate: D7-NMeFOSE	*13.8*		µg/kg wet	24.6		56.2		10-150			
Surrogate: D9-NEtFOSE	*11.7*		µg/kg wet	24.6		47.3		10-150			
Surrogate: 13C3-HFPO-DA	*6.44*		µg/kg wet	9.86		65.4		25-160			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B358237 - SW-846 9045C											
LCS (B358237-BS1)				Prepared & Analyzed: 11/15/23							
pH	5.99		pH Units	6.00		99.9		90-110			
Batch B358388 - SW 846 9060A											
Blank (B358388-BLK1)				Prepared & Analyzed: 11/17/23							
Total Organic Carbon	ND	100	mg/Kg wet								
LCS (B358388-BS1)				Prepared & Analyzed: 11/17/23							
Total Organic Carbon	757	100	mg/Kg wet	750		101		67.3-125			
LCS Dup (B358388-BSD1)				Prepared & Analyzed: 11/17/23							
Total Organic Carbon	735	100	mg/Kg wet	750		98.1		67.3-125	2.93	26.4	
MRL Check (B358388-MRL1)				Prepared & Analyzed: 11/17/23							
Total Organic Carbon	124	100	mg/Kg wet	100		124		0-200			
Matrix Spike (B358388-MS1)	**Source: 23K1858-02**			Prepared & Analyzed: 11/17/23							
Total Organic Carbon	11700	120	mg/Kg dry	923	4070	**832**	*	85-115			MS-11
Matrix Spike Dup (B358388-MSD1)	**Source: 23K1858-02**			Prepared & Analyzed: 11/17/23							
Total Organic Carbon	10700	120	mg/Kg dry	923	4070	**715**	*	85-115	9.68	20	MS-11

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
Blank (B360405-BLK1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorobutanoic acid (PFBA)	ND	7.2	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	3.6	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	ng/L							PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	7.2	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	7.2	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	89	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	89	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	ng/L							
Surrogate: 13C4-PFBA	*151*		ng/L	179		84.6	10-130			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633											
Blank (B360405-BLK1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Surrogate: 13C5-PFPeA	*76.0*		ng/L	89.5		84.9		35-150			
Surrogate: 13C5-PFHxA	*38.4*		ng/L	44.7		85.8		55-150			
Surrogate: 13C4-PFHpA	*38.6*		ng/L	44.7		86.2		55-150			
Surrogate: 13C8-PFOA	*39.9*		ng/L	44.7		89.1		60-140			
Surrogate: 13C9-PFNA	*18.2*		ng/L	22.4		81.5		55-140			
Surrogate: 13C6-PFDA	*19.8*		ng/L	22.4		88.5		50-140			
Surrogate: 13C7-PFUnA	*18.5*		ng/L	22.4		82.9		30-140			
Surrogate: 13C2-PFDoA	*18.2*		ng/L	22.4		81.5		10-150			
Surrogate: 13C2-PFTeDA	*18.5*		ng/L	22.4		82.6		10-130			
Surrogate: 13C3-PFBS	*34.2*		ng/L	44.7		76.5		55-150			
Surrogate: 13C3-PFHxS	*37.7*		ng/L	44.7		84.3		55-150			
Surrogate: 13C8-PFOS	*38.3*		ng/L	44.7		85.7		45-140			
Surrogate: 13C2-4:2FTS	*53.3*		ng/L	89.5		**59.6**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*89.8*		ng/L	89.5		100		60-200			
Surrogate: 13C2-8:2FTS	*97.2*		ng/L	89.5		109		50-200			
Surrogate: 13C8-PFOSA	*33.1*		ng/L	44.7		74.0		30-130			
Surrogate: D3-NMeFOSA	*32.4*		ng/L	44.7		72.4		15-130			
Surrogate: D5-NEtFOSA	*33.6*		ng/L	44.7		75.1		10-130			
Surrogate: D3-NMeFOSAA	*79.6*		ng/L	89.5		89.0		45-200			
Surrogate: D5-NEtFOSAA	*75.0*		ng/L	89.5		83.8		10-200			
Surrogate: D7-NMeFOSE	*342*		ng/L	447		76.5		10-150			
Surrogate: D9-NEtFOSE	*353*		ng/L	447		78.8		10-150			
Surrogate: 13C3-HFPO-DA	*152*		ng/L	179		85.0		25-160			
LCS (B360405-BS1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Perfluorobutanoic acid (PFBA)	97.7	3.9	ng/L	94.4		104		58-148			
Perfluoropentanoic acid (PFPeA)	47.6	2.0	ng/L	47.2		101		54-152			
Perfluorohexanoic acid (PFHxA)	23.6	0.98	ng/L	23.6		100		55-152			
Perfluoroheptanoic acid (PFHpA)	23.9	0.98	ng/L	23.6		101		54-154			
Perfluorooctanoic acid (PFOA)	24.1	0.98	ng/L	23.6		102		52-161			
Perfluorononanoic acid (PFNA)	24.7	0.98	ng/L	23.6		105		59-149			
Perfluorodecanoic acid (PFDA)	24.3	0.98	ng/L	23.6		103		52-147			
Perfluoroundecanoic acid (PFUnA)	24.5	0.98	ng/L	23.6		104		48-159			
Perfluorododecanoic acid (PFDoA)	24.6	0.98	ng/L	23.6		104		64-142			
Perfluorotridecanoic acid (PFTrDA)	23.7	0.98	ng/L	23.6		101		49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.8	0.98	ng/L	23.6		105		47-161			
Perfluorobutanesulfonic acid (PFBS)	21.7	0.98	ng/L	20.9		104		62-144			
Perfluoropentanesulfonic acid (PFPeS)	22.0	0.98	ng/L	22.2		99.1		59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.9	0.98	ng/L	21.6		96.7		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	22.8	0.98	ng/L	22.5		102		55-152			
Perfluorooctanesulfonic acid (PFOS)	21.0	0.98	ng/L	21.9		95.9		58-149			
Perfluorononanesulfonic acid (PFNS)	22.3	0.98	ng/L	22.7		98.0		52-148			
Perfluorodecanesulfonic acid (PFDS)	22.2	0.98	ng/L	22.8		97.5		51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.0	0.98	ng/L	22.9		91.6		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	92.7	3.9	ng/L	88.5		105		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	98.2	3.9	ng/L	89.6		110		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	99.5	3.9	ng/L	90.8		110		63-152			
Perfluorooctanesulfonamide (PFOSA)	24.8	0.98	ng/L	23.6		105		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	23.2	0.98	ng/L	23.6		98.5		63-145			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
LCS (B360405-BS1)				Prepared: 12/11/23 Analyzed: 12/13/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	22.0	0.98	ng/L	23.6		93.4	65-139			
N-MeFOSAA (NMeFOSAA)	23.9	0.98	ng/L	23.6		101	58-144			
N-EtFOSAA (NEtFOSAA)	24.7	0.98	ng/L	23.6		105	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	238	9.8	ng/L	236		101	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	238	9.8	ng/L	236		101	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	103	3.9	ng/L	94.4		109	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	95.3	3.9	ng/L	89.0		107	68-146			
9Cl-PF3ONS (F53B Minor)	99.1	3.9	ng/L	88.5		112	56-156			
11Cl-PF3OUdS (F53B Major)	99.5	3.9	ng/L	89.0		112	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	235	9.8	ng/L	236		99.6	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1230	49	ng/L	1180		104	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1220	49	ng/L	1180		103	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	47.1	2.0	ng/L	42.0		112	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.9	2.0	ng/L	47.2		101	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.7	2.0	ng/L	47.2		105	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.8	2.0	ng/L	47.2		101	48-161			
Surrogate: 13C4-PFBA	*79.2*		ng/L	98.3		80.6	10-130			
Surrogate: 13C5-PFPeA	*39.3*		ng/L	49.1		80.0	35-150			
Surrogate: 13C5-PFHxA	*20.0*		ng/L	24.6		81.4	55-150			
Surrogate: 13C4-PFHpA	*20.1*		ng/L	24.6		81.8	55-150			
Surrogate: 13C8-PFOA	*19.4*		ng/L	24.6		78.8	60-140			
Surrogate: 13C9-PFNA	*9.68*		ng/L	12.3		78.8	55-140			
Surrogate: 13C6-PFDA	*9.68*		ng/L	12.3		78.8	50-140			
Surrogate: 13C7-PFUnA	*9.56*		ng/L	12.3		77.8	30-140			
Surrogate: 13C2-PFDoA	*9.50*		ng/L	12.3		77.3	10-150			
Surrogate: 13C2-PFTeDA	*9.23*		ng/L	12.3		75.1	10-130			
Surrogate: 13C3-PFBS	*17.8*		ng/L	24.6		72.5	55-150			
Surrogate: 13C3-PFHxS	*20.4*		ng/L	24.6		83.2	55-150			
Surrogate: 13C8-PFOS	*20.6*		ng/L	24.6		83.9	45-140			
Surrogate: 13C2-4:2FTS	*30.8*		ng/L	49.1		62.6	60-200			
Surrogate: 13C2-6:2FTS	*49.9*		ng/L	49.1		102	60-200			
Surrogate: 13C2-8:2FTS	*55.0*		ng/L	49.1		112	50-200			
Surrogate: 13C8-PFOSA	*18.5*		ng/L	24.6		75.4	30-130			
Surrogate: D3-NMeFOSA	*17.4*		ng/L	24.6		70.8	15-130			
Surrogate: D5-NEtFOSA	*17.9*		ng/L	24.6		73.0	10-130			
Surrogate: D3-NMeFOSAA	*43.0*		ng/L	49.1		87.6	45-200			
Surrogate: D5-NEtFOSAA	*41.2*		ng/L	49.1		83.9	10-200			
Surrogate: D7-NMeFOSE	*179*		ng/L	246		72.9	10-150			
Surrogate: D9-NEtFOSE	*184*		ng/L	246		74.8	10-150			
Surrogate: 13C3-HFPO-DA	*77.4*		ng/L	98.3		78.7	25-160			
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorobutanoic acid (PFBA)	9.30	3.9	ng/L	7.85		118	0-200			
Perfluoropentanoic acid (PFPeA)	3.98	2.0	ng/L	3.92		101	0-200			

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360405 - Draft Method 1633										
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorohexanoic acid (PFHxA)	1.96	0.98	ng/L	1.96		99.8	0-200			
Perfluoroheptanoic acid (PFHpA)	2.25	0.98	ng/L	1.96		115	0-200			
Perfluorooctanoic acid (PFOA)	1.97	0.98	ng/L	1.96		100	0-200			
Perfluorononanoic acid (PFNA)	1.96	0.98	ng/L	1.96		99.7	0-200			
Perfluorodecanoic acid (PFDA)	1.97	0.98	ng/L	1.96		101	0-200			
Perfluoroundecanoic acid (PFUnA)	1.81	0.98	ng/L	1.96		92.5	0-200			
Perfluorododecanoic acid (PFDoA)	2.49	0.98	ng/L	1.96		127	0-200			
Perfluorotridecanoic acid (PFTrDA)	1.85	0.98	ng/L	1.96		94.4	0-200			
Perfluorotetradecanoic acid (PFTeDA)	1.98	0.98	ng/L	1.96		101	0-200			
Perfluorobutanesulfonic acid (PFBS)	1.66	0.98	ng/L	1.74		95.5	0-200			
Perfluoropentanesulfonic acid (PFPeS)	1.75	0.98	ng/L	1.84		94.9	0-200			
Perfluorohexanesulfonic acid (PFHxS)	1.83	0.98	ng/L	1.80		102	0-200			
Perfluoroheptanesulfonic acid (PFHpS)	1.59	0.98	ng/L	1.87		85.3	0-200			
Perfluorooctanesulfonic acid (PFOS)	1.88	0.98	ng/L	1.82		103	0-200			
Perfluorononanesulfonic acid (PFNS)	1.83	0.98	ng/L	1.89		96.7	0-200			
Perfluorodecanesulfonic acid (PFDS)	1.74	0.98	ng/L	1.89		91.9	0-200			
Perfluorododecanesulfonic acid (PFDoS)	1.81	0.98	ng/L	1.90		95.0	0-200			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.42	3.9	ng/L	7.36		101	0-200			PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.61	3.9	ng/L	7.46		102	0-200			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.89	3.9	ng/L	7.55		104	0-200			
Perfluorooctanesulfonamide (PFOSA)	2.06	0.98	ng/L	1.96		105	0-200			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.12	0.98	ng/L	1.96		108	0-200			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.79	0.98	ng/L	1.96		91.0	0-200			
N-MeFOSAA (NMeFOSAA)	1.75	0.98	ng/L	1.96		89.1	0-200			
N-EtFOSAA (NEtFOSAA)	1.96	0.98	ng/L	1.96		100	0-200			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	18.5	9.8	ng/L	19.6		94.4	0-200			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	18.7	9.8	ng/L	19.6		95.4	0-200			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.09	3.9	ng/L	7.85		90.4	0-200			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.65	3.9	ng/L	7.41		89.8	0-200			
9Cl-PF3ONS (F53B Minor)	6.84	3.9	ng/L	7.36		93.0	0-200			
11Cl-PF3OUdS (F53B Major)	6.97	3.9	ng/L	7.41		94.1	0-200			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	15.9	9.8	ng/L	19.6		80.8	0-200			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	79.2	49	ng/L	98.1		80.7	0-200			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	76.3	49	ng/L	98.1		77.8	0-200			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.15	2.0	ng/L	3.49		90.3	0-200			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.29	2.0	ng/L	3.92		83.9	0-200			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.31	2.0	ng/L	3.92		84.2	0-200			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.77	2.0	ng/L	3.92		96.1	0-200			
Surrogate: 13C4-PFBA	*81.3*		ng/L	98.1		82.8	10-130			
Surrogate: 13C5-PFPeA	*41.2*		ng/L	49.1		84.1	35-150			
Surrogate: 13C5-PFHxA	*20.9*		ng/L	24.5		85.0	55-150			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633											
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Surrogate: 13C4-PFHpA	*20.7*		ng/L	24.5		84.2		55-150			
Surrogate: 13C8-PFOA	*20.0*		ng/L	24.5		81.7		60-140			
Surrogate: 13C9-PFNA	*9.95*		ng/L	12.3		81.1		55-140			
Surrogate: 13C6-PFDA	*10.2*		ng/L	12.3		82.8		50-140			
Surrogate: 13C7-PFUnA	*9.87*		ng/L	12.3		80.5		30-140			
Surrogate: 13C2-PFDoA	*9.61*		ng/L	12.3		78.3		10-150			
Surrogate: 13C2-PFTeDA	*9.40*		ng/L	12.3		76.7		10-130			
Surrogate: 13C3-PFBS	*18.0*		ng/L	24.5		73.4		55-150			
Surrogate: 13C3-PFHxS	*20.4*		ng/L	24.5		83.2		55-150			
Surrogate: 13C8-PFOS	*19.6*		ng/L	24.5		79.9		45-140			
Surrogate: 13C2-4:2FTS	*29.0*		ng/L	49.1		**59.1**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*49.5*		ng/L	49.1		101		60-200			
Surrogate: 13C2-8:2FTS	*54.9*		ng/L	49.1		112		50-200			
Surrogate: 13C8-PFOSA	*17.9*		ng/L	24.5		73.0		30-130			
Surrogate: D3-NMeFOSA	*15.6*		ng/L	24.5		63.6		15-130			
Surrogate: D5-NEtFOSA	*16.2*		ng/L	24.5		66.1		10-130			
Surrogate: D3-NMeFOSAA	*42.5*		ng/L	49.1		86.5		45-200			
Surrogate: D5-NEtFOSAA	*39.8*		ng/L	49.1		81.2		10-200			
Surrogate: D7-NMeFOSE	*178*		ng/L	245		72.7		10-150			
Surrogate: D9-NEtFOSE	*180*		ng/L	245		73.3		10-150			
Surrogate: 13C3-HFPO-DA	*81.8*		ng/L	98.1		83.4		25-160			
Batch B361062 - Draft Method 1633											
Blank (B361062-BLK1)				Prepared: 12/21/23 Analyzed: 12/27/23							
Perfluorobutanoic acid (PFBA)	ND	7.2	ng/L								
Perfluoropentanoic acid (PFPeA)	ND	3.6	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L								
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L								
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L								
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L								
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L								
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L								
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L								
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L								
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L								
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L								
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L								
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L								
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L								
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L								
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L								
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L								
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L								
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	ng/L								
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	ng/L								
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	ng/L								
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L								
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L								

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633										
Blank (B361062-BLK1)				Prepared: 12/21/23 Analyzed: 12/27/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	7.2	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	7.2	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	90	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	90	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	ng/L							
Surrogate: 13C4-PFBA	*158*		ng/L	180		87.6	10-130			
Surrogate: 13C5-PFPeA	*82.2*		ng/L	90.2		91.1	35-150			
Surrogate: 13C5-PFHxA	*40.0*		ng/L	45.1		88.8	55-150			
Surrogate: 13C4-PFHpA	*39.8*		ng/L	45.1		88.3	55-150			
Surrogate: 13C8-PFOA	*41.7*		ng/L	45.1		92.6	60-140			
Surrogate: 13C9-PFNA	*19.3*		ng/L	22.5		85.5	55-140			
Surrogate: 13C6-PFDA	*20.0*		ng/L	22.5		88.9	50-140			
Surrogate: 13C7-PFUnA	*19.2*		ng/L	22.5		85.1	30-140			
Surrogate: 13C2-PFDoA	*18.8*		ng/L	22.5		83.3	10-150			
Surrogate: 13C2-PFTeDA	*18.4*		ng/L	22.5		81.5	10-130			
Surrogate: 13C3-PFBS	*39.4*		ng/L	45.1		87.4	55-150			
Surrogate: 13C3-PFHxS	*40.2*		ng/L	45.1		89.3	55-150			
Surrogate: 13C8-PFOS	*38.2*		ng/L	45.1		84.7	45-140			
Surrogate: 13C2-4:2FTS	*69.6*		ng/L	90.2		77.2	60-200			
Surrogate: 13C2-6:2FTS	*58.9*		ng/L	90.2		65.4	60-200			
Surrogate: 13C2-8:2FTS	*94.0*		ng/L	90.2		104	50-200			
Surrogate: 13C8-PFOSA	*34.2*		ng/L	45.1		75.9	30-130			
Surrogate: D3-NMeFOSA	*26.2*		ng/L	45.1		58.2	15-130			
Surrogate: D5-NEtFOSA	*26.7*		ng/L	45.1		59.2	10-130			
Surrogate: D3-NMeFOSAA	*67.7*		ng/L	90.2		75.1	45-200			
Surrogate: D5-NEtFOSAA	*58.8*		ng/L	90.2		65.2	10-200			
Surrogate: D7-NMeFOSE	*324*		ng/L	451		71.9	10-150			
Surrogate: D9-NEtFOSE	*324*		ng/L	451		71.8	10-150			
Surrogate: 13C3-HFPO-DA	*169*		ng/L	180		93.5	25-160			
LCS (B361062-BS1)				Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorobutanoic acid (PFBA)	97.0	3.9	ng/L	93.9		103	58-148			
Perfluoropentanoic acid (PFPeA)	47.9	2.0	ng/L	47.0		102	54-152			

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633										
LCS (B361062-BS1)				Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorohexanoic acid (PFHxA)	24.2	0.98	ng/L	23.5		103	55-152			
Perfluoroheptanoic acid (PFHpA)	23.1	0.98	ng/L	23.5		98.3	54-154			
Perfluorooctanoic acid (PFOA)	22.6	0.98	ng/L	23.5		96.4	52-161			
Perfluorononanoic acid (PFNA)	24.5	0.98	ng/L	23.5		104	59-149			
Perfluorodecanoic acid (PFDA)	23.3	0.98	ng/L	23.5		99.2	52-147			
Perfluoroundecanoic acid (PFUnA)	24.2	0.98	ng/L	23.5		103	48-159			
Perfluorododecanoic acid (PFDoA)	25.4	0.98	ng/L	23.5		108	64-142			
Perfluorotridecanoic acid (PFTrDA)	24.9	0.98	ng/L	23.5		106	49-148			
Perfluorotetradecanoic acid (PFTeDA)	23.7	0.98	ng/L	23.5		101	47-161			
Perfluorobutanesulfonic acid (PFBS)	21.6	0.98	ng/L	20.8		104	62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.1	0.98	ng/L	22.1		105	59-151			
Perfluorohexanesulfonic acid (PFHxS)	21.2	0.98	ng/L	21.5		98.5	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	24.1	0.98	ng/L	22.4		108	55-152			
Perfluorooctanesulfonic acid (PFOS)	22.2	0.98	ng/L	21.8		102	58-149			
Perfluorononanesulfonic acid (PFNS)	24.2	0.98	ng/L	22.6		107	52-148			
Perfluorodecanesulfonic acid (PFDS)	22.4	0.98	ng/L	22.7		98.9	51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.6	0.98	ng/L	22.8		95.0	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	86.6	3.9	ng/L	88.0		98.4	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	89.0	3.9	ng/L	89.2		99.8	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	97.2	3.9	ng/L	90.4		107	63-152			
Perfluorooctanesulfonamide (PFOSA)	23.6	0.98	ng/L	23.5		101	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	23.5	0.98	ng/L	23.5		100	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.4	0.98	ng/L	23.5		99.7	65-139			
N-MeFOSAA (NMeFOSAA)	23.3	0.98	ng/L	23.5		99.4	58-144			
N-EtFOSAA (NEtFOSAA)	22.6	0.98	ng/L	23.5		96.2	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	245	9.8	ng/L	235		105	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	248	9.8	ng/L	235		106	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	90.9	3.9	ng/L	93.9		96.8	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	81.1	3.9	ng/L	88.6		91.5	68-146			
9Cl-PF3ONS (F53B Minor)	74.6	3.9	ng/L	88.0		84.8	56-156			
11Cl-PF3OUdS (F53B Major)	80.8	3.9	ng/L	88.6		91.1	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	203	9.8	ng/L	256		79.2	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1110	49	ng/L	1280		87.0	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1040	49	ng/L	1280		81.2	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	41.0	2.0	ng/L	41.8		98.0	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	46.2	2.0	ng/L	47.0		98.4	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	47.6	2.0	ng/L	47.0		101	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	48.2	2.0	ng/L	47.0		103	48-161			
Surrogate: 13C4-PFBA	*78.1*		ng/L	97.8		79.8	10-130			
Surrogate: 13C5-PFPeA	*40.3*		ng/L	48.9		82.3	35-150			
Surrogate: 13C5-PFHxA	*19.5*		ng/L	24.5		79.6	55-150			

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633										
LCS (B361062-BS1)				Prepared: 12/21/23 Analyzed: 12/27/23						
Surrogate: 13C4-PFHpA	*19.5*		ng/L	24.5		79.6	55-150			
Surrogate: 13C8-PFOA	*19.5*		ng/L	24.5		79.7	60-140			
Surrogate: 13C9-PFNA	*9.77*		ng/L	12.2		79.9	55-140			
Surrogate: 13C6-PFDA	*10.1*		ng/L	12.2		82.4	50-140			
Surrogate: 13C7-PFUnA	*9.72*		ng/L	12.2		79.5	30-140			
Surrogate: 13C2-PFDoA	*9.06*		ng/L	12.2		74.1	10-150			
Surrogate: 13C2-PFTeDA	*9.51*		ng/L	12.2		77.8	10-130			
Surrogate: 13C3-PFBS	*19.3*		ng/L	24.5		78.9	55-150			
Surrogate: 13C3-PFHxS	*19.5*		ng/L	24.5		79.7	55-150			
Surrogate: 13C8-PFOS	*19.0*		ng/L	24.5		77.8	45-140			
Surrogate: 13C2-4:2FTS	*36.1*		ng/L	48.9		73.9	60-200			
Surrogate: 13C2-6:2FTS	*32.7*		ng/L	48.9		66.8	60-200			
Surrogate: 13C2-8:2FTS	*37.8*		ng/L	48.9		77.2	50-200			
Surrogate: 13C8-PFOSA	*18.6*		ng/L	24.5		76.1	30-130			
Surrogate: D3-NMeFOSA	*14.9*		ng/L	24.5		60.9	15-130			
Surrogate: D5-NEtFOSA	*15.4*		ng/L	24.5		62.8	10-130			
Surrogate: D3-NMeFOSAA	*34.5*		ng/L	48.9		70.6	45-200			
Surrogate: D5-NEtFOSAA	*30.3*		ng/L	48.9		62.0	10-200			
Surrogate: D7-NMeFOSE	*174*		ng/L	245		71.3	10-150			
Surrogate: D9-NEtFOSE	*171*		ng/L	245		70.0	10-150			
Surrogate: 13C3-HFPO-DA	*81.1*		ng/L	97.8		82.9	25-160			
MRL Check (B361062-MRL1)				Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorobutanoic acid (PFBA)	7.91	4.0	ng/L	7.93		99.9	0-200			
Perfluoropentanoic acid (PFPeA)	3.50	2.0	ng/L	3.96		88.2	0-200			
Perfluorohexanoic acid (PFHxA)	1.72	0.99	ng/L	1.98		86.6	0-200			
Perfluoroheptanoic acid (PFHpA)	1.59	0.99	ng/L	1.98		80.2	0-200			
Perfluorooctanoic acid (PFOA)	1.52	0.99	ng/L	1.98		76.8	0-200			
Perfluorononanoic acid (PFNA)	1.72	0.99	ng/L	1.98		86.7	0-200			
Perfluorodecanoic acid (PFDA)	1.73	0.99	ng/L	1.98		87.4	0-200			
Perfluoroundecanoic acid (PFUnA)	1.69	0.99	ng/L	1.98		85.1	0-200			
Perfluorododecanoic acid (PFDoA)	1.74	0.99	ng/L	1.98		87.8	0-200			
Perfluorotridecanoic acid (PFTrDA)	1.73	0.99	ng/L	1.98		87.5	0-200			
Perfluorotetradecanoic acid (PFTeDA)	1.64	0.99	ng/L	1.98		82.9	0-200			
Perfluorobutanesulfonic acid (PFBS)	1.51	0.99	ng/L	1.76		85.6	0-200			
Perfluoropentanesulfonic acid (PFPeS)	1.59	0.99	ng/L	1.86		85.3	0-200			
Perfluorohexanesulfonic acid (PFHxS)	1.60	0.99	ng/L	1.81		88.2	0-200			
Perfluoroheptanesulfonic acid (PFHpS)	1.50	0.99	ng/L	1.89		79.4	0-200			
Perfluorooctanesulfonic acid (PFOS)	1.56	0.99	ng/L	1.84		85.1	0-200			
Perfluorononanesulfonic acid (PFNS)	1.80	0.99	ng/L	1.91		94.6	0-200			
Perfluorodecanesulfonic acid (PFDS)	1.62	0.99	ng/L	1.91		84.6	0-200			
Perfluorododecanesulfonic acid (PFDoS)	1.52	0.99	ng/L	1.92		79.2	0-200			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	6.16	4.0	ng/L	7.43		82.9	0-200			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.08	4.0	ng/L	7.53		94.0	0-200			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	6.27	4.0	ng/L	7.63		82.2	0-200			
Perfluorooctanesulfonamide (PFOSA)	1.72	0.99	ng/L	1.98		86.9	0-200			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.67	0.99	ng/L	1.98		84.1	0-200			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.61	0.99	ng/L	1.98		81.5	0-200			
N-MeFOSAA (NMeFOSAA)	2.10	0.99	ng/L	1.98		106	0-200			

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633										
MRL Check (B361062-MRL1)				Prepared: 12/21/23 Analyzed: 12/27/23						
N-EtFOSAA (NEtFOSAA)	1.76	0.99	ng/L	1.98		88.8	0-200			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	17.5	9.9	ng/L	19.8		88.3	0-200			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	17.6	9.9	ng/L	19.8		88.7	0-200			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.22	4.0	ng/L	7.93		78.5	0-200			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.01	4.0	ng/L	7.48		80.3	0-200			
9Cl-PF3ONS (F53B Minor)	5.53	4.0	ng/L	7.43		74.4	0-200			
11Cl-PF3OUdS (F53B Major)	5.63	4.0	ng/L	7.48		75.2	0-200			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	13.6	9.9	ng/L	19.8		68.7	0-200			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	74.4	50	ng/L	99.1		75.1	0-200			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	67.9	50	ng/L	99.1		68.5	0-200			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.90	2.0	ng/L	3.53		82.2	0-200			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.39	2.0	ng/L	3.96		85.5	0-200			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.34	2.0	ng/L	3.96		84.2	0-200			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.39	2.0	ng/L	3.96		85.6	0-200			
Surrogate: 13C4-PFBA	*78.1*		ng/L	99.1		78.8	10-130			
Surrogate: 13C5-PFPeA	*40.2*		ng/L	49.5		81.2	35-150			
Surrogate: 13C5-PFHxA	*19.6*		ng/L	24.8		79.3	55-150			
Surrogate: 13C4-PFHpA	*19.8*		ng/L	24.8		80.0	55-150			
Surrogate: 13C8-PFOA	*20.6*		ng/L	24.8		83.3	60-140			
Surrogate: 13C9-PFNA	*9.78*		ng/L	12.4		79.0	55-140			
Surrogate: 13C6-PFDA	*9.80*		ng/L	12.4		79.2	50-140			
Surrogate: 13C7-PFUnA	*8.82*		ng/L	12.4		71.2	30-140			
Surrogate: 13C2-PFDoA	*9.09*		ng/L	12.4		73.4	10-150			
Surrogate: 13C2-PFTeDA	*9.01*		ng/L	12.4		72.8	10-130			
Surrogate: 13C3-PFBS	*20.0*		ng/L	24.8		80.6	55-150			
Surrogate: 13C3-PFHxS	*21.0*		ng/L	24.8		84.8	55-150			
Surrogate: 13C8-PFOS	*19.4*		ng/L	24.8		78.5	45-140			
Surrogate: 13C2-4:2FTS	*36.7*		ng/L	49.5		74.1	60-200			
Surrogate: 13C2-6:2FTS	*31.9*		ng/L	49.5		64.5	60-200			
Surrogate: 13C2-8:2FTS	*42.1*		ng/L	49.5		85.1	50-200			
Surrogate: 13C8-PFOSA	*17.4*		ng/L	24.8		70.3	30-130			
Surrogate: D3-NMeFOSA	*14.4*		ng/L	24.8		58.0	15-130			
Surrogate: D5-NEtFOSA	*15.6*		ng/L	24.8		62.9	10-130			
Surrogate: D3-NMeFOSAA	*35.4*		ng/L	49.5		71.4	45-200			
Surrogate: D5-NEtFOSAA	*31.5*		ng/L	49.5		63.5	10-200			
Surrogate: D7-NMeFOSE	*170*		ng/L	248		68.8	10-150			
Surrogate: D9-NEtFOSE	*169*		ng/L	248		68.0	10-150			
Surrogate: 13C3-HFPO-DA	*78.9*		ng/L	99.1		79.6	25-160			
Matrix Spike (B361062-MS1)		**Source: 23K1858-15RE1**		Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorobutanoic acid (PFBA)	516	20	ng/L	484	7.58	105	58-148			
Perfluoropentanoic acid (PFPeA)	255	10	ng/L	242	1.78	104	54-152			
Perfluorohexanoic acid (PFHxA)	127	5.0	ng/L	121	ND	105	55-152			
Perfluoroheptanoic acid (PFHpA)	123	5.0	ng/L	121	ND	102	54-154			
Perfluorooctanoic acid (PFOA)	127	5.0	ng/L	121	ND	105	52-161			

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B361062 - Draft Method 1633										
Matrix Spike (B361062-MS1)	**Source: 23K1858-15RE1**			Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorononanoic acid (PFNA)	125	5.0	ng/L	121	ND	103	59-149			
Perfluorodecanoic acid (PFDA)	128	5.0	ng/L	121	ND	106	52-147			
Perfluoroundecanoic acid (PFUnA)	130	5.0	ng/L	121	ND	108	48-159			
Perfluorododecanoic acid (PFDoA)	127	5.0	ng/L	121	ND	105	64-142			
Perfluorotridecanoic acid (PFTrDA)	124	5.0	ng/L	121	ND	103	49-148			
Perfluorotetradecanoic acid (PFTeDA)	129	5.0	ng/L	121	ND	107	47-161			
Perfluorobutanesulfonic acid (PFBS)	114	5.0	ng/L	107	ND	106	62-144			
Perfluoropentanesulfonic acid (PFPeS)	118	5.0	ng/L	114	ND	104	59-151			
Perfluorohexanesulfonic acid (PFHxS)	109	5.0	ng/L	111	ND	98.0	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	121	5.0	ng/L	115	ND	105	55-152			
Perfluorooctanesulfonic acid (PFOS)	116	5.0	ng/L	112	2.03	102	58-149			
Perfluorononanesulfonic acid (PFNS)	128	5.0	ng/L	117	ND	110	52-148			
Perfluorodecanesulfonic acid (PFDS)	117	5.0	ng/L	117	ND	99.8	51-147			
Perfluorododecanesulfonic acid (PFDoS)	107	5.0	ng/L	117	ND	91.3	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	448	20	ng/L	454	ND	98.6	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	487	20	ng/L	460	ND	106	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	513	20	ng/L	466	ND	110	63-152			
Perfluorooctanesulfonamide (PFOSA)	127	5.0	ng/L	121	ND	105	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	127	5.0	ng/L	121	ND	105	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	126	5.0	ng/L	121	ND	104	65-139			
N-MeFOSAA (NMeFOSAA)	120	5.0	ng/L	121	ND	99.1	58-144			
N-EtFOSAA (NEtFOSAA)	125	5.0	ng/L	121	ND	103	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1290	50	ng/L	1210	ND	107	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1310	50	ng/L	1210	ND	108	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	452	20	ng/L	484	ND	93.3	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	406	20	ng/L	457	ND	88.9	68-146			
9Cl-PF3ONS (F53B Minor)	390	20	ng/L	454	ND	85.8	56-156			
11Cl-PF3OUdS (F53B Major)	415	20	ng/L	457	ND	90.9	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	939	50	ng/L	1320	ND	71.2	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	5470	250	ng/L	6600	ND	83.0	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	5410	250	ng/L	6600	ND	82.0	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	200	10	ng/L	215	ND	92.6	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	224	10	ng/L	242	ND	92.3	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	228	10	ng/L	242	ND	94.3	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	221	10	ng/L	242	ND	91.5	48-161			
Surrogate: 13C4-PFBA	*404*		ng/L	504		80.1	10-130			
Surrogate: 13C5-PFPeA	*210*		ng/L	252		83.4	35-150			
Surrogate: 13C5-PFHxA	*100*		ng/L	126		79.6	55-150			
Surrogate: 13C4-PFHpA	*99.8*		ng/L	126		79.1	55-150			
Surrogate: 13C8-PFOA	*102*		ng/L	126		80.7	60-140			
Surrogate: 13C9-PFNA	*49.3*		ng/L	63.0		78.2	55-140			

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633										
Matrix Spike (B361062-MS1)		**Source: 23K1858-15RE1**		Prepared: 12/21/23 Analyzed: 12/27/23						
Surrogate: 13C6-PFDA	*51.0*		ng/L	63.0		80.8	50-140			
Surrogate: 13C7-PFUnA	*50.0*		ng/L	63.0		79.2	30-140			
Surrogate: 13C2-PFDoA	*49.7*		ng/L	63.0		78.8	10-150			
Surrogate: 13C2-PFTeDA	*45.6*		ng/L	63.0		72.4	10-130			
Surrogate: 13C3-PFBS	*101*		ng/L	126		80.3	55-150			
Surrogate: 13C3-PFHxS	*105*		ng/L	126		83.3	55-150			
Surrogate: 13C8-PFOS	*100*		ng/L	126		79.5	45-140			
Surrogate: 13C2-4:2FTS	*175*		ng/L	252		69.5	60-200			
Surrogate: 13C2-6:2FTS	*160*		ng/L	252		63.5	60-200			
Surrogate: 13C2-8:2FTS	*197*		ng/L	252		77.9	50-200			
Surrogate: 13C8-PFOSA	*90.1*		ng/L	126		71.4	30-130			
Surrogate: D3-NMeFOSA	*65.6*		ng/L	126		52.0	15-130			
Surrogate: D5-NEtFOSA	*62.5*		ng/L	126		49.6	10-130			
Surrogate: D3-NMeFOSAA	*174*		ng/L	252		69.1	45-200			
Surrogate: D5-NEtFOSAA	*156*		ng/L	252		61.9	10-200			
Surrogate: D7-NMeFOSE	*900*		ng/L	1260		71.4	10-150			
Surrogate: D9-NEtFOSE	*904*		ng/L	1260		71.7	10-150			
Surrogate: 13C3-HFPO-DA	*421*		ng/L	504		83.5	25-160			
Matrix Spike Dup (B361062-MSD1)		**Source: 23K1858-15RE1**		Prepared: 12/21/23 Analyzed: 12/27/23						
Perfluorobutanoic acid (PFBA)	453	20	ng/L	485	7.58	91.8	58-148	13.1	20	
Perfluoropentanoic acid (PFPeA)	221	10	ng/L	243	1.78	90.6	54-152	13.9	20	
Perfluorohexanoic acid (PFHxA)	110	5.1	ng/L	121	ND	90.6	55-152	14.8	25	
Perfluoroheptanoic acid (PFHpA)	111	5.1	ng/L	121	ND	91.2	54-154	10.9	25	
Perfluorooctanoic acid (PFOA)	113	5.1	ng/L	121	ND	93.3	52-161	11.1	25	
Perfluorononanoic acid (PFNA)	111	5.1	ng/L	121	ND	91.5	59-149	12.1	25	
Perfluorodecanoic acid (PFDA)	108	5.1	ng/L	121	ND	89.2	52-147	17.2	25	
Perfluoroundecanoic acid (PFUnA)	111	5.1	ng/L	121	ND	91.7	48-159	15.9	30	
Perfluorododecanoic acid (PFDoA)	112	5.1	ng/L	121	ND	92.2	64-142	12.4	25	
Perfluorotridecanoic acid (PFTrDA)	108	5.1	ng/L	121	ND	89.4	49-148	13.8	25	
Perfluorotetradecanoic acid (PFTeDA)	111	5.1	ng/L	121	ND	91.5	47-161	15.2	25	
Perfluorobutanesulfonic acid (PFBS)	102	5.1	ng/L	108	ND	94.9	62-144	10.8	20	
Perfluoropentanesulfonic acid (PFPeS)	105	5.1	ng/L	114	ND	91.7	59-151	12.1	25	
Perfluorohexanesulfonic acid (PFHxS)	95.5	5.1	ng/L	111	ND	86.0	57-146	12.9	25	
Perfluoroheptanesulfonic acid (PFHpS)	104	5.1	ng/L	116	ND	90.1	55-152	15.0	25	
Perfluorooctanesulfonic acid (PFOS)	106	5.1	ng/L	112	2.03	92.2	58-149	9.57	20	
Perfluorononanesulfonic acid (PFNS)	111	5.1	ng/L	117	ND	95.2	52-148	14.1	25	
Perfluorodecanesulfonic acid (PFDS)	100	5.1	ng/L	117	ND	85.7	51-147	15.0	25	
Perfluorododecanesulfonic acid (PFDoS)	96.3	5.1	ng/L	118	ND	81.9	36-145	10.7	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	417	20	ng/L	455	ND	91.7	67-146	7.06	25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	404	20	ng/L	461	ND	87.8	61-151	18.6	30	PF-18
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	404	20	ng/L	467	ND	86.4	63-152	23.9	30	
Perfluorooctanesulfonamide (PFOSA)	109	5.1	ng/L	121	ND	90.1	61-148	15.3	20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	109	5.1	ng/L	121	ND	89.7	63-145	15.8	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	108	5.1	ng/L	121	ND	89.3	65-139	15.5	25	
N-MeFOSAA (NMeFOSAA)	104	5.1	ng/L	121	ND	85.9	58-144	14.0	25	
N-EtFOSAA (NEtFOSAA)	108	5.1	ng/L	121	ND	89.3	59-146	14.4	25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1150	51	ng/L	1210	ND	94.6	71-136	12.0	20	

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QUALITY CONTROL

SPLP - 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 B361062 - Draft Method 1633											
Matrix Spike Dup (B361062-MSD1)	**Source: 23K1858-15RE1**			Prepared: 12/21/23 Analyzed: 12/27/23							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1120	51	ng/L	1210	ND	92.5		69-137	15.1	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	466	20	ng/L	485	ND	96.0		63-144	3.04	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	418	20	ng/L	458	ND	91.3		68-146	2.88	20	
9Cl-PF3ONS (F53B Minor)	385	20	ng/L	455	ND	84.7		56-156	1.16	30	
11Cl-PF3OUdS (F53B Major)	411	20	ng/L	458	ND	89.8		46-156	1.02	35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	919	51	ng/L	1320	ND	69.5		62-129	2.19	20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	5280	250	ng/L	6610	ND	79.8		63-134	3.64	20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	5050	250	ng/L	6610	ND	76.4		50-138	6.93	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	200	10	ng/L	216	ND	92.7		56-151	0.236	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	226	10	ng/L	243	ND	93.0		51-145	0.925	25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	236	10	ng/L	243	ND	97.5		55-148	3.47	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	222	10	ng/L	243	ND	91.4		48-161	0.153	35	
Surrogate: 13C4-PFBA	*359*		ng/L	505		71.1		10-130			
Surrogate: 13C5-PFPeA	*194*		ng/L	253		77.0		35-150			
Surrogate: 13C5-PFHxA	*94.7*		ng/L	126		74.9		55-150			
Surrogate: 13C4-PFHpA	*92.3*		ng/L	126		73.0		55-150			
Surrogate: 13C8-PFOA	*94.8*		ng/L	126		75.1		60-140			
Surrogate: 13C9-PFNA	*45.5*		ng/L	63.2		72.1		55-140			
Surrogate: 13C6-PFDA	*47.5*		ng/L	63.2		75.2		50-140			
Surrogate: 13C7-PFUnA	*45.1*		ng/L	63.2		71.5		30-140			
Surrogate: 13C2-PFDoA	*43.8*		ng/L	63.2		69.4		10-150			
Surrogate: 13C2-PFTeDA	*40.9*		ng/L	63.2		64.7		10-130			
Surrogate: 13C3-PFBS	*95.0*		ng/L	126		75.2		55-150			
Surrogate: 13C3-PFHxS	*97.8*		ng/L	126		77.4		55-150			
Surrogate: 13C8-PFOS	*91.2*		ng/L	126		72.2		45-140			
Surrogate: 13C2-4:2FTS	*165*		ng/L	253		65.1		60-200			
Surrogate: 13C2-6:2FTS	*147*		ng/L	253		**58.2**	*	60-200			PF-18
Surrogate: 13C2-8:2FTS	*179*		ng/L	253		70.9		50-200			
Surrogate: 13C8-PFOSA	*77.0*		ng/L	126		61.0		30-130			
Surrogate: D3-NMeFOSA	*52.2*		ng/L	126		41.3		15-130			
Surrogate: D5-NEtFOSA	*55.9*		ng/L	126		44.2		10-130			
Surrogate: D3-NMeFOSAA	*156*		ng/L	253		61.7		45-200			
Surrogate: D5-NEtFOSAA	*137*		ng/L	253		54.2		10-200			
Surrogate: D7-NMeFOSE	*822*		ng/L	1260		65.0		10-150			
Surrogate: D9-NEtFOSE	*833*		ng/L	1260		65.9		10-150			
Surrogate: 13C3-HFPO-DA	*389*		ng/L	505		77.0		25-160			

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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.
B-05	Data is not affected by elevated level in laboratory blank since sample(s) result is "Not Detected".
D-01	Sample extracted/prepared at a dilution due to sample matrix.
H-03	Sample received after recommended holding time was exceeded.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
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-17C	Extracted internal standard is outside of control limits. Analyte is a known difficult compound.
PF-18	Re-analysis confirmed Extracted Internal Standard failure due to matrix effects.
S-29	Extracted Internal Standard is outside of control limits.
Z-01	Analyte detected in method blank >1/3 MRL

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CERTIFICATIONS

Certified Analyses included in this Report

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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Perfluorohexanoic acid (PFHxA)	NH-P,NY
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY
Perfluorooctanoic acid (PFOA)	NH-P,NY
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY
Perfluorodecanoic acid (PFDA)	NH-P,NY
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NH-P,PA,WV
N-methyl perfluorooctanesulfonamide (NMeFOSA)	NH-P
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
N-MeFOSAA (NMeFOSAA)	NH-P,NY
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,NY
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
SW 846 9060A in Soil	
Total Organic Carbon	ME,NY,NH,VA

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

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 23K1858 KAM

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460 Pace callout # 147704
Collected By (print): B. CAPPELLANO	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U U U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Lab Profile/Line:

	Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PFAS 1633 (1. 125 mL/sample)	PFAS SPLP 1633 (1. 250 mL/sample)	TOC and pH (1. 8 oz Amber Glass/sample)
1	SB-12 (0"-2")	SL	C	11-6-23	1245				1	X		
2	SB-12 (2"-12")	SL	C		1250				3	X	X	X
3	SB-12 (11-11.5)	SL	C		1415				1	X		
4	EQB11062023	QT	G		1445				2	X		
5	SB-3 (0"-2")	SL	C	11-7-23	1007				1	X		
6	SB-3 (2"-12")	SL	C		1007				3	X	X	X
7	SB-3 (15.9"-17")	SL	C		1315				1	X		
8	SB-4 (0"-2")	SL	C		1430				1	X		
9	SB-4 (2"-12")	SL	C		1440				3	X	X	X (2)
10	SB-4 (17'-19')	SL	C		1640				1	X		

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
CO# 147704 / Site No. 2100460

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	11/12/23 1400		11/12/23 1400
Relinquished By/Company: (Signature)	11/13/23 1000	Pace	11-13-23 11 20
Relinquished by/Company: (Signature)		1.5°C	0728 11-14-23

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 23K1858 KAM

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460
Collected By (print): C. CAPPELLANO	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Container Preservative Type **: U U U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PFAS 1633 (1, 125 mL/sample)	PFAS SPLP 1633 (1, 250 mL/sample)	TOC and pH (1, 8 oz Amber Glass/sample)
11	SB-11 (2"-12")	SL	C	11-8-23	8:20				1	X		
12	SB-11 (0"-2")	SL	C	11-8-23	8:05				1	X		
13	SB-11 (11"-12")	SL	C	11-8-23	9:00				1	X		
14	SB-10 (0"-2")	SL	C	11-8-23	9:45				1	X		
15	SB-10 (2"-12")	SL	C	11-8-23	10:00				3	X	X	X
16	SB-10 (2'-2.2')	SL	C	11-8-23	11:30				1	X		
17	SB-5 (0"-2")	SL	C	11-8-23	4:30				1	X		
18	SB-5 (2"-12")	SL	C	11-8-23	4:35				1	X		
19	SB-5 (11'-12')	SL	C	11-8-23	5:15				1	X		
20	SB-7 (11'-12')	SL	C	11-9-23	9:05				1	X		

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 11/12/23 1400	Received by/Company: (Signature)	Date/Time: 11/13/23 1400
Relinquished by/Company: (Signature)	Date/Time: 11/13/23 1600	Received by/Company: (Signature)	Date/Time: 11-13-23 1120
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) 4.5°C	Date/Time: 0720 11-14-23

MTJL LAB USE ONLY

Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

Pace	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Precision Environmental Services

Project Meadow Pond School

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location Meadow

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time AAM / 11-14-23 / 0728

Back-Sheet By / Date / Time AAM / 11-14-23 / 1301

Temperature Method Temp. Gun # 5

Temp ✓ ≤ 6° C Actual Temperature

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

work order was split after the first 20 samples

pH arrived out of hold time

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

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☐	☑
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑ AAM	☑
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑	☐
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

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

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear				1				1									1					
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL				2																
Sulfuric																						
Unpreserved		250mL		1				1									1					
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					
Other			1	1	1		1															1

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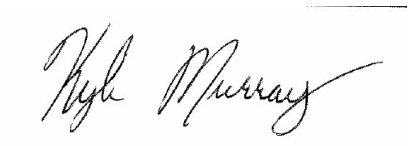
December 26, 2023

Brian Neumann
NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020

Project Location: Meadow Pond School, South Salem, NY
Client Job Number:
Project Number: 2100460
Laboratory Work Order Number: 23K1873

Enclosed are results of analyses for samples as received by the laboratory on November 14, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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

NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/26/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K1873

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

PROJECT LOCATION: Meadow Pond School, South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-7 (0"-2")	23K1873-01	Soil		Draft Method 1633	
				SM 2540G	
SB-7 (2"-12")	23K1873-02	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
DUP SB-7 (2"-12")	23K1873-03	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-6 (0"-2")	23K1873-04	Soil		Draft Method 1633	
				SM 2540G	
SB-6 (2"-12")	23K1873-05	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-6 (9'-10')	23K1873-06	Soil		Draft Method 1633	
				SM 2540G	
SB-8 (0"-2")	23K1873-07	Soil		Draft Method 1633	
				SM 2540G	
SB-8 (2"-12")	23K1873-08	Soil		Draft Method 1633	
				SM 2540G	
SB-8 (5'-6')	23K1873-09	Soil		Draft Method 1633	
				SM 2540G	
SB-9a (0"-2")	23K1873-10	Soil		Draft Method 1633	
				SM 2540G	
SB-9a (2"-12")	23K1873-11	Soil		Draft Method 1633	
				SM 2540G	
				SW 846 9060A	
				SW-846 9045C	
SB-9c (17'-18')	23K1873-12	Soil		Draft Method 1633	
				SM 2540G	
SB-1 (0"-2")	23K1873-13	Soil		Draft Method 1633	
				SM 2540G	
SB-1 (2"-12")	23K1873-14	Soil		Draft Method 1633	
				SM 2540G	
SB-1 (17'-19')	23K1873-15	Soil		Draft Method 1633	
				SM 2540G	
FB20231110	23K1873-16	Field Blank		Draft Method 1633	
				SM 2540G	

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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.

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Draft Method 1633

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix.

Analyte & Samples(s) Qualified:

23K1873-02[SB-7 (2"-12")], 23K1873-03[DUP SB-7 (2"-12")], 23K1873-05[SB-6 (2"-12")], 23K1873-11[SB-9a (2"-12")]

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA
23K1873-14RE1[SB-1 (2"-12")], B360635-BS1

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:

2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FT
B360699-MS1, B360699-MSD1

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA
B360699-MS1, B360699-MSD1

PF-17C

Extracted internal standard is outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23K1873-02[SB-7 (2"-12")], 23K1873-05[SB-6 (2"-12")], 23K1873-11[SB-9a (2"-12")], B360405-BLK1, B360405-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS
23K1873-02[SB-7 (2"-12")], 23K1873-05[SB-6 (2"-12")], 23K1873-11[SB-9a (2"-12")], B360405-BLK1, B360405-MRL1

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA
B360699-MSD1

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA
B360405-MSD1, B360699-MSD1

N-ethyl perfluorooctanesulfonamide (NEtFOSA)
B360699-MSD1

N-MeFOSAA (NMeFOSAA)
B360699-MSD1

N-methylperfluorooctanesulfonamidoethanol(NMeF
B360699-MSD1

Perfluorobutanesulfonic acid (PFBS)
B360699-MSD1

Perfluorobutanoic acid (PFBA)
B360699-MSD1

Perfluorododecanesulfonic acid (PFDoS)
B360405-MSD1

Perfluorooctanesulfonamide (PFOSA)
B360699-MSD1

Perfluoropentanoic acid (PFPeA)
B360699-MSD1

SM 2540G

Qualifications:

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H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

% Solids

23K1873-01[SB-7 (0"-2")], 23K1873-02[SB-7 (2"-12")], 23K1873-03[DUP SB-7 (2"-12")], 23K1873-04[SB-6 (0"-2")], 23K1873-05[SB-6 (2"-12")], 23K1873-06[SB-6 (9'-10')], 23K1873-07[SB-8 (0"-2")], 23K1873-08[SB-8 (2"-12")], 23K1873-09[SB-8 (5'-6')]

SW 846 9060A

Qualifications:

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Total Organic Carbon

23K1873-11[SB-9a (2"-12")], B358683-MSD1

SW-846 9045C

Qualifications:

H-03

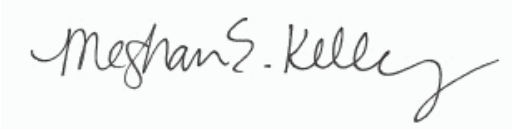
Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

23K1873-02[SB-7 (2"-12")], 23K1873-03[DUP SB-7 (2"-12")], 23K1873-05[SB-6 (2"-12")], 23K1873-11[SB-9a (2"-12")]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (0"-2") Sampled: 11/9/2023 07:50

Sample ID: 23K1873-01

Sample Matrix: Soil

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)	0.39	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoropentanoic acid (PFPeA)	0.20	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorohexanoic acid (PFHxA)	0.15	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoroheptanoic acid (PFHpA)	0.16	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorooctanoic acid (PFOA)	0.46	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorononanoic acid (PFNA)	0.29	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorodecanoic acid (PFDA)	0.23	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoroundecanoic acid (PFUnA)	0.28	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorododecanoic acid (PFDoA)	0.13	0.20	0.021	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorotridecanoic acid (PFTrDA)	0.12	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.089	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorooctanesulfonic acid (PFOS)	0.99	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorodecanesulfonic acid (PFDS)	0.074	0.20	0.044	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (0"-2") Sampled: 11/9/2023 07:50

Sample ID: 23K1873-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:43	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	86.0	10-130		12/18/23 19:43
13C5-PFPeA	85.3	35-150		12/18/23 19:43
13C5-PFHxA	87.4	55-150		12/18/23 19:43
13C4-PFHpA	89.4	55-150		12/18/23 19:43
13C8-PFOA	90.0	60-140		12/18/23 19:43
13C9-PFNA	89.4	55-140		12/18/23 19:43
13C6-PFDA	89.6	50-140		12/18/23 19:43
13C7-PFUnA	91.9	30-140		12/18/23 19:43
13C2-PFDoA	92.7	10-150		12/18/23 19:43
13C2-PFTeDA	68.1	10-130		12/18/23 19:43
13C3-PFBS	78.8	55-150		12/18/23 19:43
13C3-PFHxS	90.1	55-150		12/18/23 19:43
13C8-PFOS	86.3	45-140		12/18/23 19:43
13C2-4:2FTS	73.9	60-200		12/18/23 19:43
13C2-6:2FTS	111	60-200		12/18/23 19:43
13C2-8:2FTS	130	50-200		12/18/23 19:43
13C8-PFOSA	79.5	30-130		12/18/23 19:43
D3-NMeFOSA	52.8	15-130		12/18/23 19:43
D5-NEtFOSA	41.2	10-130		12/18/23 19:43
D3-NMeFOSAA	94.4	45-200		12/18/23 19:43
D5-NEtFOSAA	101	10-200		12/18/23 19:43
D7-NMeFOSE	65.9	10-150		12/18/23 19:43
D9-NEtFOSE	56.1	10-150		12/18/23 19:43
13C3-HFPO-DA	82.0	25-160		12/18/23 19:43

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (0"-2") Sampled: 11/9/2023 07:50

Sample ID: 23K1873-01

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	69.3			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-02

Sample Matrix: Soil

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)	0.21	0.93	0.17	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoropentanoic acid (PFPeA)	0.15	0.47	0.030	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorohexanoic acid (PFHxA)	0.12	0.23	0.016	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoroheptanoic acid (PFHpA)	0.11	0.23	0.017	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorooctanoic acid (PFOA)	0.41	0.23	0.034	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorononanoic acid (PFNA)	0.16	0.23	0.030	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorodecanoic acid (PFDA)	0.11	0.23	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoroundecanoic acid (PFUnA)	0.12	0.23	0.024	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorododecanoic acid (PFDoA)	0.059	0.23	0.025	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorotridecanoic acid (PFTrDA)	0.059	0.23	0.031	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.047	0.23	0.021	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.23	0.023	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.23	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.23	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.23	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorooctanesulfonic acid (PFOS)	0.58	0.23	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.23	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.23	0.052	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.23	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.93	0.087	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.93	0.096	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.93	0.087	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.23	0.12	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.23	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.23	0.032	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.23	0.033	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.23	0.049	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.3	0.18	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.3	0.20	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.93	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.93	0.094	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.93	0.090	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.93	0.12	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.3	0.20	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	12	1.4	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	12	1.1	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.47	0.023	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.47	0.049	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.47	0.036	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.47	0.047	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 19:58	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	83.1	10-130		12/18/23 19:58
13C5-PFPeA	81.4	35-150		12/18/23 19:58
13C5-PFHxA	83.4	55-150		12/18/23 19:58
13C4-PFHpA	87.2	55-150		12/18/23 19:58
13C8-PFOA	89.5	60-140		12/18/23 19:58
13C9-PFNA	82.1	55-140		12/18/23 19:58
13C6-PFDA	86.8	50-140		12/18/23 19:58
13C7-PFUnA	85.1	30-140		12/18/23 19:58
13C2-PFDoA	84.4	10-150		12/18/23 19:58
13C2-PFTeDA	79.9	10-130		12/18/23 19:58
13C3-PFBS	74.3	55-150		12/18/23 19:58
13C3-PFHxS	88.5	55-150		12/18/23 19:58
13C8-PFOS	85.6	45-140		12/18/23 19:58
13C2-4:2FTS	65.7	60-200		12/18/23 19:58
13C2-6:2FTS	96.7	60-200		12/18/23 19:58
13C2-8:2FTS	113	50-200		12/18/23 19:58
13C8-PFOSA	79.0	30-130		12/18/23 19:58
D3-NMeFOSA	63.6	15-130		12/18/23 19:58
D5-NEtFOSA	56.8	10-130		12/18/23 19:58
D3-NMeFOSAA	95.0	45-200		12/18/23 19:58
D5-NEtFOSAA	97.6	10-200		12/18/23 19:58
D7-NMeFOSE	85.9	10-150		12/18/23 19:58
D9-NEtFOSE	86.7	10-150		12/18/23 19:58
13C3-HFPO-DA	79.1	25-160		12/18/23 19:58

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-02

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.2			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @20.7°C	6.4			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	22000	130	85	mg/Kg dry	1		SW 846 9060A	11/21/23	11/21/23 14:21	NRH

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-02

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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)	2.6	7.1	2.6	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoropentanoic acid (PFPeA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.8	0.38	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorooctanoic acid (PFOA)	3.2	1.8	0.40	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorononanoic acid (PFNA)	0.88	1.8	0.34	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.33	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.46	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.46	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.42	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.36	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	0.54	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	0.56	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.8	0.52	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.56	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.1	1.2	ng/L	1	PF-17C	Draft Method 1633	12/11/23	12/13/23 22:36	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.1	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.1	1.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	0.74	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.39	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	4.7	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	4.4	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.1	1.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.1	1.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	7.1	1.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	7.1	1.7	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	3.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	89	18	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	89	16	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	0.87	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	0.88	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-02

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	0.71	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	1.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:36	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	80.0		10-130		12/13/23 22:36
13C5-PFPeA	78.2		35-150		12/13/23 22:36
13C5-PFHxA	80.4		55-150		12/13/23 22:36
13C4-PFHpA	83.3		55-150		12/13/23 22:36
13C8-PFOA	81.1		60-140		12/13/23 22:36
13C9-PFNA	77.4		55-140		12/13/23 22:36
13C6-PFDA	77.9		50-140		12/13/23 22:36
13C7-PFUnA	72.1		30-140		12/13/23 22:36
13C2-PFDoA	69.8		10-150		12/13/23 22:36
13C2-PFTeDA	49.2		10-130		12/13/23 22:36
13C3-PFBS	69.0		55-150		12/13/23 22:36
13C3-PFHxS	83.1		55-150		12/13/23 22:36
13C8-PFOS	78.9		45-140		12/13/23 22:36
13C2-4:2FTS	**57.5**	*	60-200	PF-17C	12/13/23 22:36
13C2-6:2FTS	89.3		60-200		12/13/23 22:36
13C2-8:2FTS	93.5		50-200		12/13/23 22:36
13C8-PFOSA	63.9		30-130		12/13/23 22:36
D3-NMeFOSA	51.1		15-130		12/13/23 22:36
D5-NEtFOSA	51.3		10-130		12/13/23 22:36
D3-NMeFOSAA	77.4		45-200		12/13/23 22:36
D5-NEtFOSAA	75.5		10-200		12/13/23 22:36
D7-NMeFOSE	60.1		10-150		12/13/23 22:36
D9-NEtFOSE	58.3		10-150		12/13/23 22:36
13C3-HFPO-DA	75.3		25-160		12/13/23 22:36

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: DUP SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-03

Sample Matrix: Soil

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)	0.33	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoropentanoic acid (PFPeA)	0.17	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorohexanoic acid (PFHxA)	0.12	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoroheptanoic acid (PFHpA)	0.13	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorooctanoic acid (PFOA)	0.46	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorononanoic acid (PFNA)	0.21	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorodecanoic acid (PFDA)	0.15	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoroundecanoic acid (PFUnA)	0.17	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorododecanoic acid (PFDoA)	0.080	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorotridecanoic acid (PFTrDA)	0.081	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.050	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorooctanesulfonic acid (PFOS)	0.71	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: DUP SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:14	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	82.0	10-130		12/18/23 20:14
13C5-PFPeA	79.7	35-150		12/18/23 20:14
13C5-PFHxA	82.4	55-150		12/18/23 20:14
13C4-PFHpA	84.4	55-150		12/18/23 20:14
13C8-PFOA	84.2	60-140		12/18/23 20:14
13C9-PFNA	84.2	55-140		12/18/23 20:14
13C6-PFDA	88.2	50-140		12/18/23 20:14
13C7-PFUnA	84.6	30-140		12/18/23 20:14
13C2-PFDoA	84.9	10-150		12/18/23 20:14
13C2-PFTeDA	72.6	10-130		12/18/23 20:14
13C3-PFBS	73.4	55-150		12/18/23 20:14
13C3-PFHxS	87.0	55-150		12/18/23 20:14
13C8-PFOS	81.7	45-140		12/18/23 20:14
13C2-4:2FTS	66.4	60-200		12/18/23 20:14
13C2-6:2FTS	98.4	60-200		12/18/23 20:14
13C2-8:2FTS	114	50-200		12/18/23 20:14
13C8-PFOSA	75.2	30-130		12/18/23 20:14
D3-NMeFOSA	49.3	15-130		12/18/23 20:14
D5-NEtFOSA	40.9	10-130		12/18/23 20:14
D3-NMeFOSAA	87.6	45-200		12/18/23 20:14
D5-NEtFOSAA	96.7	10-200		12/18/23 20:14
D7-NMeFOSE	78.5	10-150		12/18/23 20:14
D9-NEtFOSE	75.3	10-150		12/18/23 20:14
13C3-HFPO-DA	79.0	25-160		12/18/23 20:14

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: DUP SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-03

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	72.8			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @20.4°C	6.2			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	22000	140	89	mg/Kg dry	1		SW 846 9060A	11/21/23	11/21/23 15:35	NRH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: DUP SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-03

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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	7.4	2.7	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoropentanoic acid (PFPeA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.9	0.40	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorooctanoic acid (PFOA)	2.6	1.9	0.42	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorononanoic acid (PFNA)	ND	1.9	0.35	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorodecanoic acid (PFDA)	ND	1.9	0.34	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.51	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.50	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	0.44	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	0.38	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorooctanesulfonic acid (PFOS)	2.6	1.9	0.59	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorononanesulfonic acid (PFNS)	3.7	1.9	0.54	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.58	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	0.49	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.4	1.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.4	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.4	2.0	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	0.77	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.82	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.9	0.41	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	4.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	4.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.4	1.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.4	1.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
9Cl-PF3ONS (F53B Minor)	ND	7.4	1.6	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
11Cl-PF3OUdS (F53B Major)	ND	7.4	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	3.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	93	19	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	93	16	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.7	0.91	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.7	0.92	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: DUP SB-7 (2"-12") Sampled: 11/9/2023 08:00

Sample ID: 23K1873-03

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.7	0.74	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.7	1.6	ng/L	1		Draft Method 1633	12/11/23	12/13/23 22:52	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	79.6	10-130		12/13/23 22:52
13C5-PFPeA	78.5	35-150		12/13/23 22:52
13C5-PFHxA	80.3	55-150		12/13/23 22:52
13C4-PFHpA	83.8	55-150		12/13/23 22:52
13C8-PFOA	80.0	60-140		12/13/23 22:52
13C9-PFNA	78.1	55-140		12/13/23 22:52
13C6-PFDA	78.2	50-140		12/13/23 22:52
13C7-PFUnA	68.5	30-140		12/13/23 22:52
13C2-PFDoA	62.3	10-150		12/13/23 22:52
13C2-PFTeDA	36.2	10-130		12/13/23 22:52
13C3-PFBS	71.6	55-150		12/13/23 22:52
13C3-PFHxS	85.1	55-150		12/13/23 22:52
13C8-PFOS	78.7	45-140		12/13/23 22:52
13C2-4:2FTS	62.4	60-200		12/13/23 22:52
13C2-6:2FTS	76.4	60-200		12/13/23 22:52
13C2-8:2FTS	87.4	50-200		12/13/23 22:52
13C8-PFOSA	59.1	30-130		12/13/23 22:52
D3-NMeFOSA	45.9	15-130		12/13/23 22:52
D5-NEtFOSA	43.8	10-130		12/13/23 22:52
D3-NMeFOSAA	66.8	45-200		12/13/23 22:52
D5-NEtFOSAA	63.0	10-200		12/13/23 22:52
D7-NMeFOSE	50.6	10-150		12/13/23 22:52
D9-NEtFOSE	47.3	10-150		12/13/23 22:52
13C3-HFPO-DA	75.1	25-160		12/13/23 22:52

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (0"-2") Sampled: 11/9/2023 10:15

Sample ID: 23K1873-04

Sample Matrix: Soil

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)	0.30	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoropentanoic acid (PFPeA)	0.11	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorohexanoic acid (PFHxA)	0.11	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoroheptanoic acid (PFHpA)	0.079	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorooctanoic acid (PFOA)	0.23	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorononanoic acid (PFNA)	0.12	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorodecanoic acid (PFDA)	0.085	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoroundecanoic acid (PFUnA)	0.072	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorododecanoic acid (PFDoA)	0.038	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.019	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorooctanesulfonic acid (PFOS)	0.48	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorodecanesulfonic acid (PFDS)	0.11	0.20	0.044	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.96	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (0"-2") Sampled: 11/9/2023 10:15

Sample ID: 23K1873-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:30	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	96.2	10-130		12/18/23 20:30
13C5-PFPeA	96.4	35-150		12/18/23 20:30
13C5-PFHxA	101	55-150		12/18/23 20:30
13C4-PFHpA	103	55-150		12/18/23 20:30
13C8-PFOA	101	60-140		12/18/23 20:30
13C9-PFNA	101	55-140		12/18/23 20:30
13C6-PFDA	104	50-140		12/18/23 20:30
13C7-PFUnA	103	30-140		12/18/23 20:30
13C2-PFDoA	103	10-150		12/18/23 20:30
13C2-PFTeDA	87.6	10-130		12/18/23 20:30
13C3-PFBS	88.7	55-150		12/18/23 20:30
13C3-PFHxS	104	55-150		12/18/23 20:30
13C8-PFOS	101	45-140		12/18/23 20:30
13C2-4:2FTS	78.7	60-200		12/18/23 20:30
13C2-6:2FTS	115	60-200		12/18/23 20:30
13C2-8:2FTS	127	50-200		12/18/23 20:30
13C8-PFOSA	95.5	30-130		12/18/23 20:30
D3-NMeFOSA	69.6	15-130		12/18/23 20:30
D5-NEtFOSA	57.3	10-130		12/18/23 20:30
D3-NMeFOSAA	109	45-200		12/18/23 20:30
D5-NEtFOSAA	113	10-200		12/18/23 20:30
D7-NMeFOSE	92.0	10-150		12/18/23 20:30
D9-NEtFOSE	81.9	10-150		12/18/23 20:30
13C3-HFPO-DA	93.8	25-160		12/18/23 20:30

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (0"-2") Sampled: 11/9/2023 10:15

Sample ID: 23K1873-04

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	77.8			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (2"-12") Sampled: 11/9/2023 11:45

Sample ID: 23K1873-05

Sample Matrix: Soil

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)	0.23	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoropentanoic acid (PFPeA)	0.11	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorohexanoic acid (PFHxA)	0.057	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoroheptanoic acid (PFHpA)	0.057	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorooctanoic acid (PFOA)	0.21	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorononanoic acid (PFNA)	0.050	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorooctanesulfonic acid (PFOS)	0.34	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorodecanesulfonic acid (PFDS)	0.12	0.20	0.045	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.97	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (2"-12") Sampled: 11/9/2023 11:45

Sample ID: 23K1873-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 20:45	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	94.6	10-130		12/18/23 20:45
13C5-PFPeA	90.9	35-150		12/18/23 20:45
13C5-PFHxA	95.8	55-150		12/18/23 20:45
13C4-PFHpA	96.7	55-150		12/18/23 20:45
13C8-PFOA	99.2	60-140		12/18/23 20:45
13C9-PFNA	94.4	55-140		12/18/23 20:45
13C6-PFDA	99.2	50-140		12/18/23 20:45
13C7-PFUnA	98.5	30-140		12/18/23 20:45
13C2-PFDoA	98.0	10-150		12/18/23 20:45
13C2-PFTeDA	93.1	10-130		12/18/23 20:45
13C3-PFBS	85.0	55-150		12/18/23 20:45
13C3-PFHxS	97.1	55-150		12/18/23 20:45
13C8-PFOS	96.7	45-140		12/18/23 20:45
13C2-4:2FTS	72.0	60-200		12/18/23 20:45
13C2-6:2FTS	110	60-200		12/18/23 20:45
13C2-8:2FTS	120	50-200		12/18/23 20:45
13C8-PFOSA	91.9	30-130		12/18/23 20:45
D3-NMeFOSA	80.5	15-130		12/18/23 20:45
D5-NEtFOSA	74.1	10-130		12/18/23 20:45
D3-NMeFOSAA	103	45-200		12/18/23 20:45
D5-NEtFOSAA	112	10-200		12/18/23 20:45
D7-NMeFOSE	99.6	10-150		12/18/23 20:45
D9-NEtFOSE	102	10-150		12/18/23 20:45
13C3-HFPO-DA	90.9	25-160		12/18/23 20:45

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (2"-12") Sampled: 11/9/2023 11:45

Sample ID: 23K1873-05

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.3			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV
pH @19.3°C	7.5			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	18000	120	75	mg/Kg dry	1		SW 846 9060A	11/21/23	11/21/23 16:12	NRH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (2"-12") Sampled: 11/9/2023 11:45

Sample ID: 23K1873-05

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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)	6.2	7.2	2.6	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoropentanoic acid (PFPeA)	1.5	3.6	0.63	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorohexanoic acid (PFHxA)	1.0	1.8	0.39	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoroheptanoic acid (PFHpA)	1.4	1.8	0.46	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorooctanoic acid (PFOA)	6.2	1.8	0.41	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorononanoic acid (PFNA)	ND	1.8	0.35	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorodecanoic acid (PFDA)	ND	1.8	0.33	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.49	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.49	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	0.43	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	0.37	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorooctanesulfonic acid (PFOS)	4.2	1.8	0.58	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.8	0.53	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	1.3	ng/L	1	PF-17C	Draft Method 1633	12/11/23	12/13/23 23:08	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	2.0	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	0.56	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	0.75	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	0.56	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.80	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.40	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	4.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	4.4	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	1.9	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	1.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
9Cl-PF3ONS (F53B Minor)	ND	7.2	1.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
11Cl-PF3OUdS (F53B Major)	ND	7.2	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	3.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	90	18	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	90	16	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	0.89	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	0.90	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (2"-12") Sampled: 11/9/2023 11:45

Sample ID: 23K1873-05

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	0.73	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	1.6	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:08	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	71.5		10-130		12/13/23 23:08
13C5-PFPeA	72.2		35-150		12/13/23 23:08
13C5-PFHxA	71.5		55-150		12/13/23 23:08
13C4-PFHpA	74.3		55-150		12/13/23 23:08
13C8-PFOA	72.6		60-140		12/13/23 23:08
13C9-PFNA	70.8		55-140		12/13/23 23:08
13C6-PFDA	70.9		50-140		12/13/23 23:08
13C7-PFUnA	63.0		30-140		12/13/23 23:08
13C2-PFDoA	55.4		10-150		12/13/23 23:08
13C2-PFTeDA	41.3		10-130		12/13/23 23:08
13C3-PFBS	61.5		55-150		12/13/23 23:08
13C3-PFHxS	70.3		55-150		12/13/23 23:08
13C8-PFOS	62.8		45-140		12/13/23 23:08
13C2-4:2FTS	**53.5**	*	60-200	PF-17C	12/13/23 23:08
13C2-6:2FTS	75.9		60-200		12/13/23 23:08
13C2-8:2FTS	80.9		50-200		12/13/23 23:08
13C8-PFOSA	60.5		30-130		12/13/23 23:08
D3-NMeFOSA	32.4		15-130		12/13/23 23:08
D5-NEtFOSA	29.9		10-130		12/13/23 23:08
D3-NMeFOSAA	67.3		45-200		12/13/23 23:08
D5-NEtFOSAA	60.3		10-200		12/13/23 23:08
D7-NMeFOSE	42.0		10-150		12/13/23 23:08
D9-NEtFOSE	40.6		10-150		12/13/23 23:08
13C3-HFPO-DA	68.5		25-160		12/13/23 23:08

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (9'-10') Sampled: 11/9/2023 01:45

Sample ID: 23K1873-06

Sample Matrix: Soil

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)	0.17	0.77	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.39	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.19	0.013	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.19	0.014	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorooctanoic acid (PFOA)	ND	0.19	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorononanoic acid (PFNA)	ND	0.19	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorodecanoic acid (PFDA)	ND	0.19	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.19	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.19	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.19	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.19	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.19	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.19	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.19	0.043	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.77	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.19	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.19	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1.9	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1.9	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.063	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.078	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.77	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.77	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1.9	0.16	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.7	1.1	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.7	0.94	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (9'-10') Sampled: 11/9/2023 01:45

Sample ID: 23K1873-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.039	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:01	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	88.1	10-130		12/18/23 21:01
13C5-PFPeA	86.8	35-150		12/18/23 21:01
13C5-PFHxA	90.0	55-150		12/18/23 21:01
13C4-PFHpA	92.6	55-150		12/18/23 21:01
13C8-PFOA	92.2	60-140		12/18/23 21:01
13C9-PFNA	89.1	55-140		12/18/23 21:01
13C6-PFDA	91.8	50-140		12/18/23 21:01
13C7-PFUnA	89.4	30-140		12/18/23 21:01
13C2-PFDoA	86.2	10-150		12/18/23 21:01
13C2-PFTeDA	81.0	10-130		12/18/23 21:01
13C3-PFBS	80.2	55-150		12/18/23 21:01
13C3-PFHxS	93.2	55-150		12/18/23 21:01
13C8-PFOS	89.1	45-140		12/18/23 21:01
13C2-4:2FTS	67.7	60-200		12/18/23 21:01
13C2-6:2FTS	108	60-200		12/18/23 21:01
13C2-8:2FTS	113	50-200		12/18/23 21:01
13C8-PFOSA	84.1	30-130		12/18/23 21:01
D3-NMeFOSA	72.0	15-130		12/18/23 21:01
D5-NEtFOSA	66.6	10-130		12/18/23 21:01
D3-NMeFOSAA	84.7	45-200		12/18/23 21:01
D5-NEtFOSAA	89.9	10-200		12/18/23 21:01
D7-NMeFOSE	93.3	10-150		12/18/23 21:01
D9-NEtFOSE	94.0	10-150		12/18/23 21:01
13C3-HFPO-DA	86.8	25-160		12/18/23 21:01

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-6 (9'-10') Sampled: 11/9/2023 01:45

Sample ID: 23K1873-06

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.4			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (0"-2") Sampled: 11/9/2023 04:30

Sample ID: 23K1873-07

Sample Matrix: Soil

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)	0.36	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoropentanoic acid (PFPeA)	0.21	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorohexanoic acid (PFHxA)	0.17	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoroheptanoic acid (PFHpA)	0.13	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorooctanoic acid (PFOA)	0.48	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorononanoic acid (PFNA)	0.25	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorodecanoic acid (PFDA)	0.18	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoroundecanoic acid (PFUnA)	0.17	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorododecanoic acid (PFDoA)	0.088	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorotridecanoic acid (PFTrDA)	0.065	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.040	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorooctanesulfonic acid (PFOS)	0.75	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorodecanesulfonic acid (PFDS)	0.20	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (0"-2") Sampled: 11/9/2023 04:30

Sample ID: 23K1873-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 21:17	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	75.7	10-130		12/18/23 21:17
13C5-PFPeA	75.2	35-150		12/18/23 21:17
13C5-PFHxA	76.8	55-150		12/18/23 21:17
13C4-PFHpA	78.6	55-150		12/18/23 21:17
13C8-PFOA	76.3	60-140		12/18/23 21:17
13C9-PFNA	72.3	55-140		12/18/23 21:17
13C6-PFDA	74.7	50-140		12/18/23 21:17
13C7-PFUnA	72.4	30-140		12/18/23 21:17
13C2-PFDoA	73.0	10-150		12/18/23 21:17
13C2-PFTeDA	63.5	10-130		12/18/23 21:17
13C3-PFBS	73.4	55-150		12/18/23 21:17
13C3-PFHxS	81.7	55-150		12/18/23 21:17
13C8-PFOS	76.5	45-140		12/18/23 21:17
13C2-4:2FTS	62.3	60-200		12/18/23 21:17
13C2-6:2FTS	92.1	60-200		12/18/23 21:17
13C2-8:2FTS	101	50-200		12/18/23 21:17
13C8-PFOSA	61.1	30-130		12/18/23 21:17
D3-NMeFOSA	35.1	15-130		12/18/23 21:17
D5-NEtFOSA	27.9	10-130		12/18/23 21:17
D3-NMeFOSAA	80.1	45-200		12/18/23 21:17
D5-NEtFOSAA	85.3	10-200		12/18/23 21:17
D7-NMeFOSE	55.3	10-150		12/18/23 21:17
D9-NEtFOSE	52.8	10-150		12/18/23 21:17
13C3-HFPO-DA	68.5	25-160		12/18/23 21:17

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (0"-2") Sampled: 11/9/2023 04:30

Sample ID: 23K1873-07

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.3			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (2"-12") Sampled: 11/9/2023 04:40

Sample ID: 23K1873-08

Sample Matrix: Soil

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)	0.22	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoropentanoic acid (PFPeA)	0.11	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorohexanoic acid (PFHxA)	0.083	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoroheptanoic acid (PFHpA)	0.076	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorooctanoic acid (PFOA)	0.32	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorononanoic acid (PFNA)	0.057	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoroundecanoic acid (PFUnA)	0.030	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorooctanesulfonic acid (PFOS)	0.24	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (2"-12") Sampled: 11/9/2023 04:40

Sample ID: 23K1873-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:04	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	89.2	10-130		12/18/23 22:04
13C5-PFPeA	89.2	35-150		12/18/23 22:04
13C5-PFHxA	92.3	55-150		12/18/23 22:04
13C4-PFHpA	97.8	55-150		12/18/23 22:04
13C8-PFOA	95.1	60-140		12/18/23 22:04
13C9-PFNA	92.0	55-140		12/18/23 22:04
13C6-PFDA	95.0	50-140		12/18/23 22:04
13C7-PFUnA	95.3	30-140		12/18/23 22:04
13C2-PFDoA	95.8	10-150		12/18/23 22:04
13C2-PFTeDA	93.0	10-130		12/18/23 22:04
13C3-PFBS	80.5	55-150		12/18/23 22:04
13C3-PFHxS	97.8	55-150		12/18/23 22:04
13C8-PFOS	94.1	45-140		12/18/23 22:04
13C2-4:2FTS	72.2	60-200		12/18/23 22:04
13C2-6:2FTS	105	60-200		12/18/23 22:04
13C2-8:2FTS	113	50-200		12/18/23 22:04
13C8-PFOSA	83.3	30-130		12/18/23 22:04
D3-NMeFOSA	69.9	15-130		12/18/23 22:04
D5-NEtFOSA	64.7	10-130		12/18/23 22:04
D3-NMeFOSAA	101	45-200		12/18/23 22:04
D5-NEtFOSAA	110	10-200		12/18/23 22:04
D7-NMeFOSE	90.6	10-150		12/18/23 22:04
D9-NEtFOSE	97.0	10-150		12/18/23 22:04
13C3-HFPO-DA	87.2	25-160		12/18/23 22:04

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (2"-12") Sampled: 11/9/2023 04:40

Sample ID: 23K1873-08

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.0			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (5'-6') Sampled: 11/9/2023 04:55

Sample ID: 23K1873-09

Sample Matrix: Soil

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)	0.18	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoropentanoic acid (PFPeA)	0.030	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	0.014	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.97	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (5'-6') Sampled: 11/9/2023 04:55

Sample ID: 23K1873-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:20	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	85.6	10-130		12/18/23 22:20
13C5-PFPeA	85.9	35-150		12/18/23 22:20
13C5-PFHxA	89.2	55-150		12/18/23 22:20
13C4-PFHpA	91.2	55-150		12/18/23 22:20
13C8-PFOA	90.5	60-140		12/18/23 22:20
13C9-PFNA	90.0	55-140		12/18/23 22:20
13C6-PFDA	89.7	50-140		12/18/23 22:20
13C7-PFUnA	90.0	30-140		12/18/23 22:20
13C2-PFDoA	86.6	10-150		12/18/23 22:20
13C2-PFTeDA	81.9	10-130		12/18/23 22:20
13C3-PFBS	79.7	55-150		12/18/23 22:20
13C3-PFHxS	92.9	55-150		12/18/23 22:20
13C8-PFOS	89.5	45-140		12/18/23 22:20
13C2-4:2FTS	66.6	60-200		12/18/23 22:20
13C2-6:2FTS	104	60-200		12/18/23 22:20
13C2-8:2FTS	115	50-200		12/18/23 22:20
13C8-PFOSA	85.4	30-130		12/18/23 22:20
D3-NMeFOSA	83.3	15-130		12/18/23 22:20
D5-NEtFOSA	79.2	10-130		12/18/23 22:20
D3-NMeFOSAA	89.1	45-200		12/18/23 22:20
D5-NEtFOSAA	93.3	10-200		12/18/23 22:20
D7-NMeFOSE	91.2	10-150		12/18/23 22:20
D9-NEtFOSE	94.2	10-150		12/18/23 22:20
13C3-HFPO-DA	85.2	25-160		12/18/23 22:20

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-8 (5'-6') Sampled: 11/9/2023 04:55

Sample ID: 23K1873-09

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.9			% Wt	1	H-06	SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (0"-2") Sampled: 11/10/2023 07:40

Sample ID: 23K1873-10

Sample Matrix: Soil

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)	0.37	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoropentanoic acid (PFPeA)	0.27	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorohexanoic acid (PFHxA)	0.32	0.20	0.013	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoroheptanoic acid (PFHpA)	0.16	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorooctanoic acid (PFOA)	0.64	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorononanoic acid (PFNA)	0.39	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorodecanoic acid (PFDA)	0.38	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoroundecanoic acid (PFUnA)	0.25	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorododecanoic acid (PFDoA)	0.14	0.20	0.021	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorotridecanoic acid (PFTrDA)	0.088	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.065	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorooctanesulfonic acid (PFOS)	1.3	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorodecanesulfonic acid (PFDS)	0.39	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (0"-2") Sampled: 11/10/2023 07:40

Sample ID: 23K1873-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:36	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	77.5	10-130		12/18/23 22:36
13C5-PFPeA	76.0	35-150		12/18/23 22:36
13C5-PFHxA	77.9	55-150		12/18/23 22:36
13C4-PFHpA	81.6	55-150		12/18/23 22:36
13C8-PFOA	83.6	60-140		12/18/23 22:36
13C9-PFNA	78.4	55-140		12/18/23 22:36
13C6-PFDA	79.1	50-140		12/18/23 22:36
13C7-PFUnA	78.4	30-140		12/18/23 22:36
13C2-PFDoA	78.8	10-150		12/18/23 22:36
13C2-PFTeDA	65.1	10-130		12/18/23 22:36
13C3-PFBS	70.5	55-150		12/18/23 22:36
13C3-PFHxS	81.6	55-150		12/18/23 22:36
13C8-PFOS	75.9	45-140		12/18/23 22:36
13C2-4:2FTS	64.7	60-200		12/18/23 22:36
13C2-6:2FTS	95.9	60-200		12/18/23 22:36
13C2-8:2FTS	114	50-200		12/18/23 22:36
13C8-PFOSA	70.2	30-130		12/18/23 22:36
D3-NMeFOSA	44.1	15-130		12/18/23 22:36
D5-NEtFOSA	33.6	10-130		12/18/23 22:36
D3-NMeFOSAA	83.8	45-200		12/18/23 22:36
D5-NEtFOSAA	90.1	10-200		12/18/23 22:36
D7-NMeFOSE	62.5	10-150		12/18/23 22:36
D9-NEtFOSE	57.7	10-150		12/18/23 22:36
13C3-HFPO-DA	70.8	25-160		12/18/23 22:36

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (0"-2") Sampled: 11/10/2023 07:40

Sample ID: 23K1873-10

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	74.0			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (2"-12") Sampled: 11/10/2023 07:45

Sample ID: 23K1873-11

Sample Matrix: Soil

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)	0.40	0.79	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoropentanoic acid (PFPeA)	0.31	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorohexanoic acid (PFHxA)	0.21	0.20	0.013	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoroheptanoic acid (PFHpA)	0.13	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorooctanoic acid (PFOA)	0.59	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorononanoic acid (PFNA)	0.35	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorodecanoic acid (PFDA)	0.36	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoroundecanoic acid (PFUnA)	0.23	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorododecanoic acid (PFDoA)	0.12	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorotridecanoic acid (PFTrDA)	0.078	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.046	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorooctanesulfonic acid (PFOS)	1.2	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorodecanesulfonic acid (PFDS)	0.39	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	0.076	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	0.97	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (2"-12") Sampled: 11/10/2023 07:45

Sample ID: 23K1873-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 22:51	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	80.4	10-130		12/18/23 22:51
13C5-PFPeA	79.0	35-150		12/18/23 22:51
13C5-PFHxA	81.3	55-150		12/18/23 22:51
13C4-PFHpA	84.4	55-150		12/18/23 22:51
13C8-PFOA	85.1	60-140		12/18/23 22:51
13C9-PFNA	80.5	55-140		12/18/23 22:51
13C6-PFDA	84.6	50-140		12/18/23 22:51
13C7-PFUnA	84.1	30-140		12/18/23 22:51
13C2-PFDoA	83.7	10-150		12/18/23 22:51
13C2-PFTeDA	67.4	10-130		12/18/23 22:51
13C3-PFBS	71.1	55-150		12/18/23 22:51
13C3-PFHxS	85.9	55-150		12/18/23 22:51
13C8-PFOS	81.8	45-140		12/18/23 22:51
13C2-4:2FTS	68.1	60-200		12/18/23 22:51
13C2-6:2FTS	104	60-200		12/18/23 22:51
13C2-8:2FTS	121	50-200		12/18/23 22:51
13C8-PFOSA	77.8	30-130		12/18/23 22:51
D3-NMeFOSA	52.7	15-130		12/18/23 22:51
D5-NEtFOSA	44.3	10-130		12/18/23 22:51
D3-NMeFOSAA	93.5	45-200		12/18/23 22:51
D5-NEtFOSAA	96.8	10-200		12/18/23 22:51
D7-NMeFOSE	64.1	10-150		12/18/23 22:51
D9-NEtFOSE	54.9	10-150		12/18/23 22:51
13C3-HFPO-DA	75.4	25-160		12/18/23 22:51

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (2"-12") Sampled: 11/10/2023 07:45

Sample ID: 23K1873-11

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	72.9			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV
pH @19.7°C	6.6			pH Units	1	H-03	SW-846 9045C	11/15/23	11/15/23 15:05	JEC
Total Organic Carbon	19000	140	89	mg/Kg dry	1	MS-11	SW 846 9060A	11/21/23	11/21/23 12:21	NRH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (2"-12") Sampled: 11/10/2023 07:45

Sample ID: 23K1873-11

Sample Matrix: Soil

Sample Flags: D-01

SPLP - 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)	6.5	8.5	3.1	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoropentanoic acid (PFPeA)	1.4	4.3	0.74	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorohexanoic acid (PFHxA)	1.0	2.1	0.46	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoroheptanoic acid (PFHpA)	0.69	2.1	0.54	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorooctanoic acid (PFOA)	4.4	2.1	0.48	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorononanoic acid (PFNA)	ND	2.1	0.41	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorodecanoic acid (PFDA)	ND	2.1	0.39	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoroundecanoic acid (PFUnA)	ND	2.1	0.58	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorododecanoic acid (PFDoA)	ND	2.1	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	2.1	0.58	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	2.1	0.53	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	0.55	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	2.1	0.51	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	0.44	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.1	0.65	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorooctanesulfonic acid (PFOS)	2.6	2.1	0.68	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorononanesulfonic acid (PFNS)	ND	2.1	0.63	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	2.1	0.67	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	2.1	0.57	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	8.5	1.5	ng/L	1	PF-17C	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	3.0	8.5	2.1	ng/L	1	J	Draft Method 1633	12/11/23	12/13/23 23:23	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	8.5	2.3	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	2.1	0.65	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	2.1	0.89	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	2.1	0.66	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-MeFOSAA (NMeFOSAA)	ND	2.1	0.94	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-EtFOSAA (NEtFOSAA)	ND	2.1	0.47	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	21	5.6	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	21	5.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	8.5	2.2	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	8.5	1.5	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
9Cl-PF3ONS (F53B Minor)	ND	8.5	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
11Cl-PF3OUdS (F53B Major)	ND	8.5	2.1	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	21	3.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	110	22	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	110	19	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.3	1.0	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	4.3	1.1	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9a (2"-12") Sampled: 11/10/2023 07:45

Sample ID: 23K1873-11

Sample Matrix: Soil

Sample Flags: D-01

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	4.3	0.86	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.3	1.8	ng/L	1		Draft Method 1633	12/11/23	12/13/23 23:23	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	67.0		10-130		12/13/23 23:23
13C5-PFPeA	65.9		35-150		12/13/23 23:23
13C5-PFHxA	66.8		55-150		12/13/23 23:23
13C4-PFHpA	69.2		55-150		12/13/23 23:23
13C8-PFOA	67.2		60-140		12/13/23 23:23
13C9-PFNA	66.6		55-140		12/13/23 23:23
13C6-PFDA	67.2		50-140		12/13/23 23:23
13C7-PFUnA	65.3		30-140		12/13/23 23:23
13C2-PFDoA	60.7		10-150		12/13/23 23:23
13C2-PFTeDA	51.1		10-130		12/13/23 23:23
13C3-PFBS	56.2		55-150		12/13/23 23:23
13C3-PFHxS	69.3		55-150		12/13/23 23:23
13C8-PFOS	70.0		45-140		12/13/23 23:23
13C2-4:2FTS	**48.8**	*	60-200	PF-17C	12/13/23 23:23
13C2-6:2FTS	71.5		60-200		12/13/23 23:23
13C2-8:2FTS	80.9		50-200		12/13/23 23:23
13C8-PFOSA	60.9		30-130		12/13/23 23:23
D3-NMeFOSA	43.7		15-130		12/13/23 23:23
D5-NEtFOSA	42.5		10-130		12/13/23 23:23
D3-NMeFOSAA	67.3		45-200		12/13/23 23:23
D5-NEtFOSAA	65.1		10-200		12/13/23 23:23
D7-NMeFOSE	55.5		10-150		12/13/23 23:23
D9-NEtFOSE	54.9		10-150		12/13/23 23:23
13C3-HFPO-DA	66.0		25-160		12/13/23 23:23

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9c (17'-18') Sampled: 11/10/2023 02:30

Sample ID: 23K1873-12

Sample Matrix: Soil

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)	0.19	0.78	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoropentanoic acid (PFPeA)	0.063	0.39	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorohexanoic acid (PFHxA)	0.039	0.20	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	0.044	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	0.080	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	0.073	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	0.064	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.78	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.78	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.8	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.8	0.96	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9c (17'-18') Sampled: 11/10/2023 02:30

Sample ID: 23K1873-12

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.040	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:07	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	81.0	10-130		12/18/23 23:07
13C5-PFPeA	80.6	35-150		12/18/23 23:07
13C5-PFHxA	83.8	55-150		12/18/23 23:07
13C4-PFHpA	83.2	55-150		12/18/23 23:07
13C8-PFOA	84.5	60-140		12/18/23 23:07
13C9-PFNA	81.1	55-140		12/18/23 23:07
13C6-PFDA	84.3	50-140		12/18/23 23:07
13C7-PFUnA	82.3	30-140		12/18/23 23:07
13C2-PFDoA	78.7	10-150		12/18/23 23:07
13C2-PFTeDA	74.4	10-130		12/18/23 23:07
13C3-PFBS	74.9	55-150		12/18/23 23:07
13C3-PFHxS	84.8	55-150		12/18/23 23:07
13C8-PFOS	83.9	45-140		12/18/23 23:07
13C2-4:2FTS	63.0	60-200		12/18/23 23:07
13C2-6:2FTS	97.8	60-200		12/18/23 23:07
13C2-8:2FTS	106	50-200		12/18/23 23:07
13C8-PFOSA	78.4	30-130		12/18/23 23:07
D3-NMeFOSA	70.1	15-130		12/18/23 23:07
D5-NEtFOSA	66.5	10-130		12/18/23 23:07
D3-NMeFOSAA	84.8	45-200		12/18/23 23:07
D5-NEtFOSAA	87.3	10-200		12/18/23 23:07
D7-NMeFOSE	86.1	10-150		12/18/23 23:07
D9-NEtFOSE	86.6	10-150		12/18/23 23:07
13C3-HFPO-DA	79.4	25-160		12/18/23 23:07

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-9c (17'-18') Sampled: 11/10/2023 02:30

Sample ID: 23K1873-12

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.7			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (0"-2") Sampled: 11/10/2023 08:15

Sample ID: 23K1873-13

Sample Matrix: Soil

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)	0.30	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoropentanoic acid (PFPeA)	0.076	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorohexanoic acid (PFHxA)	0.060	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	0.015	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorooctanoic acid (PFOA)	0.15	0.20	0.029	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorononanoic acid (PFNA)	0.12	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorodecanoic acid (PFDA)	0.12	0.20	0.019	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoroundecanoic acid (PFUnA)	0.095	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorododecanoic acid (PFDoA)	0.068	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorotridecanoic acid (PFTrDA)	0.049	0.20	0.027	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.043	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorooctanesulfonic acid (PFOS)	0.38	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorodecanesulfonic acid (PFDS)	0.25	0.20	0.045	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (0"-2") Sampled: 11/10/2023 08:15

Sample ID: 23K1873-13

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:23	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	85.0	10-130		12/18/23 23:23
13C5-PFPeA	83.4	35-150		12/18/23 23:23
13C5-PFHxA	84.7	55-150		12/18/23 23:23
13C4-PFHpA	87.1	55-150		12/18/23 23:23
13C8-PFOA	87.9	60-140		12/18/23 23:23
13C9-PFNA	83.1	55-140		12/18/23 23:23
13C6-PFDA	88.7	50-140		12/18/23 23:23
13C7-PFUnA	86.0	30-140		12/18/23 23:23
13C2-PFDoA	86.0	10-150		12/18/23 23:23
13C2-PFTeDA	81.9	10-130		12/18/23 23:23
13C3-PFBS	78.7	55-150		12/18/23 23:23
13C3-PFHxS	87.9	55-150		12/18/23 23:23
13C8-PFOS	83.6	45-140		12/18/23 23:23
13C2-4:2FTS	69.7	60-200		12/18/23 23:23
13C2-6:2FTS	107	60-200		12/18/23 23:23
13C2-8:2FTS	116	50-200		12/18/23 23:23
13C8-PFOSA	74.3	30-130		12/18/23 23:23
D3-NMeFOSA	59.1	15-130		12/18/23 23:23
D5-NEtFOSA	49.8	10-130		12/18/23 23:23
D3-NMeFOSAA	94.3	45-200		12/18/23 23:23
D5-NEtFOSAA	101	10-200		12/18/23 23:23
D7-NMeFOSE	79.0	10-150		12/18/23 23:23
D9-NEtFOSE	77.7	10-150		12/18/23 23:23
13C3-HFPO-DA	81.0	25-160		12/18/23 23:23

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (0"-2") Sampled: 11/10/2023 08:15

Sample ID: 23K1873-13

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.0			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (2"-12") Sampled: 11/10/2023 08:20

Sample ID: 23K1873-14

Sample Matrix: Soil

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)	0.18	0.80	0.14	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoropentanoic acid (PFPeA)	0.067	0.40	0.026	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorohexanoic acid (PFHxA)	0.054	0.20	0.014	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoroheptanoic acid (PFHpA)	0.043	0.20	0.015	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorooctanoic acid (PFOA)	0.14	0.20	0.029	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorononanoic acid (PFNA)	0.091	0.20	0.026	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorodecanoic acid (PFDA)	0.072	0.20	0.019	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoroundecanoic acid (PFUnA)	0.047	0.20	0.020	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorododecanoic acid (PFDoA)	0.030	0.20	0.022	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	0.027	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.027	0.20	0.018	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	0.020	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	0.025	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	0.022	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorooctanesulfonic acid (PFOS)	0.22	0.20	0.036	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	0.030	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorodecanesulfonic acid (PFDS)	0.099	0.20	0.045	µg/kg dry	1	J	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	0.075	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	0.082	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	0.074	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	0.10	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	0.021	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	0.028	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	0.042	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	0.15	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	0.17	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	0.065	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	0.081	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	0.077	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	0.10	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	0.17	µg/kg dry	1	L-03	Draft Method 1633	12/18/23	12/21/23 7:20	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	1.2	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	0.98	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	0.020	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	0.042	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (2"-12") Sampled: 11/10/2023 08:20

Sample ID: 23K1873-14

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	0.031	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	0.041	µg/kg dry	1		Draft Method 1633	12/18/23	12/21/23 7:20	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	86.3	10-130		12/21/23 7:20
13C5-PFPeA	87.4	35-150		12/21/23 7:20
13C5-PFHxA	88.7	55-150		12/21/23 7:20
13C4-PFHpA	91.9	55-150		12/21/23 7:20
13C8-PFOA	89.0	60-140		12/21/23 7:20
13C9-PFNA	85.4	55-140		12/21/23 7:20
13C6-PFDA	89.4	50-140		12/21/23 7:20
13C7-PFUnA	88.8	30-140		12/21/23 7:20
13C2-PFDoA	86.9	10-150		12/21/23 7:20
13C2-PFTeDA	82.1	10-130		12/21/23 7:20
13C3-PFBS	79.0	55-150		12/21/23 7:20
13C3-PFHxS	92.6	55-150		12/21/23 7:20
13C8-PFOS	82.5	45-140		12/21/23 7:20
13C2-4:2FTS	72.9	60-200		12/21/23 7:20
13C2-6:2FTS	107	60-200		12/21/23 7:20
13C2-8:2FTS	117	50-200		12/21/23 7:20
13C8-PFOSA	73.1	30-130		12/21/23 7:20
D3-NMeFOSA	54.6	15-130		12/21/23 7:20
D5-NEtFOSA	48.3	10-130		12/21/23 7:20
D3-NMeFOSAA	96.5	45-200		12/21/23 7:20
D5-NEtFOSAA	98.9	10-200		12/21/23 7:20
D7-NMeFOSE	65.3	10-150		12/21/23 7:20
D9-NEtFOSE	65.0	10-150		12/21/23 7:20
13C3-HFPO-DA	85.0	25-160		12/21/23 7:20

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (2"-12") Sampled: 11/10/2023 08:20

Sample ID: 23K1873-14

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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

Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (17'-19') Sampled: 11/10/2023 05:30

Sample ID: 23K1873-15

Sample Matrix: Soil

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)	0.15	0.77	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.39	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.19	0.013	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.19	0.015	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorooctanoic acid (PFOA)	ND	0.19	0.028	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorononanoic acid (PFNA)	ND	0.19	0.025	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorodecanoic acid (PFDA)	ND	0.19	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.19	0.026	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.19	0.018	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.19	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.19	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.19	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.19	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.19	0.043	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.77	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.19	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.19	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1.9	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1.9	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.063	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.078	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.77	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.77	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1.9	0.16	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.7	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.7	0.95	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (17'-19') Sampled: 11/10/2023 05:30

Sample ID: 23K1873-15

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.039	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:38	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	108	10-130		12/18/23 23:38
13C5-PFPeA	107	35-150		12/18/23 23:38
13C5-PFHxA	110	55-150		12/18/23 23:38
13C4-PFHpA	108	55-150		12/18/23 23:38
13C8-PFOA	109	60-140		12/18/23 23:38
13C9-PFNA	110	55-140		12/18/23 23:38
13C6-PFDA	110	50-140		12/18/23 23:38
13C7-PFUnA	110	30-140		12/18/23 23:38
13C2-PFDoA	104	10-150		12/18/23 23:38
13C2-PFTeDA	100	10-130		12/18/23 23:38
13C3-PFBS	100	55-150		12/18/23 23:38
13C3-PFHxS	112	55-150		12/18/23 23:38
13C8-PFOS	107	45-140		12/18/23 23:38
13C2-4:2FTS	83.0	60-200		12/18/23 23:38
13C2-6:2FTS	126	60-200		12/18/23 23:38
13C2-8:2FTS	136	50-200		12/18/23 23:38
13C8-PFOSA	94.0	30-130		12/18/23 23:38
D3-NMeFOSA	85.7	15-130		12/18/23 23:38
D5-NEtFOSA	77.7	10-130		12/18/23 23:38
D3-NMeFOSAA	115	45-200		12/18/23 23:38
D5-NEtFOSAA	113	10-200		12/18/23 23:38
D7-NMeFOSE	101	10-150		12/18/23 23:38
D9-NEtFOSE	102	10-150		12/18/23 23:38
13C3-HFPO-DA	107	25-160		12/18/23 23:38

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: SB-1 (17'-19') Sampled: 11/10/2023 05:30

Sample ID: 23K1873-15

Sample Matrix: Soil

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.0			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: FB20231110 Sampled: 11/10/2023 00:00

Sample ID: 23K1873-16

Sample Matrix: Field Blank

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)	0.23	0.77	0.14	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoropentanoic acid (PFPeA)	0.053	0.39	0.025	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorohexanoic acid (PFHxA)	0.053	0.19	0.013	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoroheptanoic acid (PFHpA)	0.045	0.19	0.015	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorooctanoic acid (PFOA)	0.12	0.19	0.028	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorononanoic acid (PFNA)	0.10	0.19	0.025	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorodecanoic acid (PFDA)	0.094	0.19	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoroundecanoic acid (PFUnA)	0.071	0.19	0.020	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorododecanoic acid (PFDoA)	0.055	0.19	0.021	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorotridecanoic acid (PFTrDA)	0.036	0.19	0.026	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorotetradecanoic acid (PFTeDA)	0.024	0.19	0.018	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.19	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.19	0.024	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.19	0.022	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorooctanesulfonic acid (PFOS)	0.27	0.19	0.035	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.19	0.029	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorodecanesulfonic acid (PFDS)	0.16	0.19	0.043	µg/kg dry	1	J	Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.19	0.021	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.77	0.079	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.77	0.072	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.19	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.19	0.020	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.19	0.027	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.19	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1.9	0.15	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1.9	0.17	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.77	0.063	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.77	0.078	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.77	0.074	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.77	0.10	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1.9	0.16	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.7	1.2	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.7	0.95	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	0.019	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	0.041	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: FB20231110 Sampled: 11/10/2023 00:00

Sample ID: 23K1873-16

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	0.030	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	0.039	µg/kg dry	1		Draft Method 1633	12/14/23	12/18/23 23:54	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	91.4	10-130		12/18/23 23:54
13C5-PFPeA	90.1	35-150		12/18/23 23:54
13C5-PFHxA	91.7	55-150		12/18/23 23:54
13C4-PFHpA	93.1	55-150		12/18/23 23:54
13C8-PFOA	93.8	60-140		12/18/23 23:54
13C9-PFNA	89.8	55-140		12/18/23 23:54
13C6-PFDA	92.4	50-140		12/18/23 23:54
13C7-PFUnA	95.8	30-140		12/18/23 23:54
13C2-PFDoA	92.6	10-150		12/18/23 23:54
13C2-PFTeDA	85.4	10-130		12/18/23 23:54
13C3-PFBS	82.8	55-150		12/18/23 23:54
13C3-PFHxS	97.4	55-150		12/18/23 23:54
13C8-PFOS	92.0	45-140		12/18/23 23:54
13C2-4:2FTS	72.9	60-200		12/18/23 23:54
13C2-6:2FTS	110	60-200		12/18/23 23:54
13C2-8:2FTS	122	50-200		12/18/23 23:54
13C8-PFOSA	82.4	30-130		12/18/23 23:54
D3-NMeFOSA	71.2	15-130		12/18/23 23:54
D5-NEtFOSA	60.5	10-130		12/18/23 23:54
D3-NMeFOSAA	103	45-200		12/18/23 23:54
D5-NEtFOSAA	102	10-200		12/18/23 23:54
D7-NMeFOSE	85.5	10-150		12/18/23 23:54
D9-NEtFOSE	80.9	10-150		12/18/23 23:54
13C3-HFPO-DA	89.9	25-160		12/18/23 23:54

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K1873

Date Received: 11/14/2023

Field Sample #: FB20231110 Sampled: 11/10/2023 00:00

Sample ID: 23K1873-16

Sample Matrix: Field Blank

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.5			% Wt	1		SM 2540G	11/16/23	11/16/23 9:40	AV

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Sample Extraction Data

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 11/16/2023 per SW-846 1312 in Batch B358302**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1873-02 [SB-7 (2"-12")]	B360405	282	5.00	12/11/23
23K1873-03 [DUP SB-7 (2"-12")]	B360405	270	5.00	12/11/23
23K1873-05 [SB-6 (2"-12")]	B360405	276	5.00	12/11/23
23K1873-11 [SB-9a (2"-12")]	B360405	234	5.00	12/11/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1873-14RE1 [SB-1 (2"-12")]	B360635	5.64	5.00	12/18/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1873-01RE1 [SB-7 (0"-2")]	B360699	7.37	5.00	12/14/23
23K1873-02RE1 [SB-7 (2"-12")]	B360699	5.63	5.00	12/14/23
23K1873-03RE1 [DUP SB-7 (2"-12")]	B360699	6.95	5.00	12/14/23
23K1873-04RE1 [SB-6 (0"-2")]	B360699	6.51	5.00	12/14/23
23K1873-05RE1 [SB-6 (2"-12")]	B360699	5.82	5.00	12/14/23
23K1873-06RE1 [SB-6 (9'-10')]	B360699	5.73	5.00	12/14/23
23K1873-07RE1 [SB-8 (0"-2")]	B360699	7.18	5.00	12/14/23
23K1873-08RE1 [SB-8 (2"-12")]	B360699	6.42	5.00	12/14/23
23K1873-09RE1 [SB-8 (5'-6')]	B360699	5.58	5.00	12/14/23
23K1873-10RE1 [SB-9a (0"-2")]	B360699	6.89	5.00	12/14/23
23K1873-11RE1 [SB-9a (2"-12")]	B360699	6.94	5.00	12/14/23
23K1873-12RE1 [SB-9c (17'-18')]	B360699	5.97	5.00	12/14/23
23K1873-13RE1 [SB-1 (0"-2")]	B360699	6.10	5.00	12/14/23
23K1873-15RE1 [SB-1 (17'-19')]	B360699	5.81	5.00	12/14/23
23K1873-16RE1 [FB20231110]	B360699	6.19	5.00	12/14/23

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23K1873-01 [SB-7 (0"-2")]	B358325	11/16/23
23K1873-02 [SB-7 (2"-12")]	B358325	11/16/23
23K1873-03 [DUP SB-7 (2"-12")]	B358325	11/16/23
23K1873-04 [SB-6 (0"-2")]	B358325	11/16/23
23K1873-05 [SB-6 (2"-12")]	B358325	11/16/23
23K1873-06 [SB-6 (9'-10')]	B358325	11/16/23
23K1873-07 [SB-8 (0"-2")]	B358325	11/16/23
23K1873-08 [SB-8 (2"-12")]	B358325	11/16/23
23K1873-09 [SB-8 (5'-6')]	B358325	11/16/23
23K1873-10 [SB-9a (0"-2")]	B358325	11/16/23
23K1873-11 [SB-9a (2"-12")]	B358325	11/16/23
23K1873-12 [SB-9c (17'-18')]	B358325	11/16/23
23K1873-13 [SB-1 (0"-2")]	B358325	11/16/23
23K1873-14 [SB-1 (2"-12")]	B358325	11/16/23
23K1873-15 [SB-1 (17'-19')]	B358325	11/16/23
23K1873-16 [FB20231110]	B358325	11/16/23

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Sample Extraction Data

SW 846 9060A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23K1873-02 [SB-7 (2"-12")]	B358683	1.00	1.00	11/21/23
23K1873-03 [DUP SB-7 (2"-12")]	B358683	1.00	1.00	11/21/23
23K1873-05 [SB-6 (2"-12")]	B358683	1.00	1.00	11/21/23
23K1873-11 [SB-9a (2"-12")]	B358683	1.00	1.00	11/21/23

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
23K1873-02 [SB-7 (2"-12")]	B358237	20.0	11/15/23
23K1873-03 [DUP SB-7 (2"-12")]	B358237	20.0	11/15/23
23K1873-05 [SB-6 (2"-12")]	B358237	20.0	11/15/23
23K1873-11 [SB-9a (2"-12")]	B358237	20.0	11/15/23

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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 B360635 - Draft Method 1633										
Blank (B360635-BLK1)				Prepared: 12/18/23 Analyzed: 12/21/23						
Perfluorobutanoic acid (PFBA)	ND	0.78	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.19	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.19	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.19	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.19	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.19	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.19	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.19	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.19	µg/kg wet							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.19	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.19	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.19	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.19	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.19	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.19	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.19	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.19	µg/kg wet							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.19	µg/kg wet							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.78	µg/kg wet							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.78	µg/kg wet							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.78	µg/kg wet							
Perfluorooctanesulfonamide (PFOSA)	ND	0.19	µg/kg wet							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.19	µg/kg wet							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.19	µg/kg wet							
N-MeFOSAA (NMeFOSAA)	ND	0.19	µg/kg wet							
N-EtFOSAA (NEtFOSAA)	ND	0.19	µg/kg wet							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1.9	µg/kg wet							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1.9	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.78	µg/kg wet							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.78	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.78	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.78	µg/kg wet							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1.9	µg/kg wet							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.7	µg/kg wet							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.7	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg wet							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Surrogate: 13C4-PFBA	*8.81*		µg/kg wet	9.73		90.6	10-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360635 - Draft Method 1633										
Blank (B360635-BLK1)				Prepared: 12/18/23 Analyzed: 12/21/23						
Surrogate: 13C5-PFPeA	*4.56*		µg/kg wet	4.87		93.8	35-150			
Surrogate: 13C5-PFHxA	*2.30*		µg/kg wet	2.43		94.6	55-150			
Surrogate: 13C4-PFHpA	*2.37*		µg/kg wet	2.43		97.5	55-150			
Surrogate: 13C8-PFOA	*2.32*		µg/kg wet	2.43		95.3	60-140			
Surrogate: 13C9-PFNA	*1.17*		µg/kg wet	1.22		95.8	55-140			
Surrogate: 13C6-PFDA	*1.17*		µg/kg wet	1.22		96.3	50-140			
Surrogate: 13C7-PFUnA	*1.09*		µg/kg wet	1.22		89.4	30-140			
Surrogate: 13C2-PFDoA	*1.07*		µg/kg wet	1.22		88.1	10-150			
Surrogate: 13C2-PFTeDA	*1.01*		µg/kg wet	1.22		83.4	10-130			
Surrogate: 13C3-PFBS	*1.92*		µg/kg wet	2.43		79.0	55-150			
Surrogate: 13C3-PFHxS	*2.32*		µg/kg wet	2.43		95.2	55-150			
Surrogate: 13C8-PFOS	*2.35*		µg/kg wet	2.43		96.5	45-140			
Surrogate: 13C2-4:2FTS	*3.67*		µg/kg wet	4.87		75.4	60-200			
Surrogate: 13C2-6:2FTS	*5.16*		µg/kg wet	4.87		106	60-200			
Surrogate: 13C2-8:2FTS	*6.06*		µg/kg wet	4.87		125	50-200			
Surrogate: 13C8-PFOSA	*2.01*		µg/kg wet	2.43		82.6	30-130			
Surrogate: D3-NMeFOSA	*1.62*		µg/kg wet	2.43		66.7	15-130			
Surrogate: D5-NEtFOSA	*1.67*		µg/kg wet	2.43		68.6	10-130			
Surrogate: D3-NMeFOSAA	*4.67*		µg/kg wet	4.87		95.9	45-200			
Surrogate: D5-NEtFOSAA	*3.75*		µg/kg wet	4.87		77.0	10-200			
Surrogate: D7-NMeFOSE	*15.6*		µg/kg wet	24.3		64.3	10-150			
Surrogate: D9-NEtFOSE	*15.3*		µg/kg wet	24.3		63.0	10-150			
Surrogate: 13C3-HFPO-DA	*9.08*		µg/kg wet	9.73		93.3	25-160			
LCS (B360635-BS1)				Prepared: 12/18/23 Analyzed: 12/21/23						
Perfluorobutanoic acid (PFBA)	8.21	0.79	µg/kg wet	9.54		86.1	58-148			
Perfluoropentanoic acid (PFPeA)	3.92	0.40	µg/kg wet	4.77		82.3	54-152			
Perfluorohexanoic acid (PFHxA)	1.91	0.20	µg/kg wet	2.38		80.1	55-152			
Perfluoroheptanoic acid (PFHpA)	1.92	0.20	µg/kg wet	2.38		80.7	54-154			
Perfluorooctanoic acid (PFOA)	1.94	0.20	µg/kg wet	2.38		81.5	52-161			
Perfluorononanoic acid (PFNA)	1.99	0.20	µg/kg wet	2.38		83.4	59-149			
Perfluorodecanoic acid (PFDA)	1.90	0.20	µg/kg wet	2.38		79.7	52-147			
Perfluoroundecanoic acid (PFUnA)	2.00	0.20	µg/kg wet	2.38		84.0	48-159			
Perfluorododecanoic acid (PFDoA)	2.03	0.20	µg/kg wet	2.38		85.0	64-142			
Perfluorotridecanoic acid (PFTrDA)	1.97	0.20	µg/kg wet	2.38		82.7	49-148			
Perfluorotetradecanoic acid (PFTeDA)	2.00	0.20	µg/kg wet	2.38		84.1	47-161			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.20	µg/kg wet	2.12		83.5	62-144			
Perfluoropentanesulfonic acid (PFPeS)	1.84	0.20	µg/kg wet	2.24		82.0	59-151			
Perfluorohexanesulfonic acid (PFHxS)	1.70	0.20	µg/kg wet	2.18		78.0	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	1.93	0.20	µg/kg wet	2.27		84.8	55-152			
Perfluorooctanesulfonic acid (PFOS)	1.78	0.20	µg/kg wet	2.21		80.4	58-149			
Perfluorononanesulfonic acid (PFNS)	1.90	0.20	µg/kg wet	2.29		83.0	52-148			
Perfluorodecanesulfonic acid (PFDS)	1.85	0.20	µg/kg wet	2.30		80.3	51-147			
Perfluorododecanesulfonic acid (PFDoS)	1.65	0.20	µg/kg wet	2.31		71.5	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.58	0.79	µg/kg wet	8.94		84.7	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.48	0.79	µg/kg wet	9.06		82.6	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	8.61	0.79	µg/kg wet	9.18		93.8	63-152			
Perfluorooctanesulfonamide (PFOSA)	2.02	0.20	µg/kg wet	2.38		84.5	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.54	0.20	µg/kg wet	2.38		64.7	63-145			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B360635 - Draft Method 1633											
LCS (B360635-BS1)				Prepared: 12/18/23 Analyzed: 12/21/23							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.61	0.20	µg/kg wet	2.38		67.4		65-139			
N-MeFOSAA (NMeFOSAA)	1.86	0.20	µg/kg wet	2.38		78.0		58-144			
N-EtFOSAA (NEtFOSAA)	2.08	0.20	µg/kg wet	2.38		87.4		59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	19.3	2.0	µg/kg wet	23.8		81.1		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	19.8	2.0	µg/kg wet	23.8		83.2		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.82	0.79	µg/kg wet	9.54		82.0		63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.13	0.79	µg/kg wet	9.00		79.2		68-146			
9Cl-PF3ONS (F53B Minor)	7.93	0.79	µg/kg wet	8.94		88.7		56-156			
11Cl-PF3OUdS (F53B Major)	8.03	0.79	µg/kg wet	9.00		89.3		46-156			
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	14.1	2.0	µg/kg wet	26.0		**54.1**	*	62-129			L-03
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	85.9	9.9	µg/kg wet	130		66.1		63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	90.9	9.9	µg/kg wet	130		69.9		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.64	0.40	µg/kg wet	4.24		85.7		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.50	0.40	µg/kg wet	4.77		73.4		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.65	0.40	µg/kg wet	4.77		76.5		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.80	0.40	µg/kg wet	4.77		79.8		48-161			
Surrogate: 13C4-PFBA	*9.17*		µg/kg wet	9.93		92.3		10-130			
Surrogate: 13C5-PFPeA	*4.59*		µg/kg wet	4.97		92.4		35-150			
Surrogate: 13C5-PFHxA	*2.33*		µg/kg wet	2.48		93.8		55-150			
Surrogate: 13C4-PFHpA	*2.38*		µg/kg wet	2.48		96.0		55-150			
Surrogate: 13C8-PFOA	*2.40*		µg/kg wet	2.48		96.5		60-140			
Surrogate: 13C9-PFNA	*1.15*		µg/kg wet	1.24		92.3		55-140			
Surrogate: 13C6-PFDA	*1.21*		µg/kg wet	1.24		97.8		50-140			
Surrogate: 13C7-PFUnA	*1.15*		µg/kg wet	1.24		92.5		30-140			
Surrogate: 13C2-PFDoA	*1.11*		µg/kg wet	1.24		89.4		10-150			
Surrogate: 13C2-PFTeDA	*1.06*		µg/kg wet	1.24		85.0		10-130			
Surrogate: 13C3-PFBS	*2.04*		µg/kg wet	2.48		82.2		55-150			
Surrogate: 13C3-PFHxS	*2.33*		µg/kg wet	2.48		94.0		55-150			
Surrogate: 13C8-PFOS	*2.26*		µg/kg wet	2.48		91.1		45-140			
Surrogate: 13C2-4:2FTS	*3.90*		µg/kg wet	4.97		78.4		60-200			
Surrogate: 13C2-6:2FTS	*5.68*		µg/kg wet	4.97		114		60-200			
Surrogate: 13C2-8:2FTS	*6.67*		µg/kg wet	4.97		134		50-200			
Surrogate: 13C8-PFOSA	*2.00*		µg/kg wet	2.48		80.4		30-130			
Surrogate: D3-NMeFOSA	*1.82*		µg/kg wet	2.48		73.4		15-130			
Surrogate: D5-NEtFOSA	*1.79*		µg/kg wet	2.48		72.1		10-130			
Surrogate: D3-NMeFOSAA	*4.80*		µg/kg wet	4.97		96.5		45-200			
Surrogate: D5-NEtFOSAA	*4.53*		µg/kg wet	4.97		91.2		10-200			
Surrogate: D7-NMeFOSE	*17.5*		µg/kg wet	24.8		70.3		10-150			
Surrogate: D9-NEtFOSE	*17.1*		µg/kg wet	24.8		68.8		10-150			
Surrogate: 13C3-HFPO-DA	*9.10*		µg/kg wet	9.93		91.6		25-160			
MRL Check (B360635-MRL1)				Prepared: 12/18/23 Analyzed: 12/21/23							
Perfluorobutanoic acid (PFBA)	0.753	0.79	µg/kg wet	0.788		95.6		44-157			J
Perfluoropentanoic acid (PFPeA)	0.337	0.39	µg/kg wet	0.394		85.5		57-148			J

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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 B360635 - Draft Method 1633										
MRL Check (B360635-MRL1)				Prepared: 12/18/23 Analyzed: 12/21/23						
Perfluorohexanoic acid (PFHxA)	0.158	0.20	µg/kg wet	0.197		80.4	62-149			J
Perfluoroheptanoic acid (PFHpA)	0.161	0.20	µg/kg wet	0.197		81.8	56-150			J
Perfluorooctanoic acid (PFOA)	0.160	0.20	µg/kg wet	0.197		81.0	57-161			J
Perfluorononanoic acid (PFNA)	0.147	0.20	µg/kg wet	0.197		74.4	53-157			J
Perfluorodecanoic acid (PFDA)	0.165	0.20	µg/kg wet	0.197		83.9	43-158			J
Perfluoroundecanoic acid (PFUnA)	0.161	0.20	µg/kg wet	0.197		81.9	50-155			J
Perfluorododecanoic acid (PFDoA)	0.175	0.20	µg/kg wet	0.197		88.8	60-141			J
Perfluorotridecanoic acid (PFTrDA)	0.172	0.20	µg/kg wet	0.197		87.4	52-140			J
Perfluorotetradecanoic acid (PFTeDA)	0.167	0.20	µg/kg wet	0.197		84.9	52-156			J
Perfluorobutanesulfonic acid (PFBS)	0.152	0.20	µg/kg wet	0.175		87.0	63-145			J
Perfluoropentanesulfonic acid (PFPeS)	0.156	0.20	µg/kg wet	0.185		84.5	58-144			J
Perfluorohexanesulfonic acid (PFHxS)	0.158	0.20	µg/kg wet	0.180		87.4	44-158			J
Perfluoroheptanesulfonic acid (PFHpS)	0.149	0.20	µg/kg wet	0.188		79.3	51-150			J
Perfluorooctanesulfonic acid (PFOS)	0.161	0.20	µg/kg wet	0.183		88.3	43-162			J
Perfluorononanesulfonic acid (PFNS)	0.161	0.20	µg/kg wet	0.190		85.1	46-151			J
Perfluorodecanesulfonic acid (PFDS)	0.160	0.20	µg/kg wet	0.190		84.1	50-144			J
Perfluorododecanesulfonic acid (PFDoS)	0.145	0.20	µg/kg wet	0.191		75.8	30-138			J
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	0.624	0.79	µg/kg wet	0.739		84.5	52-158			J
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.676	0.79	µg/kg wet	0.749		90.3	48-158			J
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	0.718	0.79	µg/kg wet	0.758		94.7	46-165			J
Perfluorooctanesulfonamide (PFOSA)	0.175	0.20	µg/kg wet	0.197		88.6	47-163			J
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	0.150	0.20	µg/kg wet	0.197		76.2	54-155			J
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.144	0.20	µg/kg wet	0.197		72.9	49-156			J
N-MeFOSAA (NMeFOSAA)	0.188	0.20	µg/kg wet	0.197		95.6	32-160			J
N-EtFOSAA (NEtFOSAA)	0.186	0.20	µg/kg wet	0.197		94.6	51-154			J
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1.66	2.0	µg/kg wet	1.97		84.5	56-151			J
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1.64	2.0	µg/kg wet	1.97		83.3	60-147			J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.669	0.79	µg/kg wet	0.788		85.0	58-154			J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.611	0.79	µg/kg wet	0.744		82.2	61-148			J
9Cl-PF3ONS (F53B Minor)	0.658	0.79	µg/kg wet	0.739		89.0	44-167			J
11Cl-PF3OUdS (F53B Major)	0.656	0.79	µg/kg wet	0.744		88.2	36-158			J
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1.05	2.0	µg/kg wet	1.97		53.5	32-161			J
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	6.67	9.9	µg/kg wet	9.85		67.7	39-156			J
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	6.81	9.9	µg/kg wet	9.85		69.2	36-149			J
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.312	0.39	µg/kg wet	0.351		89.0	56-144			J
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.326	0.39	µg/kg wet	0.394		82.7	48-150			J
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.325	0.39	µg/kg wet	0.394		82.6	49-154			J
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.318	0.39	µg/kg wet	0.394		80.6	47-160			J
Surrogate: 13C4-PFBA	*9.47*		µg/kg wet	9.85		96.1	10-130			
Surrogate: 13C5-PFPeA	*4.78*		µg/kg wet	4.93		97.1	35-150			
Surrogate: 13C5-PFHxA	*2.40*		µg/kg wet	2.46		97.4	55-150			

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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 B360635 - Draft Method 1633										
MRL Check (B360635-MRL1)				Prepared: 12/18/23 Analyzed: 12/21/23						
Surrogate: 13C4-PFHpA	*2.48*		µg/kg wet	2.46		101	55-150			
Surrogate: 13C8-PFOA	*2.41*		µg/kg wet	2.46		97.7	60-140			
Surrogate: 13C9-PFNA	*1.21*		µg/kg wet	1.23		98.0	55-140			
Surrogate: 13C6-PFDA	*1.23*		µg/kg wet	1.23		100	50-140			
Surrogate: 13C7-PFUnA	*1.21*		µg/kg wet	1.23		98.2	30-140			
Surrogate: 13C2-PFDoA	*1.12*		µg/kg wet	1.23		91.0	10-150			
Surrogate: 13C2-PFTeDA	*1.09*		µg/kg wet	1.23		88.6	10-130			
Surrogate: 13C3-PFBS	*2.05*		µg/kg wet	2.46		83.1	55-150			
Surrogate: 13C3-PFHxS	*2.45*		µg/kg wet	2.46		99.4	55-150			
Surrogate: 13C8-PFOS	*2.34*		µg/kg wet	2.46		94.8	45-140			
Surrogate: 13C2-4:2FTS	*3.79*		µg/kg wet	4.93		76.9	60-200			
Surrogate: 13C2-6:2FTS	*6.04*		µg/kg wet	4.93		123	60-200			
Surrogate: 13C2-8:2FTS	*6.67*		µg/kg wet	4.93		136	50-200			
Surrogate: 13C8-PFOSA	*1.94*		µg/kg wet	2.46		78.7	30-130			
Surrogate: D3-NMeFOSA	*1.71*		µg/kg wet	2.46		69.4	15-130			
Surrogate: D5-NEtFOSA	*1.72*		µg/kg wet	2.46		69.7	10-130			
Surrogate: D3-NMeFOSAA	*5.21*		µg/kg wet	4.93		106	45-200			
Surrogate: D5-NEtFOSAA	*5.13*		µg/kg wet	4.93		104	10-200			
Surrogate: D7-NMeFOSE	*15.1*		µg/kg wet	24.6		61.3	10-150			
Surrogate: D9-NEtFOSE	*15.5*		µg/kg wet	24.6		63.0	10-150			
Surrogate: 13C3-HFPO-DA	*9.43*		µg/kg wet	9.85		95.8	25-160			
Batch B360699 - Draft Method 1633										
Blank (B360699-BLK1)				Prepared: 12/14/23 Analyzed: 12/18/23						
Perfluorobutanoic acid (PFBA)	ND	0.79	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg wet							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg wet							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg wet							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	µg/kg wet							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	µg/kg wet							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	µg/kg wet							
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg wet							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg wet							

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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 B360699 - Draft Method 1633										
Blank (B360699-BLK1)				Prepared: 12/14/23 Analyzed: 12/18/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg wet							
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg wet							
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg wet							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg wet							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	µg/kg wet							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.79	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.79	µg/kg wet							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg wet							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	µg/kg wet							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg wet							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	µg/kg wet							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.39	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg wet							
Surrogate: 13C4-PFBA	*9.64*		µg/kg wet	9.87		97.7	10-130			
Surrogate: 13C5-PFPeA	*4.94*		µg/kg wet	4.93		100	35-150			
Surrogate: 13C5-PFHxA	*2.51*		µg/kg wet	2.47		102	55-150			
Surrogate: 13C4-PFHpA	*2.57*		µg/kg wet	2.47		104	55-150			
Surrogate: 13C8-PFOA	*2.47*		µg/kg wet	2.47		100	60-140			
Surrogate: 13C9-PFNA	*1.25*		µg/kg wet	1.23		101	55-140			
Surrogate: 13C6-PFDA	*1.27*		µg/kg wet	1.23		103	50-140			
Surrogate: 13C7-PFUnA	*1.21*		µg/kg wet	1.23		98.1	30-140			
Surrogate: 13C2-PFDoA	*1.18*		µg/kg wet	1.23		95.8	10-150			
Surrogate: 13C2-PFTeDA	*1.15*		µg/kg wet	1.23		93.6	10-130			
Surrogate: 13C3-PFBS	*2.20*		µg/kg wet	2.47		89.1	55-150			
Surrogate: 13C3-PFHxS	*2.52*		µg/kg wet	2.47		102	55-150			
Surrogate: 13C8-PFOS	*2.48*		µg/kg wet	2.47		100	45-140			
Surrogate: 13C2-4:2FTS	*3.92*		µg/kg wet	4.93		79.3	60-200			
Surrogate: 13C2-6:2FTS	*6.19*		µg/kg wet	4.93		125	60-200			
Surrogate: 13C2-8:2FTS	*6.62*		µg/kg wet	4.93		134	50-200			
Surrogate: 13C8-PFOSA	*2.20*		µg/kg wet	2.47		89.3	30-130			
Surrogate: D3-NMeFOSA	*2.11*		µg/kg wet	2.47		85.3	15-130			
Surrogate: D5-NEtFOSA	*2.05*		µg/kg wet	2.47		82.9	10-130			
Surrogate: D3-NMeFOSAA	*5.51*		µg/kg wet	4.93		112	45-200			
Surrogate: D5-NEtFOSAA	*5.45*		µg/kg wet	4.93		110	10-200			
Surrogate: D7-NMeFOSE	*22.6*		µg/kg wet	24.7		91.6	10-150			
Surrogate: D9-NEtFOSE	*22.6*		µg/kg wet	24.7		91.7	10-150			
Surrogate: 13C3-HFPO-DA	*9.84*		µg/kg wet	9.87		99.7	25-160			
LCS (B360699-BS1)				Prepared: 12/14/23 Analyzed: 12/18/23						
Perfluorobutanoic acid (PFBA)	9.74	0.77	µg/kg wet	9.28		105	58-148			
Perfluoropentanoic acid (PFPeA)	4.48	0.39	µg/kg wet	4.64		96.7	54-152			

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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 B360699 - Draft Method 1633										
LCS (B360699-BS1)				Prepared: 12/14/23 Analyzed: 12/18/23						
Perfluorohexanoic acid (PFHxA)	2.20	0.19	µg/kg wet	2.32		94.9	55-152			
Perfluoroheptanoic acid (PFHpA)	2.20	0.19	µg/kg wet	2.32		94.9	54-154			
Perfluorooctanoic acid (PFOA)	2.26	0.19	µg/kg wet	2.32		97.3	52-161			
Perfluorononanoic acid (PFNA)	2.25	0.19	µg/kg wet	2.32		96.9	59-149			
Perfluorodecanoic acid (PFDA)	2.26	0.19	µg/kg wet	2.32		97.5	52-147			
Perfluoroundecanoic acid (PFUnA)	2.28	0.19	µg/kg wet	2.32		98.2	48-159			
Perfluorododecanoic acid (PFDoA)	2.30	0.19	µg/kg wet	2.32		99.2	64-142			
Perfluorotridecanoic acid (PFTrDA)	2.25	0.19	µg/kg wet	2.32		96.8	49-148			
Perfluorotetradecanoic acid (PFTeDA)	2.28	0.19	µg/kg wet	2.32		98.4	47-161			
Perfluorobutanesulfonic acid (PFBS)	2.07	0.19	µg/kg wet	2.06		101	62-144			
Perfluoropentanesulfonic acid (PFPeS)	2.04	0.19	µg/kg wet	2.18		93.8	59-151			
Perfluorohexanesulfonic acid (PFHxS)	1.97	0.19	µg/kg wet	2.12		92.8	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	2.20	0.19	µg/kg wet	2.21		99.8	55-152			
Perfluorooctanesulfonic acid (PFOS)	2.09	0.19	µg/kg wet	2.15		97.1	58-149			
Perfluorononanesulfonic acid (PFNS)	2.26	0.19	µg/kg wet	2.23		101	52-148			
Perfluorodecanesulfonic acid (PFDS)	2.13	0.19	µg/kg wet	2.24		95.3	51-147			
Perfluorododecanesulfonic acid (PFDoS)	1.97	0.19	µg/kg wet	2.25		87.4	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.70	0.77	µg/kg wet	8.70		100	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.91	0.77	µg/kg wet	8.81		101	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.29	0.77	µg/kg wet	8.93		104	63-152			
Perfluorooctanesulfonamide (PFOSA)	2.30	0.19	µg/kg wet	2.32		99.0	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.18	0.19	µg/kg wet	2.32		94.1	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.09	0.19	µg/kg wet	2.32		89.9	65-139			
N-MeFOSAA (NMeFOSAA)	2.17	0.19	µg/kg wet	2.32		93.7	58-144			
N-EtFOSAA (NEtFOSAA)	2.34	0.19	µg/kg wet	2.32		101	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	22.4	1.9	µg/kg wet	23.2		96.5	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	22.6	1.9	µg/kg wet	23.2		97.5	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.31	0.77	µg/kg wet	9.28		89.6	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.34	0.77	µg/kg wet	8.75		83.8	68-146			
9Cl-PF3ONS (F53B Minor)	7.70	0.77	µg/kg wet	8.70		88.6	56-156			
11Cl-PF3OUdS (F53B Major)	7.81	0.77	µg/kg wet	8.75		89.3	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	16.3	1.9	µg/kg wet	25.3		64.4	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	91.7	9.7	µg/kg wet	126		72.5	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	94.7	9.7	µg/kg wet	126		75.0	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.57	0.39	µg/kg wet	4.13		86.5	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.69	0.39	µg/kg wet	4.64		79.5	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.84	0.39	µg/kg wet	4.64		82.8	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.15	0.39	µg/kg wet	4.64		89.6	48-161			
Surrogate: 13C4-PFBA	*8.52*		µg/kg wet	9.66		88.1	10-130			
Surrogate: 13C5-PFPeA	*4.39*		µg/kg wet	4.83		90.8	35-150			
Surrogate: 13C5-PFHxA	*2.21*		µg/kg wet	2.42		91.5	55-150			

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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 B360699 - Draft Method 1633										
LCS (B360699-BS1)				Prepared: 12/14/23 Analyzed: 12/18/23						
Surrogate: 13C4-PFHpA	*2.25*		µg/kg wet	2.42		93.1	55-150			
Surrogate: 13C8-PFOA	*2.25*		µg/kg wet	2.42		93.0	60-140			
Surrogate: 13C9-PFNA	*1.10*		µg/kg wet	1.21		91.3	55-140			
Surrogate: 13C6-PFDA	*1.14*		µg/kg wet	1.21		94.3	50-140			
Surrogate: 13C7-PFUnA	*1.13*		µg/kg wet	1.21		93.8	30-140			
Surrogate: 13C2-PFDoA	*1.09*		µg/kg wet	1.21		90.0	10-150			
Surrogate: 13C2-PFTeDA	*1.03*		µg/kg wet	1.21		85.7	10-130			
Surrogate: 13C3-PFBS	*1.95*		µg/kg wet	2.42		80.6	55-150			
Surrogate: 13C3-PFHxS	*2.26*		µg/kg wet	2.42		93.6	55-150			
Surrogate: 13C8-PFOS	*2.19*		µg/kg wet	2.42		90.8	45-140			
Surrogate: 13C2-4:2FTS	*3.74*		µg/kg wet	4.83		77.4	60-200			
Surrogate: 13C2-6:2FTS	*5.78*		µg/kg wet	4.83		120	60-200			
Surrogate: 13C2-8:2FTS	*6.21*		µg/kg wet	4.83		129	50-200			
Surrogate: 13C8-PFOSA	*1.99*		µg/kg wet	2.42		82.2	30-130			
Surrogate: D3-NMeFOSA	*1.80*		µg/kg wet	2.42		74.4	15-130			
Surrogate: D5-NEtFOSA	*1.72*		µg/kg wet	2.42		71.2	10-130			
Surrogate: D3-NMeFOSAA	*4.95*		µg/kg wet	4.83		103	45-200			
Surrogate: D5-NEtFOSAA	*5.08*		µg/kg wet	4.83		105	10-200			
Surrogate: D7-NMeFOSE	*19.0*		µg/kg wet	24.2		78.8	10-150			
Surrogate: D9-NEtFOSE	*19.2*		µg/kg wet	24.2		79.6	10-150			
Surrogate: 13C3-HFPO-DA	*8.60*		µg/kg wet	9.66		89.1	25-160			
MRL Check (B360699-MRL1)				Prepared: 12/14/23 Analyzed: 12/18/23						
Perfluorobutanoic acid (PFBA)	0.814	0.78	µg/kg wet	0.782		104	44-157			
Perfluoropentanoic acid (PFPeA)	0.365	0.39	µg/kg wet	0.391		93.3	57-148			J
Perfluorohexanoic acid (PFHxA)	0.187	0.20	µg/kg wet	0.196		95.8	62-149			J
Perfluoroheptanoic acid (PFHpA)	0.181	0.20	µg/kg wet	0.196		92.3	56-150			J
Perfluorooctanoic acid (PFOA)	0.161	0.20	µg/kg wet	0.196		82.1	57-161			J
Perfluorononanoic acid (PFNA)	0.172	0.20	µg/kg wet	0.196		87.8	53-157			J
Perfluorodecanoic acid (PFDA)	0.173	0.20	µg/kg wet	0.196		88.4	43-158			J
Perfluoroundecanoic acid (PFUnA)	0.184	0.20	µg/kg wet	0.196		94.3	50-155			J
Perfluorododecanoic acid (PFDoA)	0.193	0.20	µg/kg wet	0.196		98.9	60-141			J
Perfluorotridecanoic acid (PFTrDA)	0.177	0.20	µg/kg wet	0.196		90.4	52-140			J
Perfluorotetradecanoic acid (PFTeDA)	0.177	0.20	µg/kg wet	0.196		90.7	52-156			J
Perfluorobutanesulfonic acid (PFBS)	0.167	0.20	µg/kg wet	0.174		96.5	63-145			J
Perfluoropentanesulfonic acid (PFPeS)	0.162	0.20	µg/kg wet	0.184		87.9	58-144			J
Perfluorohexanesulfonic acid (PFHxS)	0.176	0.20	µg/kg wet	0.179		98.5	44-158			J
Perfluoroheptanesulfonic acid (PFHpS)	0.168	0.20	µg/kg wet	0.186		90.3	51-150			J
Perfluorooctanesulfonic acid (PFOS)	0.170	0.20	µg/kg wet	0.181		93.9	43-162			J
Perfluorononanesulfonic acid (PFNS)	0.158	0.20	µg/kg wet	0.188		84.1	46-151			J
Perfluorodecanesulfonic acid (PFDS)	0.171	0.20	µg/kg wet	0.189		90.8	50-144			J
Perfluorododecanesulfonic acid (PFDoS)	0.174	0.20	µg/kg wet	0.190		91.5	30-138			J
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	0.683	0.78	µg/kg wet	0.733		93.1	52-158			J
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.729	0.78	µg/kg wet	0.743		98.1	48-158			J
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	0.768	0.78	µg/kg wet	0.753		102	46-165			J
Perfluorooctanesulfonamide (PFOSA)	0.195	0.20	µg/kg wet	0.196		99.8	47-163			J
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	0.181	0.20	µg/kg wet	0.196		92.3	54-155			J
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.151	0.20	µg/kg wet	0.196		77.0	49-156			J
N-MeFOSAA (NMeFOSAA)	0.176	0.20	µg/kg wet	0.196		89.9	32-160			J

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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 B360699 - Draft Method 1633										
MRL Check (B360699-MRL1)				Prepared: 12/14/23 Analyzed: 12/18/23						
N-EtFOSAA (NEtFOSAA)	0.179	0.20	µg/kg wet	0.196		91.4	51-154			J
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1.77	2.0	µg/kg wet	1.96		90.6	56-151			J
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1.73	2.0	µg/kg wet	1.96		88.5	60-147			J
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.675	0.78	µg/kg wet	0.782		86.3	58-154			J
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.612	0.78	µg/kg wet	0.738		82.9	61-148			J
9Cl-PF3ONS (F53B Minor)	0.652	0.78	µg/kg wet	0.733		88.9	44-167			J
11Cl-PF3OUdS (F53B Major)	0.655	0.78	µg/kg wet	0.738		88.7	36-158			J
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1.29	2.0	µg/kg wet	1.96		66.1	32-161			J
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	7.41	9.8	µg/kg wet	9.78		75.8	39-156			J
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	7.31	9.8	µg/kg wet	9.78		74.8	36-149			J
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.316	0.39	µg/kg wet	0.348		90.7	56-144			J
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.343	0.39	µg/kg wet	0.391		87.7	48-150			J
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.334	0.39	µg/kg wet	0.391		85.3	49-154			J
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.372	0.39	µg/kg wet	0.391		95.0	47-160			J
Surrogate: 13C4-PFBA	*8.79*		µg/kg wet	9.78		89.8	10-130			
Surrogate: 13C5-PFPeA	*4.42*		µg/kg wet	4.89		90.4	35-150			
Surrogate: 13C5-PFHxA	*2.23*		µg/kg wet	2.44		91.2	55-150			
Surrogate: 13C4-PFHpA	*2.29*		µg/kg wet	2.44		93.9	55-150			
Surrogate: 13C8-PFOA	*2.25*		µg/kg wet	2.44		92.2	60-140			
Surrogate: 13C9-PFNA	*1.11*		µg/kg wet	1.22		90.6	55-140			
Surrogate: 13C6-PFDA	*1.11*		µg/kg wet	1.22		90.6	50-140			
Surrogate: 13C7-PFUnA	*1.09*		µg/kg wet	1.22		89.5	30-140			
Surrogate: 13C2-PFDoA	*1.03*		µg/kg wet	1.22		84.3	10-150			
Surrogate: 13C2-PFTeDA	*1.04*		µg/kg wet	1.22		84.9	10-130			
Surrogate: 13C3-PFBS	*1.98*		µg/kg wet	2.44		80.9	55-150			
Surrogate: 13C3-PFHxS	*2.32*		µg/kg wet	2.44		94.7	55-150			
Surrogate: 13C8-PFOS	*2.25*		µg/kg wet	2.44		91.9	45-140			
Surrogate: 13C2-4:2FTS	*3.61*		µg/kg wet	4.89		73.8	60-200			
Surrogate: 13C2-6:2FTS	*5.55*		µg/kg wet	4.89		114	60-200			
Surrogate: 13C2-8:2FTS	*5.98*		µg/kg wet	4.89		122	50-200			
Surrogate: 13C8-PFOSA	*2.07*		µg/kg wet	2.44		84.5	30-130			
Surrogate: D3-NMeFOSA	*2.06*		µg/kg wet	2.44		84.2	15-130			
Surrogate: D5-NEtFOSA	*1.98*		µg/kg wet	2.44		81.1	10-130			
Surrogate: D3-NMeFOSAA	*5.10*		µg/kg wet	4.89		104	45-200			
Surrogate: D5-NEtFOSAA	*5.09*		µg/kg wet	4.89		104	10-200			
Surrogate: D7-NMeFOSE	*21.6*		µg/kg wet	24.4		88.4	10-150			
Surrogate: D9-NEtFOSE	*21.7*		µg/kg wet	24.4		88.9	10-150			
Surrogate: 13C3-HFPO-DA	*8.87*		µg/kg wet	9.78		90.7	25-160			
Matrix Spike (B360699-MS1)		**Source: 23K1873-11RE1**		Prepared: 12/14/23 Analyzed: 12/18/23						
Perfluorobutanoic acid (PFBA)	9.50	0.79	µg/kg dry	9.47	0.395	96.2	58-148			
Perfluoropentanoic acid (PFPeA)	4.67	0.39	µg/kg dry	4.74	0.306	92.2	54-152			
Perfluorohexanoic acid (PFHxA)	2.40	0.20	µg/kg dry	2.37	0.211	92.2	55-152			
Perfluoroheptanoic acid (PFHpA)	2.31	0.20	µg/kg dry	2.37	0.127	92.3	54-154			
Perfluorooctanoic acid (PFOA)	2.79	0.20	µg/kg dry	2.37	0.585	93.1	52-161			

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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 B360699 - Draft Method 1633											
Matrix Spike (B360699-MS1)	**Source: 23K1873-11RE1**			Prepared: 12/14/23 Analyzed: 12/18/23							
Perfluorononanoic acid (PFNA)	2.64	0.20	µg/kg dry	2.37	0.353	96.8		59-149			
Perfluorodecanoic acid (PFDA)	2.54	0.20	µg/kg dry	2.37	0.359	92.2		52-147			
Perfluoroundecanoic acid (PFUnA)	2.46	0.20	µg/kg dry	2.37	0.229	94.4		48-159			
Perfluorododecanoic acid (PFDoA)	2.45	0.20	µg/kg dry	2.37	0.119	98.4		64-142			
Perfluorotridecanoic acid (PFTrDA)	2.36	0.20	µg/kg dry	2.37	0.0783	96.2		49-148			
Perfluorotetradecanoic acid (PFTeDA)	2.26	0.20	µg/kg dry	2.37	0.0462	93.3		47-161			
Perfluorobutanesulfonic acid (PFBS)	2.05	0.20	µg/kg dry	2.10	ND	97.6		62-144			
Perfluoropentanesulfonic acid (PFPeS)	1.99	0.20	µg/kg dry	2.23	ND	89.4		59-151			
Perfluorohexanesulfonic acid (PFHxS)	1.90	0.20	µg/kg dry	2.17	ND	87.9		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	2.18	0.20	µg/kg dry	2.26	ND	96.7		55-152			
Perfluorooctanesulfonic acid (PFOS)	3.20	0.20	µg/kg dry	2.20	1.21	90.5		58-149			
Perfluorononanesulfonic acid (PFNS)	2.28	0.20	µg/kg dry	2.28	ND	99.9		52-148			
Perfluorodecanesulfonic acid (PFDS)	2.72	0.20	µg/kg dry	2.29	0.388	102		51-147			
Perfluorododecanesulfonic acid (PFDoS)	1.97	0.20	µg/kg dry	2.30	ND	85.9		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.62	0.79	µg/kg dry	8.88	ND	97.1		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.75	0.79	µg/kg dry	9.00	ND	97.2		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.43	0.79	µg/kg dry	9.12	ND	103		63-152			
Perfluorooctanesulfonamide (PFOSA)	2.30	0.20	µg/kg dry	2.37	ND	97.1		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.17	0.20	µg/kg dry	2.37	ND	91.5		63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.04	0.20	µg/kg dry	2.37	ND	86.0		65-139			
N-MeFOSAA (NMeFOSAA)	2.03	0.20	µg/kg dry	2.37	ND	85.6		58-144			
N-EtFOSAA (NEtFOSAA)	2.29	0.20	µg/kg dry	2.37	ND	96.7		59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	21.6	2.0	µg/kg dry	23.7	ND	91.3		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.9	2.0	µg/kg dry	23.7	ND	92.6		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.92	0.79	µg/kg dry	9.47	ND	94.2		63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.15	0.79	µg/kg dry	8.94	ND	91.2		68-146			
9Cl-PF3ONS (F53B Minor)	8.62	0.79	µg/kg dry	8.88	ND	97.1		56-156			
11Cl-PF3OUdS (F53B Major)	9.31	0.79	µg/kg dry	8.94	ND	104		46-156			
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	14.6	2.0	µg/kg dry	25.8	ND	**56.5**	*	62-129			MS-07A
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	69.7	9.9	µg/kg dry	129	ND	**54.0**	*	63-134			MS-07A
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	95.4	9.9	µg/kg dry	129	ND	74.0		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	4.09	0.39	µg/kg dry	4.21	ND	97.0		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.24	0.39	µg/kg dry	4.74	ND	89.6		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.44	0.39	µg/kg dry	4.74	ND	93.8		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.64	0.39	µg/kg dry	4.74	ND	97.9		48-161			
Surrogate: 13C4-PFBA	*8.97*		µg/kg dry	9.87		91.0		10-130			
Surrogate: 13C5-PFPeA	*4.45*		µg/kg dry	4.93		90.2		35-150			
Surrogate: 13C5-PFHxA	*2.25*		µg/kg dry	2.47		91.3		55-150			
Surrogate: 13C4-PFHpA	*2.33*		µg/kg dry	2.47		94.4		55-150			
Surrogate: 13C8-PFOA	*2.28*		µg/kg dry	2.47		92.6		60-140			
Surrogate: 13C9-PFNA	*1.13*		µg/kg dry	1.23		91.5		55-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B360699 - Draft Method 1633											
Matrix Spike (B360699-MS1)		**Source: 23K1873-11RE1**		Prepared: 12/14/23 Analyzed: 12/18/23							
Surrogate: 13C6-PFDA	*1.13*		µg/kg dry	1.23		91.7	50-140				
Surrogate: 13C7-PFUnA	*1.12*		µg/kg dry	1.23		90.4	30-140				
Surrogate: 13C2-PFDoA	*1.11*		µg/kg dry	1.23		89.8	10-150				
Surrogate: 13C2-PFTeDA	*1.09*		µg/kg dry	1.23		88.8	10-130				
Surrogate: 13C3-PFBS	*2.00*		µg/kg dry	2.47		81.0	55-150				
Surrogate: 13C3-PFHxS	*2.35*		µg/kg dry	2.47		95.4	55-150				
Surrogate: 13C8-PFOS	*2.20*		µg/kg dry	2.47		89.4	45-140				
Surrogate: 13C2-4:2FTS	*3.92*		µg/kg dry	4.93		79.5	60-200				
Surrogate: 13C2-6:2FTS	*5.95*		µg/kg dry	4.93		121	60-200				
Surrogate: 13C2-8:2FTS	*6.69*		µg/kg dry	4.93		136	50-200				
Surrogate: 13C8-PFOSA	*1.86*		µg/kg dry	2.47		75.4	30-130				
Surrogate: D3-NMeFOSA	*1.79*		µg/kg dry	2.47		72.7	15-130				
Surrogate: D5-NEtFOSA	*1.75*		µg/kg dry	2.47		70.9	10-130				
Surrogate: D3-NMeFOSAA	*5.04*		µg/kg dry	4.93		102	45-200				
Surrogate: D5-NEtFOSAA	*5.31*		µg/kg dry	4.93		108	10-200				
Surrogate: D7-NMeFOSE	*20.6*		µg/kg dry	24.7		83.5	10-150				
Surrogate: D9-NEtFOSE	*21.4*		µg/kg dry	24.7		86.7	10-150				
Surrogate: 13C3-HFPO-DA	*8.87*		µg/kg dry	9.87		89.9	25-160				
Matrix Spike Dup (B360699-MSD1)		**Source: 23K1873-11RE1**		Prepared: 12/14/23 Analyzed: 12/18/23							
Perfluorobutanoic acid (PFBA)	11.7	0.92	µg/kg dry	11.1	0.395	102	58-148	**20.4**	*	20	R-06
Perfluoropentanoic acid (PFPeA)	5.76	0.46	µg/kg dry	5.53	0.306	98.6	54-152	**20.8**	*	20	R-06
Perfluorohexanoic acid (PFHxA)	2.95	0.23	µg/kg dry	2.77	0.211	98.9	55-152	20.7		25	
Perfluoroheptanoic acid (PFHpA)	2.80	0.23	µg/kg dry	2.77	0.127	96.5	54-154	19.0		25	
Perfluorooctanoic acid (PFOA)	3.42	0.23	µg/kg dry	2.77	0.585	103	52-161	20.3		25	
Perfluorononanoic acid (PFNA)	3.17	0.23	µg/kg dry	2.77	0.353	102	59-149	18.2		25	
Perfluorodecanoic acid (PFDA)	3.10	0.23	µg/kg dry	2.77	0.359	98.9	52-147	19.6		25	
Perfluoroundecanoic acid (PFUnA)	3.09	0.23	µg/kg dry	2.77	0.229	103	48-159	22.6		30	
Perfluorododecanoic acid (PFDoA)	2.97	0.23	µg/kg dry	2.77	0.119	103	64-142	19.2		25	
Perfluorotridecanoic acid (PFTrDA)	2.92	0.23	µg/kg dry	2.77	0.0783	103	49-148	21.4		25	
Perfluorotetradecanoic acid (PFTeDA)	2.87	0.23	µg/kg dry	2.77	0.0462	102	47-161	24.0		25	
Perfluorobutanesulfonic acid (PFBS)	2.53	0.23	µg/kg dry	2.46	ND	103	62-144	**20.9**	*	20	R-06
Perfluoropentanesulfonic acid (PFPeS)	2.46	0.23	µg/kg dry	2.60	ND	94.6	59-151	21.1		25	
Perfluorohexanesulfonic acid (PFHxS)	2.30	0.23	µg/kg dry	2.53	ND	91.0	57-146	19.1		25	
Perfluoroheptanesulfonic acid (PFHpS)	2.59	0.23	µg/kg dry	2.64	ND	98.2	55-152	17.1		25	
Perfluorooctanesulfonic acid (PFOS)	3.78	0.23	µg/kg dry	2.57	1.21	100	58-149	16.7		20	
Perfluorononanesulfonic acid (PFNS)	2.78	0.23	µg/kg dry	2.66	ND	104	52-148	19.7		25	
Perfluorodecanesulfonic acid (PFDS)	3.19	0.23	µg/kg dry	2.67	0.388	105	51-147	16.1		25	
Perfluorododecanesulfonic acid (PFDoS)	2.42	0.23	µg/kg dry	2.68	ND	90.2	36-145	20.3		30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	10.7	0.92	µg/kg dry	10.4	ND	103	67-146	21.9		25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	10.7	0.92	µg/kg dry	10.5	ND	102	61-151	20.4		30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	11.4	0.92	µg/kg dry	10.7	ND	107	63-152	18.9		30	
Perfluorooctanesulfonamide (PFOSA)	2.83	0.23	µg/kg dry	2.77	ND	102	61-148	**20.7**	*	20	R-06
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.73	0.23	µg/kg dry	2.77	ND	98.7	63-145	23.1		25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.64	0.23	µg/kg dry	2.77	ND	95.5	65-139	**25.9**	*	25	R-06
N-MeFOSAA (NMeFOSAA)	2.70	0.23	µg/kg dry	2.77	ND	97.6	58-144	**28.5**	*	25	R-06
N-EtFOSAA (NEtFOSAA)	2.83	0.23	µg/kg dry	2.77	ND	102	59-146	21.2		25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	27.3	2.3	µg/kg dry	27.7	ND	98.6	71-136	**23.1**	*	20	R-06

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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 B360699 - Draft Method 1633												
Matrix Spike Dup (B360699-MSD1)	**Source: 23K1873-11RE1**		Prepared: 12/14/23 Analyzed: 12/18/23									
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	27.2	2.3	µg/kg dry	27.7	ND	98.2		69-137	21.3		25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.6	0.92	µg/kg dry	11.1	ND	96.0		63-144	17.5		25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.77	0.92	µg/kg dry	10.4	ND	93.5		68-146	18.0		20	
9Cl-PF3ONS (F53B Minor)	10.4	0.92	µg/kg dry	10.4	ND	101		56-156	19.1		30	
11Cl-PF3OUdS (F53B Major)	11.2	0.92	µg/kg dry	10.4	ND	107		46-156	18.3		35	
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	18.2	2.3	µg/kg dry	30.2	ND	**60.4**	*	62-129	**22.1**	*	20	MS-07A, R-06
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	80.8	12	µg/kg dry	151	ND	**53.6**	*	63-134	14.8		20	MS-07A
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	123	12	µg/kg dry	151	ND	81.5		50-138	**25.1**	*	25	R-06
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	4.81	0.46	µg/kg dry	4.92	ND	97.7		56-151	16.2		20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.97	0.46	µg/kg dry	5.53	ND	89.9		51-145	15.9		25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	5.24	0.46	µg/kg dry	5.53	ND	94.6		55-148	16.4		20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.46	0.46	µg/kg dry	5.53	ND	98.6		48-161	16.3		35	
Surrogate: 13C4-PFBA	*10.3*		µg/kg dry	11.5		89.2		10-130				
Surrogate: 13C5-PFPeA	*5.12*		µg/kg dry	5.76		88.8		35-150				
Surrogate: 13C5-PFHxA	*2.60*		µg/kg dry	2.88		90.4		55-150				
Surrogate: 13C4-PFHpA	*2.70*		µg/kg dry	2.88		93.8		55-150				
Surrogate: 13C8-PFOA	*2.67*		µg/kg dry	2.88		92.8		60-140				
Surrogate: 13C9-PFNA	*1.32*		µg/kg dry	1.44		91.6		55-140				
Surrogate: 13C6-PFDA	*1.29*		µg/kg dry	1.44		89.7		50-140				
Surrogate: 13C7-PFUnA	*1.29*		µg/kg dry	1.44		89.3		30-140				
Surrogate: 13C2-PFDoA	*1.29*		µg/kg dry	1.44		89.6		10-150				
Surrogate: 13C2-PFTeDA	*1.24*		µg/kg dry	1.44		86.3		10-130				
Surrogate: 13C3-PFBS	*2.34*		µg/kg dry	2.88		81.2		55-150				
Surrogate: 13C3-PFHxS	*2.69*		µg/kg dry	2.88		93.4		55-150				
Surrogate: 13C8-PFOS	*2.60*		µg/kg dry	2.88		90.3		45-140				
Surrogate: 13C2-4:2FTS	*4.59*		µg/kg dry	5.76		79.7		60-200				
Surrogate: 13C2-6:2FTS	*7.06*		µg/kg dry	5.76		123		60-200				
Surrogate: 13C2-8:2FTS	*8.05*		µg/kg dry	5.76		140		50-200				
Surrogate: 13C8-PFOSA	*2.24*		µg/kg dry	2.88		77.6		30-130				
Surrogate: D3-NMeFOSA	*2.19*		µg/kg dry	2.88		76.0		15-130				
Surrogate: D5-NEtFOSA	*2.10*		µg/kg dry	2.88		72.9		10-130				
Surrogate: D3-NMeFOSAA	*5.96*		µg/kg dry	5.76		103		45-200				
Surrogate: D5-NEtFOSAA	*6.07*		µg/kg dry	5.76		105		10-200				
Surrogate: D7-NMeFOSE	*25.2*		µg/kg dry	28.8		87.4		10-150				
Surrogate: D9-NEtFOSE	*26.1*		µg/kg dry	28.8		90.5		10-150				
Surrogate: 13C3-HFPO-DA	*10.2*		µg/kg dry	11.5		88.6		25-160				

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B358237 - SW-846 9045C											
LCS (B358237-BS1)				Prepared & Analyzed: 11/15/23							
pH	5.99		pH Units	6.00		99.9		90-110			
Batch B358683 - SW 846 9060A											
Blank (B358683-BLK1)				Prepared & Analyzed: 11/21/23							
Total Organic Carbon	ND	100	mg/Kg wet								
LCS (B358683-BS1)				Prepared & Analyzed: 11/21/23							
Total Organic Carbon	749	100	mg/Kg wet	750		99.8		67.3-125			
LCS Dup (B358683-BSD1)				Prepared & Analyzed: 11/21/23							
Total Organic Carbon	700	100	mg/Kg wet	750		93.3		67.3-125	6.70	26.4	
Matrix Spike (B358683-MS1)	**Source: 23K1873-11**			Prepared & Analyzed: 11/21/23							
Total Organic Carbon	20000	140	mg/Kg dry	1030	18900	107		85-115			
Matrix Spike Dup (B358683-MSD1)	**Source: 23K1873-11**			Prepared & Analyzed: 11/21/23							
Total Organic Carbon	20800	140	mg/Kg dry	1030	18900	**181**	*	85-115	3.73	20	MS-11

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
Blank (B360405-BLK1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorobutanoic acid (PFBA)	ND	7.2	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	3.6	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	ng/L							PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	7.2	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	7.2	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	89	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	89	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	3.6	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	ng/L							
Surrogate: 13C4-PFBA	*151*		ng/L	179		84.6	10-130			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633											
Blank (B360405-BLK1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Surrogate: 13C5-PFPeA	*76.0*		ng/L	89.5		84.9		35-150			
Surrogate: 13C5-PFHxA	*38.4*		ng/L	44.7		85.8		55-150			
Surrogate: 13C4-PFHpA	*38.6*		ng/L	44.7		86.2		55-150			
Surrogate: 13C8-PFOA	*39.9*		ng/L	44.7		89.1		60-140			
Surrogate: 13C9-PFNA	*18.2*		ng/L	22.4		81.5		55-140			
Surrogate: 13C6-PFDA	*19.8*		ng/L	22.4		88.5		50-140			
Surrogate: 13C7-PFUnA	*18.5*		ng/L	22.4		82.9		30-140			
Surrogate: 13C2-PFDoA	*18.2*		ng/L	22.4		81.5		10-150			
Surrogate: 13C2-PFTeDA	*18.5*		ng/L	22.4		82.6		10-130			
Surrogate: 13C3-PFBS	*34.2*		ng/L	44.7		76.5		55-150			
Surrogate: 13C3-PFHxS	*37.7*		ng/L	44.7		84.3		55-150			
Surrogate: 13C8-PFOS	*38.3*		ng/L	44.7		85.7		45-140			
Surrogate: 13C2-4:2FTS	*53.3*		ng/L	89.5		**59.6**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*89.8*		ng/L	89.5		100		60-200			
Surrogate: 13C2-8:2FTS	*97.2*		ng/L	89.5		109		50-200			
Surrogate: 13C8-PFOSA	*33.1*		ng/L	44.7		74.0		30-130			
Surrogate: D3-NMeFOSA	*32.4*		ng/L	44.7		72.4		15-130			
Surrogate: D5-NEtFOSA	*33.6*		ng/L	44.7		75.1		10-130			
Surrogate: D3-NMeFOSAA	*79.6*		ng/L	89.5		89.0		45-200			
Surrogate: D5-NEtFOSAA	*75.0*		ng/L	89.5		83.8		10-200			
Surrogate: D7-NMeFOSE	*342*		ng/L	447		76.5		10-150			
Surrogate: D9-NEtFOSE	*353*		ng/L	447		78.8		10-150			
Surrogate: 13C3-HFPO-DA	*152*		ng/L	179		85.0		25-160			
LCS (B360405-BS1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Perfluorobutanoic acid (PFBA)	97.7	3.9	ng/L	94.4		104		58-148			
Perfluoropentanoic acid (PFPeA)	47.6	2.0	ng/L	47.2		101		54-152			
Perfluorohexanoic acid (PFHxA)	23.6	0.98	ng/L	23.6		100		55-152			
Perfluoroheptanoic acid (PFHpA)	23.9	0.98	ng/L	23.6		101		54-154			
Perfluorooctanoic acid (PFOA)	24.1	0.98	ng/L	23.6		102		52-161			
Perfluorononanoic acid (PFNA)	24.7	0.98	ng/L	23.6		105		59-149			
Perfluorodecanoic acid (PFDA)	24.3	0.98	ng/L	23.6		103		52-147			
Perfluoroundecanoic acid (PFUnA)	24.5	0.98	ng/L	23.6		104		48-159			
Perfluorododecanoic acid (PFDoA)	24.6	0.98	ng/L	23.6		104		64-142			
Perfluorotridecanoic acid (PFTrDA)	23.7	0.98	ng/L	23.6		101		49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.8	0.98	ng/L	23.6		105		47-161			
Perfluorobutanesulfonic acid (PFBS)	21.7	0.98	ng/L	20.9		104		62-144			
Perfluoropentanesulfonic acid (PFPeS)	22.0	0.98	ng/L	22.2		99.1		59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.9	0.98	ng/L	21.6		96.7		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	22.8	0.98	ng/L	22.5		102		55-152			
Perfluorooctanesulfonic acid (PFOS)	21.0	0.98	ng/L	21.9		95.9		58-149			
Perfluorononanesulfonic acid (PFNS)	22.3	0.98	ng/L	22.7		98.0		52-148			
Perfluorodecanesulfonic acid (PFDS)	22.2	0.98	ng/L	22.8		97.5		51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.0	0.98	ng/L	22.9		91.6		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	92.7	3.9	ng/L	88.5		105		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	98.2	3.9	ng/L	89.6		110		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	99.5	3.9	ng/L	90.8		110		63-152			
Perfluorooctanesulfonamide (PFOSA)	24.8	0.98	ng/L	23.6		105		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	23.2	0.98	ng/L	23.6		98.5		63-145			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
LCS (B360405-BS1)				Prepared: 12/11/23 Analyzed: 12/13/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	22.0	0.98	ng/L	23.6		93.4	65-139			
N-MeFOSAA (NMeFOSAA)	23.9	0.98	ng/L	23.6		101	58-144			
N-EtFOSAA (NEtFOSAA)	24.7	0.98	ng/L	23.6		105	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	238	9.8	ng/L	236		101	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	238	9.8	ng/L	236		101	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	103	3.9	ng/L	94.4		109	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	95.3	3.9	ng/L	89.0		107	68-146			
9Cl-PF3ONS (F53B Minor)	99.1	3.9	ng/L	88.5		112	56-156			
11Cl-PF3OUdS (F53B Major)	99.5	3.9	ng/L	89.0		112	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	235	9.8	ng/L	236		99.6	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1230	49	ng/L	1180		104	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1220	49	ng/L	1180		103	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	47.1	2.0	ng/L	42.0		112	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.9	2.0	ng/L	47.2		101	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.7	2.0	ng/L	47.2		105	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.8	2.0	ng/L	47.2		101	48-161			
Surrogate: 13C4-PFBA	*79.2*		ng/L	98.3		80.6	10-130			
Surrogate: 13C5-PFPeA	*39.3*		ng/L	49.1		80.0	35-150			
Surrogate: 13C5-PFHxA	*20.0*		ng/L	24.6		81.4	55-150			
Surrogate: 13C4-PFHpA	*20.1*		ng/L	24.6		81.8	55-150			
Surrogate: 13C8-PFOA	*19.4*		ng/L	24.6		78.8	60-140			
Surrogate: 13C9-PFNA	*9.68*		ng/L	12.3		78.8	55-140			
Surrogate: 13C6-PFDA	*9.68*		ng/L	12.3		78.8	50-140			
Surrogate: 13C7-PFUnA	*9.56*		ng/L	12.3		77.8	30-140			
Surrogate: 13C2-PFDoA	*9.50*		ng/L	12.3		77.3	10-150			
Surrogate: 13C2-PFTeDA	*9.23*		ng/L	12.3		75.1	10-130			
Surrogate: 13C3-PFBS	*17.8*		ng/L	24.6		72.5	55-150			
Surrogate: 13C3-PFHxS	*20.4*		ng/L	24.6		83.2	55-150			
Surrogate: 13C8-PFOS	*20.6*		ng/L	24.6		83.9	45-140			
Surrogate: 13C2-4:2FTS	*30.8*		ng/L	49.1		62.6	60-200			
Surrogate: 13C2-6:2FTS	*49.9*		ng/L	49.1		102	60-200			
Surrogate: 13C2-8:2FTS	*55.0*		ng/L	49.1		112	50-200			
Surrogate: 13C8-PFOSA	*18.5*		ng/L	24.6		75.4	30-130			
Surrogate: D3-NMeFOSA	*17.4*		ng/L	24.6		70.8	15-130			
Surrogate: D5-NEtFOSA	*17.9*		ng/L	24.6		73.0	10-130			
Surrogate: D3-NMeFOSAA	*43.0*		ng/L	49.1		87.6	45-200			
Surrogate: D5-NEtFOSAA	*41.2*		ng/L	49.1		83.9	10-200			
Surrogate: D7-NMeFOSE	*179*		ng/L	246		72.9	10-150			
Surrogate: D9-NEtFOSE	*184*		ng/L	246		74.8	10-150			
Surrogate: 13C3-HFPO-DA	*77.4*		ng/L	98.3		78.7	25-160			
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorobutanoic acid (PFBA)	9.30	3.9	ng/L	7.85		118	0-200			
Perfluoropentanoic acid (PFPeA)	3.98	2.0	ng/L	3.92		101	0-200			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorohexanoic acid (PFHxA)	1.96	0.98	ng/L	1.96		99.8	0-200			
Perfluoroheptanoic acid (PFHpA)	2.25	0.98	ng/L	1.96		115	0-200			
Perfluorooctanoic acid (PFOA)	1.97	0.98	ng/L	1.96		100	0-200			
Perfluorononanoic acid (PFNA)	1.96	0.98	ng/L	1.96		99.7	0-200			
Perfluorodecanoic acid (PFDA)	1.97	0.98	ng/L	1.96		101	0-200			
Perfluoroundecanoic acid (PFUnA)	1.81	0.98	ng/L	1.96		92.5	0-200			
Perfluorododecanoic acid (PFDoA)	2.49	0.98	ng/L	1.96		127	0-200			
Perfluorotridecanoic acid (PFTrDA)	1.85	0.98	ng/L	1.96		94.4	0-200			
Perfluorotetradecanoic acid (PFTeDA)	1.98	0.98	ng/L	1.96		101	0-200			
Perfluorobutanesulfonic acid (PFBS)	1.66	0.98	ng/L	1.74		95.5	0-200			
Perfluoropentanesulfonic acid (PFPeS)	1.75	0.98	ng/L	1.84		94.9	0-200			
Perfluorohexanesulfonic acid (PFHxS)	1.83	0.98	ng/L	1.80		102	0-200			
Perfluoroheptanesulfonic acid (PFHpS)	1.59	0.98	ng/L	1.87		85.3	0-200			
Perfluorooctanesulfonic acid (PFOS)	1.88	0.98	ng/L	1.82		103	0-200			
Perfluorononanesulfonic acid (PFNS)	1.83	0.98	ng/L	1.89		96.7	0-200			
Perfluorodecanesulfonic acid (PFDS)	1.74	0.98	ng/L	1.89		91.9	0-200			
Perfluorododecanesulfonic acid (PFDoS)	1.81	0.98	ng/L	1.90		95.0	0-200			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.42	3.9	ng/L	7.36		101	0-200			PF-17C
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.61	3.9	ng/L	7.46		102	0-200			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.89	3.9	ng/L	7.55		104	0-200			
Perfluorooctanesulfonamide (PFOSA)	2.06	0.98	ng/L	1.96		105	0-200			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.12	0.98	ng/L	1.96		108	0-200			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.79	0.98	ng/L	1.96		91.0	0-200			
N-MeFOSAA (NMeFOSAA)	1.75	0.98	ng/L	1.96		89.1	0-200			
N-EtFOSAA (NEtFOSAA)	1.96	0.98	ng/L	1.96		100	0-200			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	18.5	9.8	ng/L	19.6		94.4	0-200			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	18.7	9.8	ng/L	19.6		95.4	0-200			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.09	3.9	ng/L	7.85		90.4	0-200			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.65	3.9	ng/L	7.41		89.8	0-200			
9Cl-PF3ONS (F53B Minor)	6.84	3.9	ng/L	7.36		93.0	0-200			
11Cl-PF3OUdS (F53B Major)	6.97	3.9	ng/L	7.41		94.1	0-200			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	15.9	9.8	ng/L	19.6		80.8	0-200			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	79.2	49	ng/L	98.1		80.7	0-200			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	76.3	49	ng/L	98.1		77.8	0-200			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.15	2.0	ng/L	3.49		90.3	0-200			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.29	2.0	ng/L	3.92		83.9	0-200			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.31	2.0	ng/L	3.92		84.2	0-200			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.77	2.0	ng/L	3.92		96.1	0-200			
Surrogate: 13C4-PFBA	*81.3*		ng/L	98.1		82.8	10-130			
Surrogate: 13C5-PFPeA	*41.2*		ng/L	49.1		84.1	35-150			
Surrogate: 13C5-PFHxA	*20.9*		ng/L	24.5		85.0	55-150			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633											
MRL Check (B360405-MRL1)				Prepared: 12/11/23 Analyzed: 12/13/23							
Surrogate: 13C4-PFHpA	*20.7*		ng/L	24.5		84.2		55-150			
Surrogate: 13C8-PFOA	*20.0*		ng/L	24.5		81.7		60-140			
Surrogate: 13C9-PFNA	*9.95*		ng/L	12.3		81.1		55-140			
Surrogate: 13C6-PFDA	*10.2*		ng/L	12.3		82.8		50-140			
Surrogate: 13C7-PFUnA	*9.87*		ng/L	12.3		80.5		30-140			
Surrogate: 13C2-PFDoA	*9.61*		ng/L	12.3		78.3		10-150			
Surrogate: 13C2-PFTeDA	*9.40*		ng/L	12.3		76.7		10-130			
Surrogate: 13C3-PFBS	*18.0*		ng/L	24.5		73.4		55-150			
Surrogate: 13C3-PFHxS	*20.4*		ng/L	24.5		83.2		55-150			
Surrogate: 13C8-PFOS	*19.6*		ng/L	24.5		79.9		45-140			
Surrogate: 13C2-4:2FTS	*29.0*		ng/L	49.1		**59.1**	*	60-200			PF-17C
Surrogate: 13C2-6:2FTS	*49.5*		ng/L	49.1		101		60-200			
Surrogate: 13C2-8:2FTS	*54.9*		ng/L	49.1		112		50-200			
Surrogate: 13C8-PFOSA	*17.9*		ng/L	24.5		73.0		30-130			
Surrogate: D3-NMeFOSA	*15.6*		ng/L	24.5		63.6		15-130			
Surrogate: D5-NEtFOSA	*16.2*		ng/L	24.5		66.1		10-130			
Surrogate: D3-NMeFOSAA	*42.5*		ng/L	49.1		86.5		45-200			
Surrogate: D5-NEtFOSAA	*39.8*		ng/L	49.1		81.2		10-200			
Surrogate: D7-NMeFOSE	*178*		ng/L	245		72.7		10-150			
Surrogate: D9-NEtFOSE	*180*		ng/L	245		73.3		10-150			
Surrogate: 13C3-HFPO-DA	*81.8*		ng/L	98.1		83.4		25-160			
Matrix Spike (B360405-MS1)	**Source: 23K1873-11**			Prepared: 12/11/23 Analyzed: 12/13/23							
Perfluorobutanoic acid (PFBA)	213	8.0	ng/L	191	6.46	108		58-148			
Perfluoropentanoic acid (PFPeA)	104	4.0	ng/L	95.5	1.43	108		54-152			
Perfluorohexanoic acid (PFHxA)	52.6	2.0	ng/L	47.7	1.05	108		55-152			
Perfluoroheptanoic acid (PFHpA)	51.8	2.0	ng/L	47.7	0.694	107		54-154			
Perfluorooctanoic acid (PFOA)	56.3	2.0	ng/L	47.7	4.43	109		52-161			
Perfluorononanoic acid (PFNA)	54.1	2.0	ng/L	47.7	ND	113		59-149			
Perfluorodecanoic acid (PFDA)	51.2	2.0	ng/L	47.7	ND	107		52-147			
Perfluoroundecanoic acid (PFUnA)	52.9	2.0	ng/L	47.7	ND	111		48-159			
Perfluorododecanoic acid (PFDoA)	53.2	2.0	ng/L	47.7	ND	111		64-142			
Perfluorotridecanoic acid (PFTrDA)	50.6	2.0	ng/L	47.7	ND	106		49-148			
Perfluorotetradecanoic acid (PFTeDA)	53.1	2.0	ng/L	47.7	ND	111		47-161			
Perfluorobutanesulfonic acid (PFBS)	47.6	2.0	ng/L	42.4	ND	112		62-144			
Perfluoropentanesulfonic acid (PFPeS)	48.5	2.0	ng/L	44.9	ND	108		59-151			
Perfluorohexanesulfonic acid (PFHxS)	45.6	2.0	ng/L	43.7	ND	104		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	48.2	2.0	ng/L	45.5	ND	106		55-152			
Perfluorooctanesulfonic acid (PFOS)	49.8	2.0	ng/L	44.3	2.61	107		58-149			
Perfluorononanesulfonic acid (PFNS)	47.6	2.0	ng/L	46.0	ND	104		52-148			
Perfluorodecanesulfonic acid (PFDS)	46.1	2.0	ng/L	46.1	ND	100		51-147			
Perfluorododecanesulfonic acid (PFDoS)	39.9	2.0	ng/L	46.3	ND	86.3		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	202	8.0	ng/L	179	ND	113		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	213	8.0	ng/L	181	2.95	116		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	218	8.0	ng/L	184	ND	119		63-152			
Perfluorooctanesulfonamide (PFOSA)	52.9	2.0	ng/L	47.7	ND	111		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	52.8	2.0	ng/L	47.7	ND	111		63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	51.8	2.0	ng/L	47.7	ND	109		65-139			
N-MeFOSAA (NMeFOSAA)	49.6	2.0	ng/L	47.7	ND	104		58-144			

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
Matrix Spike (B360405-MS1)	**Source: 23K1873-11**			Prepared: 12/11/23 Analyzed: 12/13/23						
N-EtFOSAA (NEtFOSAA)	52.7	2.0	ng/L	47.7	ND	110	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	520	20	ng/L	477	ND	109	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	523	20	ng/L	477	ND	110	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	203	8.0	ng/L	191	ND	106	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	195	8.0	ng/L	180	ND	108	68-146			
9Cl-PF3ONS (F53B Minor)	201	8.0	ng/L	179	ND	112	56-156			
11Cl-PF3OUdS (F53B Major)	199	8.0	ng/L	180	ND	110	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	482	20	ng/L	477	ND	101	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	2540	99	ng/L	2390	ND	107	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	2570	99	ng/L	2390	ND	108	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	96.7	4.0	ng/L	85.0	ND	114	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	94.3	4.0	ng/L	95.5	ND	98.8	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	101	4.0	ng/L	95.5	ND	106	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	96.4	4.0	ng/L	95.5	ND	101	48-161			
Surrogate: 13C4-PFBA	*159*		ng/L	199		80.1	10-130			
Surrogate: 13C5-PFPeA	*78.9*		ng/L	99.5		79.4	35-150			
Surrogate: 13C5-PFHxA	*40.3*		ng/L	49.7		81.1	55-150			
Surrogate: 13C4-PFHpA	*41.5*		ng/L	49.7		83.5	55-150			
Surrogate: 13C8-PFOA	*40.4*		ng/L	49.7		81.3	60-140			
Surrogate: 13C9-PFNA	*19.2*		ng/L	24.9		77.4	55-140			
Surrogate: 13C6-PFDA	*20.1*		ng/L	24.9		80.9	50-140			
Surrogate: 13C7-PFUnA	*18.7*		ng/L	24.9		75.2	30-140			
Surrogate: 13C2-PFDoA	*18.3*		ng/L	24.9		73.6	10-150			
Surrogate: 13C2-PFTeDA	*15.9*		ng/L	24.9		63.8	10-130			
Surrogate: 13C3-PFBS	*34.4*		ng/L	49.7		69.2	55-150			
Surrogate: 13C3-PFHxS	*40.1*		ng/L	49.7		80.5	55-150			
Surrogate: 13C8-PFOS	*38.7*		ng/L	49.7		77.9	45-140			
Surrogate: 13C2-4:2FTS	*63.4*		ng/L	99.5		63.8	60-200			
Surrogate: 13C2-6:2FTS	*95.6*		ng/L	99.5		96.1	60-200			
Surrogate: 13C2-8:2FTS	*107*		ng/L	99.5		107	50-200			
Surrogate: 13C8-PFOSA	*34.1*		ng/L	49.7		68.6	30-130			
Surrogate: D3-NMeFOSA	*28.8*		ng/L	49.7		58.0	15-130			
Surrogate: D5-NEtFOSA	*26.2*		ng/L	49.7		52.6	10-130			
Surrogate: D3-NMeFOSAA	*76.9*		ng/L	99.5		77.4	45-200			
Surrogate: D5-NEtFOSAA	*74.9*		ng/L	99.5		75.3	10-200			
Surrogate: D7-NMeFOSE	*346*		ng/L	497		69.6	10-150			
Surrogate: D9-NEtFOSE	*347*		ng/L	497		69.8	10-150			
Surrogate: 13C3-HFPO-DA	*155*		ng/L	199		77.8	25-160			
Matrix Spike Dup (B360405-MSD1)	**Source: 23K1873-11**			Prepared: 12/11/23 Analyzed: 12/13/23						
Perfluorobutanoic acid (PFBA)	241	9.0	ng/L	217	6.46	108	58-148	12.3	20	
Perfluoropentanoic acid (PFPeA)	116	4.5	ng/L	108	1.43	106	54-152	10.8	20	
Perfluorohexanoic acid (PFHxA)	58.3	2.3	ng/L	54.2	1.05	106	55-152	10.3	25	
Perfluoroheptanoic acid (PFHpA)	56.9	2.3	ng/L	54.2	0.694	104	54-154	9.31	25	
Perfluorooctanoic acid (PFOA)	61.7	2.3	ng/L	54.2	4.43	106	52-161	9.17	25	

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633											
Matrix Spike Dup (B360405-MSD1)	**Source: 23K1873-11**			Prepared: 12/11/23 Analyzed: 12/13/23							
Perfluorononanoic acid (PFNA)	60.3	2.3	ng/L	54.2	ND	111	59-149	10.8		25	
Perfluorodecanoic acid (PFDA)	57.9	2.3	ng/L	54.2	ND	107	52-147	12.4		25	
Perfluoroundecanoic acid (PFUnA)	57.2	2.3	ng/L	54.2	ND	105	48-159	7.81		30	
Perfluorododecanoic acid (PFDoA)	59.3	2.3	ng/L	54.2	ND	109	64-142	10.8		25	
Perfluorotridecanoic acid (PFTrDA)	49.0	2.3	ng/L	54.2	ND	90.4	49-148	3.27		25	
Perfluorotetradecanoic acid (PFTeDA)	59.2	2.3	ng/L	54.2	ND	109	47-161	10.9		25	
Perfluorobutanesulfonic acid (PFBS)	51.5	2.3	ng/L	48.1	ND	107	62-144	7.94		20	
Perfluoropentanesulfonic acid (PFPeS)	52.8	2.3	ng/L	51.0	ND	104	59-151	8.60		25	
Perfluorohexanesulfonic acid (PFHxS)	50.5	2.3	ng/L	49.6	ND	102	57-146	10.3		25	
Perfluoroheptanesulfonic acid (PFHpS)	59.4	2.3	ng/L	51.7	ND	115	55-152	20.8		25	
Perfluorooctanesulfonic acid (PFOS)	55.2	2.3	ng/L	50.3	2.61	105	58-149	10.2		20	
Perfluorononanesulfonic acid (PFNS)	50.7	2.3	ng/L	52.2	ND	97.2	52-148	6.29		25	
Perfluorodecanesulfonic acid (PFDS)	42.9	2.3	ng/L	52.3	ND	82.0	51-147	7.16		25	
Perfluorododecanesulfonic acid (PFDoS)	28.9	2.3	ng/L	52.6	ND	54.9	36-145	**32.1**	*	30	R-06
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	227	9.0	ng/L	203	ND	111	67-146	11.6		25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	224	9.0	ng/L	206	2.95	107	61-151	4.95		30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	232	9.0	ng/L	209	ND	111	63-152	6.07		30	
Perfluorooctanesulfonamide (PFOSA)	58.5	2.3	ng/L	54.2	ND	108	61-148	9.91		20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	58.6	2.3	ng/L	54.2	ND	108	63-145	10.4		25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	55.8	2.3	ng/L	54.2	ND	103	65-139	7.42		25	
N-MeFOSAA (NMeFOSAA)	57.8	2.3	ng/L	54.2	ND	107	58-144	15.2		25	
N-EtFOSAA (NEtFOSAA)	58.2	2.3	ng/L	54.2	ND	107	59-146	9.85		25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	560	23	ng/L	542	ND	103	71-136	7.32		20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	569	23	ng/L	542	ND	105	69-137	8.35		25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	231	9.0	ng/L	217	ND	106	63-144	13.0		25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	226	9.0	ng/L	205	ND	110	68-146	14.6		20	
9Cl-PF3ONS (F53B Minor)	189	9.0	ng/L	203	ND	92.8	56-156	6.35		30	
11Cl-PF3OUdS (F53B Major)	149	9.0	ng/L	205	ND	72.7	46-156	28.6		35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	615	23	ng/L	542	ND	113	62-129	**24.4**	*	20	R-06
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	3010	110	ng/L	2710	ND	111	63-134	16.8		20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	2840	110	ng/L	2710	ND	105	50-138	9.89		25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	103	4.5	ng/L	96.5	ND	106	56-151	5.82		20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	103	4.5	ng/L	108	ND	95.4	51-145	9.26		25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	110	4.5	ng/L	108	ND	101	55-148	8.13		20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	99.5	4.5	ng/L	108	ND	91.7	48-161	3.14		35	
Surrogate: 13C4-PFBA	*170*		ng/L	226		75.1	10-130				
Surrogate: 13C5-PFPeA	*88.8*		ng/L	113		78.6	35-150				
Surrogate: 13C5-PFHxA	*43.3*		ng/L	56.5		76.7	55-150				
Surrogate: 13C4-PFHpA	*45.5*		ng/L	56.5		80.6	55-150				
Surrogate: 13C8-PFOA	*41.7*		ng/L	56.5		73.8	60-140				
Surrogate: 13C9-PFNA	*20.2*		ng/L	28.2		71.4	55-140				

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QUALITY CONTROL

SPLP - 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 B360405 - Draft Method 1633										
Matrix Spike Dup (B360405-MSD1)		**Source: 23K1873-11**		Prepared: 12/11/23 Analyzed: 12/13/23						
Surrogate: 13C6-PFDA	*19.3*		ng/L	28.2		68.5	50-140			
Surrogate: 13C7-PFUnA	*17.2*		ng/L	28.2		61.0	30-140			
Surrogate: 13C2-PFDoA	*14.5*		ng/L	28.2		51.3	10-150			
Surrogate: 13C2-PFTeDA	*10.3*		ng/L	28.2		36.6	10-130			
Surrogate: 13C3-PFBS	*33.0*		ng/L	56.5		58.4	55-150			
Surrogate: 13C3-PFHxS	*39.3*		ng/L	56.5		69.6	55-150			
Surrogate: 13C8-PFOS	*35.8*		ng/L	56.5		63.4	45-140			
Surrogate: 13C2-4:2FTS	*67.9*		ng/L	113		60.1	60-200			
Surrogate: 13C2-6:2FTS	*94.2*		ng/L	113		83.4	60-200			
Surrogate: 13C2-8:2FTS	*96.8*		ng/L	113		85.7	50-200			
Surrogate: 13C8-PFOSA	*35.5*		ng/L	56.5		62.8	30-130			
Surrogate: D3-NMeFOSA	*24.2*		ng/L	56.5		42.8	15-130			
Surrogate: D5-NEtFOSA	*23.0*		ng/L	56.5		40.7	10-130			
Surrogate: D3-NMeFOSAA	*73.2*		ng/L	113		64.8	45-200			
Surrogate: D5-NEtFOSAA	*69.1*		ng/L	113		61.2	10-200			
Surrogate: D7-NMeFOSE	*276*		ng/L	565		48.8	10-150			
Surrogate: D9-NEtFOSE	*264*		ng/L	565		46.7	10-150			
Surrogate: 13C3-HFPO-DA	*163*		ng/L	226		72.2	25-160			

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix.
H-03	Sample received after recommended holding time was exceeded.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
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-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
PF-17C	Extracted internal standard is outside of control limits. Analyte is a known difficult compound.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

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CERTIFICATIONS

Certified Analyses included in this Report

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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Perfluorohexanoic acid (PFHxA)	NH-P,NY
Perfluoroheptanoic acid (PFHpA)	NH-P,NY
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY
Perfluorodecanoic acid (PFDA)	NH-P,NY
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY
11Cl-PF3OUdS (F53B Major)	NH-P,NY
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
SW 846 9060A in Soil	
Total Organic Carbon	ME,NY,NH,VA

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

Code	Description	Number	Expires
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 23K1873 KAM

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460 Pace callout # 147704
Collected By (print): C. CAPPELLANO	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: U U U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

	Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: PFAS 1633 (1, 125 mL/sample)	PFAS SPLP 1633 (1, 250 mL/sample)	TOC and pH (1, 8 oz Amber Glass/sample)
1	SB-7(0'-2')	SL	C	11-9-23	7:50				1	X		
2	SB-7 (2'-12")	SL	C	11-9-23	8:00				3	X	X	X
3	DUPSB-7(2'-12")	SL	C	11-9-23	8:00				3	X	X	X
4	SB-6 (0'-2')	SL	C	11-9-23	10:15				1	X	X (@)	
5	SB-6 (2'-12")	SL	C	11-9-23	11:45				3	X	X	X
6	SB-6 (9'-10')	SL	C	11-9-23	1:45				1	X		
7	SB-8(0'-2')	SL	C	11-9-23	4:30				1	X		
8	SB-8(2'-12")	SL	C	11-9-23	4:40				1	X		
9	SB-8 (5'-6')	SL	C	11-9-23	4:55				1	X		
10	SB-9a(0'-2')	SL	C	11-10-23	7:40				1	X		

Lab Profile/Line:

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:
CO# 147704 / Site No. 2100460

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:

	Date/Time		Date/Time
Relinquished by/Company: (Signature) Cantcappellan/PES	11/13/23 1400	Received by/Company: (Signature)	11/13/23 1400
Relinquished by/Company: (Signature)	11/13/23 1000	Received by/Company: (Signature) p.pac	11-13-23 1120
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature) 4.5°C	Date/Time: 0728 11-14-23

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460
Collected By (print): C. CAPPELLANO	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Container Preservative Type **: U U U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses: PFAS 1633 (1, 125 mL/sample)	PFAS SPLP 1633 (1, 250 mL/sample)	TOC and pH (1, 8 oz Amber Glass/sample)
11	SB-9 (2'-2'')	SL	C	11-10-23	7:45				5	X	X	X
12	SB-9 (17-18')	SL	C	11-10-23	2:30				1	X		
13	SB-1 (0''-2'')	SL	C	11-10-23	8:15				1	X		
14	SB-1 (2''-12'')	SL	C	11-10-23	8:20				1	X		
15	SB-1 (17-18')	SL	C	11-10-23	5:30				1	X		
16	FB20231110	SL	C	11-10-23	NA				1	X		

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: *Contains MS/MSD samples FOR 1633

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
PES	11/13/23 1400		11/13/23 1400
	11/13/23 1000		11-13-23 1120
		4.5°C	0712 & 11-14-23

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Precision Environmental Services

Project Meadow Pond School

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location Meadow

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time AAM / 11-14-23 / 0728

Back-Sheet By / Date / Time AAM / 11-14-23 / 1301

Temperature Method Temp. Gun # 5

Temp ✓ ≤6° C Actual Temperature

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

work order was split after the first 20 samples

pH arrived out of hold time

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

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☐	☑
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑ AAM	☑
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☑	☐
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

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

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear				-	-		-						-									
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL																				
Sulfuric																						
Unpreserved		250mL											-									
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					
Other				-									W	-				L				

Qualtrax ID: 120836

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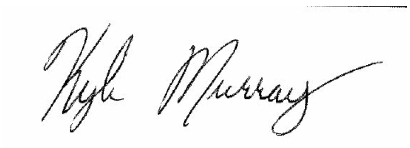
December 28, 2023

Brittany O'Brien-Drake
NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020

Project Location: South Salem, NY
Client Job Number:
Project Number: 2100460
Laboratory Work Order Number: 23K3096

Enclosed are results of analyses for samples as received by the laboratory on November 22, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brittany O'Brien-Drake

REPORT DATE: 12/28/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K3096

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

PROJECT LOCATION: South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
EQPT BLANK #1	23K3096-01	Equipment Blank Water		Draft Method 1633	
MW-7	23K3096-02	Ground Water		Draft Method 1633	
MW-6	23K3096-03	Ground Water		Draft Method 1633	
MW-10	23K3096-04	Ground Water		Draft Method 1633	
				EPA 300.0	
				EPA 350.1	
				EPA 410.4	
				EPA 906.0	CT PH-0694/NY10888/MA M-PA1457
				NA	CT PH-0694/NY10888/MA M-PA1457
				SM 21-23 4500 P E	
				SM 21-23 5210B	
				SM 21-23 5310B	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CO2 D	
				SM21-23 4500 H B	
				SW-846 6010D	
MW-12	23K3096-05	Ground Water		-	M-IN035
				Draft Method 1633	
				EPA 300.0	
				EPA 350.1	
				EPA 410.4	
				EPA 906.0	CT PH-0694/NY10888/MA M-PA1457
				NA	CT PH-0694/NY10888/MA M-PA1457
				SM 21-23 4500 P E	
				SM 21-23 5210B	
				SM 21-23 5310B	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CO2 D	
				SM21-23 4500 H B	
				SW-846 6010D	

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brittany O'Brien-Drake

REPORT DATE: 12/28/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K3096

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

PROJECT LOCATION: South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-3	23K3096-06	Ground Water		Draft Method 1633	

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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.

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Draft Method 1633

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix.

Analyte & Samples(s) Qualified:

23K3096-05[MW-12]

D-03

Sample diluted pre-extraction due to elevated TSS pre-analysis result.

Analyte & Samples(s) Qualified:

23K3096-02[MW-7], 23K3096-03[MW-6], 23K3096-06[MW-3]

PF-17C

Extracted internal standard is outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23K3096-01[EQPT BLANK #1]

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT
23K3096-01[EQPT BLANK #1]

Z-01

Extracted internal standard outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
B359705-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT
B359705-MRL1

EPA 300.0

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:

Bromide
23K3096-04[MW-10], B358952-MS1, B358952-MSD1

EPA 350.1

Qualifications:

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Ammonia as N
B360050-MS1

EPA 410.4

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand
23K3096-04[MW-10], B359465-MS1

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Z-01c

Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand
23K3096-04[MW-10], 23K3096-05[MW-12]

SM 21-23 4500 P E

Qualifications:

W-17

Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

Analyte & Samples(s) Qualified:

Orthophosphate as P
23K3096-04[MW-10], 23K3096-05[MW-12], B359075-DUP1, B359075-MS1

SM 21-23 5210B

Qualifications:

W-01

The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l dissolved oxygen depletion.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
23K3096-05[MW-12]

W-16

Blank result was >0.2mg/L.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
B358948-BLK2

SM21-23 2320B

Qualifications:

PR-18

Headspace present in sample container.

Analyte & Samples(s) Qualified:

Alkalinity to pH 4.5
23K3096-04[MW-10], 23K3096-05[MW-12], B358959-MS1, B358959-MSD1

SM21-23 2540C

Qualifications:

R-02

Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

Analyte & Samples(s) Qualified:

Total Dissolved Solids
23K3096-04[MW-10], B358974-DUP1

SM21-23 4500 H B

Qualifications:

H-05

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:

pH
23K3096-04[MW-10], 23K3096-05[MW-12], B359070-DUP1

SW-846 6010D

Qualifications:

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MS-19

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

Analyte & Samples(s) Qualified:

Calcium

23K3096-04[MW-10], B359833-MSD1

Hardness

23K3096-04[MW-10], B359833-MSD1

Z-01a

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Hardness

23K3096-04[MW-10], B359833-PS1

Z-01b

Post spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

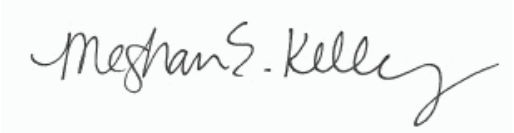
Calcium

23K3096-04[MW-10], B359833-PS1

Magnesium

23K3096-04[MW-10], B359833-PS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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

Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: EQPT BLANK #1 | Sampled: 11/21/2023 13:05

Sample ID: 23K3096-01

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.0	1.4	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.35	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorooctanoic acid (PFOA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorodecanoic acid (PFDA)	ND	1.0	0.18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.0	0.21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.0	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.70	ng/L	1	PF-17C	Draft Method 1633	12/6/23	12/7/23 12:30	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	0.98	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.41	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.6	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.4	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.85	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.0	0.97	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	1.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	10	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	8.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: EQPT BLANK #1 | Sampled: 11/21/2023 13:05

Sample ID: 23K3096-01

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.86	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:30	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	66.6		10-130		12/7/23 12:30
13C5-PFPeA	63.9		35-150		12/7/23 12:30
13C5-PFHxA	66.2		55-150		12/7/23 12:30
13C4-PFHpA	70.2		55-150		12/7/23 12:30
13C8-PFOA	67.1		60-140		12/7/23 12:30
13C9-PFNA	61.2		55-140		12/7/23 12:30
13C6-PFDA	61.9		50-140		12/7/23 12:30
13C7-PFUnA	56.0		30-140		12/7/23 12:30
13C2-PFDoA	53.5		10-150		12/7/23 12:30
13C2-PFTeDA	49.6		10-130		12/7/23 12:30
13C3-PFBS	57.9		55-150		12/7/23 12:30
13C3-PFHxS	66.6		55-150		12/7/23 12:30
13C8-PFOS	62.8		45-140		12/7/23 12:30
13C2-4:2FTS	**51.8**	*	60-200	PF-17C	12/7/23 12:30
13C2-6:2FTS	63.6		60-200		12/7/23 12:30
13C2-8:2FTS	58.1		50-200		12/7/23 12:30
13C8-PFOSA	58.2		30-130		12/7/23 12:30
D3-NMeFOSA	54.3		15-130		12/7/23 12:30
D5-NEtFOSA	55.0		10-130		12/7/23 12:30
D3-NMeFOSAA	57.0		45-200		12/7/23 12:30
D5-NEtFOSAA	57.2		10-200		12/7/23 12:30
D7-NMeFOSE	53.6		10-150		12/7/23 12:30
D9-NEtFOSE	54.4		10-150		12/7/23 12:30
13C3-HFPO-DA	62.7		25-160		12/7/23 12:30

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: EQPT BLANK #1 | Sampled: 11/21/2023 13:05

Sample ID: 23K3096-01

Sample Matrix: Equipment Blank Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10		mg/L	1		Draft Method 1633	11/28/23	11/28/23 6:06	LL

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-7 | Sampled: 11/21/2023 14:10

Sample ID: 23K3096-02

Sample Matrix: Ground Water

Sample Flags: D-03

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)	260	400	150	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoropentanoic acid (PFPeA)	56	200	35	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorohexanoic acid (PFHxA)	ND	100	22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoroheptanoic acid (PFHpA)	ND	100	25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorooctanoic acid (PFOA)	ND	100	23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorononanoic acid (PFNA)	ND	100	19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorodecanoic acid (PFDA)	ND	100	18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoroundecanoic acid (PFUnA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorododecanoic acid (PFDoA)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	100	25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	100	24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	100	21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	100	32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorononanesulfonic acid (PFNS)	ND	100	29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	400	70	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	400	99	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	400	110	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	100	42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-MeFOSAA (NMeFOSAA)	ND	100	44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-EtFOSAA (NEtFOSAA)	ND	100	22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1000	260	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1000	250	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	400	100	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	400	69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
9Cl-PF3ONS (F53B Minor)	ND	400	85	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
11Cl-PF3OUdS (F53B Major)	ND	400	97	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1000	180	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	5000	1000	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	5000	880	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	200	49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	200	50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-7 | Sampled: 11/21/2023 14:10

Sample ID: 23K3096-02

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	200	40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	200	87	ng/L	1		Draft Method 1633	12/6/23	12/7/23 12:46	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	91.8	10-130		12/7/23 12:46
13C5-PFPeA	89.9	35-150		12/7/23 12:46
13C5-PFHxA	95.3	55-150		12/7/23 12:46
13C4-PFHpA	98.4	55-150		12/7/23 12:46
13C8-PFOA	98.9	60-140		12/7/23 12:46
13C9-PFNA	92.6	55-140		12/7/23 12:46
13C6-PFDA	90.6	50-140		12/7/23 12:46
13C7-PFUnA	87.0	30-140		12/7/23 12:46
13C2-PFDoA	77.3	10-150		12/7/23 12:46
13C2-PFTeDA	69.3	10-130		12/7/23 12:46
13C3-PFBS	86.0	55-150		12/7/23 12:46
13C3-PFHxS	101	55-150		12/7/23 12:46
13C8-PFOS	92.8	45-140		12/7/23 12:46
13C2-4:2FTS	76.5	60-200		12/7/23 12:46
13C2-6:2FTS	95.2	60-200		12/7/23 12:46
13C2-8:2FTS	92.1	50-200		12/7/23 12:46
13C8-PFOSA	84.8	30-130		12/7/23 12:46
D3-NMeFOSA	69.4	15-130		12/7/23 12:46
D5-NEtFOSA	71.2	10-130		12/7/23 12:46
D3-NMeFOSAA	86.4	45-200		12/7/23 12:46
D5-NEtFOSAA	83.8	10-200		12/7/23 12:46
D7-NMeFOSE	80.8	10-150		12/7/23 12:46
D9-NEtFOSE	80.5	10-150		12/7/23 12:46
13C3-HFPO-DA	86.7	25-160		12/7/23 12:46

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

Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-7 | Sampled: 11/21/2023 14:10

Sample ID: 23K3096-02

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	66000	100		mg/L	1		Draft Method 1633	11/28/23	11/28/23 13:24	LL

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-6 | Sampled: 11/21/2023 14:00

Sample ID: 23K3096-03

Sample Matrix: Ground Water

Sample Flags: D-03

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)	310	400	150	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoropentanoic acid (PFPeA)	74	200	35	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorohexanoic acid (PFHxA)	ND	100	22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoroheptanoic acid (PFHpA)	ND	100	25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorooctanoic acid (PFOA)	ND	100	23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorononanoic acid (PFNA)	ND	100	19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorodecanoic acid (PFDA)	ND	100	18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoroundecanoic acid (PFUnA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorododecanoic acid (PFDoA)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	100	25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	100	24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	100	21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	100	32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorononanesulfonic acid (PFNS)	ND	100	29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	400	70	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	400	99	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	400	110	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	100	42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-MeFOSAA (NMeFOSAA)	ND	100	44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-EtFOSAA (NEtFOSAA)	ND	100	22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1000	260	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1000	250	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	400	100	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	400	69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
9Cl-PF3ONS (F53B Minor)	ND	400	85	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
11Cl-PF3OUdS (F53B Major)	ND	400	97	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1000	180	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	5000	1000	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	5000	880	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	200	49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	200	50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-6 | Sampled: 11/21/2023 14:00

Sample ID: 23K3096-03

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	200	40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	200	87	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:02	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	77.0	10-130		12/7/23 13:02
13C5-PFPeA	74.9	35-150		12/7/23 13:02
13C5-PFHxA	78.4	55-150		12/7/23 13:02
13C4-PFHpA	79.8	55-150		12/7/23 13:02
13C8-PFOA	77.3	60-140		12/7/23 13:02
13C9-PFNA	78.8	55-140		12/7/23 13:02
13C6-PFDA	77.1	50-140		12/7/23 13:02
13C7-PFUnA	70.7	30-140		12/7/23 13:02
13C2-PFDoA	65.3	10-150		12/7/23 13:02
13C2-PFTeDA	57.0	10-130		12/7/23 13:02
13C3-PFBS	70.5	55-150		12/7/23 13:02
13C3-PFHxS	80.1	55-150		12/7/23 13:02
13C8-PFOS	78.2	45-140		12/7/23 13:02
13C2-4:2FTS	61.6	60-200		12/7/23 13:02
13C2-6:2FTS	76.9	60-200		12/7/23 13:02
13C2-8:2FTS	71.4	50-200		12/7/23 13:02
13C8-PFOSA	76.5	30-130		12/7/23 13:02
D3-NMeFOSA	61.3	15-130		12/7/23 13:02
D5-NEtFOSA	62.0	10-130		12/7/23 13:02
D3-NMeFOSAA	72.7	45-200		12/7/23 13:02
D5-NEtFOSAA	70.7	10-200		12/7/23 13:02
D7-NMeFOSE	66.5	10-150		12/7/23 13:02
D9-NEtFOSE	66.4	10-150		12/7/23 13:02
13C3-HFPO-DA	71.9	25-160		12/7/23 13:02

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-6 | Sampled: 11/21/2023 14:00

Sample ID: 23K3096-03

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	37000	100		mg/L	1		Draft Method 1633	11/28/23	11/28/23 13:24	LL

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

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)	1.9	3.9	1.4	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoropentanoic acid (PFPeA)	0.72	1.9	0.34	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.97	0.21	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorooctanoic acid (PFOA)	0.49	0.97	0.22	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorononanoic acid (PFNA)	ND	0.97	0.19	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorodecanoic acid (PFDA)	ND	0.97	0.18	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.97	0.27	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	0.26	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	0.24	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.97	0.25	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.97	0.23	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.97	0.20	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.97	0.30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.97	0.31	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.97	0.29	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	0.30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	0.26	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.68	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.96	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	0.30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.97	0.40	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	0.30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.97	0.43	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.97	0.21	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	2.6	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	2.4	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.67	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.83	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.94	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	1.7	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	9.9	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	8.6	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

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
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.84	ng/L	1		Draft Method 1633	12/20/23	12/20/23 17:45	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	72.8	10-130		12/20/23 17:45
13C5-PFPeA	74.7	35-150		12/20/23 17:45
13C5-PFHxA	79.4	55-150		12/20/23 17:45
13C4-PFHpA	82.8	55-150		12/20/23 17:45
13C8-PFOA	79.2	60-140		12/20/23 17:45
13C9-PFNA	75.0	55-140		12/20/23 17:45
13C6-PFDA	70.9	50-140		12/20/23 17:45
13C7-PFUnA	61.4	30-140		12/20/23 17:45
13C2-PFDoA	56.5	10-150		12/20/23 17:45
13C2-PFTeDA	52.5	10-130		12/20/23 17:45
13C3-PFBS	67.8	55-150		12/20/23 17:45
13C3-PFHxS	79.9	55-150		12/20/23 17:45
13C8-PFOS	71.5	45-140		12/20/23 17:45
13C2-4:2FTS	63.9	60-200		12/20/23 17:45
13C2-6:2FTS	79.8	60-200		12/20/23 17:45
13C2-8:2FTS	85.0	50-200		12/20/23 17:45
13C8-PFOSA	64.3	30-130		12/20/23 17:45
D3-NMeFOSA	49.7	15-130		12/20/23 17:45
D5-NEtFOSA	47.5	10-130		12/20/23 17:45
D3-NMeFOSAA	60.4	45-200		12/20/23 17:45
D5-NEtFOSAA	56.5	10-200		12/20/23 17:45
D7-NMeFOSE	56.8	10-150		12/20/23 17:45
D9-NEtFOSE	56.0	10-150		12/20/23 17:45
13C3-HFPO-DA	72.5	25-160		12/20/23 17:45

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Calcium	79	0.50	0.091	mg/L	1	MS-19, Z-01b	SW-846 6010D	12/5/23	12/7/23 18:30	MJH
Magnesium	24	0.050	0.016	mg/L	1	Z-01b	SW-846 6010D	12/5/23	12/7/23 18:30	MJH
Potassium	2.8	2.0	0.33	mg/L	1		SW-846 6010D	12/5/23	12/7/23 18:30	MJH
Sodium	7.2	2.0	0.74	mg/L	1		SW-846 6010D	12/5/23	12/7/23 18:30	MJH
Boron	ND	0.10	0.016	mg/L	1		SW-846 6010D	12/5/23	12/7/23 18:30	MJH
Hardness	300	1.4		mg/L	1	MS-19, Z-01a	SW-846 6010D	12/5/23	12/7/23 18:30	MJH

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.10	0.060	mg/L	1		EPA 350.1	12/7/23	12/7/23 13:30	IS
Biochemical Oxygen Demand	ND	4.0		mg/L	1		SM 21-23 5210B	11/22/23	11/22/23 19:33	EMF
Bromide	0.30	0.50	0.15	mg/L	1	MS-07A, J	EPA 300.0	11/22/23	11/22/23 20:38	NRH
Chemical Oxygen Demand	ND	15	13	mg/L	1	MS-07, Z-01c	EPA 410.4	12/1/23	12/1/23 11:16	LL
Chloride	1.2	1.0	0.65	mg/L	1		EPA 300.0	11/22/23	11/22/23 20:38	NRH
Nitrate as N	ND	0.10	0.057	mg/L	1		EPA 300.0	11/22/23	11/22/23 20:38	NRH
Orthophosphate as P	0.047	0.050	0.028	mg/L	1	W-17, J	SM 21-23 4500 P E	11/22/23	11/22/23 19:00	jec
pH @19.7°C	7.1			pH Units	1	H-05	SM21-23 4500 H B	11/28/23	11/28/23 17:21	JEC
Sulfate	15	1.0	0.32	mg/L	1		EPA 300.0	11/22/23	11/22/23 20:38	NRH
Total Kjeldahl Nitrogen	0.56	1.0	0.39	mg/L	1	J	SM19-23 4500-N Org B,C-NH3 C	12/15/23	12/19/23 9:05	MVD/IS
Total Organic Carbon	2.7	1.0	0.56	mg/L	1		SM 21-23 5310B	12/1/23	12/1/23 17:48	NRH
Total Suspended Solids	24	10		mg/L	1		Draft Method 1633	11/27/23	11/27/23 13:32	LL
Bicarbonate Alkalinity	250			mg/L	1		SM21-23 4500 CO2 D	12/4/23	12/4/23 11:24	LL
Carbonate	0.30			mg/L	1		SM21-23 4500 H B	12/4/23	12/4/23 11:24	LL
Alkalinity to pH 4.5	250	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	11/26/23	11/26/23 15:28	DET

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	230	10	10	mg/L	1	R-02	SM21-23 2540C	11/28/23	11/28/23 10:00	LL

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-10 | Sampled: 11/21/2023 11:15

Sample ID: 23K3096-04

Sample Matrix: Ground Water

Tritium

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	Attached	Attached	Attached	pCi/L	1		EPA 906.0	12/7/23	12/7/23 22:47	PACE

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

Sample Flags: D-01

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)	110	240	88	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoropentanoic acid (PFPeA)	270	120	21	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorohexanoic acid (PFHxA)	230	60	13	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoroheptanoic acid (PFHpA)	47	60	15	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorooctanoic acid (PFOA)	260	60	14	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorononanoic acid (PFNA)	22	60	12	ng/L	1	J	Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorodecanoic acid (PFDA)	ND	60	11	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoroundecanoic acid (PFUnA)	ND	60	16	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorododecanoic acid (PFDoA)	ND	60	16	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	60	16	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	60	15	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	60	16	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	60	14	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	60	12	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	60	18	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorooctanesulfonic acid (PFOS)	570	60	19	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorononanesulfonic acid (PFNS)	ND	60	18	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	60	19	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	60	16	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	240	42	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	240	60	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	240	65	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	60	19	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	60	25	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	60	19	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-MeFOSAA (NMeFOSAA)	ND	60	27	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-EtFOSAA (NEtFOSAA)	ND	60	13	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	600	160	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	600	150	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	240	63	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	240	41	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
9Cl-PF3ONS (F53B Minor)	ND	240	51	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
11Cl-PF3OUdS (F53B Major)	ND	240	58	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	600	110	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	3000	620	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	3000	530	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	120	30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	120	30	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	120	24	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	120	52	ng/L	1		Draft Method 1633	12/20/23	12/20/23 18:00	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	87.9	10-130		12/20/23 18:00
13C5-PFPeA	86.3	35-150		12/20/23 18:00
13C5-PFHxA	89.8	55-150		12/20/23 18:00
13C4-PFHpA	93.9	55-150		12/20/23 18:00
13C8-PFOA	89.5	60-140		12/20/23 18:00
13C9-PFNA	86.4	55-140		12/20/23 18:00
13C6-PFDA	86.9	50-140		12/20/23 18:00
13C7-PFUnA	83.0	30-140		12/20/23 18:00
13C2-PFDoA	81.1	10-150		12/20/23 18:00
13C2-PFTeDA	78.3	10-130		12/20/23 18:00
13C3-PFBS	78.2	55-150		12/20/23 18:00
13C3-PFHxS	93.7	55-150		12/20/23 18:00
13C8-PFOS	81.1	45-140		12/20/23 18:00
13C2-4:2FTS	71.5	60-200		12/20/23 18:00
13C2-6:2FTS	113	60-200		12/20/23 18:00
13C2-8:2FTS	125	50-200		12/20/23 18:00
13C8-PFOSA	79.2	30-130		12/20/23 18:00
D3-NMeFOSA	60.1	15-130		12/20/23 18:00
D5-NEtFOSA	61.4	10-130		12/20/23 18:00
D3-NMeFOSAA	87.5	45-200		12/20/23 18:00
D5-NEtFOSAA	88.6	10-200		12/20/23 18:00
D7-NMeFOSE	76.8	10-150		12/20/23 18:00
D9-NEtFOSE	77.9	10-150		12/20/23 18:00
13C3-HFPO-DA	82.1	25-160		12/20/23 18:00

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Calcium	26	0.50	0.091	mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH
Magnesium	16	0.050	0.016	mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH
Potassium	11	2.0	0.33	mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH
Sodium	10	2.0	0.74	mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH
Boron	ND	0.10	0.016	mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH
Hardness	130	1.4		mg/L	1		SW-846 6010D	12/5/23	12/7/23 19:36	MJH

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.079	0.10	0.060	mg/L	1	J	EPA 350.1	12/7/23	12/7/23 13:32	IS
Biochemical Oxygen Demand	<12	12		mg/L	1	W-01	SM 21-23 5210B	11/22/23	11/22/23 19:33	EMF
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	11/22/23	11/22/23 21:45	NRH
Chemical Oxygen Demand	69	15	13	mg/L	1	Z-01c	EPA 410.4	12/1/23	12/1/23 11:16	LL
Chloride	14	1.0	0.65	mg/L	1		EPA 300.0	11/22/23	11/22/23 21:45	NRH
Nitrate as N	1.7	0.10	0.057	mg/L	1		EPA 300.0	11/22/23	11/22/23 21:45	NRH
Orthophosphate as P	0.13	0.050	0.028	mg/L	1	W-17	SM 21-23 4500 P E	11/22/23	11/22/23 19:00	jec
pH @17.6°C	7.7			pH Units	1	H-05	SM21-23 4500 H B	11/28/23	11/28/23 17:21	JEC
Sulfate	7.4	1.0	0.32	mg/L	1		EPA 300.0	11/22/23	11/22/23 21:45	NRH
Total Kjeldahl Nitrogen	2.8	1.0	0.39	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	12/15/23	12/17/23 10:38	IS
Total Organic Carbon	1.7	1.0	0.56	mg/L	1		SM 21-23 5310B	12/1/23	12/1/23 18:39	NRH
Total Suspended Solids	17000	33		mg/L	1		Draft Method 1633	11/27/23	11/27/23 13:32	LL
Bicarbonate Alkalinity	86			mg/L	1		SM21-23 4500 CO2 D	12/4/23	12/4/23 11:24	LL
Carbonate	0.41			mg/L	1		SM21-23 4500 H B	12/4/23	12/4/23 11:24	LL
Alkalinity to pH 4.5	86	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	11/26/23	11/26/23 15:28	DET

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	110	10	10	mg/L	1		SM21-23 2540C	11/28/23	11/28/23 10:00	LL

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

Tritium

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	Attached	Attached	Attached	pCi/L	1		EPA 906.0	12/8/23	12/8/23 7:22	PACE

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-12 | Sampled: 11/21/2023 10:20

Sample ID: 23K3096-05

Sample Matrix: Ground Water

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-			1		-	12/4/23	12/4/23 22:25	EURO

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Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-3 | Sampled: 11/21/2023 14:40

Sample ID: 23K3096-06

Sample Matrix: Ground Water

Sample Flags: D-03

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)	170	400	150	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoropentanoic acid (PFPeA)	110	200	35	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorohexanoic acid (PFHxA)	79	100	22	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoroheptanoic acid (PFHpA)	33	100	25	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorooctanoic acid (PFOA)	ND	100	23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorononanoic acid (PFNA)	ND	100	19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorodecanoic acid (PFDA)	ND	100	18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoroundecanoic acid (PFUnA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorododecanoic acid (PFDoA)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	100	25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	100	26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	100	24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	100	21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	100	32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorononanesulfonic acid (PFNS)	ND	100	29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	100	27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	400	70	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	400	99	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	400	110	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	100	42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	100	31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-MeFOSAA (NMeFOSAA)	ND	100	44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-EtFOSAA (NEtFOSAA)	ND	100	22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	1000	260	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	1000	250	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	400	100	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	400	69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
9Cl-PF3ONS (F53B Minor)	ND	400	85	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
11Cl-PF3OUdS (F53B Major)	ND	400	97	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	1000	180	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	5000	1000	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	5000	880	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	200	49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	200	50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS

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

Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-3 | Sampled: 11/21/2023 14:40

Sample ID: 23K3096-06

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	200	40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	200	87	ng/L	1		Draft Method 1633	12/6/23	12/7/23 13:17	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	82.3	10-130		12/7/23 13:17
13C5-PFPeA	80.5	35-150		12/7/23 13:17
13C5-PFHxA	83.0	55-150		12/7/23 13:17
13C4-PFHpA	84.2	55-150		12/7/23 13:17
13C8-PFOA	81.8	60-140		12/7/23 13:17
13C9-PFNA	79.0	55-140		12/7/23 13:17
13C6-PFDA	81.9	50-140		12/7/23 13:17
13C7-PFUnA	78.7	30-140		12/7/23 13:17
13C2-PFDoA	75.6	10-150		12/7/23 13:17
13C2-PFTeDA	71.3	10-130		12/7/23 13:17
13C3-PFBS	72.3	55-150		12/7/23 13:17
13C3-PFHxS	83.6	55-150		12/7/23 13:17
13C8-PFOS	81.6	45-140		12/7/23 13:17
13C2-4:2FTS	64.8	60-200		12/7/23 13:17
13C2-6:2FTS	80.1	60-200		12/7/23 13:17
13C2-8:2FTS	78.7	50-200		12/7/23 13:17
13C8-PFOSA	73.4	30-130		12/7/23 13:17
D3-NMeFOSA	72.7	15-130		12/7/23 13:17
D5-NEtFOSA	75.2	10-130		12/7/23 13:17
D3-NMeFOSAA	80.9	45-200		12/7/23 13:17
D5-NEtFOSAA	77.9	10-200		12/7/23 13:17
D7-NMeFOSE	74.4	10-150		12/7/23 13:17
D9-NEtFOSE	75.1	10-150		12/7/23 13:17
13C3-HFPO-DA	77.5	25-160		12/7/23 13:17

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

Project Location: South Salem, NY | Sample Description: | Work Order: 23K3096

Date Received: 11/22/2023

Field Sample #: MW-3 | Sampled: 11/21/2023 14:40

Sample ID: 23K3096-06

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	6200	10		mg/L	1		Draft Method 1633	11/28/23	11/28/23 13:24	LL

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Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B358979	50.0	11/27/23
23K3096-05 [MW-12]	B358979	15.0	11/27/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-02 [MW-7]	B359076	5.00	11/28/23
23K3096-03 [MW-6]	B359076	5.00	11/28/23
23K3096-06 [MW-3]	B359076	50.0	11/28/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-01 [EQPT BLANK #1]	B359077	50.0	11/28/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 11/27/2023 per NO PREP in Batch B358979

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B359421	514	5.00	12/20/23
23K3096-05 [MW-12]	B359421	8.28	5.00	12/20/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 11/28/2023 per NO PREP in Batch B359077

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-01 [EQPT BLANK #1]	B359705	501	5.00	12/06/23
23K3096-02 [MW-7]	B359705	5.00	5.00	12/06/23
23K3096-03 [MW-6]	B359705	5.00	5.00	12/06/23
23K3096-06 [MW-3]	B359705	5.00	5.00	12/06/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B358915	10.0	10.0	11/22/23
23K3096-05 [MW-12]	B358915	10.0	10.0	11/22/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B358952	10.0	10.0	11/22/23
23K3096-05 [MW-12]	B358952	10.0	10.0	11/22/23

EPA 350.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B360050	50.0	50.0	12/07/23
23K3096-05 [MW-12]	B360050	50.0	50.0	12/07/23

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Sample Extraction Data

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B359465	2.00	2.00	12/01/23
23K3096-05 [MW-12]	B359465	2.00	2.00	12/01/23

SM 21-23 4500 P E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B359075	50.0	50.0	11/22/23
23K3096-05 [MW-12]	B359075	50.0	50.0	11/22/23

SM 21-23 5210B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B358948	150	11/22/23
23K3096-05 [MW-12]	B358948	50.0	11/22/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B359552	50.0	50.0	12/01/23
23K3096-05 [MW-12]	B359552	50.0	50.0	12/01/23

Prep Method:SM4500 N Org B C Analytical Method:SM19-23 4500-N Org B,C-Nl

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-05 [MW-12]	B360849	25.0	25.0	12/15/23

Prep Method:SM4500 N Org B C Analytical Method:SM19-23 4500-N Org B,C-Nl

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B360850	25.0	25.0	12/15/23

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B358959	100	100	11/26/23
23K3096-05 [MW-12]	B358959	100	100	11/26/23

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B358974	50.0	11/28/23
23K3096-05 [MW-12]	B358974	50.0	11/28/23

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Sample Extraction Data

SM21-23 4500 CO2 D

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B359620	1.00	12/04/23
23K3096-05 [MW-12]	B359620	1.00	12/04/23

SM21-23 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B359070	50.0	11/28/23
23K3096-05 [MW-12]	B359070	50.0	11/28/23

SM21-23 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3096-04 [MW-10]	B359621	1.00	12/04/23
23K3096-05 [MW-12]	B359621	1.00	12/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3096-04 [MW-10]	B359833	25.0	25.0	12/05/23
23K3096-04 [MW-10]	B359833	25.0		12/05/23
23K3096-05 [MW-12]	B359833	25.0	25.0	12/05/23
23K3096-05 [MW-12]	B359833	25.0		12/05/23

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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 B359421 - Draft Method 1633										
Blank (B359421-BLK1)				Prepared & Analyzed: 12/20/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*100*		ng/L	98.0		102	10-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359421 - Draft Method 1633										
Blank (B359421-BLK1)				Prepared & Analyzed: 12/20/23						
Surrogate: 13C5-PFPeA	*49.6*		ng/L	49.0		101	35-150			
Surrogate: 13C5-PFHxA	*25.5*		ng/L	24.5		104	55-150			
Surrogate: 13C4-PFHpA	*26.5*		ng/L	24.5		108	55-150			
Surrogate: 13C8-PFOA	*26.4*		ng/L	24.5		108	60-140			
Surrogate: 13C9-PFNA	*12.5*		ng/L	12.2		102	55-140			
Surrogate: 13C6-PFDA	*13.0*		ng/L	12.2		106	50-140			
Surrogate: 13C7-PFUnA	*12.1*		ng/L	12.2		98.8	30-140			
Surrogate: 13C2-PFDoA	*11.8*		ng/L	12.2		96.1	10-150			
Surrogate: 13C2-PFTeDA	*11.4*		ng/L	12.2		93.2	10-130			
Surrogate: 13C3-PFBS	*22.1*		ng/L	24.5		90.3	55-150			
Surrogate: 13C3-PFHxS	*26.1*		ng/L	24.5		106	55-150			
Surrogate: 13C8-PFOS	*25.1*		ng/L	24.5		103	45-140			
Surrogate: 13C2-4:2FTS	*41.1*		ng/L	49.0		84.0	60-200			
Surrogate: 13C2-6:2FTS	*56.8*		ng/L	49.0		116	60-200			
Surrogate: 13C2-8:2FTS	*59.8*		ng/L	49.0		122	50-200			
Surrogate: 13C8-PFOSA	*23.3*		ng/L	24.5		95.1	30-130			
Surrogate: D3-NMeFOSA	*17.3*		ng/L	24.5		70.7	15-130			
Surrogate: D5-NEtFOSA	*18.2*		ng/L	24.5		74.2	10-130			
Surrogate: D3-NMeFOSAA	*49.4*		ng/L	49.0		101	45-200			
Surrogate: D5-NEtFOSAA	*49.0*		ng/L	49.0		100	10-200			
Surrogate: D7-NMeFOSE	*235*		ng/L	245		96.0	10-150			
Surrogate: D9-NEtFOSE	*231*		ng/L	245		94.3	10-150			
Surrogate: 13C3-HFPO-DA	*91.4*		ng/L	98.0		93.3	25-160			
LCS (B359421-BS1)				Prepared & Analyzed: 12/20/23						
Perfluorobutanoic acid (PFBA)	88.9	4.0	ng/L	94.9		93.7	58-148			
Perfluoropentanoic acid (PFPeA)	43.5	2.0	ng/L	47.4		91.7	54-152			
Perfluorohexanoic acid (PFHxA)	21.0	0.99	ng/L	23.7		88.3	55-152			
Perfluoroheptanoic acid (PFHpA)	20.9	0.99	ng/L	23.7		88.0	54-154			
Perfluorooctanoic acid (PFOA)	21.6	0.99	ng/L	23.7		90.9	52-161			
Perfluorononanoic acid (PFNA)	22.2	0.99	ng/L	23.7		93.6	59-149			
Perfluorodecanoic acid (PFDA)	20.8	0.99	ng/L	23.7		87.8	52-147			
Perfluoroundecanoic acid (PFUnA)	21.8	0.99	ng/L	23.7		91.9	48-159			
Perfluorododecanoic acid (PFDoA)	21.8	0.99	ng/L	23.7		91.8	64-142			
Perfluorotridecanoic acid (PFTrDA)	21.1	0.99	ng/L	23.7		89.1	49-148			
Perfluorotetradecanoic acid (PFTeDA)	21.3	0.99	ng/L	23.7		89.9	47-161			
Perfluorobutanesulfonic acid (PFBS)	19.3	0.99	ng/L	21.1		91.9	62-144			
Perfluoropentanesulfonic acid (PFPeS)	19.4	0.99	ng/L	22.3		87.2	59-151			
Perfluorohexanesulfonic acid (PFHxS)	18.6	0.99	ng/L	21.7		85.6	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	21.4	0.99	ng/L	22.6		94.6	55-152			
Perfluorooctanesulfonic acid (PFOS)	19.4	0.99	ng/L	22.0		88.3	58-149			
Perfluorononanesulfonic acid (PFNS)	20.9	0.99	ng/L	22.8		91.7	52-148			
Perfluorodecanesulfonic acid (PFDS)	18.7	0.99	ng/L	22.9		81.8	51-147			
Perfluorododecanesulfonic acid (PFDoS)	18.4	0.99	ng/L	23.0		80.0	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	82.0	4.0	ng/L	89.0		92.2	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	83.8	4.0	ng/L	90.2		93.0	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	87.3	4.0	ng/L	91.3		95.6	63-152			
Perfluorooctanesulfonamide (PFOSA)	21.5	0.99	ng/L	23.7		90.7	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	19.3	0.99	ng/L	23.7		81.4	63-145			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359421 - Draft Method 1633										
LCS (B359421-BS1)				Prepared & Analyzed: 12/20/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	21.1	0.99	ng/L	23.7		89.1	65-139			
N-MeFOSAA (NMeFOSAA)	21.2	0.99	ng/L	23.7		89.3	58-144			
N-EtFOSAA (NEtFOSAA)	20.1	0.99	ng/L	23.7		84.7	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	212	9.9	ng/L	237		89.3	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	212	9.9	ng/L	237		89.4	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	82.1	4.0	ng/L	94.9		86.5	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	77.5	4.0	ng/L	89.6		86.5	68-146			
9Cl-PF3ONS (F53B Minor)	80.1	4.0	ng/L	89.0		90.1	56-156			
11Cl-PF3OUdS (F53B Major)	79.1	4.0	ng/L	89.6		88.3	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	210	9.9	ng/L	259		81.3	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1050	49	ng/L	1290		81.3	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1050	49	ng/L	1290		81.2	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	38.6	2.0	ng/L	42.2		91.3	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	2.0	ng/L	47.4		84.3	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.4	2.0	ng/L	47.4		85.1	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	36.7	2.0	ng/L	47.4		77.3	48-161			
Surrogate: 13C4-PFBA	*102*		ng/L	98.9		103	10-130			
Surrogate: 13C5-PFPeA	*50.6*		ng/L	49.4		102	35-150			
Surrogate: 13C5-PFHxA	*26.0*		ng/L	24.7		105	55-150			
Surrogate: 13C4-PFHpA	*27.2*		ng/L	24.7		110	55-150			
Surrogate: 13C8-PFOA	*25.7*		ng/L	24.7		104	60-140			
Surrogate: 13C9-PFNA	*12.7*		ng/L	12.4		103	55-140			
Surrogate: 13C6-PFDA	*13.2*		ng/L	12.4		106	50-140			
Surrogate: 13C7-PFUnA	*12.2*		ng/L	12.4		98.4	30-140			
Surrogate: 13C2-PFDoA	*12.1*		ng/L	12.4		97.8	10-150			
Surrogate: 13C2-PFTeDA	*11.7*		ng/L	12.4		94.5	10-130			
Surrogate: 13C3-PFBS	*22.6*		ng/L	24.7		91.4	55-150			
Surrogate: 13C3-PFHxS	*26.7*		ng/L	24.7		108	55-150			
Surrogate: 13C8-PFOS	*25.4*		ng/L	24.7		103	45-140			
Surrogate: 13C2-4:2FTS	*43.2*		ng/L	49.4		87.4	60-200			
Surrogate: 13C2-6:2FTS	*63.7*		ng/L	49.4		129	60-200			
Surrogate: 13C2-8:2FTS	*68.6*		ng/L	49.4		139	50-200			
Surrogate: 13C8-PFOSA	*24.0*		ng/L	24.7		96.9	30-130			
Surrogate: D3-NMeFOSA	*19.1*		ng/L	24.7		77.4	15-130			
Surrogate: D5-NEtFOSA	*19.7*		ng/L	24.7		79.9	10-130			
Surrogate: D3-NMeFOSAA	*53.4*		ng/L	49.4		108	45-200			
Surrogate: D5-NEtFOSAA	*52.9*		ng/L	49.4		107	10-200			
Surrogate: D7-NMeFOSE	*249*		ng/L	247		101	10-150			
Surrogate: D9-NEtFOSE	*252*		ng/L	247		102	10-150			
Surrogate: 13C3-HFPO-DA	*98.1*		ng/L	98.9		99.3	25-160			
MRL Check (B359421-MRL1)				Prepared & Analyzed: 12/20/23						
Perfluorobutanoic acid (PFBA)	8.67	3.9	ng/L	7.82		111	44-157			
Perfluoropentanoic acid (PFPeA)	3.90	2.0	ng/L	3.91		99.8	57-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359421 - Draft Method 1633										
MRL Check (B359421-MRL1)				Prepared & Analyzed: 12/20/23						
Perfluorohexanoic acid (PFHxA)	1.91	0.98	ng/L	1.96		97.9	62-149			
Perfluoroheptanoic acid (PFHpA)	1.76	0.98	ng/L	1.96		90.0	56-150			
Perfluorooctanoic acid (PFOA)	1.79	0.98	ng/L	1.96		91.4	57-161			
Perfluorononanoic acid (PFNA)	1.84	0.98	ng/L	1.96		94.0	53-157			
Perfluorodecanoic acid (PFDA)	1.87	0.98	ng/L	1.96		95.4	43-158			
Perfluoroundecanoic acid (PFUnA)	1.83	0.98	ng/L	1.96		93.8	50-155			
Perfluorododecanoic acid (PFDoA)	1.85	0.98	ng/L	1.96		94.4	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.85	0.98	ng/L	1.96		94.7	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.83	0.98	ng/L	1.96		93.7	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.98	ng/L	1.74		102	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.82	0.98	ng/L	1.84		99.0	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.82	0.98	ng/L	1.79		102	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.82	0.98	ng/L	1.86		97.8	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.68	0.98	ng/L	1.81		92.6	43-162			
Perfluorononanesulfonic acid (PFNS)	1.71	0.98	ng/L	1.88		91.0	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.74	0.98	ng/L	1.89		92.2	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.64	0.98	ng/L	1.90		86.5	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.21	3.9	ng/L	7.33		98.4	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.25	3.9	ng/L	7.43		97.6	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.78	3.9	ng/L	7.53		103	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.87	0.98	ng/L	1.96		95.4	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.77	0.98	ng/L	1.96		90.6	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.78	0.98	ng/L	1.96		91.0	49-156			
N-MeFOSAA (NMeFOSAA)	1.79	0.98	ng/L	1.96		91.5	32-160			
N-EtFOSAA (NEtFOSAA)	1.85	0.98	ng/L	1.96		94.9	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	17.6	9.8	ng/L	19.6		90.0	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	17.9	9.8	ng/L	19.6		91.8	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	5.90	3.9	ng/L	7.82		75.4	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	5.83	3.9	ng/L	7.38		78.9	61-148			
9Cl-PF3ONS (F53B Minor)	5.64	3.9	ng/L	7.33		76.9	44-167			
11Cl-PF3OUdS (F53B Major)	5.66	3.9	ng/L	7.38		76.7	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.3	9.8	ng/L	19.6		88.6	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	83.6	49	ng/L	97.8		85.5	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	81.1	49	ng/L	97.8		82.9	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.65	2.0	ng/L	3.48		76.0	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.02	2.0	ng/L	3.91		77.3	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.84	2.0	ng/L	3.91		72.7	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.70	2.0	ng/L	3.91		69.0	47-160			
Surrogate: 13C4-PFBA	*96.4*		ng/L	97.8		98.6	10-130			
Surrogate: 13C5-PFPeA	*48.5*		ng/L	48.9		99.2	35-150			
Surrogate: 13C5-PFHxA	*24.4*		ng/L	24.4		100	55-150			

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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 B359421 - Draft Method 1633										
MRL Check (B359421-MRL1)				Prepared & Analyzed: 12/20/23						
Surrogate: 13C4-PFHpA	*25.8*		ng/L	24.4		105	55-150			
Surrogate: 13C8-PFOA	*25.3*		ng/L	24.4		103	60-140			
Surrogate: 13C9-PFNA	*12.2*		ng/L	12.2		99.5	55-140			
Surrogate: 13C6-PFDA	*12.1*		ng/L	12.2		99.3	50-140			
Surrogate: 13C7-PFUnA	*11.3*		ng/L	12.2		92.6	30-140			
Surrogate: 13C2-PFDoA	*11.2*		ng/L	12.2		91.4	10-150			
Surrogate: 13C2-PFTeDA	*10.9*		ng/L	12.2		89.0	10-130			
Surrogate: 13C3-PFBS	*21.5*		ng/L	24.4		87.8	55-150			
Surrogate: 13C3-PFHxS	*25.9*		ng/L	24.4		106	55-150			
Surrogate: 13C8-PFOS	*24.9*		ng/L	24.4		102	45-140			
Surrogate: 13C2-4:2FTS	*39.9*		ng/L	48.9		81.7	60-200			
Surrogate: 13C2-6:2FTS	*57.1*		ng/L	48.9		117	60-200			
Surrogate: 13C2-8:2FTS	*60.5*		ng/L	48.9		124	50-200			
Surrogate: 13C8-PFOSA	*23.0*		ng/L	24.4		93.9	30-130			
Surrogate: D3-NMeFOSA	*17.9*		ng/L	24.4		73.3	15-130			
Surrogate: D5-NEtFOSA	*18.4*		ng/L	24.4		75.3	10-130			
Surrogate: D3-NMeFOSAA	*49.6*		ng/L	48.9		102	45-200			
Surrogate: D5-NEtFOSAA	*49.8*		ng/L	48.9		102	10-200			
Surrogate: D7-NMeFOSE	*228*		ng/L	244		93.4	10-150			
Surrogate: D9-NEtFOSE	*234*		ng/L	244		95.7	10-150			
Surrogate: 13C3-HFPO-DA	*90.7*		ng/L	97.8		92.8	25-160			
Matrix Spike (B359421-MS1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/20/23						
Perfluorobutanoic acid (PFBA)	87.9	4.0	ng/L	95.6	1.92	89.9	58-148			
Perfluoropentanoic acid (PFPeA)	41.9	2.0	ng/L	47.8	0.716	86.1	54-152			
Perfluorohexanoic acid (PFHxA)	19.8	1.0	ng/L	23.9	ND	82.9	55-152			
Perfluoroheptanoic acid (PFHpA)	19.9	1.0	ng/L	23.9	ND	83.3	54-154			
Perfluorooctanoic acid (PFOA)	20.7	1.0	ng/L	23.9	0.485	84.4	52-161			
Perfluorononanoic acid (PFNA)	21.3	1.0	ng/L	23.9	ND	88.9	59-149			
Perfluorodecanoic acid (PFDA)	19.3	1.0	ng/L	23.9	ND	80.6	52-147			
Perfluoroundecanoic acid (PFUnA)	19.6	1.0	ng/L	23.9	ND	81.8	48-159			
Perfluorododecanoic acid (PFDoA)	19.9	1.0	ng/L	23.9	ND	83.3	64-142			
Perfluorotridecanoic acid (PFTrDA)	19.8	1.0	ng/L	23.9	ND	83.0	49-148			
Perfluorotetradecanoic acid (PFTeDA)	20.0	1.0	ng/L	23.9	ND	83.6	47-161			
Perfluorobutanesulfonic acid (PFBS)	19.2	1.0	ng/L	21.2	ND	90.3	62-144			
Perfluoropentanesulfonic acid (PFPeS)	18.3	1.0	ng/L	22.5	ND	81.5	59-151			
Perfluorohexanesulfonic acid (PFHxS)	17.6	1.0	ng/L	21.9	ND	80.4	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	19.8	1.0	ng/L	22.8	ND	86.8	55-152			
Perfluorooctanesulfonic acid (PFOS)	18.2	1.0	ng/L	22.2	ND	82.2	58-149			
Perfluorononanesulfonic acid (PFNS)	17.5	1.0	ng/L	23.0	ND	76.0	52-148			
Perfluorodecanesulfonic acid (PFDS)	15.3	1.0	ng/L	23.1	ND	66.3	51-147			
Perfluorododecanesulfonic acid (PFDoS)	14.5	1.0	ng/L	23.2	ND	62.7	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	79.0	4.0	ng/L	89.7	ND	88.1	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	76.7	4.0	ng/L	90.9	ND	84.5	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	82.6	4.0	ng/L	92.1	ND	89.7	63-152			
Perfluorooctanesulfonamide (PFOSA)	20.0	1.0	ng/L	23.9	ND	83.7	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	19.4	1.0	ng/L	23.9	ND	81.0	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.0	1.0	ng/L	23.9	ND	83.7	65-139			
N-MeFOSAA (NMeFOSAA)	22.1	1.0	ng/L	23.9	ND	92.3	58-144			

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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 B359421 - Draft Method 1633										
Matrix Spike (B359421-MS1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/20/23						
N-EtFOSAA (NEtFOSAA)	20.7	1.0	ng/L	23.9	ND	86.7	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	191	10	ng/L	239	ND	79.8	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	193	10	ng/L	239	ND	80.9	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	85.8	4.0	ng/L	95.6	ND	89.7	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	84.4	4.0	ng/L	90.3	ND	93.5	68-146			
9Cl-PF3ONS (F53B Minor)	80.7	4.0	ng/L	89.7	ND	90.0	56-156			
11Cl-PF3OUdS (F53B Major)	71.9	4.0	ng/L	90.3	ND	79.7	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	213	10	ng/L	261	ND	81.9	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1070	50	ng/L	1300	ND	82.3	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1080	50	ng/L	1300	ND	83.1	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	40.7	2.0	ng/L	42.6	ND	95.6	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.4	2.0	ng/L	47.8	ND	84.5	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	43.5	2.0	ng/L	47.8	ND	91.0	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	38.2	2.0	ng/L	47.8	ND	80.0	48-161			
Surrogate: 13C4-PFBA	*101*		ng/L	99.6		101	10-130			
Surrogate: 13C5-PFPeA	*51.0*		ng/L	49.8		102	35-150			
Surrogate: 13C5-PFHxA	*26.7*		ng/L	24.9		107	55-150			
Surrogate: 13C4-PFHpA	*28.1*		ng/L	24.9		113	55-150			
Surrogate: 13C8-PFOA	*26.5*		ng/L	24.9		106	60-140			
Surrogate: 13C9-PFNA	*12.6*		ng/L	12.5		101	55-140			
Surrogate: 13C6-PFDA	*12.7*		ng/L	12.5		102	50-140			
Surrogate: 13C7-PFUnA	*11.2*		ng/L	12.5		90.0	30-140			
Surrogate: 13C2-PFDoA	*10.8*		ng/L	12.5		86.4	10-150			
Surrogate: 13C2-PFTeDA	*9.96*		ng/L	12.5		80.0	10-130			
Surrogate: 13C3-PFBS	*22.9*		ng/L	24.9		92.0	55-150			
Surrogate: 13C3-PFHxS	*27.5*		ng/L	24.9		111	55-150			
Surrogate: 13C8-PFOS	*25.6*		ng/L	24.9		103	45-140			
Surrogate: 13C2-4:2FTS	*47.0*		ng/L	49.8		94.3	60-200			
Surrogate: 13C2-6:2FTS	*55.8*		ng/L	49.8		112	60-200			
Surrogate: 13C2-8:2FTS	*61.4*		ng/L	49.8		123	50-200			
Surrogate: 13C8-PFOSA	*23.0*		ng/L	24.9		92.4	30-130			
Surrogate: D3-NMeFOSA	*18.9*		ng/L	24.9		76.0	15-130			
Surrogate: D5-NEtFOSA	*18.1*		ng/L	24.9		72.7	10-130			
Surrogate: D3-NMeFOSAA	*43.7*		ng/L	49.8		87.7	45-200			
Surrogate: D5-NEtFOSAA	*42.9*		ng/L	49.8		86.2	10-200			
Surrogate: D7-NMeFOSE	*207*		ng/L	249		83.3	10-150			
Surrogate: D9-NEtFOSE	*211*		ng/L	249		84.7	10-150			
Surrogate: 13C3-HFPO-DA	*97.2*		ng/L	99.6		97.6	25-160			
Matrix Spike Dup (B359421-MSD1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/20/23						
Perfluorobutanoic acid (PFBA)	92.8	4.2	ng/L	99.7	1.92	91.1	58-148	5.42	20	
Perfluoropentanoic acid (PFPeA)	43.5	2.1	ng/L	49.9	0.716	85.8	54-152	3.80	20	
Perfluorohexanoic acid (PFHxA)	21.2	1.0	ng/L	24.9	ND	85.1	55-152	6.74	25	
Perfluoroheptanoic acid (PFHpA)	20.6	1.0	ng/L	24.9	ND	82.4	54-154	3.08	25	
Perfluorooctanoic acid (PFOA)	21.8	1.0	ng/L	24.9	0.485	85.3	52-161	5.18	25	

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359421 - Draft Method 1633										
Matrix Spike Dup (B359421-MSD1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/20/23						
Perfluorononanoic acid (PFNA)	22.7	1.0	ng/L	24.9	ND	91.1	59-149	6.64	25	
Perfluorodecanoic acid (PFDA)	21.6	1.0	ng/L	24.9	ND	86.7	52-147	11.4	25	
Perfluoroundecanoic acid (PFUnA)	24.5	1.0	ng/L	24.9	ND	98.4	48-159	22.6	30	
Perfluorododecanoic acid (PFDoA)	21.8	1.0	ng/L	24.9	ND	87.4	64-142	9.00	25	
Perfluorotridecanoic acid (PFTrDA)	21.0	1.0	ng/L	24.9	ND	84.3	49-148	5.76	25	
Perfluorotetradecanoic acid (PFTeDA)	21.7	1.0	ng/L	24.9	ND	86.9	47-161	7.98	25	
Perfluorobutanesulfonic acid (PFBS)	20.3	1.0	ng/L	22.1	ND	91.5	62-144	5.48	20	
Perfluoropentanesulfonic acid (PFPeS)	19.7	1.0	ng/L	23.4	ND	84.0	59-151	7.24	25	
Perfluorohexanesulfonic acid (PFHxS)	18.9	1.0	ng/L	22.8	ND	83.0	57-146	7.39	25	
Perfluoroheptanesulfonic acid (PFHpS)	21.9	1.0	ng/L	23.8	ND	92.0	55-152	10.0	25	
Perfluorooctanesulfonic acid (PFOS)	19.9	1.0	ng/L	23.1	ND	86.1	58-149	8.83	20	
Perfluorononanesulfonic acid (PFNS)	19.3	1.0	ng/L	24.0	ND	80.5	52-148	9.96	25	
Perfluorodecanesulfonic acid (PFDS)	16.6	1.0	ng/L	24.1	ND	69.1	51-147	8.43	25	
Perfluorododecanesulfonic acid (PFDoS)	14.9	1.0	ng/L	24.2	ND	61.6	36-145	2.34	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	82.0	4.2	ng/L	93.5	ND	87.7	67-146	3.65	25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	82.4	4.2	ng/L	94.8	ND	86.9	61-151	7.06	30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	87.3	4.2	ng/L	96.0	ND	90.9	63-152	5.53	30	
Perfluorooctanesulfonamide (PFOSA)	21.7	1.0	ng/L	24.9	ND	87.1	61-148	8.17	20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	20.9	1.0	ng/L	24.9	ND	83.6	63-145	7.41	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.9	1.0	ng/L	24.9	ND	83.7	65-139	4.19	25	
N-MeFOSAA (NMeFOSAA)	24.9	1.0	ng/L	24.9	ND	99.9	58-144	12.0	25	
N-EtFOSAA (NEtFOSAA)	23.5	1.0	ng/L	24.9	ND	94.1	59-146	12.4	25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	202	10	ng/L	249	ND	81.0	71-136	5.75	20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	203	10	ng/L	249	ND	81.6	69-137	5.02	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	95.5	4.2	ng/L	99.7	ND	95.8	63-144	10.8	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	94.6	4.2	ng/L	94.1	ND	100	68-146	11.4	20	
9Cl-PF3ONS (F53B Minor)	92.0	4.2	ng/L	93.5	ND	98.4	56-156	13.0	30	
11Cl-PF3OUdS (F53B Major)	80.1	4.2	ng/L	94.1	ND	85.1	46-156	10.7	35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	201	10	ng/L	272	ND	74.0	62-129	5.88	20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	998	52	ng/L	1360	ND	73.4	63-134	7.24	20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1020	52	ng/L	1360	ND	75.2	50-138	5.80	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	43.0	2.1	ng/L	44.4	ND	96.8	56-151	5.42	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	41.1	2.1	ng/L	49.9	ND	82.5	51-145	1.75	25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	45.5	2.1	ng/L	49.9	ND	91.3	55-148	4.49	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	38.8	2.1	ng/L	49.9	ND	77.9	48-161	1.54	35	
Surrogate: 13C4-PFBA	*86.3*		ng/L	104		83.0	10-130			
Surrogate: 13C5-PFPeA	*46.9*		ng/L	51.9		90.3	35-150			
Surrogate: 13C5-PFHxA	*24.5*		ng/L	26.0		94.3	55-150			
Surrogate: 13C4-PFHpA	*25.8*		ng/L	26.0		99.3	55-150			
Surrogate: 13C8-PFOA	*25.8*		ng/L	26.0		99.2	60-140			
Surrogate: 13C9-PFNA	*11.7*		ng/L	13.0		90.3	55-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359421 - Draft Method 1633										
Matrix Spike Dup (B359421-MSD1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/20/23						
Surrogate: 13C6-PFDA	*11.4*		ng/L	13.0		87.6	50-140			
Surrogate: 13C7-PFUnA	*9.67*		ng/L	13.0		74.4	30-140			
Surrogate: 13C2-PFDoA	*9.35*		ng/L	13.0		72.0	10-150			
Surrogate: 13C2-PFTeDA	*8.56*		ng/L	13.0		65.9	10-130			
Surrogate: 13C3-PFBS	*21.1*		ng/L	26.0		81.4	55-150			
Surrogate: 13C3-PFHxS	*24.7*		ng/L	26.0		95.2	55-150			
Surrogate: 13C8-PFOS	*22.5*		ng/L	26.0		86.8	45-140			
Surrogate: 13C2-4:2FTS	*44.7*		ng/L	51.9		86.1	60-200			
Surrogate: 13C2-6:2FTS	*48.4*		ng/L	51.9		93.2	60-200			
Surrogate: 13C2-8:2FTS	*57.4*		ng/L	51.9		111	50-200			
Surrogate: 13C8-PFOSA	*21.1*		ng/L	26.0		81.4	30-130			
Surrogate: D3-NMeFOSA	*15.0*		ng/L	26.0		57.7	15-130			
Surrogate: D5-NEtFOSA	*14.9*		ng/L	26.0		57.5	10-130			
Surrogate: D3-NMeFOSAA	*38.1*		ng/L	51.9		73.3	45-200			
Surrogate: D5-NEtFOSAA	*36.6*		ng/L	51.9		70.5	10-200			
Surrogate: D7-NMeFOSE	*181*		ng/L	260		69.5	10-150			
Surrogate: D9-NEtFOSE	*183*		ng/L	260		70.3	10-150			
Surrogate: 13C3-HFPO-DA	*89.5*		ng/L	104		86.1	25-160			
Batch B359705 - Draft Method 1633										
Blank (B359705-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	ND	4.0	ng/L							
Perfluoropentanoic acid (PFPeA)	0.38	2.0	ng/L							J
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							

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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 B359705 - Draft Method 1633										
Blank (B359705-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	4.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	4.0	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*80.1*		ng/L	98.8		81.1	10-130			
Surrogate: 13C5-PFPeA	*38.9*		ng/L	49.4		78.9	35-150			
Surrogate: 13C5-PFHxA	*19.7*		ng/L	24.7		79.9	55-150			
Surrogate: 13C4-PFHpA	*20.2*		ng/L	24.7		81.8	55-150			
Surrogate: 13C8-PFOA	*20.3*		ng/L	24.7		82.3	60-140			
Surrogate: 13C9-PFNA	*9.96*		ng/L	12.3		80.7	55-140			
Surrogate: 13C6-PFDA	*9.92*		ng/L	12.3		80.3	50-140			
Surrogate: 13C7-PFUnA	*9.18*		ng/L	12.3		74.3	30-140			
Surrogate: 13C2-PFDoA	*8.99*		ng/L	12.3		72.8	10-150			
Surrogate: 13C2-PFTeDA	*8.76*		ng/L	12.3		71.0	10-130			
Surrogate: 13C3-PFBS	*17.8*		ng/L	24.7		72.2	55-150			
Surrogate: 13C3-PFHxS	*20.0*		ng/L	24.7		81.2	55-150			
Surrogate: 13C8-PFOS	*19.4*		ng/L	24.7		78.7	45-140			
Surrogate: 13C2-4:2FTS	*30.8*		ng/L	49.4		62.4	60-200			
Surrogate: 13C2-6:2FTS	*40.4*		ng/L	49.4		81.7	60-200			
Surrogate: 13C2-8:2FTS	*37.0*		ng/L	49.4		74.9	50-200			
Surrogate: 13C8-PFOSA	*16.4*		ng/L	24.7		66.5	30-130			
Surrogate: D3-NMeFOSA	*15.6*		ng/L	24.7		63.1	15-130			
Surrogate: D5-NEtFOSA	*16.5*		ng/L	24.7		66.9	10-130			
Surrogate: D3-NMeFOSAA	*37.7*		ng/L	49.4		76.4	45-200			
Surrogate: D5-NEtFOSAA	*37.0*		ng/L	49.4		74.9	10-200			
Surrogate: D7-NMeFOSE	*161*		ng/L	247		65.4	10-150			
Surrogate: D9-NEtFOSE	*168*		ng/L	247		67.9	10-150			
Surrogate: 13C3-HFPO-DA	*72.8*		ng/L	98.8		73.7	25-160			
LCS (B359705-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	113	4.0	ng/L	94.9		119	58-148			
Perfluoropentanoic acid (PFPeA)	55.2	2.0	ng/L	47.4		116	54-152			
Perfluorohexanoic acid (PFHxA)	27.5	0.99	ng/L	23.7		116	55-152			
Perfluoroheptanoic acid (PFHpA)	26.7	0.99	ng/L	23.7		112	54-154			
Perfluorooctanoic acid (PFOA)	27.7	0.99	ng/L	23.7		117	52-161			
Perfluorononanoic acid (PFNA)	27.8	0.99	ng/L	23.7		117	59-149			

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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 B359705 - Draft Method 1633										
LCS (B359705-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorodecanoic acid (PFDA)	27.4	0.99	ng/L	23.7		115	52-147			
Perfluoroundecanoic acid (PFUnA)	27.8	0.99	ng/L	23.7		117	48-159			
Perfluorododecanoic acid (PFDoA)	29.0	0.99	ng/L	23.7		122	64-142			
Perfluorotridecanoic acid (PFTrDA)	27.8	0.99	ng/L	23.7		117	49-148			
Perfluorotetradecanoic acid (PFTeDA)	27.5	0.99	ng/L	23.7		116	47-161			
Perfluorobutanesulfonic acid (PFBS)	24.7	0.99	ng/L	21.1		117	62-144			
Perfluoropentanesulfonic acid (PFPeS)	25.1	0.99	ng/L	22.3		113	59-151			
Perfluorohexanesulfonic acid (PFHxS)	23.9	0.99	ng/L	21.7		110	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	26.9	0.99	ng/L	22.6		119	55-152			
Perfluorooctanesulfonic acid (PFOS)	25.0	0.99	ng/L	22.0		114	58-149			
Perfluorononanesulfonic acid (PFNS)	25.8	0.99	ng/L	22.8		113	52-148			
Perfluorodecanesulfonic acid (PFDS)	24.3	0.99	ng/L	22.9		106	51-147			
Perfluorododecanesulfonic acid (PFDoS)	23.1	0.99	ng/L	23.0		101	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	109	4.0	ng/L	89.0		123	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	107	4.0	ng/L	90.1		118	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	115	4.0	ng/L	91.3		126	63-152			
Perfluorooctanesulfonamide (PFOSA)	27.7	0.99	ng/L	23.7		117	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	26.4	0.99	ng/L	23.7		111	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	25.8	0.99	ng/L	23.7		109	65-139			
N-MeFOSAA (NMeFOSAA)	27.0	0.99	ng/L	23.7		114	58-144			
N-EtFOSAA (NEtFOSAA)	26.7	0.99	ng/L	23.7		113	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	266	9.9	ng/L	237		112	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	267	9.9	ng/L	237		113	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	103	4.0	ng/L	94.9		109	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	101	4.0	ng/L	89.5		113	68-146			
9Cl-PF3ONS (F53B Minor)	99.4	4.0	ng/L	89.0		112	56-156			
11Cl-PF3OUdS (F53B Major)	99.9	4.0	ng/L	89.5		112	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	247	9.9	ng/L	237		104	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1270	49	ng/L	1190		107	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1240	49	ng/L	1190		105	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	46.2	2.0	ng/L	42.2		109	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	50.0	2.0	ng/L	47.4		105	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	50.9	2.0	ng/L	47.4		107	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.1	2.0	ng/L	47.4		99.2	48-161			
Surrogate: 13C4-PFBA	*70.4*		ng/L	98.8		71.2	10-130			
Surrogate: 13C5-PFPeA	*33.9*		ng/L	49.4		68.7	35-150			
Surrogate: 13C5-PFHxA	*17.4*		ng/L	24.7		70.6	55-150			
Surrogate: 13C4-PFHpA	*18.4*		ng/L	24.7		74.5	55-150			
Surrogate: 13C8-PFOA	*18.4*		ng/L	24.7		74.5	60-140			
Surrogate: 13C9-PFNA	*8.91*		ng/L	12.4		72.1	55-140			
Surrogate: 13C6-PFDA	*8.69*		ng/L	12.4		70.3	50-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359705 - Draft Method 1633										
LCS (B359705-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Surrogate: 13C7-PFUnA	*8.39*		ng/L	12.4		67.9	30-140			
Surrogate: 13C2-PFDoA	*7.82*		ng/L	12.4		63.3	10-150			
Surrogate: 13C2-PFTeDA	*7.32*		ng/L	12.4		59.2	10-130			
Surrogate: 13C3-PFBS	*15.6*		ng/L	24.7		63.1	55-150			
Surrogate: 13C3-PFHxS	*18.0*		ng/L	24.7		72.9	55-150			
Surrogate: 13C8-PFOS	*17.1*		ng/L	24.7		69.2	45-140			
Surrogate: 13C2-4:2FTS	*30.1*		ng/L	49.4		60.9	60-200			
Surrogate: 13C2-6:2FTS	*39.1*		ng/L	49.4		79.2	60-200			
Surrogate: 13C2-8:2FTS	*37.8*		ng/L	49.4		76.5	50-200			
Surrogate: 13C8-PFOSA	*16.0*		ng/L	24.7		64.9	30-130			
Surrogate: D3-NMeFOSA	*14.2*		ng/L	24.7		57.4	15-130			
Surrogate: D5-NEtFOSA	*14.7*		ng/L	24.7		59.4	10-130			
Surrogate: D3-NMeFOSAA	*33.3*		ng/L	49.4		67.3	45-200			
Surrogate: D5-NEtFOSAA	*32.7*		ng/L	49.4		66.1	10-200			
Surrogate: D7-NMeFOSE	*153*		ng/L	247		62.1	10-150			
Surrogate: D9-NEtFOSE	*153*		ng/L	247		61.8	10-150			
Surrogate: 13C3-HFPO-DA	*67.1*		ng/L	98.8		67.9	25-160			
MRL Check (B359705-MRL1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	9.75	3.9	ng/L	7.90		123	44-157			
Perfluoropentanoic acid (PFPeA)	4.55	2.0	ng/L	3.95		115	57-148			
Perfluorohexanoic acid (PFHxA)	2.34	0.99	ng/L	1.97		118	62-149			
Perfluoroheptanoic acid (PFHpA)	2.03	0.99	ng/L	1.97		103	56-150			
Perfluorooctanoic acid (PFOA)	2.19	0.99	ng/L	1.97		111	57-161			
Perfluorononanoic acid (PFNA)	2.10	0.99	ng/L	1.97		107	53-157			
Perfluorodecanoic acid (PFDA)	2.18	0.99	ng/L	1.97		110	43-158			
Perfluoroundecanoic acid (PFUnA)	2.12	0.99	ng/L	1.97		107	50-155			
Perfluorododecanoic acid (PFDoA)	2.21	0.99	ng/L	1.97		112	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.22	0.99	ng/L	1.97		113	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.26	0.99	ng/L	1.97		114	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.96	0.99	ng/L	1.75		112	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.04	0.99	ng/L	1.86		110	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.07	0.99	ng/L	1.81		115	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.20	0.99	ng/L	1.88		117	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.07	0.99	ng/L	1.83		113	43-162			
Perfluorononanesulfonic acid (PFNS)	2.04	0.99	ng/L	1.90		107	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.04	0.99	ng/L	1.90		107	50-144			
Perfluorododecanesulfonic acid (PFDoS)	2.01	0.99	ng/L	1.91		105	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.86	3.9	ng/L	7.40		120	52-158			Z-01
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	9.00	3.9	ng/L	7.50		120	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.19	3.9	ng/L	7.60		121	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.24	0.99	ng/L	1.97		113	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.28	0.99	ng/L	1.97		116	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.04	0.99	ng/L	1.97		104	49-156			
N-MeFOSAA (NMeFOSAA)	1.96	0.99	ng/L	1.97		99.3	32-160			
N-EtFOSAA (NEtFOSAA)	2.52	0.99	ng/L	1.97		128	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	21.0	9.9	ng/L	19.7		106	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.4	9.9	ng/L	19.7		109	60-147			

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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 B359705 - Draft Method 1633											
MRL Check (B359705-MRL1)				Prepared: 12/06/23 Analyzed: 12/07/23							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.93	3.9	ng/L	7.90		100		58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.66	3.9	ng/L	7.45		103		61-148			
9Cl-PF3ONS (F53B Minor)	7.44	3.9	ng/L	7.40		101		44-167			
11Cl-PF3OUdS (F53B Major)	7.36	3.9	ng/L	7.45		98.7		36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	18.2	9.9	ng/L	19.7		92.1		32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	93.0	49	ng/L	98.7		94.3		39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	93.1	49	ng/L	98.7		94.3		36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.49	2.0	ng/L	3.51		99.3		56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.92	2.0	ng/L	3.95		99.2		48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.83	2.0	ng/L	3.95		97.1		49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.73	2.0	ng/L	3.95		94.6		47-160			
Surrogate: 13C4-PFBA	*68.1*		ng/L	98.7		69.0		10-130			
Surrogate: 13C5-PFPeA	*32.8*		ng/L	49.3		66.4		35-150			
Surrogate: 13C5-PFHxA	*16.7*		ng/L	24.7		67.5		55-150			
Surrogate: 13C4-PFHpA	*17.4*		ng/L	24.7		70.5		55-150			
Surrogate: 13C8-PFOA	*17.0*		ng/L	24.7		68.7		60-140			
Surrogate: 13C9-PFNA	*8.51*		ng/L	12.3		69.0		55-140			
Surrogate: 13C6-PFDA	*8.50*		ng/L	12.3		68.9		50-140			
Surrogate: 13C7-PFUnA	*8.17*		ng/L	12.3		66.2		30-140			
Surrogate: 13C2-PFDoA	*7.94*		ng/L	12.3		64.4		10-150			
Surrogate: 13C2-PFTeDA	*7.59*		ng/L	12.3		61.5		10-130			
Surrogate: 13C3-PFBS	*15.5*		ng/L	24.7		63.0		55-150			
Surrogate: 13C3-PFHxS	*18.0*		ng/L	24.7		73.1		55-150			
Surrogate: 13C8-PFOS	*16.4*		ng/L	24.7		66.3		45-140			
Surrogate: 13C2-4:2FTS	*26.9*		ng/L	49.3		**54.6**	*	60-200			Z-01
Surrogate: 13C2-6:2FTS	*35.3*		ng/L	49.3		71.5		60-200			
Surrogate: 13C2-8:2FTS	*33.4*		ng/L	49.3		67.7		50-200			
Surrogate: 13C8-PFOSA	*14.7*		ng/L	24.7		59.6		30-130			
Surrogate: D3-NMeFOSA	*13.2*		ng/L	24.7		53.4		15-130			
Surrogate: D5-NEtFOSA	*13.9*		ng/L	24.7		56.4		10-130			
Surrogate: D3-NMeFOSAA	*31.2*		ng/L	49.3		63.2		45-200			
Surrogate: D5-NEtFOSAA	*31.0*		ng/L	49.3		62.8		10-200			
Surrogate: D7-NMeFOSE	*140*		ng/L	247		56.8		10-150			
Surrogate: D9-NEtFOSE	*142*		ng/L	247		57.4		10-150			
Surrogate: 13C3-HFPO-DA	*63.8*		ng/L	98.7		64.6		25-160			
Batch B360121 - Draft Method 1633											
Blank (B360121-BLK1)				Prepared: 12/13/23 Analyzed: 12/15/23							
Perfluorobutanoic acid (PFBA)	ND	4.0	ng/L								
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L								
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L								
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L								
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L								
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L								
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L								

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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 B360121 - Draft Method 1633										
Blank (B360121-BLK1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	4.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	4.0	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*97.9*		ng/L	99.4		98.4	10-130			
Surrogate: 13C5-PFPeA	*49.9*		ng/L	49.7		100	35-150			
Surrogate: 13C5-PFHxA	*25.0*		ng/L	24.9		101	55-150			
Surrogate: 13C4-PFHpA	*25.6*		ng/L	24.9		103	55-150			
Surrogate: 13C8-PFOA	*24.8*		ng/L	24.9		99.7	60-140			
Surrogate: 13C9-PFNA	*12.2*		ng/L	12.4		97.8	55-140			
Surrogate: 13C6-PFDA	*12.2*		ng/L	12.4		98.3	50-140			
Surrogate: 13C7-PFUnA	*11.2*		ng/L	12.4		89.8	30-140			
Surrogate: 13C2-PFDoA	*11.3*		ng/L	12.4		91.1	10-150			

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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 B360121 - Draft Method 1633										
Blank (B360121-BLK1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Surrogate: 13C2-PFTeDA	*11.3*		ng/L	12.4		90.9	10-130			
Surrogate: 13C3-PFBS	*21.7*		ng/L	24.9		87.4	55-150			
Surrogate: 13C3-PFHxS	*24.8*		ng/L	24.9		99.8	55-150			
Surrogate: 13C8-PFOS	*23.9*		ng/L	24.9		96.2	45-140			
Surrogate: 13C2-4:2FTS	*36.4*		ng/L	49.7		73.2	60-200			
Surrogate: 13C2-6:2FTS	*51.4*		ng/L	49.7		103	60-200			
Surrogate: 13C2-8:2FTS	*55.3*		ng/L	49.7		111	50-200			
Surrogate: 13C8-PFOSA	*22.3*		ng/L	24.9		89.7	30-130			
Surrogate: D3-NMeFOSA	*20.8*		ng/L	24.9		83.7	15-130			
Surrogate: D5-NEtFOSA	*21.8*		ng/L	24.9		87.5	10-130			
Surrogate: D3-NMeFOSAA	*48.8*		ng/L	49.7		98.1	45-200			
Surrogate: D5-NEtFOSAA	*47.0*		ng/L	49.7		94.6	10-200			
Surrogate: D7-NMeFOSE	*231*		ng/L	249		92.8	10-150			
Surrogate: D9-NEtFOSE	*235*		ng/L	249		94.5	10-150			
Surrogate: 13C3-HFPO-DA	*99.6*		ng/L	99.4		100	25-160			
LCS (B360121-BS1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Perfluorobutanoic acid (PFBA)	121	4.0	ng/L	95.3		127	58-148			
Perfluoropentanoic acid (PFPeA)	59.4	2.0	ng/L	47.6		125	54-152			
Perfluorohexanoic acid (PFHxA)	29.3	0.99	ng/L	23.8		123	55-152			
Perfluoroheptanoic acid (PFHpA)	29.0	0.99	ng/L	23.8		122	54-154			
Perfluorooctanoic acid (PFOA)	29.2	0.99	ng/L	23.8		123	52-161			
Perfluorononanoic acid (PFNA)	29.1	0.99	ng/L	23.8		122	59-149			
Perfluorodecanoic acid (PFDA)	29.3	0.99	ng/L	23.8		123	52-147			
Perfluoroundecanoic acid (PFUnA)	30.4	0.99	ng/L	23.8		127	48-159			
Perfluorododecanoic acid (PFDoA)	29.8	0.99	ng/L	23.8		125	64-142			
Perfluorotridecanoic acid (PFTrDA)	30.5	0.99	ng/L	23.8		128	49-148			
Perfluorotetradecanoic acid (PFTeDA)	29.7	0.99	ng/L	23.8		125	47-161			
Perfluorobutanesulfonic acid (PFBS)	26.6	0.99	ng/L	21.1		126	62-144			
Perfluoropentanesulfonic acid (PFPeS)	27.4	0.99	ng/L	22.4		123	59-151			
Perfluorohexanesulfonic acid (PFHxS)	25.9	0.99	ng/L	21.8		119	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	28.9	0.99	ng/L	22.7		128	55-152			
Perfluorooctanesulfonic acid (PFOS)	25.6	0.99	ng/L	22.1		116	58-149			
Perfluorononanesulfonic acid (PFNS)	26.3	0.99	ng/L	22.9		115	52-148			
Perfluorodecanesulfonic acid (PFDS)	26.9	0.99	ng/L	23.0		117	51-147			
Perfluorododecanesulfonic acid (PFDoS)	25.7	0.99	ng/L	23.1		111	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	116	4.0	ng/L	89.3		130	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	120	4.0	ng/L	90.5		132	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	124	4.0	ng/L	91.7		135	63-152			
Perfluorooctanesulfonamide (PFOSA)	29.9	0.99	ng/L	23.8		126	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	27.8	0.99	ng/L	23.8		117	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	26.4	0.99	ng/L	23.8		111	65-139			
N-MeFOSAA (NMeFOSAA)	27.9	0.99	ng/L	23.8		117	58-144			
N-EtFOSAA (NEtFOSAA)	28.7	0.99	ng/L	23.8		121	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	286	9.9	ng/L	238		120	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	286	9.9	ng/L	238		120	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	113	4.0	ng/L	95.3		118	63-144			

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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 B360121 - Draft Method 1633										
LCS (B360121-BS1)				Prepared: 12/13/23 Analyzed: 12/15/23						
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	103	4.0	ng/L	89.9		115	68-146			
9Cl-PF3ONS (F53B Minor)	106	4.0	ng/L	89.3		119	56-156			
11Cl-PF3OUdS (F53B Major)	108	4.0	ng/L	89.9		120	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	207	9.9	ng/L	238		86.8	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1050	50	ng/L	1190		87.9	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1060	50	ng/L	1190		89.1	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	49.3	2.0	ng/L	42.4		116	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	49.4	2.0	ng/L	47.6		104	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	51.0	2.0	ng/L	47.6		107	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	54.5	2.0	ng/L	47.6		115	48-161			
Surrogate: 13C4-PFBA	*84.9*		ng/L	99.2		85.6	10-130			
Surrogate: 13C5-PFPeA	*42.8*		ng/L	49.6		86.2	35-150			
Surrogate: 13C5-PFHxA	*21.5*		ng/L	24.8		86.5	55-150			
Surrogate: 13C4-PFHpA	*22.1*		ng/L	24.8		89.1	55-150			
Surrogate: 13C8-PFOA	*21.2*		ng/L	24.8		85.6	60-140			
Surrogate: 13C9-PFNA	*10.5*		ng/L	12.4		84.5	55-140			
Surrogate: 13C6-PFDA	*10.8*		ng/L	12.4		86.8	50-140			
Surrogate: 13C7-PFUnA	*10.2*		ng/L	12.4		82.1	30-140			
Surrogate: 13C2-PFDoA	*10.1*		ng/L	12.4		81.2	10-150			
Surrogate: 13C2-PFTeDA	*10.2*		ng/L	12.4		81.8	10-130			
Surrogate: 13C3-PFBS	*19.1*		ng/L	24.8		77.0	55-150			
Surrogate: 13C3-PFHxS	*22.0*		ng/L	24.8		88.6	55-150			
Surrogate: 13C8-PFOS	*21.1*		ng/L	24.8		85.0	45-140			
Surrogate: 13C2-4:2FTS	*35.1*		ng/L	49.6		70.8	60-200			
Surrogate: 13C2-6:2FTS	*48.5*		ng/L	49.6		97.8	60-200			
Surrogate: 13C2-8:2FTS	*53.4*		ng/L	49.6		108	50-200			
Surrogate: 13C8-PFOSA	*19.4*		ng/L	24.8		78.1	30-130			
Surrogate: D3-NMeFOSA	*18.1*		ng/L	24.8		72.9	15-130			
Surrogate: D5-NEtFOSA	*18.7*		ng/L	24.8		75.6	10-130			
Surrogate: D3-NMeFOSAA	*42.4*		ng/L	49.6		85.5	45-200			
Surrogate: D5-NEtFOSAA	*41.6*		ng/L	49.6		83.8	10-200			
Surrogate: D7-NMeFOSE	*206*		ng/L	248		83.1	10-150			
Surrogate: D9-NEtFOSE	*208*		ng/L	248		83.7	10-150			
Surrogate: 13C3-HFPO-DA	*86.5*		ng/L	99.2		87.2	25-160			
MRL Check (B360121-MRL1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Perfluorobutanoic acid (PFBA)	9.36	4.0	ng/L	7.94		118	44-157			
Perfluoropentanoic acid (PFPeA)	4.50	2.0	ng/L	3.97		113	57-148			
Perfluorohexanoic acid (PFHxA)	2.26	0.99	ng/L	1.99		114	62-149			
Perfluoroheptanoic acid (PFHpA)	2.10	0.99	ng/L	1.99		106	56-150			
Perfluorooctanoic acid (PFOA)	2.20	0.99	ng/L	1.99		111	57-161			
Perfluorononanoic acid (PFNA)	2.11	0.99	ng/L	1.99		106	53-157			
Perfluorodecanoic acid (PFDA)	2.09	0.99	ng/L	1.99		105	43-158			
Perfluoroundecanoic acid (PFUnA)	2.11	0.99	ng/L	1.99		106	50-155			
Perfluorododecanoic acid (PFDoA)	2.21	0.99	ng/L	1.99		112	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.17	0.99	ng/L	1.99		109	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.21	0.99	ng/L	1.99		111	52-156			

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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 B360121 - Draft Method 1633										
MRL Check (B360121-MRL1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Perfluorobutanesulfonic acid (PFBS)	1.96	0.99	ng/L	1.76		111	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.86	0.99	ng/L	1.87		99.7	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.05	0.99	ng/L	1.82		113	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.01	0.99	ng/L	1.89		106	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.19	0.99	ng/L	1.84		119	43-162			
Perfluorononanesulfonic acid (PFNS)	1.93	0.99	ng/L	1.91		101	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.06	0.99	ng/L	1.92		108	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.96	0.99	ng/L	1.93		102	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.40	4.0	ng/L	7.45		113	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.60	4.0	ng/L	7.55		114	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.12	4.0	ng/L	7.64		119	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.21	0.99	ng/L	1.99		111	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.12	0.99	ng/L	1.99		107	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.06	0.99	ng/L	1.99		104	49-156			
N-MeFOSAA (NMeFOSAA)	1.88	0.99	ng/L	1.99		94.6	32-160			
N-EtFOSAA (NEtFOSAA)	2.20	0.99	ng/L	1.99		111	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	21.0	9.9	ng/L	19.9		106	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	20.9	9.9	ng/L	19.9		105	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.87	4.0	ng/L	7.94		99.1	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.03	4.0	ng/L	7.50		93.8	61-148			
9Cl-PF3ONS (F53B Minor)	7.06	4.0	ng/L	7.45		94.8	44-167			
11Cl-PF3OUdS (F53B Major)	7.15	4.0	ng/L	7.50		95.3	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.5	9.9	ng/L	19.9		88.0	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	87.0	50	ng/L	99.3		87.7	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	87.2	50	ng/L	99.3		87.9	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.72	2.0	ng/L	3.53		105	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.82	2.0	ng/L	3.97		96.3	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.87	2.0	ng/L	3.97		97.3	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.10	2.0	ng/L	3.97		103	47-160			
Surrogate: 13C4-PFBA	*83.4*		ng/L	99.3		84.0	10-130			
Surrogate: 13C5-PFPeA	*42.8*		ng/L	49.6		86.1	35-150			
Surrogate: 13C5-PFHxA	*21.2*		ng/L	24.8		85.5	55-150			
Surrogate: 13C4-PFHpA	*22.0*		ng/L	24.8		88.6	55-150			
Surrogate: 13C8-PFOA	*20.3*		ng/L	24.8		81.6	60-140			
Surrogate: 13C9-PFNA	*10.3*		ng/L	12.4		83.1	55-140			
Surrogate: 13C6-PFDA	*10.4*		ng/L	12.4		83.8	50-140			
Surrogate: 13C7-PFUnA	*9.48*		ng/L	12.4		76.4	30-140			
Surrogate: 13C2-PFDoA	*9.38*		ng/L	12.4		75.6	10-150			
Surrogate: 13C2-PFTeDA	*9.37*		ng/L	12.4		75.5	10-130			
Surrogate: 13C3-PFBS	*18.6*		ng/L	24.8		75.1	55-150			
Surrogate: 13C3-PFHxS	*21.3*		ng/L	24.8		86.0	55-150			

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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 B360121 - Draft Method 1633										
MRL Check (B360121-MRL1)				Prepared: 12/13/23 Analyzed: 12/15/23						
Surrogate: 13C8-PFOS	*19.4*		ng/L	24.8		78.2	45-140			
Surrogate: 13C2-4:2FTS	*32.0*		ng/L	49.6		64.4	60-200			
Surrogate: 13C2-6:2FTS	*45.6*		ng/L	49.6		91.8	60-200			
Surrogate: 13C2-8:2FTS	*49.2*		ng/L	49.6		99.0	50-200			
Surrogate: 13C8-PFOSA	*18.2*		ng/L	24.8		73.1	30-130			
Surrogate: D3-NMeFOSA	*17.1*		ng/L	24.8		69.1	15-130			
Surrogate: D5-NEtFOSA	*17.9*		ng/L	24.8		72.2	10-130			
Surrogate: D3-NMeFOSAA	*38.6*		ng/L	49.6		77.8	45-200			
Surrogate: D5-NEtFOSAA	*37.7*		ng/L	49.6		76.0	10-200			
Surrogate: D7-NMeFOSE	*188*		ng/L	248		75.9	10-150			
Surrogate: D9-NEtFOSE	*191*		ng/L	248		77.1	10-150			
Surrogate: 13C3-HFPO-DA	*86.1*		ng/L	99.3		86.7	25-160			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B359833 - SW-846 3005A											
Blank (B359833-BLK1)				Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	ND	0.50	mg/L								
Magnesium	ND	0.050	mg/L								
Potassium	ND	2.0	mg/L								
Sodium	ND	2.0	mg/L								
Boron	ND	0.10	mg/L								
Hardness	0.031	1.4	mg/L								J
LCS (B359833-BS1)				Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	4.07	0.50	mg/L	4.00		102		80-120			
Magnesium	4.14	0.050	mg/L	4.00		104		80-120			
Potassium	3.83	2.0	mg/L	4.00		95.7		80-120			
Sodium	3.75	2.0	mg/L	4.00		93.8		80-120			
Boron	1.00	0.10	mg/L	1.00		100		80-120			
Hardness	27	1.4	mg/L	26.4		103		80-120			
LCS Dup (B359833-BSD1)				Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	4.02	0.50	mg/L	4.00		101		80-120	1.11	20	
Magnesium	4.09	0.050	mg/L	4.00		102		80-120	1.11	20	
Potassium	3.88	2.0	mg/L	4.00		96.9		80-120	1.22	20	
Sodium	3.70	2.0	mg/L	4.00		92.4		80-120	1.52	20	
Boron	0.977	0.10	mg/L	1.00		97.7		80-120	2.42	20	
Hardness	27	1.4	mg/L	26.4		102		80-120	1.11	20	
Matrix Spike (B359833-MS1)	**Source: 23K3096-04**			Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	82.5	0.50	mg/L	4.00	78.7	96.3		75-125			
Magnesium	28.2	0.050	mg/L	4.00	24.2	99.4		75-125			
Potassium	7.02	2.0	mg/L	4.00	2.82	105		75-125			
Sodium	11.5	2.0	mg/L	4.00	7.15	109		75-125			
Boron	1.01	0.10	mg/L	1.00	ND	101		75-125			
Hardness	320	1.4	mg/L	26.4	300	98.3		75-125			
Matrix Spike Dup (B359833-MSD1)	**Source: 23K3096-04**			Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	85.7	0.50	mg/L	4.00	78.7	**176**	*	75-125	3.79	20	MS-19
Magnesium	29.2	0.050	mg/L	4.00	24.2	125		75-125	3.51	20	
Potassium	7.32	2.0	mg/L	4.00	2.82	113		75-125	4.13	20	
Sodium	12.0	2.0	mg/L	4.00	7.15	122		75-125	4.30	20	
Boron	1.03	0.10	mg/L	1.00	ND	103		75-125	1.47	20	
Hardness	330	1.4	mg/L	26.4	300	**144**	*	75-125	3.69	20	MS-19
Post Spike (B359833-PS1)	**Source: 23K3096-04**			Prepared: 12/05/23 Analyzed: 12/07/23							
Calcium	89.9		mg/L	20.0	77.1	**64.2**	*	75-125			Z-01b
Magnesium	38.7		mg/L	20.0	23.7	**74.7**	*	75-125			Z-01b
Potassium	19.0		mg/L	20.0	2.76	81.0		75-125			
Sodium	23.3		mg/L	20.0	7.01	81.7		75-125			
Boron	4.00		mg/L	5.00	0.00986	79.8		75-125			
Hardness	384		mg/L	132	290	**70.7**	*	75-125			Z-01a

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359833 - SW-846 3005A										
Dilution Check (B359833-SRL1)		**Source: 23K3096-04**		Prepared: 12/05/23 Analyzed: 12/07/23						
Calcium	76.3	2.5	mg/L		78.7			3.00	20	
Magnesium	23.3	0.25	mg/L		24.2			3.77	20	
Potassium	2.68	10	mg/L		2.82			4.99	20	J
Sodium	6.48	10	mg/L		7.15			9.96	20	J
Boron	ND	0.50	mg/L		ND				20	
Hardness	287	7.2	mg/L		296			3.26	20	
Dilution Check (B359833-SRL2)		**Source: 23K3423-03**		Prepared: 12/05/23 Analyzed: 12/07/23						
Calcium	32.7	2.5	mg/L		33.1			1.08	20	
Magnesium	11.7	0.25	mg/L		11.9			1.62	20	
Potassium	ND	10	mg/L		ND				20	
Sodium	35.7	10	mg/L		39.1			9.06	20	
Boron	ND	0.50	mg/L		ND				20	
Hardness	130	7.2	mg/L		131			1.28	20	

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B358915 - EPA 300.0										
Blank (B358915-BLK1)				Prepared & Analyzed: 11/22/23						
Nitrate as N	ND	0.10	mg/L							
LCS (B358915-BS1)				Prepared & Analyzed: 11/22/23						
Nitrate as N	0.95	0.10	mg/L	1.00		94.9	90-110			
LCS Dup (B358915-BSD1)				Prepared & Analyzed: 11/22/23						
Nitrate as N	0.95	0.10	mg/L	1.00		94.7	90-110	0.179	20	
Matrix Spike (B358915-MS2)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23						
Nitrate as N	1.0	0.10	mg/L	1.00	ND	102	80-120			
Matrix Spike Dup (B358915-MSD2)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23						
Nitrate as N	1.0	0.10	mg/L	1.00	ND	101	80-120	1.06	20	
Batch B358948 - SM 21-23 5210B										
Blank (B358948-BLK1)				Prepared & Analyzed: 11/22/23						
Biochemical Oxygen Demand	0.86	2.0	mg/L							J
Blank (B358948-BLK2)				Prepared & Analyzed: 11/22/23						
Biochemical Oxygen Demand	0.38	2.0	mg/L							W-16, J
LCS (B358948-BS1)				Prepared & Analyzed: 11/22/23						
Biochemical Oxygen Demand	170		mg/L	198		86.7	85-115			
Matrix Spike (B358948-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23						
Biochemical Oxygen Demand	190	2.0	mg/L	198	ND	98.1	64.7-132			
Matrix Spike Dup (B358948-MSD1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23						
Biochemical Oxygen Demand	190	2.0	mg/L	198	ND	94.5	64.7-132	3.80	20	
Batch B358952 - EPA 300.0										
Blank (B358952-BLK1)				Prepared & Analyzed: 11/22/23						
Bromide	ND	0.50	mg/L							
Chloride	ND	1.0	mg/L							
Sulfate	ND	1.0	mg/L							
LCS (B358952-BS1)				Prepared & Analyzed: 11/22/23						
Bromide	0.933	0.50	mg/L	1.00		93.3	90-110			
Chloride	9.7	1.0	mg/L	10.0		97.4	90-110			
Sulfate	9.7	1.0	mg/L	10.0		96.6	90-110			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B358952 - EPA 300.0											
LCS Dup (B358952-BSD1)				Prepared & Analyzed: 11/22/23							
Bromide	0.932	0.50	mg/L	1.00		93.2		90-110	0.139	20	
Chloride	9.7	1.0	mg/L	10.0		97.2		90-110	0.153	20	
Sulfate	9.7	1.0	mg/L	10.0		96.6		90-110	0.00	20	
Matrix Spike (B358952-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23							
Bromide	1.01	0.50	mg/L	1.00	0.305	**71.0**	*	80-120			MS-07A
Chloride	11	1.0	mg/L	10.0	1.2	101		80-120			
Sulfate	24	1.0	mg/L	10.0	15	84.2		80-120			
Matrix Spike Dup (B358952-MSD1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/22/23							
Bromide	0.987	0.50	mg/L	1.00	0.305	**68.3**	*	80-120	2.67	20	MS-07A
Chloride	11	1.0	mg/L	10.0	1.2	100		80-120	0.207	20	
Sulfate	24	1.0	mg/L	10.0	15	83.8		80-120	0.166	20	
Batch B358959 - SM21-23 2320B											
Blank (B358959-BLK1)				Prepared & Analyzed: 11/26/23							
Alkalinity to pH 4.2	ND	1.0	mg/L								
LCS (B358959-BS1)				Prepared & Analyzed: 11/26/23							
Alkalinity to pH 4.5	64	1.0	mg/L	61.2		104		88.3-110			
LCS Dup (B358959-BSD1)				Prepared & Analyzed: 11/26/23							
Alkalinity to pH 4.5	64	1.0	mg/L	61.2		104		88.3-110	0.00	5	
Matrix Spike (B358959-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/26/23							
Alkalinity to pH 4.5	300	1.0	mg/L	50.0	250	116		64-137			PR-18
Matrix Spike Dup (B358959-MSD1)		**Source: 23K3096-04**		Prepared & Analyzed: 11/26/23							
Alkalinity to pH 4.5	300	1.0	mg/L	50.0	250	112		64-137	0.660	20	PR-18
Batch B358979 - Draft Method 1633											
Blank (B358979-BLK1)				Prepared & Analyzed: 11/27/23							
Total Suspended Solids	ND	5.0	mg/L								
LCS (B358979-BS1)				Prepared & Analyzed: 11/27/23							
Total Suspended Solids	182	5.0	mg/L	200		91.0		64.1-125			
Batch B359070 - SM21-23 4500 H B											
LCS (B359070-BS1)				Prepared & Analyzed: 11/28/23							
pH	6.04		pH Units	6.00		101		90-110			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359070 - SM21-23 4500 H B										
Duplicate (B359070-DUP1)	**Source: 23K3096-05**			Prepared & Analyzed: 11/28/23						
pH	7.7		pH Units		7.7			0.533	5	H-05
Batch B359075 - SM 21-23 4500 P E										
Blank (B359075-BLK1)				Prepared & Analyzed: 11/22/23						
Orthophosphate as P	ND	0.050	mg/L							
LCS (B359075-BS1)				Prepared & Analyzed: 11/22/23						
Orthophosphate as P	0.23	0.050	mg/L	0.214		106	76.7-115			
LCS Dup (B359075-BSD1)				Prepared & Analyzed: 11/22/23						
Orthophosphate as P	0.22	0.050	mg/L	0.214		103	76.7-115	2.73	6.65	
Duplicate (B359075-DUP1)	**Source: 23K3096-04**			Prepared & Analyzed: 11/22/23						
Orthophosphate as P	0.047	0.050	mg/L		0.047			0.00	20.7	W-17, J
Matrix Spike (B359075-MS1)	**Source: 23K3096-04**			Prepared & Analyzed: 11/22/23						
Orthophosphate as P	0.36	0.050	mg/L	0.300	0.047	106	57.7-135			W-17
Batch B359076 - Draft Method 1633										
Blank (B359076-BLK1)				Prepared & Analyzed: 11/28/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B359076-BS1)				Prepared & Analyzed: 11/28/23						
Total Suspended Solids	139	5.0	mg/L	200		69.5	64.1-125			
Batch B359465 - EPA 410.4										
Blank (B359465-BLK1)				Prepared & Analyzed: 12/01/23						
Chemical Oxygen Demand	ND	15	mg/L							
LCS (B359465-BS1)				Prepared & Analyzed: 12/01/23						
Chemical Oxygen Demand	210	15	mg/L	200		104	90-110			
LCS Dup (B359465-BSD1)				Prepared & Analyzed: 12/01/23						
Chemical Oxygen Demand	210	15	mg/L	200		104	90-110	0.00	6.71	
Duplicate (B359465-DUP1)	**Source: 23K3096-04**			Prepared & Analyzed: 12/01/23						
Chemical Oxygen Demand	ND	15	mg/L		ND			NC	38.1	

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B359465 - EPA 410.4											
Matrix Spike (B359465-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 12/01/23							
Chemical Oxygen Demand	110	15	mg/L	100	ND	**112**	*	90-110			MS-07
Batch B359552 - SM 21-23 5310B											
Blank (B359552-BLK1)				Prepared & Analyzed: 12/01/23							
Total Organic Carbon	ND	1.0	mg/L								
LCS (B359552-BS1)				Prepared & Analyzed: 12/01/23							
Total Organic Carbon	10.1	1.0	mg/L	10.0		101		90-110			
LCS Dup (B359552-BSD1)				Prepared & Analyzed: 12/01/23							
Total Organic Carbon	10.1	1.0	mg/L	10.0		101		90-110	0.0893	15	
Matrix Spike (B359552-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 12/01/23							
Total Organic Carbon	7.50	1.0	mg/L	5.00	2.68	96.4		85-115			
Matrix Spike Dup (B359552-MSD1)		**Source: 23K3096-04**		Prepared & Analyzed: 12/01/23							
Total Organic Carbon	7.49	1.0	mg/L	5.00	2.68	96.2		85-115	0.147	15	
Batch B360050 - EPA 350.1											
Blank (B360050-BLK1)				Prepared & Analyzed: 12/07/23							
Ammonia as N	ND	0.10	mg/L								
LCS (B360050-BS1)				Prepared & Analyzed: 12/07/23							
Ammonia as N	2.1	0.10	mg/L	2.00		106		90-110			
LCS Dup (B360050-BSD1)				Prepared & Analyzed: 12/07/23							
Ammonia as N	2.1	0.10	mg/L	2.00		104		90-110	1.43	13.3	
Matrix Spike (B360050-MS1)		**Source: 23K3096-04**		Prepared & Analyzed: 12/07/23							
Ammonia as N	1.5	0.10	mg/L	2.00	ND	**76.6**	*	90-110			MS-09
Matrix Spike Dup (B360050-MSD1)		**Source: 23K3096-04**		Prepared & Analyzed: 12/07/23							
Ammonia as N	1.8	0.10	mg/L	2.00	ND	91.0		90-110	17.2	20	
Batch B360849 - SM4500 N Org B C											
Blank (B360849-BLK1)				Prepared: 12/15/23 Analyzed: 12/17/23							
Total Kjeldahl Nitrogen	ND	1.0	mg/L								

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360849 - SM4500 N Org B C										
LCS (B360849-BS1)				Prepared: 12/15/23 Analyzed: 12/17/23						
Total Kjeldahl Nitrogen	21	1.0	mg/L	20.0		106	84.7-115			
Batch B360850 - SM4500 N Org B C										
Blank (B360850-BLK1)				Prepared: 12/15/23 Analyzed: 12/19/23						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B360850-BS1)				Prepared: 12/15/23 Analyzed: 12/19/23						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		98.0	84.7-115			
Matrix Spike (B360850-MS1)	**Source: 23K3096-04**			Prepared: 12/15/23 Analyzed: 12/19/23						
Total Kjeldahl Nitrogen	21	1.0	mg/L	20.0	0.56	101	64.9-123			
Matrix Spike Dup (B360850-MSD1)	**Source: 23K3096-04**			Prepared: 12/15/23 Analyzed: 12/19/23						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0	0.56	92.4	64.9-123	8.45	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B358974 - SM21-23 2540C											
Blank (B358974-BLK1)				Prepared & Analyzed: 11/28/23							
Total Dissolved Solids	ND	10	mg/L								
LCS (B358974-BS1)				Prepared & Analyzed: 11/28/23							
Total Dissolved Solids	230	10	mg/L	293		79.2	67.3-113				
Duplicate (B358974-DUP1)	**Source: 23K3096-04**			Prepared & Analyzed: 11/28/23							
Total Dissolved Solids	290	10	mg/L		230			**22.1**	*	10	R-02

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix.
D-03	Sample diluted pre-extraction due to elevated TSS pre-analysis result.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
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-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
PF-17C	Extracted internal standard is outside of control limits. Analyte is a known difficult compound.
PR-18	Headspace present in sample container.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
W-01	The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l dissolved oxygen depletion.
W-16	Blank result was >0.2mg/L.
W-17	Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.
Z-01	Extracted internal standard outside of control limits. Analyte is a known difficult compound.
Z-01a	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
Z-01b	Post spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
Z-01c	Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
EPA 300.0 in Water	
Bromide	ME,NY,NC,NH
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Sulfate	NC,NY,MA,VA,ME,NH,CT,RI

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 350.1 in Water	
Ammonia as N	NC,NY,MA,NH,RI,ME,VA
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
SM 21-23 4500 P E in Water	
Orthophosphate as P	CT,MA,NH,NY,RI,ME,VA
SM 21-23 5210B in Water	
Biochemical Oxygen Demand	CT,MA,NH,NY,RI,ME,VA,NC
SM 21-23 5310B in Water	
Total Organic Carbon	CT,NH,NY,RI,NC,MA,VA
SM19-23 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 2320B in Water	
Alkalinity to pH 4.5	CT
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 4500 H B in Water	
pH	CT,MA,RI
SW-846 6010D in Water	
Calcium	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC

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

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 23K3016

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460 — Compliance Monitoring? [ ] Yes [ ] No
Collected By (print): Brian Neumann Pat Sinclair	Purchase Order # : PACE CO #145684 Quote #: — DW PWS ID #: DW Location Code:
Collected By (signature):	Turnaround Date Required: STANDARD — Immediately Packed on Ice: [X] Yes [ ] No
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) — Field Filtered (if applicable): [ ] Yes [ ] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: O U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager:

Analyses: REFER TO ATTACHED FOR METHODS; PFAS 1633; ACTIGIAN SWEETENERS

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	REFER TO ATTACHED FOR METHODS	PFAS 1633	ACTIGIAN SWEETENERS	Lab Profile/Line
EQPT BLNK #1		Grab	11.21.23	1305				2		X		1
~~EQPT BLNK #2~~		~~Grab~~	~~11.21.23~~							~~X~~		
MW-7	GW	Grab	11.21.23	1410				2	N	X		2
MW-6	GW	Grab	11.21.23	1420				2	N	X		3
MW-10	GW	Grab	11.21.23	1115				4 2	X	X		4
MW-12	GW	Grab	11.21.23	1020			1642		X	\	X	5
MW-3	GW	Grab	11.21.23	1490				2	~~X~~	X		6
	GW	Grab	11.21.23						X			
	GW	Grab	11.21.23						X			
	GW	Grab	11.21.23						X			

Rev 11/28/23 - B. O'Brien-Drake per discussion with field team and email dated 11/22/23

Customer Remarks / Special Conditions / Possible Hazards: MW-10 is MS/MSD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 11-21-23/1730	Received by/Company: (Signature)	Date/Time: 11/22/23 1420
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 11.22.23 9:38
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

In order to keep this project consistent with the Westchester Garden Center Labriola Landfill project, the DEC has requested that the following methods are used on samples -04 and -05:
- Hardness by Calculation 6010D
- Total Kjeldahl Nitrogen (TKN) by SM4500 NH3 C
- pH via 4500 for waters

KKS 11/28/23

Table 1
Sample and Analytical Plan

Analyte	Method	Normal Samples	Field Duplicates	MS	MSD	Equipment Blanks	MTotal	
[redacted]								
[redacted]	EPA Method 1633	36	2	2	2	1	49	
[redacted]	EPA Method 9045	6	1				7	
[redacted]	Lloyd Kahn	6	1				7	
[redacted]	EPA Method 1312/Method 1633	6	1	-	-		7	
Groundwater (up to 7 locations)								
~~PFAS~~	~~EPA Method 1633~~	7	1	1	1	2	12	
Ammonia	EPA Method 350.1	7	1	1	1	-	10	
Chemical Oxygen Demand	EPA Method 410.4	7	1	1	1	-	10	
Biochemical Oxygen Demand	EPA Method 5210B	7	1	1	1	-	10	
Total Organic Carbon	EPA Method 5310B/C	7	1	1	1	-	10	
Total Dissolved Solids	SM-2540C	7	1	1	1	-	10	
Sulfate	EPA Method 300	7	1	1	1	-	10	
Alkalinity	SM- 2320B	7	1	1	1	-	10	
Chloride	EPA Method 300	7	1	1	1	-	10	
Bromide	EPA Method 300	7	1	1	1	-	10	
Hardness	EPA Method 200.7	7	1	1	1	-	10	
Nitrate	EPA Method 300	7	1	1	1	-	10	
Phosphate	SM-4500P-E	7	1	1	1	-	10	
Total Kjeldahl Nitrogen	EPA Method 351.2	7	1	1	1	-	10	
pH	EPA Method 9045	7	1	1	1	-	10	
Bicarbonate	Calculation from Alkalinity and pH	7	1	1	1	-	10	
Carbonate	Calculation from Alkalinity and pH	7	1	1	1	-	10	
Calcium	EPA Method 6010D	7	1	1	1	-	10	
Magnesium	EPA Method 6010D	7	1	1	1	-	10	
Potassium	EPA Method 6010D	7	1	1	1	-	10	
Sodium	EPA Method 6010D	7	1	1	1	-	10	
Boron	EPA Method 6010D	7	1	1	1	-	10	
Tritium	EPA Method 906.0	7	1	1	1	-	10	
~~Artificial Sweeteners~~	~~L221~~	4	1	-	-	-	5	ORDERED - Deliver to PES by 11/:
Wastewater and Cleaning Products*								
[redacted]	[redacted]	[redacted]						[redacted]

*PFAS analyses will be performed for pre- and post- total oxidizable precursor assay.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Precision Env Services

Project Meadow Pond School Spill #2100460

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location South Salem, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☒ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time STM 11/22/23 1430

Back-Sheet By / Date / Time STM 11/22/23 1702

Temperature Method Gun # 5

Temp ☒ < 6° C Actual Temperature 4.4, 5.9, 3.8

Rush Samples: Yes / (No) Notify

Short Hold: (Yes) / No Notify Javier

Notes regarding Samples/COC outside of SOP:

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

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☐	☒
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒	Analysis ☒	Sampler Name ☒	
Project ☒	IDs ☒	Collection Date/Time ☒	

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

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

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL				3	1															
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL	2	2	2	9	3	2														
Sulfuric																						
Unpreserved		250mL	1			12	4															
Trizma																						
Sulfuric						6	2															
Nitric						6	2															
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					
250 amber						3	1															
125 plastic						5	1															
Voa ascorbic							2															

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ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Kelley
CON-TEST ANALYTICAL LABORATORY
39 SPRUCE STREET 2ND FLOOR
EAST LONGMEADOW, Massachusetts 01028

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JOB DESCRIPTION

23K3096

JOB NUMBER

810-86245-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Authorization



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Authorized for release by
Nathan Trowbridge, Manager of Project Management
Nathan.Trowbridge@et.eurofinsus.com
(574)233-4777

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Definitions/Glossary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86245-1
Project/Site: 23K3096

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

Job ID: 810-86245-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-86245-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The sample was received on 11/29/2023 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C

LCMS
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86245-1
Project/Site: 23K3096

Client Sample ID: 23K3096-05 — Lab Sample ID: 810-86245-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acesulfame K	0.044		0.020	0.0020	ug/L	1		PPCP NEG	Total/NA
Sucralose	0.26		0.10	0.014	ug/L	1		PPCP NEG	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

Client Sample ID: 23K3096-05
Date Collected: 11/21/23 10:20
Date Received: 11/29/23 09:00

Lab Sample ID: 810-86245-1
Matrix: Drinking Water

Method: Lab SOP PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	0.044		0.020	0.0020	ug/L			12/04/23 22:25	1
Sucralose	0.26		0.10	0.014	ug/L			12/04/23 22:25	1

QC Sample Results

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

Method: PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Lab Sample ID: MB 810-81757/10
Matrix: Drinking Water
Analysis Batch: 81757

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	<0.0020		0.020	0.0020	ug/L			12/04/23 21:57	1
Sucralose	<0.014		0.10	0.014	ug/L			12/04/23 21:57	1

QC Association Summary

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

LCMS

Analysis Batch: 81757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-86245-1	23K3096-05	Total/NA	Drinking Water	PPCP NEG	
MB 810-81757/10	Method Blank	Total/NA	Drinking Water	PPCP NEG	

Lab Chronicle

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86245-1
Project/Site: 23K3096

Client Sample ID: 23K3096-05
Lab Sample ID: 810-86245-1
Date Collected: 11/21/23 10:20
Matrix: Drinking Water
Date Received: 11/29/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	PPCP NEG		1	81757	CM	EA SB	12/04/23 22:25

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86245-1
Project/Site: 23K3096

Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-IN035	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
PPCP NEG		Drinking Water	Acesulfame K
PPCP NEG		Drinking Water	Sucralose

Method Summary

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

Method	Method Description	Protocol	Laboratory
PPCP NEG	Pharmaceuticals and Personal Care Products (LC/MS/MS)	Lab SOP	EA SB

Protocol References:

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3096

Job ID: 810-86245-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-86245-1	23K3096-05	Drinking Water	11/21/23 10:20	11/29/23 09:00

SUBCONTRACT CHAIN OF CUSTODY

Pace New England

23K3221



SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Meghan E. Kelley

RECEIVING LABORATC

Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617
Phone :(574) 472-5528
Fax:

Analysis	Sample Name	Due	Expires	Comments
Sample ID: 23K3221-01	**MP-V1A**	**Water** **Sampled:**	**11/24/23 13:10**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:10	7 day TAT - Method 331-report to MDL
Containers Supplied:				
Sample ID: 23K3221-02	**MP-V1B**	**Water** **Sampled:**	**11/24/23 13:15**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:15	7 day TAT - Method 331-report to MDL
Containers Supplied:				
Sample ID: 23K3221-03	**MP-V2A**	**Water** **Sampled:**	**11/24/23 13:20**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:20	7 day TAT - Method 331-report to MDL
Containers Supplied:				
Sample ID: 23K3221-04	**MP-V2B**	**Water** **Sampled:**	**11/24/23 13:25**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:25	7 day TAT - Method 331-report to MDL
Containers Supplied:				
Sample ID: 23K3221-05	**MP-V3A**	**Water** **Sampled:**	**11/24/23 13:30**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:30	7 day TAT - Method 331-report to MDL
Containers Supplied:				
Sample ID: 23K3221-06	**MP-V3B**	**Water** **Sampled:**	**11/24/23 13:35**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:35	7 day TAT - Method 331-report to MDL
Containers Supplied:				

Released By	Date	Received By	Date
[illegible]	11/29/23 1500		
Released By	Date	Received By	Date
		[illegible]	11/29/2023 0900

SUBCONTRACT CHAIN OF CUSTODY

Pace New England

23K3221

Analysis	Sample Name	Due	Expires	Comments
Sample ID: 23K3221-07	**MULTI**	**Water** **Sampled:**	**11/24/23 13:40**	
S-Perchlorate		12/06/23 14:00	12/01/23 13:40	7 day TAT - Method 331-report to MDL
Containers Supplied:				

Initial Temp: 0 Corrected Temp: 0.6 wet
IR Gun #: 26

Released By	Date	Received By	Date
[signature]	11/28/23 1500		
		[signature]	11/29/2023 0900
Released By	Date	Received By	Date

Pace New England

23K3096

810-86245 COC

:NDING LABORATORY:

ce New England
Spruce Street
ıst Longmeadow, MA 01028
one: 413.525.2332
x: 413.525.6405
ɔject Manager: Kyle A. Murray

RECEIVING LABORATORY:

Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617
Phone :(574) 472-5528
Fax:

ıalysis	Sample Name	Due	Expires	Comments
mple ID: 23K3096-05	**MW-12**	**Water** **Sampled:**	**11/21/23 10:20**	
Sucralose		12/22/23 14:00	12/05/23 10:20	Artificial Sweeteners - L221 - Sucralos & Acesulfame-K

ontainers Supplied:
OA vial + Ascorbic acid VOA vial + Ascorbic acid

Initial Temp: 0
Corrected Temp: 0.6+0.1+

[signature] 11/28/23 1500
leased By Date Received By Date

[signature] 11/29/2023 0900
leased By Date Received By Date

Login Sample Receipt Checklist

Client: CON-TEST ANALYTICAL LABORATORY

Job Number: 810-86245-1

Login Number: 86245

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Blackburn, Kelly

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Pace A
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 08, 2023

Laurie Kopyscinski
Con-Test (Pace NE)
39 Spruce Street
East Longmeadow, MA 01028

RE: Project: 23K3096
Pace Project No.: 30642513

Dear Laurie Kopyscinski:

Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nikayla M. Yasurek
nikayla.yasurek@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Subs ELON, Con-Test (Pace NE)
Kyle Murray, Con-Test
Lisa Worthington, Con-Test (Pace NE)

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
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CERTIFICATIONS

Project: 23K3096
Pace Project No.: 30642513

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 23K3096
Pace Project No.: 30642513

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30642513001	**23K3096-04/ MW-10**	Water	11/21/23 11:15	11/29/23 10:00
30642513002	**23K3096-04/ MW-10 MS**	Water	11/21/23 11:15	11/29/23 10:00
30642513003	**23K3096-04/ MW-10 MSD**	Water	11/21/23 11:15	11/29/23 10:00
30642513004	**23K3096-05/ MW-12**	Water	11/21/23 10:20	11/29/23 10:00

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SAMPLE ANALYTE COUNT

Project: 23K3096
Pace Project No.: 30642513

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30642513001	**23K3096-04/ MW-10**	EPA 906.0	SLC	1	PASI-PA
30642513002	**23K3096-04/ MW-10 MS**	EPA 906.0	SLC	1	PASI-PA
30642513003	**23K3096-04/ MW-10 MSD**	EPA 906.0	SLC	1	PASI-PA
30642513004	**23K3096-05/ MW-12**	EPA 906.0	SLC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: 23K3096
Pace Project No.: 30642513

Method: **EPA 906.0**
Description: 906.0 Tritium
Client: Con-Test (Pace NE)
Date: December 08, 2023

General Information:
4 samples were analyzed for EPA 906.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3096
Pace Project No.: 30642513

Sample: 23K3096-04/ MW-10 **Lab ID: 30642513001** Collected: 11/21/23 11:15 Received: 11/29/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • Not labeled for MS/MSD on bottles.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Tritium	EPA 906.0	**-32.5 ± 137 (249) C:NA T:NA**	pCi/L	12/07/23 22:47	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3096
Pace Project No.: 30642513

Sample: 23K3096-04/ MW-10 MS **Lab ID: 30642513002** Collected: 11/21/23 11:15 Received: 11/29/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Tritium	EPA 906.0	**96.84 %REC ± NA (NA) C:NA T:NA**	pCi/L	12/07/23 23:34	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3096
Pace Project No.: 30642513

Sample: 23K3096-04/ MW-10 MSD **Lab ID: 30642513003** Collected: 11/21/23 11:15 Received: 11/29/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Tritium	EPA 906.0	**97.58 %REC 0.76RPD ± NA (NA) C:NA T:NA**	pCi/L	12/08/23 00:22	10028-17-8	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3096
Pace Project No.: 30642513

Sample: 23K3096-05/ MW-12 **Lab ID: 30642513004** Collected: 11/21/23 10:20 Received: 11/29/23 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Tritium	EPA 906.0	**-68.0 ± 248 (451) C:NA T:NA**	pCi/L	12/08/23 07:22	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 23K3096
Pace Project No.: 30642513

QC Batch: 633425
QC Batch Method: EPA 906.0
Analysis Method: EPA 906.0
Analysis Description: 906.0 Tritium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30642513001, 30642513002, 30642513003, 30642513004

METHOD BLANK: 3088204
Matrix: Water
Associated Lab Samples: 30642513001, 30642513002, 30642513003, 30642513004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Tritium	0.000 ± 139 (248) C:NA T:NA	pCi/L	12/07/23 18:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 23K3096
Pace Project No.: 30642513

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23K3096
Pace Project No.: 30642513

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30642513001	**23K3096-04/ MW-10**	EPA 906.0	633425		
30642513002	**23K3096-04/ MW-10 MS**	EPA 906.0	633425		
30642513003	**23K3096-04/ MW-10 MSD**	EPA 906.0	633425		
30642513004	**23K3096-05/ MW-12**	EPA 906.0	633425		

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Pace New England

23K3096

:NDING LABORATORY:

ce New England
Spruce Street
ıst Longmeadow, MA 01028
ıone: 413.525.2332
x: 413.525.6405
ɔject Manager: Kyle A. Murray

RECEIVING LABORATORY:

Pace Analytical Laboratory - Greensburg, PA
1638 Roseytown Road, Suites 2,3,4
Greensburg, PA 15601
Phone :(724) 850-5600
Fax: (724) 850-5601

ıalysis	Sample Name	Due		Expires	Comments	
mple ID: 23K3096-04	**MW-10**	**Water**	**Sampled:**	**11/21/23 11:15**	**MS/MSD**	001
·Tritium		12/22/23 14:00		12/05/23 11:15	MS/MSD	002
ontainers Supplied:						003
50 mL amber (M)	250 mL amber (N)	250 mL amber (O)				
mple ID: 23K3096-05	**MW-12**	**Water**	**Sampled:**	**11/21/23 10:20**		ps 11/29/23 ~~002~~
·Tritium		12/22/23 14:00		12/05/23 10:20		004
ontainers Supplied:						
50 mL amber (E)						

WO# : 30642513

30642513

Received by Pace Greensburg
Therm ID 19 Corr Factor +/- -0.2
Receipt Temp 5.2
Corrected Temp 5.0
Correct Preservation (Y)/ N

Eva M	11/28/23	1500	Temp 2.5	11/29/23 ~~11/28/23~~ ps 11/29/23 1000
leased By	Date	Received By		Date
leased By	Date	Received By		Date

DC#_Title: ENV-FRM-GBUR-0088 v06_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 09/20/2023

WO# : 30642513

PM: NMY Due Date: 12/20/23

CLIENT: PACE NE

Client Name: Pace NE

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 7742 6653 4241

Initial / Date

Examined By: PS 11/29/23

Labeled By: PS 11/29/23

Temped By: MJS 11-29-23

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☑ No

Thermometer Used: 19 Type of Ice: (Wet) Blue None

Cooler Temperature: Observed Temp 5.2 °C Correction Factor: -0.2 °C Final Temp: 5.0 °C

Temp should be above freezing to 6°C

pH paper Lot# 1000831 | D.P.D. Residual Chlorine Lot # —

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC		✓		
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:		✓		5.
-Includes date/time/ID Matrix:	WT			not labeled for MS/MSD on bottles. (ID 23K3096-04)
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used	✓			
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				Tritium
All containers meet method preservation requirements:	✓			Initial when completed: DS Date/Time of Preservation: Lot# of added Preservative:
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed: MB Date: 11-29-23 Survey Meter SN: 25014380

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Pace Analytical

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 23K3016

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460
Collected By (print): B. Neumann	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
	Compliance Monitoring? [ ] Yes [ ] No
	DW PWS ID #: DW Location Code:
	Immediately Packed on Ice: [X] Yes [ ] No
	Field Filtered (if applicable): [ ] Yes [ ] No
	Analysis:

Container Preservative Type **: O U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Analyses: REFER TO ATTACHED FOR METHODS; PFAS 1633; ACTIVAL SWEETNERS

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	REFER TO ATTACHED FOR METHODS	PFAS 1633	ACTIVAL SWEETNERS						Lab Profile/Line:
EQPT BLNK #1		Grab	11.21.23	1305				2		X							1
~~EQPT BLNK #2~~		~~Grab~~	~~11.21.23~~							X							
MW-7	GW	Grab	11.21.23	1416				2	NV	X							2
MW-6	GW	Grab	11.21.23	1400				2	NV								3
MW-10	GW	Grab	11.21.23	1115				12	X								4
MW-12	GW	Grab	11.21.23	1020			1642	X	\	X							5
MW-3	GW	Grab	11.21.23	1490				2	X	X							6
	GW	Grab	11.21.23					X									
	GW	Grab	11.21.23					X									
	GW	Grab	11.21.23					X									

Customer Remarks / Special Conditions / Possible Hazards: MW-10 is MS/MSD

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples Received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 11-21-23/1730	Received by/Company: (Signature)	Date/Time: 11/22/23 4:4
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 1.9.3.8
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: of:

WO#: 30642513

PM: NMY Due Date: 12/20/23

CLIENT: PACE NE

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Table 1

Sample and Analytical Plan

Analyte	Method	Normal Samples	Field Duplicates	MS	MSD	Equipment Blanks	Total
[redacted]							
[redacted]	EPA Method 1633	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted] Method 9045	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	Lloyd Kahn	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	EPA Method 1613/Method 1633	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Groundwater (up to 7 locations)							
PFAS	EPA Method 1633	7	1	1	1	2	12
Ammonia	EPA Method 350.1	7	1	1	1	-	10
Chemical Oxygen Demand	EPA Method 410.4	7	1	1	1	-	10
Biochemical Oxygen Demand	EPA Method 5210B	7	1	1	1	-	10
Total Organic Carbon	EPA Method 5310B/C	7	1	1	1	-	10
Total Dissolved Solids	SM-2540C	7	1	1	1	-	10
Sulfate	EPA Method 300	7	1	1	1	-	10
Alkalinity	SM- 2320B	7	1	1	1	-	10
Chloride	EPA Method 300	7	1	1	1	-	10
Bromide	EPA Method 300	7	1	1	1	-	10
Hardness	EPA Method 200.7	7	1	1	1	-	10
Nitrate	EPA Method 300	7	1	1	1	-	10
Phosphate	SM-4500P-E	7	1	1	1	-	10
Total Kjeldahl Nitrogen	EPA Method 351.2	7	1	1	1	-	10
pH	EPA Method 9045	7	1	1	1	-	10
Bicarbonate	Calculation from Alkalinity and pH	7	1	1	1	-	10
Carbonate	Calculation from Alkalinity and pH	7	1	1	1	-	10
Calcium	EPA Method 6010D	7	1	1	1	-	10
Magnesium	EPA Method 6010D	7	1	1	1	-	10
Potassium	EPA Method 6010D	7	1	1	1	-	10
Sodium	EPA Method 6010D	7	1	1	1	-	10
Boron	EPA Method 6010D	7	1	1	1	-	10
Tritium	EPA Method 906.0	7	1	1	1	-	10
Artificial Sweeteners	L221	4	1	-	-	-	5
Wastewater and Cleaning Products*							
[redacted] PFAS*	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

ORDERED - Deliver to PES by 11/:

[redacted] ORDERED [redacted]

*PFAS analyses will be performed for pre- and post- total oxidizable precursor assay.

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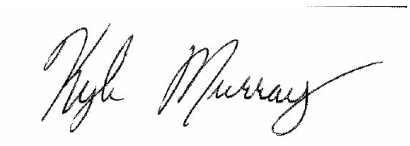
December 29, 2023

Brian Neumann
NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020

Project Location: Meadow Pond School, South Salem, NY
Client Job Number:
Project Number: 2100460
Laboratory Work Order Number: 23K3616

Enclosed are results of analyses for samples as received by the laboratory on November 30, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/29/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K3616

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

PROJECT LOCATION: Meadow Pond School, South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
EQPT BLNK#2	23K3616-01	Equipment Blank Water		Draft Method 1633	
MW-9	23K3616-02	Ground Water		Draft Method 1633	
				EPA 300.0	
				EPA 350.1	
				EPA 410.4	
				NA	CT PH-0694/NY10888/MA M-PA1457
				SM 21-23 4500 P E	
				SM 21-23 5210B	
				SM 21-23 5310B	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CO2 D	
				SM21-23 4500 H B	
				SW-846 6010D	
MW-1	23K3616-03	Ground Water		Draft Method 1633	
				EPA 300.0	
				EPA 350.1	
				EPA 410.4	
				NA	CT PH-0694/NY10888/MA M-PA1457
				SM 21-23 4500 P E	
				SM 21-23 5210B	
				SM 21-23 5310B	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CO2 D	
				SM21-23 4500 H B	
				SW-846 6010D	

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NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/29/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23K3616

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

PROJECT LOCATION: Meadow Pond School, South Salem, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
DUP A	23K3616-04	Ground Water		Draft Method 1633	
				EPA 300.0	
				EPA 350.1	
				EPA 410.4	
				NA	CT PH-0694/NY10888/MA M-PA1457
				SM 21-23 4500 P E	
				SM 21-23 5210B	
				SM 21-23 5310B	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CO2 D	
				SM21-23 4500 H B	
				SW-846 6010D	
MW-6	23K3616-05	Ground Water		-	M-IN035
MW-7	23K3616-06	Ground Water		-	M-IN035
DUP B	23K3616-07	Ground Water		-	M-IN035

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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.

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Draft Method 1633

Qualifications:

PF-17C

Extracted internal standard is outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23K3616-01[EQPT BLNK#2]

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT
23K3616-01[EQPT BLNK#2]

Z-01

Extracted internal standard outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
B359705-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT
B359705-MRL1

EPA 300.0

Qualifications:

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Nitrate as N
23K3616-03[MW-1], 23K3616-04[DUP A]

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Nitrate as N
23K3616-02[MW-9]

EPA 410.4

Qualifications:

Z-01a

Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand
23K3616-02[MW-9], 23K3616-03[MW-1], 23K3616-04[DUP A]

SM 21-23 4500 P E

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Orthophosphate as P
23K3616-02[MW-9]

H-09

Sample received by laboratory with insufficient time remaining to perform analysis within the recommended holding time.

Analyte & Samples(s) Qualified:

Orthophosphate as P
23K3616-03[MW-1], 23K3616-04[DUP A]

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W-17

Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

Analyte & Samples(s) Qualified:

Orthophosphate as P
23K3616-02[MW-9], 23K3616-03[MW-1], 23K3616-04[DUP A], B359564-DUP1, B359564-MS1

SM 21-23 5210B

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
23K3616-02[MW-9]

H-09

Sample received by laboratory with insufficient time remaining to perform analysis within the recommended holding time.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
23K3616-03[MW-1], 23K3616-04[DUP A]

W-01

The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l dissolved oxygen depletion.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
23K3616-03[MW-1], 23K3616-04[DUP A]

W-03

None of the considerable number of dilutions fell within historically expected ranges.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
23K3616-03[MW-1], 23K3616-04[DUP A]

W-16

Blank result was >0.2mg/L.

Analyte & Samples(s) Qualified:

Biochemical Oxygen Demand
B359582-BLK2

SM19-23 4500-N Org B,C-NH3 C

Qualifications:

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Total Kjeldahl Nitrogen
23K3616-04[DUP A]

SM21-23 2320B

Qualifications:

PR-18

Headspace present in sample container.

Analyte & Samples(s) Qualified:

Alkalinity to pH 4.5
23K3616-03[MW-1], 23K3616-04[DUP A]

SM21-23 4500 H B

Qualifications:

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H-05

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

23K3616-02[MW-9], 23K3616-03[MW-1], 23K3616-04[DUP A], B359725-DUP1

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: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: EQPT BLNK#2 Sampled: 11/28/2023 10:30

Sample ID: 23K3616-01

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.0	1.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.35	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorooctanoic acid (PFOA)	ND	1.0	0.23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorodecanoic acid (PFDA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.28	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.0	0.21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.0	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.70	ng/L	1	PF-17C	Draft Method 1633	12/6/23	12/7/23 15:38	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	5.6	4.0	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.86	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.0	0.98	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	1.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	10	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	8.9	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: EQPT BLNK#2 Sampled: 11/28/2023 10:30

Sample ID: 23K3616-01

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.41	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.87	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:38	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	66.8		10-130		12/7/23 15:38
13C5-PFPeA	64.6		35-150		12/7/23 15:38
13C5-PFHxA	66.4		55-150		12/7/23 15:38
13C4-PFHpA	68.7		55-150		12/7/23 15:38
13C8-PFOA	64.9		60-140		12/7/23 15:38
13C9-PFNA	64.1		55-140		12/7/23 15:38
13C6-PFDA	67.6		50-140		12/7/23 15:38
13C7-PFUnA	63.1		30-140		12/7/23 15:38
13C2-PFDoA	63.7		10-150		12/7/23 15:38
13C2-PFTeDA	60.4		10-130		12/7/23 15:38
13C3-PFBS	60.8		55-150		12/7/23 15:38
13C3-PFHxS	67.1		55-150		12/7/23 15:38
13C8-PFOS	67.6		45-140		12/7/23 15:38
13C2-4:2FTS	**51.9**	*	60-200	PF-17C	12/7/23 15:38
13C2-6:2FTS	68.0		60-200		12/7/23 15:38
13C2-8:2FTS	65.2		50-200		12/7/23 15:38
13C8-PFOSA	59.5		30-130		12/7/23 15:38
D3-NMeFOSA	53.3		15-130		12/7/23 15:38
D5-NEtFOSA	55.8		10-130		12/7/23 15:38
D3-NMeFOSAA	63.7		45-200		12/7/23 15:38
D5-NEtFOSAA	63.9		10-200		12/7/23 15:38
D7-NMeFOSE	58.0		10-150		12/7/23 15:38
D9-NEtFOSE	59.6		10-150		12/7/23 15:38
13C3-HFPO-DA	62.8		25-160		12/7/23 15:38

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: EQPT BLNK#2 Sampled: 11/28/2023 10:30

Sample ID: 23K3616-01

Sample Matrix: Equipment Blank Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10		mg/L	1		Draft Method 1633	12/4/23	12/4/23 6:28	LL

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

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)	18	4.0	1.4	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoropentanoic acid (PFPeA)	17	2.0	0.35	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorohexanoic acid (PFHxA)	20	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoroheptanoic acid (PFHpA)	7.6	1.0	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorooctanoic acid (PFOA)	18	1.0	0.23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorodecanoic acid (PFDA)	ND	1.0	0.18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorobutanesulfonic acid (PFBS)	14	1.0	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoropentanesulfonic acid (PFPeS)	0.76	1.0	0.24	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorohexanesulfonic acid (PFHxS)	2.8	1.0	0.21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorooctanesulfonic acid (PFOS)	3.1	1.0	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.70	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	0.99	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.41	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.6	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.69	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.85	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.0	0.97	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	1.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	10	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	8.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.87	ng/L	1		Draft Method 1633	12/6/23	12/7/23 15:54	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	72.7	10-130		12/7/23 15:54
13C5-PFPeA	72.2	35-150		12/7/23 15:54
13C5-PFHxA	76.6	55-150		12/7/23 15:54
13C4-PFHpA	79.4	55-150		12/7/23 15:54
13C8-PFOA	75.7	60-140		12/7/23 15:54
13C9-PFNA	72.3	55-140		12/7/23 15:54
13C6-PFDA	71.3	50-140		12/7/23 15:54
13C7-PFUnA	70.0	30-140		12/7/23 15:54
13C2-PFDoA	66.2	10-150		12/7/23 15:54
13C2-PFTeDA	63.2	10-130		12/7/23 15:54
13C3-PFBS	66.2	55-150		12/7/23 15:54
13C3-PFHxS	73.1	55-150		12/7/23 15:54
13C8-PFOS	69.9	45-140		12/7/23 15:54
13C2-4:2FTS	61.4	60-200		12/7/23 15:54
13C2-6:2FTS	66.1	60-200		12/7/23 15:54
13C2-8:2FTS	66.1	50-200		12/7/23 15:54
13C8-PFOSA	66.5	30-130		12/7/23 15:54
D3-NMeFOSA	63.9	15-130		12/7/23 15:54
D5-NEtFOSA	65.9	10-130		12/7/23 15:54
D3-NMeFOSAA	70.5	45-200		12/7/23 15:54
D5-NEtFOSAA	69.0	10-200		12/7/23 15:54
D7-NMeFOSE	69.4	10-150		12/7/23 15:54
D9-NEtFOSE	69.2	10-150		12/7/23 15:54
13C3-HFPO-DA	69.5	25-160		12/7/23 15:54

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Calcium	41	0.50	0.091	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:22	MJH
Magnesium	11	0.050	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:22	MJH
Potassium	1.8	2.0	0.33	mg/L	1	J	SW-846 6010D	12/15/23	12/18/23 22:22	MJH
Sodium	5.2	2.0	0.74	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:22	MJH
Boron	ND	0.10	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:22	MJH
Hardness	150	1.4		mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:22	MJH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.10	0.060	mg/L	1		EPA 350.1	12/7/23	12/7/23 13:32	IS
Biochemical Oxygen Demand	ND	4.0		mg/L	1	H-03	SM 21-23 5210B	12/1/23	12/1/23 18:15	EMF
Bromide	0.28	0.50	0.15	mg/L	1	J	EPA 300.0	12/2/23	12/2/23 1:44	EMF
Chemical Oxygen Demand	ND	15	13	mg/L	1	Z-01a	EPA 410.4	12/6/23	12/6/23 11:38	LL
Chloride	2.5	1.0	0.65	mg/L	1		EPA 300.0	12/2/23	12/2/23 1:44	EMF
Nitrate as N	0.54	0.10	0.057	mg/L	1	H-03	EPA 300.0	12/2/23	12/2/23 1:44	EMF
Orthophosphate as P	0.17	0.050	0.028	mg/L	1	H-03, W-17	SM 21-23 4500 P E	12/1/23	12/1/23 16:39	NRH
pH @18.9°C	7.1			pH Units	1	H-05	SM21-23 4500 H B	12/4/23	12/4/23 20:11	JEC
Sulfate	6.7	1.0	0.32	mg/L	1		EPA 300.0	12/2/23	12/2/23 1:44	EMF
Total Kjeldahl Nitrogen	0.56	1.0	0.39	mg/L	1	J	SM19-23 4500-N Org B,C-NH3 C	12/20/23	12/26/23 9:26	DET
Total Organic Carbon	1.8	1.0	0.56	mg/L	1		SM 21-23 5310B	12/2/23	12/2/23 16:13	NRH
Total Suspended Solids	64	10		mg/L	1		Draft Method 1633	12/4/23	12/4/23 12:54	ll
Bicarbonate Alkalinity	150			mg/L	1		SM21-23 4500 CO2 D	12/12/23	12/13/23 8:06	LL
Carbonate	0.18			mg/L	1		SM21-23 4500 H B	12/12/23	12/13/23 8:05	LL
Alkalinity to pH 4.5	150	1.0	0.70	mg/L	1		SM21-23 2320B	12/5/23	12/5/23 9:30	DET

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	180	10	10	mg/L	1		SM21-23 2540C	12/4/23	12/4/23 14:03	LL

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-9 Sampled: 11/28/2023 09:40

Sample ID: 23K3616-02

Sample Matrix: Ground Water

Miscellaneous Inorganic Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-				1		NA	12/14/23	12/14/23 20:21	PACEPA

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

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)	23	3.9	1.4	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoropentanoic acid (PFPeA)	29	1.9	0.33	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorohexanoic acid (PFHxA)	24	0.96	0.21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoroheptanoic acid (PFHpA)	11	0.96	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorooctanoic acid (PFOA)	19	0.96	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorononanoic acid (PFNA)	0.95	0.96	0.18	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorodecanoic acid (PFDA)	ND	0.96	0.18	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorobutanesulfonic acid (PFBS)	5.4	0.96	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	0.23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.8	0.96	0.20	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.96	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.67	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.95	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.40	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.4	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.66	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.82	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.93	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	1.7	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.83	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:10	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	58.4	10-130		12/7/23 16:10
13C5-PFPeA	61.1	35-150		12/7/23 16:10
13C5-PFHxA	66.3	55-150		12/7/23 16:10
13C4-PFHpA	69.0	55-150		12/7/23 16:10
13C8-PFOA	64.8	60-140		12/7/23 16:10
13C9-PFNA	60.9	55-140		12/7/23 16:10
13C6-PFDA	59.0	50-140		12/7/23 16:10
13C7-PFUnA	53.6	30-140		12/7/23 16:10
13C2-PFDoA	47.3	10-150		12/7/23 16:10
13C2-PFTeDA	38.9	10-130		12/7/23 16:10
13C3-PFBS	63.3	55-150		12/7/23 16:10
13C3-PFHxS	65.3	55-150		12/7/23 16:10
13C8-PFOS	57.6	45-140		12/7/23 16:10
13C2-4:2FTS	82.3	60-200		12/7/23 16:10
13C2-6:2FTS	65.2	60-200		12/7/23 16:10
13C2-8:2FTS	52.4	50-200		12/7/23 16:10
13C8-PFOSA	49.2	30-130		12/7/23 16:10
D3-NMeFOSA	42.6	15-130		12/7/23 16:10
D5-NEtFOSA	41.4	10-130		12/7/23 16:10
D3-NMeFOSAA	49.8	45-200		12/7/23 16:10
D5-NEtFOSAA	46.9	10-200		12/7/23 16:10
D7-NMeFOSE	40.6	10-150		12/7/23 16:10
D9-NEtFOSE	40.0	10-150		12/7/23 16:10
13C3-HFPO-DA	61.4	25-160		12/7/23 16:10

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Calcium	440	0.50	0.091	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:27	MJH
Magnesium	110	0.050	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:27	MJH
Potassium	13	2.0	0.33	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:27	MJH
Sodium	1400	40	15	mg/L	20		SW-846 6010D	12/15/23	12/23/23 12:07	MJH
Boron	ND	0.10	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:27	MJH
Hardness	1500	1.4		mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:27	MJH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.10	0.10	0.060	mg/L	1		EPA 350.1	12/7/23	12/7/23 13:33	IS
Biochemical Oxygen Demand	<30	30		mg/L	1	H-09, W-01, W-03	SM 21-23 5210B	12/1/23	12/1/23 18:15	EMF
Bromide	0.63	0.50	0.15	mg/L	1		EPA 300.0	12/2/23	12/2/23 2:07	EMF
Chemical Oxygen Demand	170	75	67	mg/L	5	Z-01a	EPA 410.4	12/6/23	12/6/23 11:38	LL
Chloride	2800	100	65	mg/L	100		EPA 300.0	12/2/23	12/2/23 19:16	NRH
Nitrate as N	3.2	0.10	0.057	mg/L	1	H-01	EPA 300.0	12/2/23	12/2/23 2:07	EMF
Orthophosphate as P	0.035	0.050	0.028	mg/L	1	H-09, W-17, J	SM 21-23 4500 P E	12/1/23	12/1/23 16:39	NRH
pH @17.3°C	6.6			pH Units	1	H-05	SM21-23 4500 H B	12/4/23	12/4/23 20:11	JEC
Sulfate	120	100	32	mg/L	100		EPA 300.0	12/2/23	12/2/23 19:16	NRH
Total Kjeldahl Nitrogen	1.1	1.0	0.39	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	12/20/23	12/26/23 9:26	DET
Total Organic Carbon	5.2	1.0	0.56	mg/L	1		SM 21-23 5310B	12/2/23	12/2/23 16:31	NRH
Total Suspended Solids	14	10		mg/L	1		Draft Method 1633	12/4/23	12/4/23 12:54	ll
Bicarbonate Alkalinity	420			mg/L	1		SM21-23 4500 CO2 D	12/12/23	12/13/23 8:06	LL
Carbonate	0.16			mg/L	1		SM21-23 4500 H B	12/12/23	12/13/23 8:05	LL
Alkalinity to pH 4.5	420	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	12/12/23	12/12/23 11:00	DET

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	5200	10	10	mg/L	1		SM21-23 2540C	12/4/23	12/4/23 14:03	LL

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-1 Sampled: 11/28/2023 11:00

Sample ID: 23K3616-03

Sample Matrix: Ground Water

Miscellaneous Inorganic Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-				1		NA	12/14/23	12/14/23 21:09	PACEPA

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

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)	23	4.2	1.5	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoropentanoic acid (PFPeA)	26	2.1	0.37	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorohexanoic acid (PFHxA)	23	1.1	0.23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoroheptanoic acid (PFHpA)	10	1.1	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorooctanoic acid (PFOA)	19	1.1	0.24	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorononanoic acid (PFNA)	0.99	1.1	0.20	ng/L	1	J	Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorodecanoic acid (PFDA)	ND	1.1	0.20	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.1	0.29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.1	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.1	0.29	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.1	0.26	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorobutanesulfonic acid (PFBS)	4.8	1.1	0.27	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.1	0.25	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.2	1.1	0.22	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.1	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.1	0.34	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.1	0.31	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.1	0.33	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.1	0.28	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.2	0.74	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.2	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.2	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.1	0.32	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.1	0.44	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.1	0.33	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.1	0.47	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.1	0.23	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	11	2.8	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	11	2.6	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.2	1.1	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.2	0.73	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.2	0.90	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.2	1.0	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	11	1.9	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	53	11	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	53	9.3	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1	0.52	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.1	0.53	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

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
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.1	0.42	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1	0.92	ng/L	1		Draft Method 1633	12/6/23	12/7/23 16:25	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	62.7	10-130		12/7/23 16:25
13C5-PFPeA	68.3	35-150		12/7/23 16:25
13C5-PFHxA	75.7	55-150		12/7/23 16:25
13C4-PFHpA	78.3	55-150		12/7/23 16:25
13C8-PFOA	74.0	60-140		12/7/23 16:25
13C9-PFNA	70.2	55-140		12/7/23 16:25
13C6-PFDA	64.9	50-140		12/7/23 16:25
13C7-PFUnA	57.2	30-140		12/7/23 16:25
13C2-PFDoA	49.4	10-150		12/7/23 16:25
13C2-PFTeDA	33.4	10-130		12/7/23 16:25
13C3-PFBS	71.2	55-150		12/7/23 16:25
13C3-PFHxS	72.7	55-150		12/7/23 16:25
13C8-PFOS	64.7	45-140		12/7/23 16:25
13C2-4:2FTS	91.9	60-200		12/7/23 16:25
13C2-6:2FTS	72.6	60-200		12/7/23 16:25
13C2-8:2FTS	56.8	50-200		12/7/23 16:25
13C8-PFOSA	60.8	30-130		12/7/23 16:25
D3-NMeFOSA	49.9	15-130		12/7/23 16:25
D5-NEtFOSA	48.2	10-130		12/7/23 16:25
D3-NMeFOSAA	56.9	45-200		12/7/23 16:25
D5-NEtFOSAA	52.8	10-200		12/7/23 16:25
D7-NMeFOSE	47.6	10-150		12/7/23 16:25
D9-NEtFOSE	41.0	10-150		12/7/23 16:25
13C3-HFPO-DA	67.2	25-160		12/7/23 16:25

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Calcium	450	0.50	0.091	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:35	MJH
Magnesium	110	0.050	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:35	MJH
Potassium	13	2.0	0.33	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:35	MJH
Sodium	1400	40	15	mg/L	20		SW-846 6010D	12/15/23	12/23/23 12:13	MJH
Boron	ND	0.10	0.016	mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:35	MJH
Hardness	1600	1.4		mg/L	1		SW-846 6010D	12/15/23	12/18/23 22:35	MJH

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.30	0.10	0.060	mg/L	1		EPA 350.1	12/7/23	12/7/23 13:33	IS
Biochemical Oxygen Demand	<30	30		mg/L	1	H-09, W-01, W-03	SM 21-23 5210B	12/1/23	12/1/23 18:15	EMF
Bromide	0.63	0.50	0.15	mg/L	1		EPA 300.0	12/2/23	12/2/23 2:29	EMF
Chemical Oxygen Demand	170	75	67	mg/L	5	Z-01a	EPA 410.4	12/6/23	12/6/23 11:38	LL
Chloride	2800	100	65	mg/L	100		EPA 300.0	12/2/23	12/2/23 19:38	NRH
Nitrate as N	3.2	0.10	0.057	mg/L	1	H-01	EPA 300.0	12/2/23	12/2/23 2:29	EMF
Orthophosphate as P	0.091	0.050	0.028	mg/L	1	H-09, W-17	SM 21-23 4500 P E	12/1/23	12/1/23 16:39	NRH
pH @17.5°C	6.6			pH Units	1	H-05	SM21-23 4500 H B	12/4/23	12/4/23 20:11	JEC
Sulfate	120	100	32	mg/L	100		EPA 300.0	12/2/23	12/2/23 19:38	NRH
Total Kjeldahl Nitrogen	1.1	1.0	0.39	mg/L	1	H-01	SM19-23 4500-N Org B,C-NH3 C	12/26/23	12/28/23 14:15	EC
Total Organic Carbon	5.2	1.0	0.56	mg/L	1		SM 21-23 5310B	12/2/23	12/2/23 16:49	NRH
Total Suspended Solids	28	10		mg/L	1		Draft Method 1633	12/4/23	12/4/23 12:54	ll
Bicarbonate Alkalinity	410			mg/L	1		SM21-23 4500 CO2 D	12/12/23	12/13/23 8:06	LL
Carbonate	0.15			mg/L	1		SM21-23 4500 H B	12/12/23	12/13/23 8:05	LL
Alkalinity to pH 4.5	410	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	12/12/23	12/12/23 11:00	DET

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	5000	10	10	mg/L	1		SM21-23 2540C	12/4/23	12/4/23 14:03	LL

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP A Sampled: 11/28/2023 11:30

Sample ID: 23K3616-04

Sample Matrix: Ground Water

Miscellaneous Inorganic Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-				1		NA	12/14/23	12/14/23 21:56	PACEPA

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-6 Sampled: 11/28/2023 12:30

Sample ID: 23K3616-05

Sample Matrix: Ground Water

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-			1		-	12/5/23	12/5/23 5:26	EURO

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: MW-7 Sampled: 11/28/2023 12:45

Sample ID: 23K3616-06

Sample Matrix: Ground Water

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-			1		-	12/5/23	12/5/23 5:54	EURO

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Project Location: Meadow Pond School, South Sale Sample Description: Work Order: 23K3616

Date Received: 11/30/2023

Field Sample #: DUP B Sampled: 11/28/2023 13:00

Sample ID: 23K3616-07

Sample Matrix: Ground Water

Miscellaneous Organic Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached Subcontracted Report	-			1		-	12/5/23	12/5/23 6:22	EURO

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Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B359603	50.0	12/04/23
23K3616-03 [MW-1]	B359603	50.0	12/04/23
23K3616-04 [DUP A]	B359603	50.0	12/04/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-01 [EQPT BLNK#2]	B359604	50.0	12/04/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 12/4/2023 per NO PREP in Batch B359604

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-01 [EQPT BLNK#2]	B359705	496	5.00	12/06/23
23K3616-02 [MW-9]	B359705	500	5.00	12/06/23
23K3616-03 [MW-1]	B359705	519	5.00	12/06/23
23K3616-04 [DUP A]	B359705	473	5.00	12/06/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359581	10.0	10.0	12/02/23
23K3616-03 [MW-1]	B359581	10.0	10.0	12/02/23
23K3616-04 [DUP A]	B359581	10.0	10.0	12/02/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359590	10.0	10.0	12/02/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-03 [MW-1]	B359593	10.0	10.0	12/02/23
23K3616-04 [DUP A]	B359593	10.0	10.0	12/02/23

Prep Method:EPA 300.0 Analytical Method:EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359707	10.0	10.0	12/02/23
23K3616-03 [MW-1]	B359707	10.0	10.0	12/02/23
23K3616-04 [DUP A]	B359707	10.0	10.0	12/02/23

EPA 350.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B360050	50.0	50.0	12/07/23

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Sample Extraction Data

EPA 350.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-03 [MW-1]	B360050	50.0	50.0	12/07/23
23K3616-04 [DUP A]	B360050	50.0	50.0	12/07/23

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359859	2.00	2.00	12/06/23
23K3616-03 [MW-1]	B359859	2.00	2.00	12/06/23
23K3616-04 [DUP A]	B359859	2.00	2.00	12/06/23

SM 21-23 4500 P E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359564	50.0	50.0	12/01/23
23K3616-03 [MW-1]	B359564	50.0	50.0	12/01/23
23K3616-04 [DUP A]	B359564	50.0	50.0	12/01/23

SM 21-23 5210B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B359582	150	12/01/23
23K3616-03 [MW-1]	B359582	20.0	12/01/23
23K3616-04 [DUP A]	B359582	20.0	12/01/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359584	50.0	50.0	12/02/23
23K3616-03 [MW-1]	B359584	50.0	50.0	12/02/23
23K3616-04 [DUP A]	B359584	50.0	50.0	12/02/23

Prep Method:SM4500 N Org B C Analytical Method:SM19-23 4500-N Org B,C-Nl

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B361340	25.0	25.0	12/20/23
23K3616-03 [MW-1]	B361340	25.0	25.0	12/20/23

Prep Method:SM4500 N Org B C Analytical Method:SM19-23 4500-N Org B,C-Nl

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-04 [DUP A]	B361773	25.0	25.0	12/26/23

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B359830	100	100	12/05/23

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Sample Extraction Data

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-03 [MW-1]	B360482	100	100	12/12/23
23K3616-04 [DUP A]	B360482	100	100	12/12/23

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B359601	50.0	12/04/23
23K3616-03 [MW-1]	B359601	50.0	12/04/23
23K3616-04 [DUP A]	B359601	50.0	12/04/23

SM21-23 4500 CO2 D

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B360421	1.00	12/12/23
23K3616-03 [MW-1]	B360421	1.00	12/12/23
23K3616-04 [DUP A]	B360421	1.00	12/12/23

SM21-23 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B359725	50.0	12/04/23
23K3616-03 [MW-1]	B359725	50.0	12/04/23
23K3616-04 [DUP A]	B359725	50.0	12/04/23

SM21-23 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
23K3616-02 [MW-9]	B360422	1.00	12/12/23
23K3616-03 [MW-1]	B360422	1.00	12/12/23
23K3616-04 [DUP A]	B360422	1.00	12/12/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23K3616-02 [MW-9]	B360904	25.0	25.0	12/15/23
23K3616-02 [MW-9]	B360904	25.0		12/15/23
23K3616-03 [MW-1]	B360904	25.0	25.0	12/15/23
23K3616-03 [MW-1]	B360904	25.0		12/15/23
23K3616-04 [DUP A]	B360904	25.0	25.0	12/15/23
23K3616-04 [DUP A]	B360904	25.0		12/15/23

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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 B359705 - Draft Method 1633										
Blank (B359705-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	ND	4.0	ng/L							
Perfluoropentanoic acid (PFPeA)	0.38	2.0	ng/L							J
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	4.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	4.0	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*80.1*		ng/L	98.8		81.1	10-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359705 - Draft Method 1633										
Blank (B359705-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Surrogate: 13C5-PFPeA	*38.9*		ng/L	49.4		78.9	35-150			
Surrogate: 13C5-PFHxA	*19.7*		ng/L	24.7		79.9	55-150			
Surrogate: 13C4-PFHpA	*20.2*		ng/L	24.7		81.8	55-150			
Surrogate: 13C8-PFOA	*20.3*		ng/L	24.7		82.3	60-140			
Surrogate: 13C9-PFNA	*9.96*		ng/L	12.3		80.7	55-140			
Surrogate: 13C6-PFDA	*9.92*		ng/L	12.3		80.3	50-140			
Surrogate: 13C7-PFUnA	*9.18*		ng/L	12.3		74.3	30-140			
Surrogate: 13C2-PFDoA	*8.99*		ng/L	12.3		72.8	10-150			
Surrogate: 13C2-PFTeDA	*8.76*		ng/L	12.3		71.0	10-130			
Surrogate: 13C3-PFBS	*17.8*		ng/L	24.7		72.2	55-150			
Surrogate: 13C3-PFHxS	*20.0*		ng/L	24.7		81.2	55-150			
Surrogate: 13C8-PFOS	*19.4*		ng/L	24.7		78.7	45-140			
Surrogate: 13C2-4:2FTS	*30.8*		ng/L	49.4		62.4	60-200			
Surrogate: 13C2-6:2FTS	*40.4*		ng/L	49.4		81.7	60-200			
Surrogate: 13C2-8:2FTS	*37.0*		ng/L	49.4		74.9	50-200			
Surrogate: 13C8-PFOSA	*16.4*		ng/L	24.7		66.5	30-130			
Surrogate: D3-NMeFOSA	*15.6*		ng/L	24.7		63.1	15-130			
Surrogate: D5-NEtFOSA	*16.5*		ng/L	24.7		66.9	10-130			
Surrogate: D3-NMeFOSAA	*37.7*		ng/L	49.4		76.4	45-200			
Surrogate: D5-NEtFOSAA	*37.0*		ng/L	49.4		74.9	10-200			
Surrogate: D7-NMeFOSE	*161*		ng/L	247		65.4	10-150			
Surrogate: D9-NEtFOSE	*168*		ng/L	247		67.9	10-150			
Surrogate: 13C3-HFPO-DA	*72.8*		ng/L	98.8		73.7	25-160			
LCS (B359705-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	113	4.0	ng/L	94.9		119	58-148			
Perfluoropentanoic acid (PFPeA)	55.2	2.0	ng/L	47.4		116	54-152			
Perfluorohexanoic acid (PFHxA)	27.5	0.99	ng/L	23.7		116	55-152			
Perfluoroheptanoic acid (PFHpA)	26.7	0.99	ng/L	23.7		112	54-154			
Perfluorooctanoic acid (PFOA)	27.7	0.99	ng/L	23.7		117	52-161			
Perfluorononanoic acid (PFNA)	27.8	0.99	ng/L	23.7		117	59-149			
Perfluorodecanoic acid (PFDA)	27.4	0.99	ng/L	23.7		115	52-147			
Perfluoroundecanoic acid (PFUnA)	27.8	0.99	ng/L	23.7		117	48-159			
Perfluorododecanoic acid (PFDoA)	29.0	0.99	ng/L	23.7		122	64-142			
Perfluorotridecanoic acid (PFTrDA)	27.8	0.99	ng/L	23.7		117	49-148			
Perfluorotetradecanoic acid (PFTeDA)	27.5	0.99	ng/L	23.7		116	47-161			
Perfluorobutanesulfonic acid (PFBS)	24.7	0.99	ng/L	21.1		117	62-144			
Perfluoropentanesulfonic acid (PFPeS)	25.1	0.99	ng/L	22.3		113	59-151			
Perfluorohexanesulfonic acid (PFHxS)	23.9	0.99	ng/L	21.7		110	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	26.9	0.99	ng/L	22.6		119	55-152			
Perfluorooctanesulfonic acid (PFOS)	25.0	0.99	ng/L	22.0		114	58-149			
Perfluorononanesulfonic acid (PFNS)	25.8	0.99	ng/L	22.8		113	52-148			
Perfluorodecanesulfonic acid (PFDS)	24.3	0.99	ng/L	22.9		106	51-147			
Perfluorododecanesulfonic acid (PFDoS)	23.1	0.99	ng/L	23.0		101	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	109	4.0	ng/L	89.0		123	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	107	4.0	ng/L	90.1		118	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	115	4.0	ng/L	91.3		126	63-152			
Perfluorooctanesulfonamide (PFOSA)	27.7	0.99	ng/L	23.7		117	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	26.4	0.99	ng/L	23.7		111	63-145			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359705 - Draft Method 1633										
LCS (B359705-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	25.8	0.99	ng/L	23.7		109	65-139			
N-MeFOSAA (NMeFOSAA)	27.0	0.99	ng/L	23.7		114	58-144			
N-EtFOSAA (NEtFOSAA)	26.7	0.99	ng/L	23.7		113	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	266	9.9	ng/L	237		112	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	267	9.9	ng/L	237		113	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	103	4.0	ng/L	94.9		109	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	101	4.0	ng/L	89.5		113	68-146			
9Cl-PF3ONS (F53B Minor)	99.4	4.0	ng/L	89.0		112	56-156			
11Cl-PF3OUdS (F53B Major)	99.9	4.0	ng/L	89.5		112	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	247	9.9	ng/L	237		104	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1270	49	ng/L	1190		107	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1240	49	ng/L	1190		105	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	46.2	2.0	ng/L	42.2		109	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	50.0	2.0	ng/L	47.4		105	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	50.9	2.0	ng/L	47.4		107	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.1	2.0	ng/L	47.4		99.2	48-161			
Surrogate: 13C4-PFBA	*70.4*		ng/L	98.8		71.2	10-130			
Surrogate: 13C5-PFPeA	*33.9*		ng/L	49.4		68.7	35-150			
Surrogate: 13C5-PFHxA	*17.4*		ng/L	24.7		70.6	55-150			
Surrogate: 13C4-PFHpA	*18.4*		ng/L	24.7		74.5	55-150			
Surrogate: 13C8-PFOA	*18.4*		ng/L	24.7		74.5	60-140			
Surrogate: 13C9-PFNA	*8.91*		ng/L	12.4		72.1	55-140			
Surrogate: 13C6-PFDA	*8.69*		ng/L	12.4		70.3	50-140			
Surrogate: 13C7-PFUnA	*8.39*		ng/L	12.4		67.9	30-140			
Surrogate: 13C2-PFDoA	*7.82*		ng/L	12.4		63.3	10-150			
Surrogate: 13C2-PFTeDA	*7.32*		ng/L	12.4		59.2	10-130			
Surrogate: 13C3-PFBS	*15.6*		ng/L	24.7		63.1	55-150			
Surrogate: 13C3-PFHxS	*18.0*		ng/L	24.7		72.9	55-150			
Surrogate: 13C8-PFOS	*17.1*		ng/L	24.7		69.2	45-140			
Surrogate: 13C2-4:2FTS	*30.1*		ng/L	49.4		60.9	60-200			
Surrogate: 13C2-6:2FTS	*39.1*		ng/L	49.4		79.2	60-200			
Surrogate: 13C2-8:2FTS	*37.8*		ng/L	49.4		76.5	50-200			
Surrogate: 13C8-PFOSA	*16.0*		ng/L	24.7		64.9	30-130			
Surrogate: D3-NMeFOSA	*14.2*		ng/L	24.7		57.4	15-130			
Surrogate: D5-NEtFOSA	*14.7*		ng/L	24.7		59.4	10-130			
Surrogate: D3-NMeFOSAA	*33.3*		ng/L	49.4		67.3	45-200			
Surrogate: D5-NEtFOSAA	*32.7*		ng/L	49.4		66.1	10-200			
Surrogate: D7-NMeFOSE	*153*		ng/L	247		62.1	10-150			
Surrogate: D9-NEtFOSE	*153*		ng/L	247		61.8	10-150			
Surrogate: 13C3-HFPO-DA	*67.1*		ng/L	98.8		67.9	25-160			
MRL Check (B359705-MRL1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorobutanoic acid (PFBA)	9.75	3.9	ng/L	7.90		123	44-157			
Perfluoropentanoic acid (PFPeA)	4.55	2.0	ng/L	3.95		115	57-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359705 - Draft Method 1633										
MRL Check (B359705-MRL1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Perfluorohexanoic acid (PFHxA)	2.34	0.99	ng/L	1.97		118	62-149			
Perfluoroheptanoic acid (PFHpA)	2.03	0.99	ng/L	1.97		103	56-150			
Perfluorooctanoic acid (PFOA)	2.19	0.99	ng/L	1.97		111	57-161			
Perfluorononanoic acid (PFNA)	2.10	0.99	ng/L	1.97		107	53-157			
Perfluorodecanoic acid (PFDA)	2.18	0.99	ng/L	1.97		110	43-158			
Perfluoroundecanoic acid (PFUnA)	2.12	0.99	ng/L	1.97		107	50-155			
Perfluorododecanoic acid (PFDoA)	2.21	0.99	ng/L	1.97		112	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.22	0.99	ng/L	1.97		113	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.26	0.99	ng/L	1.97		114	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.96	0.99	ng/L	1.75		112	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.04	0.99	ng/L	1.86		110	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.07	0.99	ng/L	1.81		115	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.20	0.99	ng/L	1.88		117	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.07	0.99	ng/L	1.83		113	43-162			
Perfluorononanesulfonic acid (PFNS)	2.04	0.99	ng/L	1.90		107	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.04	0.99	ng/L	1.90		107	50-144			
Perfluorododecanesulfonic acid (PFDoS)	2.01	0.99	ng/L	1.91		105	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.86	3.9	ng/L	7.40		120	52-158			Z-01
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	9.00	3.9	ng/L	7.50		120	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.19	3.9	ng/L	7.60		121	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.24	0.99	ng/L	1.97		113	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.28	0.99	ng/L	1.97		116	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.04	0.99	ng/L	1.97		104	49-156			
N-MeFOSAA (NMeFOSAA)	1.96	0.99	ng/L	1.97		99.3	32-160			
N-EtFOSAA (NEtFOSAA)	2.52	0.99	ng/L	1.97		128	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	21.0	9.9	ng/L	19.7		106	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.4	9.9	ng/L	19.7		109	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.93	3.9	ng/L	7.90		100	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.66	3.9	ng/L	7.45		103	61-148			
9Cl-PF3ONS (F53B Minor)	7.44	3.9	ng/L	7.40		101	44-167			
11Cl-PF3OUdS (F53B Major)	7.36	3.9	ng/L	7.45		98.7	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	18.2	9.9	ng/L	19.7		92.1	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	93.0	49	ng/L	98.7		94.3	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	93.1	49	ng/L	98.7		94.3	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.49	2.0	ng/L	3.51		99.3	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.92	2.0	ng/L	3.95		99.2	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.83	2.0	ng/L	3.95		97.1	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.73	2.0	ng/L	3.95		94.6	47-160			
Surrogate: 13C4-PFBA	*68.1*		ng/L	98.7		69.0	10-130			
Surrogate: 13C5-PFPeA	*32.8*		ng/L	49.3		66.4	35-150			
Surrogate: 13C5-PFHxA	*16.7*		ng/L	24.7		67.5	55-150			

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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 B359705 - Draft Method 1633											
MRL Check (B359705-MRL1)				Prepared: 12/06/23 Analyzed: 12/07/23							
Surrogate: 13C4-PFHpA	*17.4*		ng/L	24.7		70.5		55-150			
Surrogate: 13C8-PFOA	*17.0*		ng/L	24.7		68.7		60-140			
Surrogate: 13C9-PFNA	*8.51*		ng/L	12.3		69.0		55-140			
Surrogate: 13C6-PFDA	*8.50*		ng/L	12.3		68.9		50-140			
Surrogate: 13C7-PFUnA	*8.17*		ng/L	12.3		66.2		30-140			
Surrogate: 13C2-PFDoA	*7.94*		ng/L	12.3		64.4		10-150			
Surrogate: 13C2-PFTeDA	*7.59*		ng/L	12.3		61.5		10-130			
Surrogate: 13C3-PFBS	*15.5*		ng/L	24.7		63.0		55-150			
Surrogate: 13C3-PFHxS	*18.0*		ng/L	24.7		73.1		55-150			
Surrogate: 13C8-PFOS	*16.4*		ng/L	24.7		66.3		45-140			
Surrogate: 13C2-4:2FTS	*26.9*		ng/L	49.3		**54.6**	*	60-200			Z-01
Surrogate: 13C2-6:2FTS	*35.3*		ng/L	49.3		71.5		60-200			
Surrogate: 13C2-8:2FTS	*33.4*		ng/L	49.3		67.7		50-200			
Surrogate: 13C8-PFOSA	*14.7*		ng/L	24.7		59.6		30-130			
Surrogate: D3-NMeFOSA	*13.2*		ng/L	24.7		53.4		15-130			
Surrogate: D5-NEtFOSA	*13.9*		ng/L	24.7		56.4		10-130			
Surrogate: D3-NMeFOSAA	*31.2*		ng/L	49.3		63.2		45-200			
Surrogate: D5-NEtFOSAA	*31.0*		ng/L	49.3		62.8		10-200			
Surrogate: D7-NMeFOSE	*140*		ng/L	247		56.8		10-150			
Surrogate: D9-NEtFOSE	*142*		ng/L	247		57.4		10-150			
Surrogate: 13C3-HFPO-DA	*63.8*		ng/L	98.7		64.6		25-160			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360904 - SW-846 3005A										
Blank (B360904-BLK1)				Prepared: 12/15/23 Analyzed: 12/18/23						
Calcium	ND	0.50	mg/L							
Magnesium	ND	0.050	mg/L							
Potassium	ND	2.0	mg/L							
Sodium	ND	2.0	mg/L							
Boron	ND	0.10	mg/L							
Hardness	0.099	1.4	mg/L							J
LCS (B360904-BS1)				Prepared: 12/15/23 Analyzed: 12/18/23						
Calcium	3.89	0.50	mg/L	4.00		97.3	80-120			
Magnesium	4.03	0.050	mg/L	4.00		101	80-120			
Potassium	4.06	2.0	mg/L	4.00		102	80-120			
Sodium	4.31	2.0	mg/L	4.00		108	80-120			
Boron	0.995	0.10	mg/L	1.00		99.5	80-120			
Hardness	26	1.4	mg/L	26.4		99.5	80-120			
LCS Dup (B360904-BSD1)				Prepared: 12/15/23 Analyzed: 12/18/23						
Calcium	3.80	0.50	mg/L	4.00		95.1	80-120	2.27	20	
Magnesium	3.97	0.050	mg/L	4.00		99.2	80-120	1.56	20	
Potassium	4.02	2.0	mg/L	4.00		100	80-120	1.18	20	
Sodium	4.24	2.0	mg/L	4.00		106	80-120	1.55	20	
Boron	1.00	0.10	mg/L	1.00		100	80-120	0.583	20	
Hardness	26	1.4	mg/L	26.4		97.7	80-120	1.82	20	
Dilution Check (B360904-SRL1)	**Source: 23K3615-03**			Prepared: 12/15/23 Analyzed: 12/18/23						
Calcium	71.9	2.5	mg/L		73.6			2.28	20	
Magnesium	11.6	0.25	mg/L		11.8			1.03	20	
Potassium	ND	10	mg/L		ND				20	
Sodium	11.7	10	mg/L		10.7			9.21	20	
Hardness	227	7.2	mg/L		232			2.02	20	

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359564 - SM 21-23 4500 P E										
Blank (B359564-BLK1)				Prepared & Analyzed: 12/01/23						
Orthophosphate as P	ND	0.050	mg/L							
LCS (B359564-BS1)				Prepared & Analyzed: 12/01/23						
Orthophosphate as P	0.23	0.050	mg/L	0.214		109	76.7-115			
LCS Dup (B359564-BSD1)				Prepared & Analyzed: 12/01/23						
Orthophosphate as P	0.23	0.050	mg/L	0.214		108	76.7-115	1.48	6.65	
Duplicate (B359564-DUP1)	**Source: 23K3616-03**			Prepared & Analyzed: 12/01/23						
Orthophosphate as P	0.033	0.050	mg/L		0.035			5.03	20.7	W-17, J
Matrix Spike (B359564-MS1)	**Source: 23K3616-03**			Prepared & Analyzed: 12/01/23						
Orthophosphate as P	0.38	0.050	mg/L	0.300	0.035	115	57.7-135			W-17
Batch B359581 - EPA 300.0										
Blank (B359581-BLK1)				Prepared & Analyzed: 12/02/23						
Nitrate as N	ND	0.10	mg/L							
LCS (B359581-BS1)				Prepared & Analyzed: 12/02/23						
Nitrate as N	0.94	0.10	mg/L	1.00		94.2	90-110			
LCS Dup (B359581-BSD1)				Prepared & Analyzed: 12/02/23						
Nitrate as N	0.92	0.10	mg/L	1.00		91.6	90-110	2.83	20	
Batch B359582 - SM 21-23 5210B										
Blank (B359582-BLK1)				Prepared & Analyzed: 12/01/23						
Biochemical Oxygen Demand	0.58	2.0	mg/L							J
Blank (B359582-BLK2)				Prepared & Analyzed: 12/01/23						
Biochemical Oxygen Demand	0.37	2.0	mg/L							W-16, J
LCS (B359582-BS1)				Prepared & Analyzed: 12/01/23						
Biochemical Oxygen Demand	190		mg/L	198		98.3	85-115			
Batch B359584 - SM 21-23 5310B										
Blank (B359584-BLK1)				Prepared & Analyzed: 12/02/23						
Total Organic Carbon	ND	1.0	mg/L							

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359584 - SM 21-23 5310B										
LCS (B359584-BS1)				Prepared & Analyzed: 12/02/23						
Total Organic Carbon	9.87	1.0	mg/L	10.0		98.7	90-110			
LCS Dup (B359584-BSD1)				Prepared & Analyzed: 12/02/23						
Total Organic Carbon	9.84	1.0	mg/L	10.0		98.4	90-110	0.325	15	
Batch B359590 - EPA 300.0										
Blank (B359590-BLK1)				Prepared & Analyzed: 12/02/23						
Chloride	ND	1.0	mg/L							
Sulfate	ND	1.0	mg/L							
LCS (B359590-BS1)				Prepared & Analyzed: 12/02/23						
Chloride	9.6	1.0	mg/L	10.0		96.4	90-110			
Sulfate	9.7	1.0	mg/L	10.0		96.7	90-110			
LCS Dup (B359590-BSD1)				Prepared & Analyzed: 12/02/23						
Chloride	9.4	1.0	mg/L	10.0		93.5	90-110	3.01	20	
Sulfate	9.4	1.0	mg/L	10.0		94.2	90-110	2.57	20	
Batch B359593 - EPA 300.0										
Blank (B359593-BLK1)				Prepared & Analyzed: 12/02/23						
Chloride	ND	1.0	mg/L							
Sulfate	ND	1.0	mg/L							
LCS (B359593-BS1)				Prepared & Analyzed: 12/02/23						
Chloride	9.7	1.0	mg/L	10.0		97.3	90-110			
Sulfate	9.7	1.0	mg/L	10.0		97.5	90-110			
LCS Dup (B359593-BSD1)				Prepared & Analyzed: 12/02/23						
Chloride	9.7	1.0	mg/L	10.0		97.2	90-110	0.122	20	
Sulfate	9.7	1.0	mg/L	10.0		97.5	90-110	0.0205	20	
Batch B359603 - Draft Method 1633										
Blank (B359603-BLK1)				Prepared & Analyzed: 12/04/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B359603-BS1)				Prepared & Analyzed: 12/04/23						
Total Suspended Solids	171	5.0	mg/L	200		85.5	64.1-125			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359707 - EPA 300.0										
Blank (B359707-BLK1)				Prepared & Analyzed: 12/02/23						
Bromide	ND	0.50	mg/L							
LCS (B359707-BS1)				Prepared & Analyzed: 12/02/23						
Bromide	0.927	0.50	mg/L	1.00		92.7	90-110			
LCS Dup (B359707-BSD1)				Prepared & Analyzed: 12/02/23						
Bromide	0.903	0.50	mg/L	1.00		90.3	90-110	2.58	20	
Batch B359725 - SM21-23 4500 H B										
LCS (B359725-BS1)				Prepared & Analyzed: 12/04/23						
pH	6.01		pH Units	6.00		100	90-110			
Duplicate (B359725-DUP1)	**Source: 23K3616-04**			Prepared & Analyzed: 12/04/23						
pH	6.6		pH Units		6.6			0.317	5	H-05
Batch B359830 - SM21-23 2320B										
Blank (B359830-BLK1)				Prepared & Analyzed: 12/05/23						
Alkalinity to pH 4.2	ND	1.0	mg/L							
LCS (B359830-BS1)				Prepared & Analyzed: 12/05/23						
Alkalinity to pH 4.5	61	1.0	mg/L	61.2		99.7	88.3-110			
LCS Dup (B359830-BSD1)				Prepared & Analyzed: 12/05/23						
Alkalinity to pH 4.5	62	1.0	mg/L	61.2		100	88.3-110	0.816	5	
Batch B359859 - EPA 410.4										
Blank (B359859-BLK1)				Prepared & Analyzed: 12/06/23						
Chemical Oxygen Demand	ND	15	mg/L							
LCS (B359859-BS1)				Prepared & Analyzed: 12/06/23						
Chemical Oxygen Demand	210	15	mg/L	200		104	90-110			
LCS Dup (B359859-BSD1)				Prepared & Analyzed: 12/06/23						
Chemical Oxygen Demand	210	15	mg/L	200		107	90-110	2.89	6.71	
Batch B360050 - EPA 350.1										
Blank (B360050-BLK1)				Prepared & Analyzed: 12/07/23						
Ammonia as N	ND	0.10	mg/L							

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360050 - EPA 350.1										
LCS (B360050-BS1)				Prepared & Analyzed: 12/07/23						
Ammonia as N	2.1	0.10	mg/L	2.00		106	90-110			
LCS Dup (B360050-BSD1)				Prepared & Analyzed: 12/07/23						
Ammonia as N	2.1	0.10	mg/L	2.00		104	90-110	1.43	13.3	
Batch B360482 - SM21-23 2320B										
Blank (B360482-BLK1)				Prepared & Analyzed: 12/12/23						
Alkalinity to pH 4.2	ND	1.0	mg/L							
LCS (B360482-BS1)				Prepared & Analyzed: 12/12/23						
Alkalinity to pH 4.5	63	1.0	mg/L	61.2		103	88.3-110			
LCS Dup (B360482-BSD1)				Prepared & Analyzed: 12/12/23						
Alkalinity to pH 4.5	64	1.0	mg/L	61.2		105	88.3-110	1.57	5	
Batch B361340 - SM4500 N Org B C										
Blank (B361340-BLK1)				Prepared: 12/20/23 Analyzed: 12/26/23						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B361340-BS1)				Prepared: 12/20/23 Analyzed: 12/26/23						
Total Kjeldahl Nitrogen	21	1.0	mg/L	20.0		104	84.7-115			
MRL Check (B361340-MRL1)				Prepared: 12/20/23 Analyzed: 12/26/23						
Total Kjeldahl Nitrogen	1.68	1.0	mg/L	1.00		168	0-200			
Batch B361773 - SM4500 N Org B C										
Blank (B361773-BLK1)				Prepared: 12/26/23 Analyzed: 12/28/23						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B361773-BS1)				Prepared: 12/26/23 Analyzed: 12/28/23						
Total Kjeldahl Nitrogen	20	1.0	mg/L	20.0		101	84.7-115			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B359601 - SM21-23 2540C										
Blank (B359601-BLK1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	ND	10	mg/L							
LCS (B359601-BS1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	230	10	mg/L	293		77.8	67.3-113			

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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.
H-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
H-03	Sample received after recommended holding time was exceeded.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
H-09	Sample received by laboratory with insufficient time remaining to perform analysis within the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
PF-17C	Extracted internal standard is outside of control limits. Analyte is a known difficult compound.
PR-18	Headspace present in sample container.
W-01	The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l dissolved oxygen depletion.
W-03	None of the considerable number of dilutions fell within historically expected ranges.
W-16	Blank result was >0.2mg/L.
W-17	Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.
Z-01	Extracted internal standard outside of control limits. Analyte is a known difficult compound.
Z-01a	Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
EPA 300.0 in Water	
Bromide	ME,NY,NC,NH
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Sulfate	NC,NY,MA,VA,ME,NH,CT,RI

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 350.1 in Water	
Ammonia as N	NC,NY,MA,NH,RI,ME,VA
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
SM 21-23 4500 P E in Water	
Orthophosphate as P	CT,MA,NH,NY,RI,ME,VA
SM 21-23 5210B in Water	
Biochemical Oxygen Demand	CT,MA,NH,NY,RI,ME,VA,NC
SM 21-23 5310B in Water	
Total Organic Carbon	CT,NH,NY,RI,NC,MA,VA
SM19-23 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 2320B in Water	
Alkalinity to pH 4.5	CT
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 4500 H B in Water	
pH	CT,MA,RI
SW-846 6010D in Water	
Calcium	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC

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

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

23K3616 KAM

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460
Collected By (print):	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Container Preservative Type **: O U

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

	Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	REFER TO ATTACHED FOR METHODS	PFAS 1633	Analyses: Artificial Sweeteners L221	Lab Profile/Line:
	~~EQPT BLNK #1~~		~~Grab~~	~~11.21.23~~							X		
1	EQPT BLNK #2		Grab	~~11.21.23~~	11.28.23		1050		2		X		
2	MW-9	GW	Grab	~~11.21.23~~	11.28.23		0940		14	X	X		
3	MW-1	GW	Grab	~~11.21.23~~	11.28.23		1100		14	X	X		
4	DUP A	GW	Grab	~~11.21.23~~	11.28.23		1130		14	X	X		
5	MW-6	GW	Grab	11.21.23			1230		2	X		X	
6	MW-3	GW	Grab	11.21.23			1245		2	X		X	
7	DUP B	GW	Grab	11.21.23			1300		2	X		X	
		~~GW~~	~~Grab~~	~~11.21.23~~						X			
		~~GW~~	~~Grab~~	~~11.21.23~~						X			

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:

Relinquished by/Company: (Signature)	Date/Time: 11/29/23 0700	Received by/Company: (Signature)	Date/Time: 11/29/23 1100	MTJL LAB USE ONLY: Table #:
Relinquished by/Company: (Signature)	Date/Time: 11/29/23 1600	Received by/Company: (Signature)	Date/Time: 11/30/23 1030	Acctnum: Template: Prelogin:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	PM: PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: _____ of: _____

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client Precision Environmental Services

Project Meadow Pond School

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location Meadow Pond School

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM / 11-30-23 / 1030

Back-Sheet By / Date / Time AAM / 12-1-23 / 0845

Temperature Method Temp. Gun # 5

Temp ✓ < 6° C Actual Temperature 2.0°C

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

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

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☐

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

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

Sample				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																						
8oz Amb/Clear																							
4oz Amb/Clear																							
2oz Amb/Clear																							
Unpreserved	Ambers	1 Liter																					
HCL																							
Sulfuric																							
Sulfuric		250mL																					
Phosphoric					2	2	2																
HCl																							
Unpreserved		100mL																					
Unpreserved		1 Liter	Plastics																				
Sulfuric																							
Unpreserved		500mL		2	3	3	3																
Sulfuric																							
Unpreserved		250mL			4	4	4																
Trizma																							
Sulfuric					2	2	2																
Nitric					2	2	2																
NaOH																							
Ammonium Acetate																							
NaOH/Zinc																							
Unpreserved	VOA Vials																						
HCl																							
MeOH																							
D.I. Water																							
BiSulfate																							
Col/Bact	Other / Fill in																						
125mL Plastic					1	1	1																
VOA Vial Ascorbic acid					2	2	2 AAN			2													

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kyle Murray
CON-TEST ANALYTICAL LABORATORY
39 SPRUCE STREET 2ND FLOOR
EAST LONGMEADOW, Massachusetts 01028

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JOB DESCRIPTION

23K3616

JOB NUMBER

810-86577-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Eurofins Eaton Analytical South Bend

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Authorized for release by
Nathan Trowbridge, Manager of Project Management
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Definitions/Glossary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86577-1
Project/Site: 23K3616

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3616

Job ID: 810-86577-1

Job ID: 810-86577-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-86577-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/2/2023 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

LCMS
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86577-1
Project/Site: 23K3616

Client Sample ID: 23K3616-05 — Lab Sample ID: 810-86577-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acesulfame K	0.020		0.020	0.0020	ug/L	1		PPCP NEG	Total/NA

Client Sample ID: 23K3616-06 — Lab Sample ID: 810-86577-2

No Detections.

Client Sample ID: 23K3616-07 — Lab Sample ID: 810-86577-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acesulfame K	0.022		0.020	0.0020	ug/L	1		PPCP NEG	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86577-1
Project/Site: 23K3616

Client Sample ID: 23K3616-05
Lab Sample ID: 810-86577-1
Date Collected: 11/28/23 12:30
Matrix: Drinking Water
Date Received: 12/02/23 09:00

Method: Lab SOP PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	**0.020**		0.020	0.0020	ug/L			12/05/23 05:26	1
Sucralose	<0.014		0.10	0.014	ug/L			12/05/23 05:26	1

Client Sample ID: 23K3616-06
Lab Sample ID: 810-86577-2
Date Collected: 11/28/23 12:45
Matrix: Drinking Water
Date Received: 12/02/23 09:00

Method: Lab SOP PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	<0.0020		0.020	0.0020	ug/L			12/05/23 05:54	1
Sucralose	<0.014		0.10	0.014	ug/L			12/05/23 05:54	1

Client Sample ID: 23K3616-07
Lab Sample ID: 810-86577-3
Date Collected: 11/28/23 13:00
Matrix: Drinking Water
Date Received: 12/02/23 09:00

Method: Lab SOP PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	**0.022**		0.020	0.0020	ug/L			12/05/23 06:22	1
Sucralose	<0.014		0.10	0.014	ug/L			12/05/23 06:22	1

QC Sample Results

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3616

Job ID: 810-86577-1

Method: PPCP NEG - Pharmaceuticals and Personal Care Products (LC/MS/MS)

Lab Sample ID: MB 810-81757/10
Matrix: Drinking Water
Analysis Batch: 81757

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acesulfame K	<0.0020		0.020	0.0020	ug/L			12/04/23 21:57	1
Sucralose	<0.014		0.10	0.014	ug/L			12/04/23 21:57	1

QC Association Summary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86577-1
Project/Site: 23K3616

LCMS

Analysis Batch: 81757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-86577-1	23K3616-05	Total/NA	Drinking Water	PPCP NEG	
810-86577-2	23K3616-06	Total/NA	Drinking Water	PPCP NEG	
810-86577-3	23K3616-07	Total/NA	Drinking Water	PPCP NEG	
MB 810-81757/10	Method Blank	Total/NA	Drinking Water	PPCP NEG	

Lab Chronicle

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3616

Job ID: 810-86577-1

Client Sample ID: 23K3616-05

Lab Sample ID: 810-86577-1

Date Collected: 11/28/23 12:30

Matrix: Drinking Water

Date Received: 12/02/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	PPCP NEG		1	81757	CM	EA SB	12/05/23 05:26

Client Sample ID: 23K3616-06

Lab Sample ID: 810-86577-2

Date Collected: 11/28/23 12:45

Matrix: Drinking Water

Date Received: 12/02/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	PPCP NEG		1	81757	CM	EA SB	12/05/23 05:54

Client Sample ID: 23K3616-07

Lab Sample ID: 810-86577-3

Date Collected: 11/28/23 13:00

Matrix: Drinking Water

Date Received: 12/02/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	PPCP NEG		1	81757	CM	EA SB	12/05/23 06:22

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: CON-TEST ANALYTICAL LABORATORY
Job ID: 810-86577-1
Project/Site: 23K3616

Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-IN035	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
PPCP NEG		Drinking Water	Acesulfame K
PPCP NEG		Drinking Water	Sucralose

Method Summary

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3616

Job ID: 810-86577-1

Method	Method Description	Protocol	Laboratory
PPCP NEG	Pharmaceuticals and Personal Care Products (LC/MS/MS)	Lab SOP	EA SB

Protocol References:

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: CON-TEST ANALYTICAL LABORATORY
Project/Site: 23K3616

Job ID: 810-86577-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-86577-1	23K3616-05	Drinking Water	11/28/23 12:30	12/02/23 09:00
810-86577-2	23K3616-06	Drinking Water	11/28/23 12:45	12/02/23 09:00
810-86577-3	23K3616-07	Drinking Water	11/28/23 13:00	12/02/23 09:00

SUBCONTRACT CHAIN OF CUSTODY

Pace New England

23K3616



SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Kyle A. Murray

RECEIVING LABORATORY:

Eurofins Eaton Analytical
110 South Hill Street
South Bend, IN 46617
Phone :(574) 472-5528
Fax:

Analysis	Sample Name	Due	Expires	Comments
Sample ID: 23K3616-05	**MW-6** PH<4 CLA	**Water** **Sampled:**	**11/28/23 12:30**	**CAT B** (2)
S-Sucralose		12/29/23 14:00	12/12/23 12:30	Artificial Sweeteners - L221 - Sucralose & Acesulfame-K
Containers Supplied:				
VOA vial + Ascorbic acid VOA vial + Ascorbic acid				
Sample ID: 23K3616-06	**MW-7** PH<4 CLA	**Water** **Sampled:**	**11/28/23 12:45**	**CAT B**
S-Sucralose		12/29/23 14:00	12/12/23 12:45	Artificial Sweeteners - L221 - Sucralose & Acesulfame-K
Containers Supplied:				
VOA vial + Ascorbic acid VOA vial + Ascorbic acid				
Sample ID: 23K3616-07	**DUP B** PH<2 CLA	**Water** **Sampled:**	**11/28/23 13:00**	**CAT B**
S-Sucralose		12/29/23 14:00	12/12/23 13:00	Artificial Sweeteners - L221 - Sucralose & Acesulfame-K
Containers Supplied:				
VOA vial + Ascorbic acid VOA vial + Ascorbic acid				

12-2-23 10

Initial Temp 3.8
Corrected Temp 3.2
IR Gun # 18

WO

Released By	Date	Received By	Date
	12-1-23 17:00	KDW	12.2.23 0900
Released By	Date	Received By	Date

Login Sample Receipt Checklist

Client: CON-TEST ANALYTICAL LABORATORY

Job Number: 810-86577-1

Login Number: 86577

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: DePriest, Kellie

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Pace A
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

December 15, 2023

Laurie Kopyscinski
Con-Test (Pace NE)
39 Spruce Street
East Longmeadow, MA 01028

RE: Project: 23K3616
Pace Project No.: 30643763

Dear Laurie Kopyscinski:

Enclosed are the analytical results for sample(s) received by the laboratory on December 02, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nikayla M. Yasurek
nikayla.yasurek@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Subs ELON, Con-Test (Pace NE)
Kyle Murray, Con-Test
Lisa Worthington, Con-Test (Pace NE)

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CERTIFICATIONS

Project: 23K3616
Pace Project No.: 30643763

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

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SAMPLE SUMMARY

Project: 23K3616
Pace Project No.: 30643763

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30643763001	**23K3616-02**	Water	11/28/23 09:40	12/02/23 09:35
30643763002	**23K3616-03**	Water	11/28/23 11:00	12/02/23 09:35
30643763003	**23K3616-04**	Water	11/28/23 11:30	12/02/23 09:35

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SAMPLE ANALYTE COUNT

Project: 23K3616
Pace Project No.: 30643763

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30643763001	**23K3616-02**	EPA 906.0	SLC	1	PASI-PA
30643763002	**23K3616-03**	EPA 906.0	SLC	1	PASI-PA
30643763003	**23K3616-04**	EPA 906.0	SLC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23K3616
Pace Project No.: 30643763

Method: **EPA 906.0**
Description: 906.0 Tritium
Client: Con-Test (Pace NE)
Date: December 15, 2023

General Information:
3 samples were analyzed for EPA 906.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3616
Pace Project No.: 30643763

Sample: 23K3616-02 **Lab ID: 30643763001** Collected: 11/28/23 09:40 Received: 12/02/23 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Per client, "phosphoric" bottle is actually unpreserved. Please use this to run tritium, per client.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Tritium	EPA 906.0	**-100.0 ± 133 (250) C:NA T:NA**	pCi/L	12/14/23 20:21	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3616
Pace Project No.: 30643763

Sample: 23K3616-03 **Lab ID: 30643763002** Collected: 11/28/23 11:00 Received: 12/02/23 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Per client, "phosphoric" bottle is actually unpreserved. Please use this to run tritium, per client

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Tritium	EPA 906.0	**25.1 ± 158 (279) C:NA T:NA**	pCi/L	12/14/23 21:09	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 23K3616
Pace Project No.: 30643763

Sample: 23K3616-04 **Lab ID: 30643763003** Collected: 11/28/23 11:30 Received: 12/02/23 09:35 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • Per client, "phosphoric" bottle is actually unpreserved. Please use this to run tritium, per client

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
		Pace Analytical Services - Greensburg				
Tritium	EPA 906.0	**-15.3 ± 142 (255) C:NA T:NA**	pCi/L	12/14/23 21:56	10028-17-8	

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 23K3616
Pace Project No.: 30643763

QC Batch: 635319
QC Batch Method: EPA 906.0
Analysis Method: EPA 906.0
Analysis Description: 906.0 Tritium
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30643763001, 30643763002, 30643763003

METHOD BLANK: 3098269 Matrix: Water
Associated Lab Samples: 30643763001, 30643763002, 30643763003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Tritium	-20.0 ± 138 (250) C:NA T:NA	pCi/L	12/14/23 14:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 23K3616
Pace Project No.: 30643763

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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Greensburg, PA 15601
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23K3616
Pace Project No.: 30643763

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30643763001	**23K3616-02**	EPA 906.0	635319		
30643763002	**23K3616-03**	EPA 906.0	635319		
30643763003	**23K3616-04**	EPA 906.0	635319		

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SUBCONTRACT CHAIN OF CUSTODY

Pace New England

23K3616

SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Kyle A. Murray

RECEIVING LABORATORY:

Pace Analytical Laboratory - Greensburg, PA
1638 Roseytown Road, Suites 2,3,4
Greensburg, PA 15601
Phone :(724) 850-5600
Fax: (724) 850-5601

Analysis	Sample Name	Due		Expires	Comments
Sample ID: 23K3616-02	**MW-9**	**Water**	**Sampled:**	**11/28/23 09:40**	**CAT B**
S-Tritium		12/29/23 14:00		12/12/23 09:40	EPA Method 906.0 - CAT B - Report to MDL
Containers Supplied:					
250 mL plastic Unpreserv	250 mL plastic Unpreserv	250 mL plastic Unpreserv		~~250 mL amber + Phosphor~~	
Sample ID: 23K3616-03	**MW-1**	**Water**	**Sampled:**	**11/28/23 11:00**	**CAT B**
S-Tritium		12/29/23 14:00		12/12/23 11:00	EPA Method 906.0 - CAT B - Report to MDL
Containers Supplied:					
250 mL plastic Unpreserv	250 mL plastic Unpreserv	250 mL plastic Unpreserv		~~250 mL amber + Phosphor~~	
Sample ID: 23K3616-04	**DUP A**	**Water**	**Sampled:**	**11/28/23 11:30**	**CAT B**
S-Tritium		12/29/23 14:00		12/12/23 11:30	EPA Method 906.0 - CAT B - Report to MDL
Containers Supplied:					
250 mL plastic Unpreserv	250 mL plastic Unpreserv	250 mL plastic Unpreserv		~~250 mL amber + Phosphor~~	



Released By	Date	Received By	Date
	12-7-23 7:00		12-8-23 0920
Released By	Date	Received By	Date

DC#_Title: ENV-FRM-GBUR-0088 v06_Sample Condition Upon Receipt-Pittsburgh

Effective Date: 09/20/2023

WO#: 30643763

PM: NMY Due Date: 01/02/24

CLIENT: PACE NE

Client Name: PACE NE

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace ☐ Other

Tracking Number: 7743 9437 8903

Initial / Date

Examined By: ES 12.11.23

Labeled By: ES 12.11.23

Temped By: —

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No **Seals Intact:** ☐ Yes ☒ No

Thermometer Used: — **Type of Ice:** Wet Blue (None)

Cooler Temperature: Observed Temp — °C Correction Factor: — °C Final Temp: — °C

Temp should be above freezing to 6°C

pH paper Lot# 10 D 0134

D.P.D. Residual Chlorine Lot # —

Comments:	Yes	No	NA	
Chain of Custody Present	✓			1.
Chain of Custody Filled Out:	✓			2.
-Were client corrections present on COC	✓			
Chain of Custody Relinquished	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC:	✓			5.
-Includes date/time/ID	✓			
Matrix: WT				
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used:	✓			10.
-Pace Containers Used		✓		
Containers Intact:	✓			11.
Orthophosphate field filtered:			✓	12.
Hex Cr Aqueous samples field filtered:			✓	13.
Organic Samples checked for dechlorination			✓	14:
Filtered volume received for dissolved tests:			✓	15:
All containers checked for preservation:	✓			16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix				PH = 7
All containers meet method preservation requirements:	✓			Initial when completed ES / Date/Time of Preservation / Lot# of added Preservative
8260C/D: Headspace in VOA Vials (> 6mm)			✓	17.
624.1: Headspace in VOA Vials (0mm)			✓	18.
Trip Blank Present:			✓	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	✓			Initial when completed MM / Date: 12-8-23 / Survey Meter SN: 2504350

Comments:

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 23K3616 KAM

ALL SHADED AREAS are for LAB USE ONLY

Company: Precision Environmental Services	Billing Information: NYSDEC Spill No. 2100460
Address: 831 Rt 67, Ballston Spa, NY 12020	
Report To: NYSDEC, Brittany O'Brien-Drake	Email To: O'Brien-Drake and Neumann
Copy To: Brian Neumann	Site Collection Info/Address: Meadow Pond School, South Salem, NY
Customer Project Name/Meadow Pond School	State: NY County/City: Westchester/South Salem Time Zone Collected: East
Phone: 518-885-4399 Email: bneumann@pesnyinc.com	Site/Facility ID #: Spill No. 2100460
Collected By (print):	Purchase Order # : PACE CO #145684 Quote #:
Collected By (signature):	Turnaround Date Required: STANDARD
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #:

DW Location Code:

Immediately Packed on Ice: [X] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

Container Preservative Type **: O U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Project Manager:

Analyses

Lab Profile/Line:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	REFER TO ATTACHED FOR METHODS	PFAS 1633	Arklow / Suedpers L221
~~EQPT BLNK #1~~		~~Grab~~	~~11.21.23~~							X	
EQPT BLNK #2		Grab	~~11.21.23~~	11.28.23		1050		2	X	X	
MW-9	GW	Grab	~~11.21.23~~	11.28.23		0940		14	X	X	
MW-1	GW	Grab	~~11.21.23~~	11.28.23		1100		14	X	X	
DUP A	GW	Grab	~~11.21.23~~	11.28.23		1130		14	X	X	
MW-6	GW	Grab	11.21.23	"		1230		2	X	X	
MW-3	GW	Grab	11.21.23	"		1245		2	X	X	
DUP B	GW	Grab	11.21.23	↓		1300		2	X	X	
	~~GW~~	~~Grab~~	~~11.21.23~~						X		
	~~GW~~	~~Grab~~	~~11.21.23~~						X		

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y N NA
Custody Signatures Present	Y N NA
Collector Signature Present	Y N NA
Bottles Intact	Y N NA
Correct Bottles	Y N NA
Sufficient Volume	Y N NA
Samples Received on Ice	Y N NA
VOA - Headspace Acceptable	Y N NA
USDA Regulated Soils	Y N NA
Samples in Holding Time	Y N NA
Residual Chlorine Present	Y N NA
Cl Strips:	
Sample pH Acceptable	Y N NA
pH Strips:	
Sulfide Present	Y N NA
Lead Acetate Strips:	

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y / N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
[signature] PACE	11/29/23 0700	[signature] PACE	11/29/23 1100
[signature] PACE	11/30/23 1600	[signature]	11/30/23 1020

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

WO#: 30643763

PM: NMY Due Date: 01/02/24

CLIENT: PACE NE

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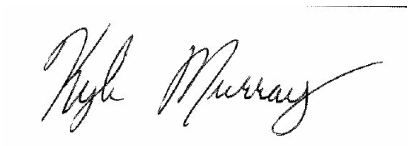
December 29, 2023

Brian Neumann
NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020

Project Location: South Salem,NY
Client Job Number:
Project Number: 2100460
Laboratory Work Order Number: 23L1082

Enclosed are results of analyses for samples as received by the laboratory on December 7, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle A. Murray
Project Manager

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

NYDEC_Precision Environmental Services, Inc
831 Rt. 67 Lot 38A
Ballston Spa, NY 12020
ATTN: Brian Neumann

REPORT DATE: 12/29/2023

PURCHASE ORDER NUMBER: 147704

PROJECT NUMBER: 2100460

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23L1082

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

PROJECT LOCATION: South Salem,NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
CB-01-20231206	23L1082-01	Water		Draft Method 1633	
CB-02-20231206	23L1082-02	Water		Draft Method 1633	
CB-03-20231206	23L1082-03	Water		Draft Method 1633	
CB-04-20231206	23L1082-04	Water		Draft Method 1633	
CB-05-20231206	23L1082-05	Water		Draft Method 1633	
CB-DUP-20231206	23L1082-06	Water		Draft Method 1633	
TAP-20231206	23L1082-07	Ground Water		Draft Method 1633	
DUP-20231206	23L1082-08	Ground Water		Draft Method 1633	
CB-EB-20231206	23L1082-09	Equipment Blank Water		Draft Method 1633	
CB-06-20231206	23L1082-10	Water		Draft Method 1633	

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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

Draft Method 1633

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix.

Analyte & Samples(s) Qualified:

23L1082-10RE1[CB-06-20231206]

MS-12

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

N-ethyl perfluorooctanesulfonamide (NEtFOSA)
B360529-MS2, B360529-MSD2

N-MeFOSAA (NMeFOSAA)
B360529-MS1, B360529-MSD1

Perfluoroheptanoic acid (PFHpA)
23L1082-07[TAP-20231206], B360529-MS2, B360529-MSD2

Perfluorooctanesulfonic acid (PFOS)
23L1082-07[TAP-20231206], B360529-MS2, B360529-MSD2

Perfluorooctanoic acid (PFOA)
23L1082-07[TAP-20231206], B360529-MS2, B360529-MSD2

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:

1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS
B360529-MS2

N-EtFOSAA (NEtFOSAA)
23L1082-01[CB-01-20231206], B360529-MS2, B360529-MSD1

N-MeFOSAA (NMeFOSAA)
B360529-MS2

N-methyl perfluoroocatnesulfonamide (NMeFOSA)
B360529-MS2

Perfluorobutanesulfonic acid (PFBS)
23L1082-07[TAP-20231206], B360529-MS2

Perfluorobutanoic acid (PFBA)
23L1082-07[TAP-20231206], B360529-MS2

Perfluorohexanesulfonic acid (PFHxS)
23L1082-07[TAP-20231206], B360529-MS2

Perfluorohexanoic acid (PFHxA)
23L1082-07[TAP-20231206], B360529-MS2

Perfluorononanesulfonic acid (PFNS)
B360529-MS2

Perfluorononanoic acid (PFNA)
23L1082-07[TAP-20231206], B360529-MS2

Perfluoropentanoic acid (PFPeA)
23L1082-07[TAP-20231206], B360529-MS2

MS-23

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 outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonamide (PFOSA)
23L1082-07[TAP-20231206], B360529-MS2

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PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

13C2-PFTeDA
B361788-BLK1

13C3-PFHxS
B361788-BLK1

13C4-PFBA
B361788-BLK1

13C5-PFPeA
B361788-BLK1

13C6-PFDA
B361788-BLK1

13C8-PFOA
B361788-BLK1

13C8-PFOS
B361788-BLK1

13C8-PFOSA
B361788-BLK1

13C9-PFNA
B361788-BLK1

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA
B361788-BLK1

Perfluoro-3-methoxypropanoic acid (PFMPA)
B361788-BLK1

Perfluoro-4-methoxybutanoic acid (PFMBA)
B361788-BLK1

Perfluorobutanoic acid (PFBA)
B361788-BLK1

Perfluorodecanesulfonic acid (PFDS)
B361788-BLK1

Perfluorodecanoic acid (PFDA)
B361788-BLK1

Perfluorododecanesulfonic acid (PFDoS)
B361788-BLK1

Perfluoroheptanesulfonic acid (PFHpS)
B361788-BLK1

Perfluorohexanesulfonic acid (PFHxS)
B361788-BLK1

Perfluorononanesulfonic acid (PFNS)
B361788-BLK1

Perfluorononanoic acid (PFNA)
B361788-BLK1

Perfluorooctanesulfonamide (PFOSA)
B361788-BLK1

Perfluorooctanesulfonic acid (PFOS)
B361788-BLK1

Perfluorooctanoic acid (PFOA)
B361788-BLK1

Perfluoropentanesulfonic acid (PFPeS)
B361788-BLK1

Perfluoropentanoic acid (PFPeA)
B361788-BLK1

Perfluorotetradecanoic acid (PFTeDA)
B361788-BLK1

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PF-17C

Extracted internal standard is outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS
23L1082-03[CB-03-20231206]

13C2-6:2FTS
23L1082-03[CB-03-20231206], 23L1082-04[CB-04-20231206], 23L1082-05[CB-05-20231206], 23L1082-06[CB-DUP-20231206], 23L1082-08[DUP-20231206], 23L1082-09[CB-EB-20231206], B361788-BS1, B361788-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FT
23L1082-03[CB-03-20231206]

1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS
23L1082-03[CB-03-20231206], 23L1082-04[CB-04-20231206], 23L1082-05[CB-05-20231206], 23L1082-06[CB-DUP-20231206], 23L1082-08[DUP-20231206], 23L1082-09[CB-EB-20231206], B361788-BS1, B361788-MRL1

PF-18

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

Analyte & Samples(s) Qualified:

13C2-6:2FTS
23L1082-01[CB-01-20231206], 23L1082-07[TAP-20231206], B360529-MS1, B360529-MS2, B360529-MSD1

1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS
B360529-MS1, B360529-MS2, B360529-MSD1

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonamide (PFOSA)
23L1082-07[TAP-20231206], B360529-MSD2

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

13C8-PFOA
23L1082-02[CB-02-20231206], 23L1082-03[CB-03-20231206]

13C9-PFNA
23L1082-02[CB-02-20231206]

Perfluorononanoic acid (PFNA)
23L1082-02[CB-02-20231206]

Perfluorooctanoic acid (PFOA)
23L1082-02[CB-02-20231206], 23L1082-03[CB-03-20231206]

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: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-01-20231206 | Sampled: 12/6/2023 10:05

Sample ID: 23L1082-01

Sample Matrix: 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)	13	3.9	1.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoropentanoic acid (PFPeA)	26	1.9	0.34	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorohexanoic acid (PFHxA)	22	0.97	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoroheptanoic acid (PFHpA)	15	0.97	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorooctanoic acid (PFOA)	33	0.97	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorononanoic acid (PFNA)	2.3	0.97	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorodecanoic acid (PFDA)	2.6	0.97	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.97	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorobutanesulfonic acid (PFBS)	5.6	0.97	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoropentanesulfonic acid (PFPeS)	1.2	0.97	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorohexanesulfonic acid (PFHxS)	5.9	0.97	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoroheptanesulfonic acid (PFHpS)	1.5	0.97	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorooctanesulfonic acid (PFOS)	64	0.97	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.97	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorodecanesulfonic acid (PFDS)	2.9	0.97	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.67	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.95	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluorooctanesulfonamide (PFOSA)	11	0.97	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.97	0.40	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.44	0.97	0.30	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.97	0.43	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-EtFOSAA (NEtFOSAA)	25	0.97	0.21	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	2.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.66	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.82	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.94	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	1.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.9	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-01-20231206 | Sampled: 12/6/2023 10:05

Sample ID: 23L1082-01

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.84	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:27	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	43.3		10-130		12/24/23 3:27
13C5-PFPeA	77.5		35-150		12/24/23 3:27
13C5-PFHxA	72.3		55-150		12/24/23 3:27
13C4-PFHpA	70.1		55-150		12/24/23 3:27
13C8-PFOA	71.1		60-140		12/24/23 3:27
13C9-PFNA	70.1		55-140		12/24/23 3:27
13C6-PFDA	69.2		50-140		12/24/23 3:27
13C7-PFUnA	67.0		30-140		12/24/23 3:27
13C2-PFDoA	60.3		10-150		12/24/23 3:27
13C2-PFTeDA	48.8		10-130		12/24/23 3:27
13C3-PFBS	73.9		55-150		12/24/23 3:27
13C3-PFHxS	71.4		55-150		12/24/23 3:27
13C8-PFOS	68.2		45-140		12/24/23 3:27
13C2-4:2FTS	70.7		60-200		12/24/23 3:27
13C2-6:2FTS	**57.1**	*	60-200	PF-18	12/24/23 3:27
13C2-8:2FTS	60.9		50-200		12/24/23 3:27
13C8-PFOSA	68.7		30-130		12/24/23 3:27
D3-NMeFOSA	57.3		15-130		12/24/23 3:27
D5-NEtFOSA	55.1		10-130		12/24/23 3:27
D3-NMeFOSAA	64.4		45-200		12/24/23 3:27
D5-NEtFOSAA	55.5		10-200		12/24/23 3:27
D7-NMeFOSE	55.5		10-150		12/24/23 3:27
D9-NEtFOSE	51.3		10-150		12/24/23 3:27
13C3-HFPO-DA	76.9		25-160		12/24/23 3:27

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-01-20231206 | Sampled: 12/6/2023 10:05

Sample ID: 23L1082-01

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-02-20231206 | Sampled: 12/6/2023 10:15

Sample ID: 23L1082-02

Sample Matrix: 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)	5.8	3.9	1.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.34	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorohexanoic acid (PFHxA)	2.1	0.98	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoroheptanoic acid (PFHpA)	1.1	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorooctanoic acid (PFOA)	0.74	0.98	0.22	ng/L	1	S-29, J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorononanoic acid (PFNA)	0.58	0.98	0.19	ng/L	1	S-29, J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorodecanoic acid (PFDA)	0.27	0.98	0.18	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorobutanesulfonic acid (PFBS)	0.39	0.98	0.26	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorooctanesulfonic acid (PFOS)	0.50	0.98	0.31	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.98	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.69	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.97	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluorooctanesulfonamide (PFOSA)	0.92	0.98	0.30	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.98	0.43	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-EtFOSAA (NEtFOSAA)	ND	0.98	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	2.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.68	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.84	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.95	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	1.8	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	10	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	8.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.48	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-02-20231206 | Sampled: 12/6/2023 10:15

Sample ID: 23L1082-02

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.40	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.85	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:42	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	57.7		10-130		12/24/23 3:42
13C5-PFPeA	56.4		35-150		12/24/23 3:42
13C5-PFHxA	55.9		55-150		12/24/23 3:42
13C4-PFHpA	55.5		55-150		12/24/23 3:42
13C8-PFOA	**53.9**	*	60-140	S-29	12/24/23 3:42
13C9-PFNA	**54.3**	*	55-140	S-29	12/24/23 3:42
13C6-PFDA	57.7		50-140		12/24/23 3:42
13C7-PFUnA	54.4		30-140		12/24/23 3:42
13C2-PFDoA	52.6		10-150		12/24/23 3:42
13C2-PFTeDA	39.1		10-130		12/24/23 3:42
13C3-PFBS	56.7		55-150		12/24/23 3:42
13C3-PFHxS	55.6		55-150		12/24/23 3:42
13C8-PFOS	53.9		45-140		12/24/23 3:42
13C2-4:2FTS	124		60-200		12/24/23 3:42
13C2-6:2FTS	76.0		60-200		12/24/23 3:42
13C2-8:2FTS	64.9		50-200		12/24/23 3:42
13C8-PFOSA	52.9		30-130		12/24/23 3:42
D3-NMeFOSA	45.1		15-130		12/24/23 3:42
D5-NEtFOSA	43.4		10-130		12/24/23 3:42
D3-NMeFOSAA	59.8		45-200		12/24/23 3:42
D5-NEtFOSAA	55.2		10-200		12/24/23 3:42
D7-NMeFOSE	43.6		10-150		12/24/23 3:42
D9-NEtFOSE	41.6		10-150		12/24/23 3:42
13C3-HFPO-DA	57.3		25-160		12/24/23 3:42

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-02-20231206 | Sampled: 12/6/2023 10:15

Sample ID: 23L1082-02

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	12	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-03-20231206 | Sampled: 12/6/2023 10:20

Sample ID: 23L1082-03

Sample Matrix: 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)	7.8	3.7	1.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoropentanoic acid (PFPeA)	13	1.9	0.32	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorohexanoic acid (PFHxA)	12	0.93	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoroheptanoic acid (PFHpA)	8.3	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorooctanoic acid (PFOA)	20	0.93	0.21	ng/L	1	S-29	Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorononanoic acid (PFNA)	1.4	0.93	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorodecanoic acid (PFDA)	0.85	0.93	0.17	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.93	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorobutanesulfonic acid (PFBS)	3.3	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoropentanesulfonic acid (PFPeS)	1.1	0.93	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorohexanesulfonic acid (PFHxS)	5.0	0.93	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoroheptanesulfonic acid (PFHpS)	1.4	0.93	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorooctanesulfonic acid (PFOS)	55	0.93	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.93	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorodecanesulfonic acid (PFDS)	0.45	0.93	0.29	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.65	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 3:58	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.7	0.92	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 3:58	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluorooctanesulfonamide (PFOSA)	4.6	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.93	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.93	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-EtFOSAA (NEtFOSAA)	3.3	0.93	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.3	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.3	2.3	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.97	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.79	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.90	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.3	1.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.2	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-03-20231206 | Sampled: 12/6/2023 10:20

Sample ID: 23L1082-03

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.37	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.81	ng/L	1		Draft Method 1633	12/21/23	12/24/23 3:58	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	57.7		10-130		12/24/23 3:58
13C5-PFPeA	62.4		35-150		12/24/23 3:58
13C5-PFHxA	57.5		55-150		12/24/23 3:58
13C4-PFHpA	56.7		55-150		12/24/23 3:58
13C8-PFOA	**58.1**	*	60-140	S-29	12/24/23 3:58
13C9-PFNA	56.5		55-140		12/24/23 3:58
13C6-PFDA	56.0		50-140		12/24/23 3:58
13C7-PFUnA	51.6		30-140		12/24/23 3:58
13C2-PFDoA	45.5		10-150		12/24/23 3:58
13C2-PFTeDA	35.2		10-130		12/24/23 3:58
13C3-PFBS	59.8		55-150		12/24/23 3:58
13C3-PFHxS	59.7		55-150		12/24/23 3:58
13C8-PFOS	54.1		45-140		12/24/23 3:58
13C2-4:2FTS	**56.7**	*	60-200	PF-17C	12/24/23 3:58
13C2-6:2FTS	**46.7**	*	60-200	PF-17C	12/24/23 3:58
13C2-8:2FTS	53.7		50-200		12/24/23 3:58
13C8-PFOSA	56.7		30-130		12/24/23 3:58
D3-NMeFOSA	42.2		15-130		12/24/23 3:58
D5-NEtFOSA	38.1		10-130		12/24/23 3:58
D3-NMeFOSAA	51.8		45-200		12/24/23 3:58
D5-NEtFOSAA	43.2		10-200		12/24/23 3:58
D7-NMeFOSE	37.6		10-150		12/24/23 3:58
D9-NEtFOSE	32.6		10-150		12/24/23 3:58
13C3-HFPO-DA	59.0		25-160		12/24/23 3:58

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-03-20231206 | Sampled: 12/6/2023 10:20

Sample ID: 23L1082-03

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-04-20231206 | Sampled: 12/6/2023 10:27

Sample ID: 23L1082-04

Sample Matrix: 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)	2.1	3.6	1.3	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoropentanoic acid (PFPeA)	0.46	1.8	0.31	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorohexanoic acid (PFHxA)	0.59	0.90	0.19	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoroheptanoic acid (PFHpA)	0.59	0.90	0.23	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorooctanoic acid (PFOA)	2.8	0.90	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorononanoic acid (PFNA)	0.22	0.90	0.17	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorodecanoic acid (PFDA)	ND	0.90	0.17	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorobutanesulfonic acid (PFBS)	1.9	0.90	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	0.90	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorohexanesulfonic acid (PFHxS)	0.43	0.90	0.18	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.90	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorooctanesulfonic acid (PFOS)	0.91	0.90	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.90	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.62	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.88	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 4:14	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.97	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.90	0.37	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.90	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-EtFOSAA (NEtFOSAA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.0	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	2.2	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.94	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.76	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.87	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	1.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-04-20231206 | Sampled: 12/6/2023 10:27

Sample ID: 23L1082-04

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:14	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	66.3		10-130		12/24/23 4:14
13C5-PFPeA	69.1		35-150		12/24/23 4:14
13C5-PFHxA	65.1		55-150		12/24/23 4:14
13C4-PFHpA	62.3		55-150		12/24/23 4:14
13C8-PFOA	61.6		60-140		12/24/23 4:14
13C9-PFNA	59.8		55-140		12/24/23 4:14
13C6-PFDA	60.1		50-140		12/24/23 4:14
13C7-PFUnA	53.7		30-140		12/24/23 4:14
13C2-PFDoA	48.7		10-150		12/24/23 4:14
13C2-PFTeDA	39.2		10-130		12/24/23 4:14
13C3-PFBS	64.8		55-150		12/24/23 4:14
13C3-PFHxS	64.0		55-150		12/24/23 4:14
13C8-PFOS	56.1		45-140		12/24/23 4:14
13C2-4:2FTS	61.0		60-200		12/24/23 4:14
13C2-6:2FTS	**50.9**	*	60-200	PF-17C	12/24/23 4:14
13C2-8:2FTS	56.5		50-200		12/24/23 4:14
13C8-PFOSA	58.2		30-130		12/24/23 4:14
D3-NMeFOSA	45.5		15-130		12/24/23 4:14
D5-NEtFOSA	42.4		10-130		12/24/23 4:14
D3-NMeFOSAA	53.0		45-200		12/24/23 4:14
D5-NEtFOSAA	45.7		10-200		12/24/23 4:14
D7-NMeFOSE	45.5		10-150		12/24/23 4:14
D9-NEtFOSE	39.5		10-150		12/24/23 4:14
13C3-HFPO-DA	66.0		25-160		12/24/23 4:14

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-04-20231206 | Sampled: 12/6/2023 10:27

Sample ID: 23L1082-04

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-05-20231206 | Sampled: 12/6/2023 10:35

Sample ID: 23L1082-05

Sample Matrix: 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)	1.4	3.7	1.4	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.32	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorohexanoic acid (PFHxA)	ND	0.93	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoroheptanoic acid (PFHpA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorooctanoic acid (PFOA)	0.51	0.93	0.21	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorononanoic acid (PFNA)	ND	0.93	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorodecanoic acid (PFDA)	ND	0.93	0.17	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.93	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.93	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorobutanesulfonic acid (PFBS)	ND	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	0.93	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	0.93	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorooctanesulfonic acid (PFOS)	0.45	0.93	0.30	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.93	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.65	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.7	0.92	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 4:29	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluorooctanesulfonamide (PFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.93	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.93	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-EtFOSAA (NEtFOSAA)	ND	0.93	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.3	2.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.3	2.3	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.98	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.80	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.90	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.3	1.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.2	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-05-20231206 | Sampled: 12/6/2023 10:35

Sample ID: 23L1082-05

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.38	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.81	ng/L	1		Draft Method 1633	12/21/23	12/24/23 4:29	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	71.6		10-130		12/24/23 4:29
13C5-PFPeA	73.5		35-150		12/24/23 4:29
13C5-PFHxA	70.1		55-150		12/24/23 4:29
13C4-PFHpA	67.4		55-150		12/24/23 4:29
13C8-PFOA	70.1		60-140		12/24/23 4:29
13C9-PFNA	68.8		55-140		12/24/23 4:29
13C6-PFDA	67.0		50-140		12/24/23 4:29
13C7-PFUnA	63.9		30-140		12/24/23 4:29
13C2-PFDoA	58.8		10-150		12/24/23 4:29
13C2-PFTeDA	47.6		10-130		12/24/23 4:29
13C3-PFBS	73.7		55-150		12/24/23 4:29
13C3-PFHxS	71.9		55-150		12/24/23 4:29
13C8-PFOS	67.8		45-140		12/24/23 4:29
13C2-4:2FTS	68.4		60-200		12/24/23 4:29
13C2-6:2FTS	**57.6**	*	60-200	PF-17C	12/24/23 4:29
13C2-8:2FTS	63.2		50-200		12/24/23 4:29
13C8-PFOSA	66.4		30-130		12/24/23 4:29
D3-NMeFOSA	53.0		15-130		12/24/23 4:29
D5-NEtFOSA	52.6		10-130		12/24/23 4:29
D3-NMeFOSAA	63.5		45-200		12/24/23 4:29
D5-NEtFOSAA	54.1		10-200		12/24/23 4:29
D7-NMeFOSE	54.9		10-150		12/24/23 4:29
D9-NEtFOSE	49.1		10-150		12/24/23 4:29
13C3-HFPO-DA	73.5		25-160		12/24/23 4:29

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-05-20231206 | Sampled: 12/6/2023 10:35

Sample ID: 23L1082-05

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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

Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-06

Sample Matrix: 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)	13	3.9	1.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoropentanoic acid (PFPeA)	26	2.0	0.34	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorohexanoic acid (PFHxA)	23	0.98	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoroheptanoic acid (PFHpA)	15	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorooctanoic acid (PFOA)	34	0.98	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorononanoic acid (PFNA)	2.3	0.98	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorodecanoic acid (PFDA)	2.3	0.98	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorobutanesulfonic acid (PFBS)	5.4	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoropentanesulfonic acid (PFPeS)	1.3	0.98	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorohexanesulfonic acid (PFHxS)	5.7	0.98	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoroheptanesulfonic acid (PFHpS)	1.3	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorooctanesulfonic acid (PFOS)	63	0.98	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.98	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorodecanesulfonic acid (PFDS)	3.1	0.98	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.68	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	10	3.9	0.97	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 5:17	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluorooctanesulfonamide (PFOSA)	12	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.50	0.98	0.30	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.98	0.43	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-EtFOSAA (NEtFOSAA)	26	0.98	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	2.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.67	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.84	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.95	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	1.8	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	10	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	8.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.48	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-06

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.85	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:17	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	48.4		10-130		12/24/23 5:17
13C5-PFPeA	74.6		35-150		12/24/23 5:17
13C5-PFHxA	70.1		55-150		12/24/23 5:17
13C4-PFHpA	69.1		55-150		12/24/23 5:17
13C8-PFOA	69.5		60-140		12/24/23 5:17
13C9-PFNA	68.6		55-140		12/24/23 5:17
13C6-PFDA	72.3		50-140		12/24/23 5:17
13C7-PFUnA	61.2		30-140		12/24/23 5:17
13C2-PFDoA	56.9		10-150		12/24/23 5:17
13C2-PFTeDA	47.3		10-130		12/24/23 5:17
13C3-PFBS	74.5		55-150		12/24/23 5:17
13C3-PFHxS	72.0		55-150		12/24/23 5:17
13C8-PFOS	69.6		45-140		12/24/23 5:17
13C2-4:2FTS	76.0		60-200		12/24/23 5:17
13C2-6:2FTS	**56.8**	*	60-200	PF-17C	12/24/23 5:17
13C2-8:2FTS	64.7		50-200		12/24/23 5:17
13C8-PFOSA	66.2		30-130		12/24/23 5:17
D3-NMeFOSA	52.8		15-130		12/24/23 5:17
D5-NEtFOSA	52.4		10-130		12/24/23 5:17
D3-NMeFOSAA	66.9		45-200		12/24/23 5:17
D5-NEtFOSAA	56.1		10-200		12/24/23 5:17
D7-NMeFOSE	50.2		10-150		12/24/23 5:17
D9-NEtFOSE	48.7		10-150		12/24/23 5:17
13C3-HFPO-DA	72.2		25-160		12/24/23 5:17

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-06

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	10	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:14	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: TAP-20231206 | Sampled: 12/6/2023 11:05

Sample ID: 23L1082-07

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)	160	3.7	1.4	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoropentanoic acid (PFPeA)	610	1.9	0.32	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorohexanoic acid (PFHxA)	520	0.93	0.20	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoroheptanoic acid (PFHpA)	220	0.93	0.24	ng/L	1	MS-12	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorooctanoic acid (PFOA)	480	0.93	0.21	ng/L	1	MS-12	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorononanoic acid (PFNA)	29	0.93	0.18	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorodecanoic acid (PFDA)	1.3	0.93	0.17	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.93	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorobutanesulfonic acid (PFBS)	16	0.93	0.24	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoropentanesulfonic acid (PFPeS)	8.9	0.93	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorohexanesulfonic acid (PFHxS)	34	0.93	0.19	ng/L	1	MS-22	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoroheptanesulfonic acid (PFHpS)	8.8	0.93	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorooctanesulfonic acid (PFOS)	240	0.93	0.30	ng/L	1	MS-12	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.93	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.93	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.65	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	2.3	3.7	0.92	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluorooctanesulfonamide (PFOSA)	7.3	0.93	0.29	ng/L	1	MS-23, R-06	Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.93	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.93	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-EtFOSAA (NEtFOSAA)	ND	0.93	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.3	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.3	2.3	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.97	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.79	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.90	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.3	1.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.2	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: TAP-20231206 | Sampled: 12/6/2023 11:05

Sample ID: 23L1082-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.37	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.81	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:32	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	28.2		10-130		12/24/23 5:32
13C5-PFPeA	69.0		35-150		12/24/23 5:32
13C5-PFHxA	62.9		55-150		12/24/23 5:32
13C4-PFHpA	63.0		55-150		12/24/23 5:32
13C8-PFOA	61.2		60-140		12/24/23 5:32
13C9-PFNA	61.3		55-140		12/24/23 5:32
13C6-PFDA	62.1		50-140		12/24/23 5:32
13C7-PFUnA	59.3		30-140		12/24/23 5:32
13C2-PFDoA	53.2		10-150		12/24/23 5:32
13C2-PFTeDA	49.8		10-130		12/24/23 5:32
13C3-PFBS	61.7		55-150		12/24/23 5:32
13C3-PFHxS	61.7		55-150		12/24/23 5:32
13C8-PFOS	58.1		45-140		12/24/23 5:32
13C2-4:2FTS	61.0		60-200		12/24/23 5:32
13C2-6:2FTS	**52.9**	*	60-200	PF-18	12/24/23 5:32
13C2-8:2FTS	73.7		50-200		12/24/23 5:32
13C8-PFOSA	47.7		30-130		12/24/23 5:32
D3-NMeFOSA	24.9		15-130		12/24/23 5:32
D5-NEtFOSA	24.9		10-130		12/24/23 5:32
D3-NMeFOSAA	53.8		45-200		12/24/23 5:32
D5-NEtFOSAA	47.9		10-200		12/24/23 5:32
D7-NMeFOSE	54.0		10-150		12/24/23 5:32
D9-NEtFOSE	52.6		10-150		12/24/23 5:32
13C3-HFPO-DA	71.8		25-160		12/24/23 5:32

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: TAP-20231206 | Sampled: 12/6/2023 11:05

Sample ID: 23L1082-07

Sample Matrix: Ground Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-08

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)	160	4.1	1.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoropentanoic acid (PFPeA)	600	2.0	0.35	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorohexanoic acid (PFHxA)	510	1.0	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoroheptanoic acid (PFHpA)	230	1.0	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorooctanoic acid (PFOA)	490	1.0	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorononanoic acid (PFNA)	30	1.0	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorodecanoic acid (PFDA)	1.4	1.0	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.28	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorobutanesulfonic acid (PFBS)	17	1.0	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoropentanesulfonic acid (PFPeS)	9.4	1.0	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorohexanesulfonic acid (PFHxS)	36	1.0	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoroheptanesulfonic acid (PFHpS)	8.1	1.0	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorooctanesulfonic acid (PFOS)	230	1.0	0.32	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.32	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.1	0.71	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	2.1	4.1	1.0	ng/L	1	PF-17C, J	Draft Method 1633	12/21/23	12/24/23 5:48	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.1	1.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluorooctanesulfonamide (PFOSA)	6.7	1.0	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.42	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.45	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.5	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	0.70	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
9Cl-PF3ONS (F53B Minor)	ND	4.1	0.86	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
11Cl-PF3OUdS (F53B Major)	ND	4.1	0.98	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	1.8	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	51	10	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	51	8.9	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-08

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.88	ng/L	1		Draft Method 1633	12/21/23	12/24/23 5:48	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	30.3		10-130		12/24/23 5:48
13C5-PFPeA	76.4		35-150		12/24/23 5:48
13C5-PFHxA	70.8		55-150		12/24/23 5:48
13C4-PFHpA	69.1		55-150		12/24/23 5:48
13C8-PFOA	67.5		60-140		12/24/23 5:48
13C9-PFNA	65.2		55-140		12/24/23 5:48
13C6-PFDA	68.2		50-140		12/24/23 5:48
13C7-PFUnA	65.1		30-140		12/24/23 5:48
13C2-PFDoA	59.4		10-150		12/24/23 5:48
13C2-PFTeDA	53.0		10-130		12/24/23 5:48
13C3-PFBS	68.9		55-150		12/24/23 5:48
13C3-PFHxS	68.6		55-150		12/24/23 5:48
13C8-PFOS	68.0		45-140		12/24/23 5:48
13C2-4:2FTS	64.5		60-200		12/24/23 5:48
13C2-6:2FTS	**55.1**	*	60-200	PF-17C	12/24/23 5:48
13C2-8:2FTS	65.2		50-200		12/24/23 5:48
13C8-PFOSA	60.2		30-130		12/24/23 5:48
D3-NMeFOSA	31.7		15-130		12/24/23 5:48
D5-NEtFOSA	30.5		10-130		12/24/23 5:48
D3-NMeFOSAA	61.1		45-200		12/24/23 5:48
D5-NEtFOSAA	52.5		10-200		12/24/23 5:48
D7-NMeFOSE	56.7		10-150		12/24/23 5:48
D9-NEtFOSE	53.1		10-150		12/24/23 5:48
13C3-HFPO-DA	75.5		25-160		12/24/23 5:48

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: DUP-20231206 | Sampled: 12/6/2023 00:00

Sample ID: 23L1082-08

Sample Matrix: Ground Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:14	LL

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-EB-20231206

Sample ID: 23L1082-09 | Start Date/Time: 12/6/2023 12:00:00AM

Sample Matrix: Equipment Blank Water | Stop Date/Time: 12/6/2023 10:55:00AM

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.9	1.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.34	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorohexanoic acid (PFHxA)	ND	0.98	0.21	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoroheptanoic acid (PFHpA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorooctanoic acid (PFOA)	0.39	0.98	0.22	ng/L	1	J	Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorononanoic acid (PFNA)	ND	0.98	0.19	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorodecanoic acid (PFDA)	ND	0.98	0.18	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoroundecanoic acid (PFUnA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorododecanoic acid (PFDoA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	0.24	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	0.25	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	0.23	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	0.20	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorononanesulfonic acid (PFNS)	ND	0.98	0.29	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	0.31	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	0.26	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.68	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.96	ng/L	1	PF-17C	Draft Method 1633	12/21/23	12/24/23 6:04	QNW
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	0.41	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	0.30	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-MeFOSAA (NMeFOSAA)	ND	0.98	0.43	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-EtFOSAA (NEtFOSAA)	ND	0.98	0.22	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	2.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	2.4	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.67	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.83	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.94	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	1.8	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	10	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	8.6	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.48	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-EB-20231206

Sample ID: 23L1082-09 | Start Date/Time: 12/6/2023 12:00:00AM

Sample Matrix: Equipment Blank Water | Stop Date/Time: 12/6/2023 10:55:00AM

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.39	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.85	ng/L	1		Draft Method 1633	12/21/23	12/24/23 6:04	QNW

Surrogates	% Recovery		Recovery Limits	Flag/Qual		
13C4-PFBA	69.6		10-130		12/24/23	6:04
13C5-PFPeA	73.4		35-150		12/24/23	6:04
13C5-PFHxA	69.4		55-150		12/24/23	6:04
13C4-PFHpA	68.2		55-150		12/24/23	6:04
13C8-PFOA	70.1		60-140		12/24/23	6:04
13C9-PFNA	68.5		55-140		12/24/23	6:04
13C6-PFDA	69.9		50-140		12/24/23	6:04
13C7-PFUnA	71.4		30-140		12/24/23	6:04
13C2-PFDoA	65.9		10-150		12/24/23	6:04
13C2-PFTeDA	60.8		10-130		12/24/23	6:04
13C3-PFBS	71.1		55-150		12/24/23	6:04
13C3-PFHxS	70.8		55-150		12/24/23	6:04
13C8-PFOS	68.3		45-140		12/24/23	6:04
13C2-4:2FTS	64.7		60-200		12/24/23	6:04
13C2-6:2FTS	**59.2**	*	60-200	PF-17C	12/24/23	6:04
13C2-8:2FTS	82.5		50-200		12/24/23	6:04
13C8-PFOSA	65.1		30-130		12/24/23	6:04
D3-NMeFOSA	59.8		15-130		12/24/23	6:04
D5-NEtFOSA	63.1		10-130		12/24/23	6:04
D3-NMeFOSAA	63.6		45-200		12/24/23	6:04
D5-NEtFOSAA	56.7		10-200		12/24/23	6:04
D7-NMeFOSE	62.8		10-150		12/24/23	6:04
D9-NEtFOSE	59.6		10-150		12/24/23	6:04
13C3-HFPO-DA	72.7		25-160		12/24/23	6:04

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-06-20231206 | Sampled: 12/6/2023 10:45

Sample ID: 23L1082-10

Sample Matrix: Water

Sample Flags: D-01

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)	210	200	73	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoropentanoic acid (PFPeA)	550	100	17	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorohexanoic acid (PFHxA)	460	50	11	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoroheptanoic acid (PFHpA)	180	50	13	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorooctanoic acid (PFOA)	370	50	11	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorononanoic acid (PFNA)	24	50	9.6	ng/L	1	J	Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorodecanoic acid (PFDA)	ND	50	9.2	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoroundecanoic acid (PFUnA)	ND	50	14	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorododecanoic acid (PFDoA)	170	50	13	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	50	14	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	50	13	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorobutanesulfonic acid (PFBS)	26	50	13	ng/L	1	J	Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	50	12	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorohexanesulfonic acid (PFHxS)	30	50	10	ng/L	1	J	Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	50	15	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorooctanesulfonic acid (PFOS)	100	50	16	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorononanesulfonic acid (PFNS)	ND	50	15	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	50	16	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	50	13	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	200	35	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	200	49	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	200	54	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	50	15	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	50	21	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	50	15	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-MeFOSAA (NMeFOSAA)	ND	50	22	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-EtFOSAA (NEtFOSAA)	ND	50	11	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	500	130	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	500	120	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	200	52	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	200	34	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
9Cl-PF3ONS (F53B Minor)	ND	200	43	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
11Cl-PF3OUdS (F53B Major)	ND	200	48	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	500	90	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	2500	510	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	2500	440	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	100	24	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	100	25	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-06-20231206 | Sampled: 12/6/2023 10:45

Sample ID: 23L1082-10

Sample Matrix: Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	100	20	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	100	43	ng/L	1		Draft Method 1633	12/28/23	12/29/23 1:29	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	82.7	10-130		12/29/23 1:29
13C5-PFPeA	85.2	35-150		12/29/23 1:29
13C5-PFHxA	81.1	55-150		12/29/23 1:29
13C4-PFHpA	77.8	55-150		12/29/23 1:29
13C8-PFOA	82.2	60-140		12/29/23 1:29
13C9-PFNA	82.2	55-140		12/29/23 1:29
13C6-PFDA	85.1	50-140		12/29/23 1:29
13C7-PFUnA	87.5	30-140		12/29/23 1:29
13C2-PFDoA	89.1	10-150		12/29/23 1:29
13C2-PFTeDA	73.9	10-130		12/29/23 1:29
13C3-PFBS	81.3	55-150		12/29/23 1:29
13C3-PFHxS	84.9	55-150		12/29/23 1:29
13C8-PFOS	82.9	45-140		12/29/23 1:29
13C2-4:2FTS	78.5	60-200		12/29/23 1:29
13C2-6:2FTS	64.3	60-200		12/29/23 1:29
13C2-8:2FTS	76.8	50-200		12/29/23 1:29
13C8-PFOSA	87.7	30-130		12/29/23 1:29
D3-NMeFOSA	79.8	15-130		12/29/23 1:29
D5-NEtFOSA	76.4	10-130		12/29/23 1:29
D3-NMeFOSAA	91.5	45-200		12/29/23 1:29
D5-NEtFOSAA	88.1	10-200		12/29/23 1:29
D7-NMeFOSE	98.4	10-150		12/29/23 1:29
D9-NEtFOSE	103	10-150		12/29/23 1:29
13C3-HFPO-DA	82.8	25-160		12/29/23 1:29

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Project Location: South Salem,NY | Sample Description: | Work Order: 23L1082

Date Received: 12/7/2023

Field Sample #: CB-06-20231206 | Sampled: 12/6/2023 10:45

Sample ID: 23L1082-10

Sample Matrix: Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	64	10	mg/L	1		Draft Method 1633	12/12/23	12/12/23 13:24	LL

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Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23L1082-06 [CB-DUP-20231206]	B360378	50.0	12/12/23
23L1082-08 [DUP-20231206]	B360378	50.0	12/12/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23L1082-01 [CB-01-20231206]	B360380	50.0	12/12/23
23L1082-02 [CB-02-20231206]	B360380	50.0	12/12/23
23L1082-03 [CB-03-20231206]	B360380	50.0	12/12/23
23L1082-04 [CB-04-20231206]	B360380	50.0	12/12/23
23L1082-05 [CB-05-20231206]	B360380	50.0	12/12/23
23L1082-07 [TAP-20231206]	B360380	50.0	12/12/23
23L1082-10 [CB-06-20231206]	B360380	50.0	12/12/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 12/12/2023 per NO PREP in Batch B360380

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23L1082-01 [CB-01-20231206]	B360529	517	5.00	12/21/23
23L1082-02 [CB-02-20231206]	B360529	509	5.00	12/21/23
23L1082-03 [CB-03-20231206]	B360529	536	5.00	12/21/23
23L1082-04 [CB-04-20231206]	B360529	558	5.00	12/21/23
23L1082-05 [CB-05-20231206]	B360529	535	5.00	12/21/23
23L1082-06 [CB-DUP-20231206]	B360529	510	5.00	12/21/23
23L1082-07 [TAP-20231206]	B360529	537	5.00	12/21/23
23L1082-08 [DUP-20231206]	B360529	493	5.00	12/21/23
23L1082-09 [CB-EB-20231206]	B360529	512	5.00	12/21/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 12/12/2023 per NO PREP in Batch B360380

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23L1082-10RE1 [CB-06-20231206]	B361788	10.0	5.00	12/28/23

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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 B360529 - Draft Method 1633										
Blank (B360529-BLK1)				Prepared: 12/21/23 Analyzed: 12/24/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.97	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.97	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.97	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.97	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.97	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.97	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.97	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.97	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.97	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.97	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.97	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.97	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.97	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.97	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.97	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.97	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Surrogate: 13C4-PFBA	*80.7*		ng/L	97.5		82.8	10-130			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360529 - Draft Method 1633										
Blank (B360529-BLK1)				Prepared: 12/21/23 Analyzed: 12/24/23						
Surrogate: 13C5-PFPeA	*41.8*		ng/L	48.7		85.7	35-150			
Surrogate: 13C5-PFHxA	*19.7*		ng/L	24.4		80.9	55-150			
Surrogate: 13C4-PFHpA	*19.4*		ng/L	24.4		79.6	55-150			
Surrogate: 13C8-PFOA	*20.2*		ng/L	24.4		82.7	60-140			
Surrogate: 13C9-PFNA	*10.2*		ng/L	12.2		83.6	55-140			
Surrogate: 13C6-PFDA	*10.1*		ng/L	12.2		83.1	50-140			
Surrogate: 13C7-PFUnA	*9.72*		ng/L	12.2		79.7	30-140			
Surrogate: 13C2-PFDoA	*9.36*		ng/L	12.2		76.8	10-150			
Surrogate: 13C2-PFTeDA	*9.61*		ng/L	12.2		78.9	10-130			
Surrogate: 13C3-PFBS	*20.9*		ng/L	24.4		85.8	55-150			
Surrogate: 13C3-PFHxS	*21.0*		ng/L	24.4		86.2	55-150			
Surrogate: 13C8-PFOS	*19.0*		ng/L	24.4		77.8	45-140			
Surrogate: 13C2-4:2FTS	*38.0*		ng/L	48.7		77.9	60-200			
Surrogate: 13C2-6:2FTS	*34.8*		ng/L	48.7		71.5	60-200			
Surrogate: 13C2-8:2FTS	*41.0*		ng/L	48.7		84.1	50-200			
Surrogate: 13C8-PFOSA	*18.4*		ng/L	24.4		75.3	30-130			
Surrogate: D3-NMeFOSA	*15.0*		ng/L	24.4		61.7	15-130			
Surrogate: D5-NEtFOSA	*15.7*		ng/L	24.4		64.6	10-130			
Surrogate: D3-NMeFOSAA	*37.4*		ng/L	48.7		76.7	45-200			
Surrogate: D5-NEtFOSAA	*33.9*		ng/L	48.7		69.5	10-200			
Surrogate: D7-NMeFOSE	*183*		ng/L	244		74.9	10-150			
Surrogate: D9-NEtFOSE	*181*		ng/L	244		74.4	10-150			
Surrogate: 13C3-HFPO-DA	*80.7*		ng/L	97.5		82.8	25-160			
LCS (B360529-BS1)				Prepared: 12/21/23 Analyzed: 12/24/23						
Perfluorobutanoic acid (PFBA)	103	4.0	ng/L	79.7		129	58-148			
Perfluoropentanoic acid (PFPeA)	49.6	2.0	ng/L	39.9		124	54-152			
Perfluorohexanoic acid (PFHxA)	24.7	1.0	ng/L	19.9		124	55-152			
Perfluoroheptanoic acid (PFHpA)	24.8	1.0	ng/L	19.9		124	54-154			
Perfluorooctanoic acid (PFOA)	24.4	1.0	ng/L	19.9		123	52-161			
Perfluorononanoic acid (PFNA)	24.5	1.0	ng/L	19.9		123	59-149			
Perfluorodecanoic acid (PFDA)	24.6	1.0	ng/L	19.9		123	52-147			
Perfluoroundecanoic acid (PFUnA)	26.6	1.0	ng/L	19.9		134	48-159			
Perfluorododecanoic acid (PFDoA)	25.8	1.0	ng/L	19.9		129	64-142			
Perfluorotridecanoic acid (PFTrDA)	26.1	1.0	ng/L	19.9		131	49-148			
Perfluorotetradecanoic acid (PFTeDA)	25.4	1.0	ng/L	19.9		127	47-161			
Perfluorobutanesulfonic acid (PFBS)	22.3	1.0	ng/L	17.7		126	62-144			
Perfluoropentanesulfonic acid (PFPeS)	24.2	1.0	ng/L	18.7		129	59-151			
Perfluorohexanesulfonic acid (PFHxS)	22.1	1.0	ng/L	18.2		121	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	24.7	1.0	ng/L	19.0		130	55-152			
Perfluorooctanesulfonic acid (PFOS)	23.0	1.0	ng/L	18.5		124	58-149			
Perfluorononanesulfonic acid (PFNS)	24.3	1.0	ng/L	19.2		126	52-148			
Perfluorodecanesulfonic acid (PFDS)	21.7	1.0	ng/L	19.2		113	51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.5	1.0	ng/L	19.3		111	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	94.9	4.0	ng/L	74.7		127	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	96.9	4.0	ng/L	75.7		128	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	105	4.0	ng/L	76.7		136	63-152			
Perfluorooctanesulfonamide (PFOSA)	25.4	1.0	ng/L	19.9		127	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	24.7	1.0	ng/L	19.9		124	63-145			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360529 - Draft Method 1633										
LCS (B360529-BS1)				Prepared: 12/21/23 Analyzed: 12/24/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	24.3	1.0	ng/L	19.9		122	65-139			
N-MeFOSAA (NMeFOSAA)	25.8	1.0	ng/L	19.9		130	58-144			
N-EtFOSAA (NEtFOSAA)	24.0	1.0	ng/L	19.9		121	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	258	10	ng/L	199		130	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	263	10	ng/L	199		132	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	82.9	4.0	ng/L	79.7		104	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	70.7	4.0	ng/L	75.2		94.0	68-146			
9Cl-PF3ONS (F53B Minor)	68.8	4.0	ng/L	74.7		92.1	56-156			
11Cl-PF3OUdS (F53B Major)	68.9	4.0	ng/L	75.2		91.6	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	200	10	ng/L	217		92.1	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1090	50	ng/L	1090		100	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1010	50	ng/L	1090		93.3	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	37.3	2.0	ng/L	35.5		105	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	41.1	2.0	ng/L	39.9		103	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	41.9	2.0	ng/L	39.9		105	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	43.5	2.0	ng/L	39.9		109	48-161			
Surrogate: 13C4-PFBA	*85.5*		ng/L	99.6		85.8	10-130			
Surrogate: 13C5-PFPeA	*45.3*		ng/L	49.8		90.9	35-150			
Surrogate: 13C5-PFHxA	*21.3*		ng/L	24.9		85.4	55-150			
Surrogate: 13C4-PFHpA	*20.9*		ng/L	24.9		84.1	55-150			
Surrogate: 13C8-PFOA	*21.4*		ng/L	24.9		86.1	60-140			
Surrogate: 13C9-PFNA	*10.9*		ng/L	12.5		87.9	55-140			
Surrogate: 13C6-PFDA	*10.7*		ng/L	12.5		85.8	50-140			
Surrogate: 13C7-PFUnA	*9.87*		ng/L	12.5		79.3	30-140			
Surrogate: 13C2-PFDoA	*9.40*		ng/L	12.5		75.5	10-150			
Surrogate: 13C2-PFTeDA	*9.24*		ng/L	12.5		74.2	10-130			
Surrogate: 13C3-PFBS	*21.8*		ng/L	24.9		87.7	55-150			
Surrogate: 13C3-PFHxS	*21.9*		ng/L	24.9		87.8	55-150			
Surrogate: 13C8-PFOS	*21.2*		ng/L	24.9		85.0	45-140			
Surrogate: 13C2-4:2FTS	*43.1*		ng/L	49.8		86.5	60-200			
Surrogate: 13C2-6:2FTS	*37.5*		ng/L	49.8		75.3	60-200			
Surrogate: 13C2-8:2FTS	*64.3*		ng/L	49.8		129	50-200			
Surrogate: 13C8-PFOSA	*18.2*		ng/L	24.9		73.0	30-130			
Surrogate: D3-NMeFOSA	*17.6*		ng/L	24.9		70.5	15-130			
Surrogate: D5-NEtFOSA	*18.4*		ng/L	24.9		73.8	10-130			
Surrogate: D3-NMeFOSAA	*39.1*		ng/L	49.8		78.6	45-200			
Surrogate: D5-NEtFOSAA	*36.7*		ng/L	49.8		73.6	10-200			
Surrogate: D7-NMeFOSE	*177*		ng/L	249		70.9	10-150			
Surrogate: D9-NEtFOSE	*180*		ng/L	249		72.4	10-150			
Surrogate: 13C3-HFPO-DA	*87.4*		ng/L	99.6		87.7	25-160			
MRL Check (B360529-MRL1)				Prepared: 12/21/23 Analyzed: 12/24/23						
Perfluorobutanoic acid (PFBA)	10.5	3.9	ng/L	7.84		133	44-157			
Perfluoropentanoic acid (PFPeA)	4.72	2.0	ng/L	3.92		120	57-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360529 - Draft Method 1633										
MRL Check (B360529-MRL1)				Prepared: 12/21/23 Analyzed: 12/24/23						
Perfluorohexanoic acid (PFHxA)	2.29	0.98	ng/L	1.96		117	62-149			
Perfluoroheptanoic acid (PFHpA)	2.19	0.98	ng/L	1.96		112	56-150			
Perfluorooctanoic acid (PFOA)	2.14	0.98	ng/L	1.96		109	57-161			
Perfluorononanoic acid (PFNA)	2.10	0.98	ng/L	1.96		107	53-157			
Perfluorodecanoic acid (PFDA)	2.28	0.98	ng/L	1.96		117	43-158			
Perfluoroundecanoic acid (PFUnA)	2.50	0.98	ng/L	1.96		127	50-155			
Perfluorododecanoic acid (PFDoA)	2.55	0.98	ng/L	1.96		130	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.54	0.98	ng/L	1.96		129	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.26	0.98	ng/L	1.96		115	52-156			
Perfluorobutanesulfonic acid (PFBS)	2.15	0.98	ng/L	1.74		124	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.03	0.98	ng/L	1.84		110	58-144			
Perfluorohexanesulfonic acid (PFHxS)	2.13	0.98	ng/L	1.79		119	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.31	0.98	ng/L	1.87		124	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.20	0.98	ng/L	1.82		121	43-162			
Perfluorononanesulfonic acid (PFNS)	2.23	0.98	ng/L	1.89		118	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.97	0.98	ng/L	1.89		104	50-144			
Perfluorododecanesulfonic acid (PFDoS)	2.20	0.98	ng/L	1.90		116	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.78	3.9	ng/L	7.35		119	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.59	3.9	ng/L	7.45		115	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	8.97	3.9	ng/L	7.55		119	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.47	0.98	ng/L	1.96		126	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.38	0.98	ng/L	1.96		121	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.34	0.98	ng/L	1.96		120	49-156			
N-MeFOSAA (NMeFOSAA)	2.44	0.98	ng/L	1.96		124	32-160			
N-EtFOSAA (NEtFOSAA)	2.66	0.98	ng/L	1.96		136	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	23.2	9.8	ng/L	19.6		118	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	24.0	9.8	ng/L	19.6		122	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.38	3.9	ng/L	7.84		107	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.27	3.9	ng/L	7.40		98.3	61-148			
9Cl-PF3ONS (F53B Minor)	6.77	3.9	ng/L	7.35		92.2	44-167			
11Cl-PF3OUdS (F53B Major)	6.86	3.9	ng/L	7.40		92.7	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.9	9.8	ng/L	19.6		91.3	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	94.5	49	ng/L	98.0		96.5	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	86.3	49	ng/L	98.0		88.0	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.61	2.0	ng/L	3.49		104	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.14	2.0	ng/L	3.92		106	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.05	2.0	ng/L	3.92		103	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.05	2.0	ng/L	3.92		129	47-160			
Surrogate: 13C4-PFBA	*71.3*		ng/L	98.0		72.7	10-130			
Surrogate: 13C5-PFPeA	*38.3*		ng/L	49.0		78.3	35-150			
Surrogate: 13C5-PFHxA	*17.9*		ng/L	24.5		73.2	55-150			

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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 B360529 - Draft Method 1633											
MRL Check (B360529-MRL1)				Prepared: 12/21/23 Analyzed: 12/24/23							
Surrogate: 13C4-PFHpA	*17.7*		ng/L	24.5		72.2		55-150			
Surrogate: 13C8-PFOA	*17.4*		ng/L	24.5		71.0		60-140			
Surrogate: 13C9-PFNA	*8.85*		ng/L	12.3		72.3		55-140			
Surrogate: 13C6-PFDA	*8.98*		ng/L	12.3		73.3		50-140			
Surrogate: 13C7-PFUnA	*8.40*		ng/L	12.3		68.5		30-140			
Surrogate: 13C2-PFDoA	*8.05*		ng/L	12.3		65.7		10-150			
Surrogate: 13C2-PFTeDA	*8.12*		ng/L	12.3		66.3		10-130			
Surrogate: 13C3-PFBS	*18.2*		ng/L	24.5		74.4		55-150			
Surrogate: 13C3-PFHxS	*18.5*		ng/L	24.5		75.6		55-150			
Surrogate: 13C8-PFOS	*17.2*		ng/L	24.5		70.3		45-140			
Surrogate: 13C2-4:2FTS	*33.0*		ng/L	49.0		67.3		60-200			
Surrogate: 13C2-6:2FTS	*29.4*		ng/L	49.0		60.0		60-200			
Surrogate: 13C2-8:2FTS	*36.1*		ng/L	49.0		73.8		50-200			
Surrogate: 13C8-PFOSA	*14.9*		ng/L	24.5		60.9		30-130			
Surrogate: D3-NMeFOSA	*14.0*		ng/L	24.5		57.0		15-130			
Surrogate: D5-NEtFOSA	*14.6*		ng/L	24.5		59.4		10-130			
Surrogate: D3-NMeFOSAA	*32.5*		ng/L	49.0		66.3		45-200			
Surrogate: D5-NEtFOSAA	*29.4*		ng/L	49.0		59.9		10-200			
Surrogate: D7-NMeFOSE	*148*		ng/L	245		60.5		10-150			
Surrogate: D9-NEtFOSE	*151*		ng/L	245		61.8		10-150			
Surrogate: 13C3-HFPO-DA	*75.4*		ng/L	98.0		76.9		25-160			
Matrix Spike (B360529-MS1)		**Source: 23L1082-01**		Prepared: 12/21/23 Analyzed: 12/24/23							
Perfluorobutanoic acid (PFBA)	113	3.8	ng/L	76.2	13.1	131		58-148			
Perfluoropentanoic acid (PFPeA)	74.6	1.9	ng/L	38.1	26.1	127		54-152			
Perfluorohexanoic acid (PFHxA)	46.4	0.95	ng/L	19.1	22.1	127		55-152			
Perfluoroheptanoic acid (PFHpA)	39.8	0.95	ng/L	19.1	14.7	132		54-154			
Perfluorooctanoic acid (PFOA)	55.0	0.95	ng/L	19.1	32.7	117		52-161			
Perfluorononanoic acid (PFNA)	26.1	0.95	ng/L	19.1	2.34	125		59-149			
Perfluorodecanoic acid (PFDA)	26.3	0.95	ng/L	19.1	2.60	124		52-147			
Perfluoroundecanoic acid (PFUnA)	25.0	0.95	ng/L	19.1	ND	131		48-159			
Perfluorododecanoic acid (PFDoA)	25.2	0.95	ng/L	19.1	ND	132		64-142			
Perfluorotridecanoic acid (PFTrDA)	23.6	0.95	ng/L	19.1	ND	124		49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.3	0.95	ng/L	19.1	ND	127		47-161			
Perfluorobutanesulfonic acid (PFBS)	27.3	0.95	ng/L	16.9	5.57	128		62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.8	0.95	ng/L	17.9	1.16	126		59-151			
Perfluorohexanesulfonic acid (PFHxS)	26.8	0.95	ng/L	17.4	5.90	120		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	24.7	0.95	ng/L	18.2	1.45	128		55-152			
Perfluorooctanesulfonic acid (PFOS)	85.8	0.95	ng/L	17.7	63.7	125		58-149			
Perfluorononanesulfonic acid (PFNS)	23.8	0.95	ng/L	18.3	ND	130		52-148			
Perfluorodecanesulfonic acid (PFDS)	23.8	0.95	ng/L	18.4	2.92	113		51-147			
Perfluorododecanesulfonic acid (PFDoS)	18.3	0.95	ng/L	18.5	ND	98.9		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	90.4	3.8	ng/L	71.5	ND	126		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	93.1	3.8	ng/L	72.4	ND	128		61-151			PF-18
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	98.6	3.8	ng/L	73.4	ND	134		63-152			
Perfluorooctanesulfonamide (PFOSA)	35.9	0.95	ng/L	19.1	11.0	131		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	23.0	0.95	ng/L	19.1	ND	121		63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.0	0.95	ng/L	19.1	0.443	118		65-139			
N-MeFOSAA (NMeFOSAA)	27.8	0.95	ng/L	19.1	ND	**146**	*	58-144			MS-12

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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 B360529 - Draft Method 1633											
Matrix Spike (B360529-MS1)	**Source: 23L1082-01**			Prepared: 12/21/23 Analyzed: 12/24/23							
N-EtFOSAA (NEtFOSAA)	51.1	0.95	ng/L	19.1	25.2	136		59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	234	9.5	ng/L	191	ND	123		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	239	9.5	ng/L	191	ND	126		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	92.0	3.8	ng/L	76.2	ND	121		63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	79.7	3.8	ng/L	71.9	ND	111		68-146			
9Cl-PF3ONS (F53B Minor)	75.6	3.8	ng/L	71.5	ND	106		56-156			
11Cl-PF3OUdS (F53B Major)	72.4	3.8	ng/L	71.9	ND	101		46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	202	9.5	ng/L	208	ND	97.3		62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1100	48	ng/L	1040	ND	106		63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1020	48	ng/L	1040	ND	98.3		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	44.7	1.9	ng/L	33.9	ND	132		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.2	1.9	ng/L	38.1	ND	124		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.5	1.9	ng/L	38.1	ND	130		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	54.7	1.9	ng/L	38.1	ND	143		48-161			
Surrogate: 13C4-PFBA	*39.7*		ng/L	95.3		41.7		10-130			
Surrogate: 13C5-PFPeA	*33.5*		ng/L	47.6		70.4		35-150			
Surrogate: 13C5-PFHxA	*16.0*		ng/L	23.8		67.0		55-150			
Surrogate: 13C4-PFHpA	*15.5*		ng/L	23.8		65.1		55-150			
Surrogate: 13C8-PFOA	*15.5*		ng/L	23.8		65.2		60-140			
Surrogate: 13C9-PFNA	*7.96*		ng/L	11.9		66.8		55-140			
Surrogate: 13C6-PFDA	*7.89*		ng/L	11.9		66.2		50-140			
Surrogate: 13C7-PFUnA	*7.47*		ng/L	11.9		62.7		30-140			
Surrogate: 13C2-PFDoA	*6.96*		ng/L	11.9		58.4		10-150			
Surrogate: 13C2-PFTeDA	*6.01*		ng/L	11.9		50.4		10-130			
Surrogate: 13C3-PFBS	*16.8*		ng/L	23.8		70.6		55-150			
Surrogate: 13C3-PFHxS	*16.8*		ng/L	23.8		70.4		55-150			
Surrogate: 13C8-PFOS	*15.3*		ng/L	23.8		64.2		45-140			
Surrogate: 13C2-4:2FTS	*34.9*		ng/L	47.6		73.3		60-200			
Surrogate: 13C2-6:2FTS	*27.8*		ng/L	47.6		**58.3**	*	60-200			PF-18
Surrogate: 13C2-8:2FTS	*32.9*		ng/L	47.6		69.1		50-200			
Surrogate: 13C8-PFOSA	*15.4*		ng/L	23.8		64.5		30-130			
Surrogate: D3-NMeFOSA	*13.2*		ng/L	23.8		55.2		15-130			
Surrogate: D5-NEtFOSA	*12.7*		ng/L	23.8		53.2		10-130			
Surrogate: D3-NMeFOSAA	*28.9*		ng/L	47.6		60.6		45-200			
Surrogate: D5-NEtFOSAA	*25.3*		ng/L	47.6		53.1		10-200			
Surrogate: D7-NMeFOSE	*126*		ng/L	238		52.7		10-150			
Surrogate: D9-NEtFOSE	*117*		ng/L	238		49.2		10-150			
Surrogate: 13C3-HFPO-DA	*66.3*		ng/L	95.3		69.5		25-160			
Matrix Spike (B360529-MS2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23							
Perfluorobutanoic acid (PFBA)	285	3.9	ng/L	78.8	163	**155**	*	58-148			MS-22
Perfluoropentanoic acid (PFPeA)	686	2.0	ng/L	39.4	606	**205**	*	54-152			MS-22
Perfluorohexanoic acid (PFHxA)	562	0.98	ng/L	19.7	517	**230**	*	55-152			MS-22
Perfluoroheptanoic acid (PFHpA)	265	0.98	ng/L	19.7	222	**216**	*	54-154			MS-12
Perfluorooctanoic acid (PFOA)	535	0.98	ng/L	19.7	476	**301**	*	52-161			MS-12

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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 B360529 - Draft Method 1633											
Matrix Spike (B360529-MS2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23							
Perfluorononanoic acid (PFNA)	58.5	0.98	ng/L	19.7	28.7	**151**	*	59-149			MS-22
Perfluorodecanoic acid (PFDA)	28.2	0.98	ng/L	19.7	1.27	137		52-147			
Perfluoroundecanoic acid (PFUnA)	27.7	0.98	ng/L	19.7	ND	141		48-159			
Perfluorododecanoic acid (PFDoA)	27.7	0.98	ng/L	19.7	ND	141		64-142			
Perfluorotridecanoic acid (PFTrDA)	26.0	0.98	ng/L	19.7	ND	132		49-148			
Perfluorotetradecanoic acid (PFTeDA)	27.9	0.98	ng/L	19.7	ND	142		47-161			
Perfluorobutanesulfonic acid (PFBS)	43.2	0.98	ng/L	17.5	16.2	**154**	*	62-144			MS-22
Perfluoropentanesulfonic acid (PFPeS)	36.1	0.98	ng/L	18.5	8.90	147		59-151			
Perfluorohexanesulfonic acid (PFHxS)	60.7	0.98	ng/L	18.0	34.0	**148**	*	57-146			MS-22
Perfluoroheptanesulfonic acid (PFHpS)	35.8	0.98	ng/L	18.8	8.75	144		55-152			
Perfluorooctanesulfonic acid (PFOS)	271	0.98	ng/L	18.3	238	**182**	*	58-149			MS-12
Perfluorononanesulfonic acid (PFNS)	28.5	0.98	ng/L	19.0	ND	**150**	*	52-148			MS-22
Perfluorodecanesulfonic acid (PFDS)	25.1	0.98	ng/L	19.0	ND	132		51-147			
Perfluorododecanesulfonic acid (PFDoS)	23.5	0.98	ng/L	19.1	ND	123		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	104	3.9	ng/L	73.8	ND	141		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	106	3.9	ng/L	74.8	2.31	138		61-151			PF-18
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	117	3.9	ng/L	75.8	ND	**155**	*	63-152			MS-22
Perfluorooctanesulfonamide (PFOSA)	48.1	0.98	ng/L	19.7	7.29	**207**	*	61-148			MS-23
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	30.4	0.98	ng/L	19.7	ND	**155**	*	63-145			MS-22
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	35.0	0.98	ng/L	19.7	ND	**178**	*	65-139			MS-12
N-MeFOSAA (NMeFOSAA)	28.6	0.98	ng/L	19.7	ND	**145**	*	58-144			MS-22
N-EtFOSAA (NEtFOSAA)	29.3	0.98	ng/L	19.7	ND	**149**	*	59-146			MS-22
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	263	9.8	ng/L	197	ND	134		71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	262	9.8	ng/L	197	ND	133		69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	103	3.9	ng/L	78.8	ND	131		63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	91.7	3.9	ng/L	74.3	ND	123		68-146			
9Cl-PF3ONS (F53B Minor)	85.5	3.9	ng/L	73.8	ND	116		56-156			
11Cl-PF3OUdS (F53B Major)	87.4	3.9	ng/L	74.3	ND	118		46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	214	9.8	ng/L	215	ND	99.8		62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1350	49	ng/L	1070	ND	126		63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1200	49	ng/L	1070	ND	112		50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	47.7	2.0	ng/L	35.0	ND	136		56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	41.9	2.0	ng/L	39.4	ND	106		51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	51.5	2.0	ng/L	39.4	ND	131		55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	57.5	2.0	ng/L	39.4	ND	146		48-161			
Surrogate: 13C4-PFBA	*25.8*		ng/L	98.5		26.2		10-130			
Surrogate: 13C5-PFPeA	*35.2*		ng/L	49.2		71.6		35-150			
Surrogate: 13C5-PFHxA	*16.2*		ng/L	24.6		65.8		55-150			
Surrogate: 13C4-PFHpA	*16.5*		ng/L	24.6		66.9		55-150			
Surrogate: 13C8-PFOA	*16.1*		ng/L	24.6		65.5		60-140			
Surrogate: 13C9-PFNA	*7.85*		ng/L	12.3		63.8		55-140			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B360529 - Draft Method 1633											
Matrix Spike (B360529-MS2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23							
Surrogate: 13C6-PFDA	*8.48*		ng/L	12.3		68.9		50-140			
Surrogate: 13C7-PFUnA	*8.17*		ng/L	12.3		66.4		30-140			
Surrogate: 13C2-PFDoA	*7.40*		ng/L	12.3		60.1		10-150			
Surrogate: 13C2-PFTeDA	*6.66*		ng/L	12.3		54.1		10-130			
Surrogate: 13C3-PFBS	*15.9*		ng/L	24.6		64.6		55-150			
Surrogate: 13C3-PFHxS	*16.4*		ng/L	24.6		66.8		55-150			
Surrogate: 13C8-PFOS	*16.5*		ng/L	24.6		66.9		45-140			
Surrogate: 13C2-4:2FTS	*32.4*		ng/L	49.2		65.7		60-200			
Surrogate: 13C2-6:2FTS	*28.2*		ng/L	49.2		**57.4**	*	60-200			PF-18
Surrogate: 13C2-8:2FTS	*33.1*		ng/L	49.2		67.3		50-200			
Surrogate: 13C8-PFOSA	*14.5*		ng/L	24.6		59.0		30-130			
Surrogate: D3-NMeFOSA	*7.01*		ng/L	24.6		28.5		15-130			
Surrogate: D5-NEtFOSA	*6.73*		ng/L	24.6		27.3		10-130			
Surrogate: D3-NMeFOSAA	*30.5*		ng/L	49.2		61.9		45-200			
Surrogate: D5-NEtFOSAA	*27.2*		ng/L	49.2		55.3		10-200			
Surrogate: D7-NMeFOSE	*146*		ng/L	246		59.2		10-150			
Surrogate: D9-NEtFOSE	*137*		ng/L	246		55.8		10-150			
Surrogate: 13C3-HFPO-DA	*70.1*		ng/L	98.5		71.2		25-160			
Matrix Spike Dup (B360529-MSD1)	**Source: 23L1082-01**			Prepared: 12/21/23 Analyzed: 12/24/23							
Perfluorobutanoic acid (PFBA)	118	3.7	ng/L	74.6	13.1	141		58-148	4.84	20	
Perfluoropentanoic acid (PFPeA)	77.5	1.9	ng/L	37.3	26.1	138		54-152	3.84	20	
Perfluorohexanoic acid (PFHxA)	46.4	0.93	ng/L	18.7	22.1	130		55-152	0.0471	25	
Perfluoroheptanoic acid (PFHpA)	39.6	0.93	ng/L	18.7	14.7	134		54-154	0.600	25	
Perfluorooctanoic acid (PFOA)	56.4	0.93	ng/L	18.7	32.7	127		52-161	2.37	25	
Perfluorononanoic acid (PFNA)	27.4	0.93	ng/L	18.7	2.34	134		59-149	4.80	25	
Perfluorodecanoic acid (PFDA)	27.0	0.93	ng/L	18.7	2.60	131		52-147	2.84	25	
Perfluoroundecanoic acid (PFUnA)	26.0	0.93	ng/L	18.7	ND	139		48-159	3.91	30	
Perfluorododecanoic acid (PFDoA)	25.9	0.93	ng/L	18.7	ND	139		64-142	2.55	25	
Perfluorotridecanoic acid (PFTrDA)	23.9	0.93	ng/L	18.7	ND	128		49-148	1.14	25	
Perfluorotetradecanoic acid (PFTeDA)	25.9	0.93	ng/L	18.7	ND	139		47-161	6.47	25	
Perfluorobutanesulfonic acid (PFBS)	28.5	0.93	ng/L	16.6	5.57	139		62-144	4.63	20	
Perfluoropentanesulfonic acid (PFPeS)	26.3	0.93	ng/L	17.5	1.16	143		59-151	9.94	25	
Perfluorohexanesulfonic acid (PFHxS)	29.1	0.93	ng/L	17.1	5.90	136		57-146	7.95	25	
Perfluoroheptanesulfonic acid (PFHpS)	26.0	0.93	ng/L	17.8	1.45	138		55-152	5.14	25	
Perfluorooctanesulfonic acid (PFOS)	88.0	0.93	ng/L	17.3	63.7	141		58-149	2.57	20	
Perfluorononanesulfonic acid (PFNS)	24.4	0.93	ng/L	18.0	ND	136		52-148	2.42	25	
Perfluorodecanesulfonic acid (PFDS)	24.2	0.93	ng/L	18.0	2.92	118		51-147	2.00	25	
Perfluorododecanesulfonic acid (PFDoS)	17.8	0.93	ng/L	18.1	ND	98.3		36-145	2.75	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	94.8	3.7	ng/L	70.0	ND	135		67-146	4.76	25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	95.3	3.7	ng/L	70.9	ND	134		61-151	2.34	30	PF-18
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	106	3.7	ng/L	71.8	ND	147		63-152	6.80	30	
Perfluorooctanesulfonamide (PFOSA)	37.7	0.93	ng/L	18.7	11.0	143		61-148	4.72	20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	24.7	0.93	ng/L	18.7	ND	133		63-145	7.19	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.8	0.93	ng/L	18.7	0.443	125		65-139	3.35	25	
N-MeFOSAA (NMeFOSAA)	31.6	0.93	ng/L	18.7	ND	**169**	*	58-144	12.8	25	MS-12
N-EtFOSAA (NEtFOSAA)	55.4	0.93	ng/L	18.7	25.2	**162**	*	59-146	8.14	25	MS-22
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	245	9.3	ng/L	187	ND	131		71-136	4.59	20	

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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 B360529 - Draft Method 1633											
Matrix Spike Dup (B360529-MSD1)	**Source: 23L1082-01**			Prepared: 12/21/23 Analyzed: 12/24/23							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	255	9.3	ng/L	187	ND	136		69-137	6.14	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	94.1	3.7	ng/L	74.6	ND	126		63-144	2.28	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	82.7	3.7	ng/L	70.4	ND	117		68-146	3.69	20	
9Cl-PF3ONS (F53B Minor)	77.5	3.7	ng/L	70.0	ND	111		56-156	2.45	30	
11Cl-PF3OUdS (F53B Major)	72.1	3.7	ng/L	70.4	ND	102		46-156	0.365	35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	192	9.3	ng/L	203	ND	94.4		62-129	5.17	20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1030	47	ng/L	1020	ND	102		63-134	6.43	20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	960	47	ng/L	1020	ND	94.4		50-138	6.12	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	41.2	1.9	ng/L	33.2	ND	124		56-151	8.15	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	43.4	1.9	ng/L	37.3	ND	116		51-145	8.36	25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	46.1	1.9	ng/L	37.3	ND	124		55-148	7.14	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	49.4	1.9	ng/L	37.3	ND	132		48-161	10.2	35	
Surrogate: 13C4-PFBA	*38.3*		ng/L	93.3		41.0		10-130			
Surrogate: 13C5-PFPeA	*34.4*		ng/L	46.6		73.8		35-150			
Surrogate: 13C5-PFHxA	*16.8*		ng/L	23.3		72.1		55-150			
Surrogate: 13C4-PFHpA	*16.2*		ng/L	23.3		69.4		55-150			
Surrogate: 13C8-PFOA	*15.9*		ng/L	23.3		68.0		60-140			
Surrogate: 13C9-PFNA	*7.91*		ng/L	11.7		67.9		55-140			
Surrogate: 13C6-PFDA	*8.17*		ng/L	11.7		70.0		50-140			
Surrogate: 13C7-PFUnA	*7.50*		ng/L	11.7		64.3		30-140			
Surrogate: 13C2-PFDoA	*6.56*		ng/L	11.7		56.2		10-150			
Surrogate: 13C2-PFTeDA	*5.54*		ng/L	11.7		47.5		10-130			
Surrogate: 13C3-PFBS	*16.7*		ng/L	23.3		71.7		55-150			
Surrogate: 13C3-PFHxS	*16.4*		ng/L	23.3		70.5		55-150			
Surrogate: 13C8-PFOS	*15.4*		ng/L	23.3		66.1		45-140			
Surrogate: 13C2-4:2FTS	*35.5*		ng/L	46.6		76.1		60-200			
Surrogate: 13C2-6:2FTS	*27.7*		ng/L	46.6		**59.3**	*	60-200			PF-18
Surrogate: 13C2-8:2FTS	*31.7*		ng/L	46.6		68.1		50-200			
Surrogate: 13C8-PFOSA	*15.1*		ng/L	23.3		64.8		30-130			
Surrogate: D3-NMeFOSA	*12.6*		ng/L	23.3		53.9		15-130			
Surrogate: D5-NEtFOSA	*12.1*		ng/L	23.3		52.1		10-130			
Surrogate: D3-NMeFOSAA	*28.7*		ng/L	46.6		61.6		45-200			
Surrogate: D5-NEtFOSAA	*25.0*		ng/L	46.6		53.7		10-200			
Surrogate: D7-NMeFOSE	*120*		ng/L	233		51.4		10-150			
Surrogate: D9-NEtFOSE	*112*		ng/L	233		48.0		10-150			
Surrogate: 13C3-HFPO-DA	*67.6*		ng/L	93.3		72.5		25-160			
Matrix Spike Dup (B360529-MSD2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23							
Perfluorobutanoic acid (PFBA)	264	3.9	ng/L	78.3	163	129		58-148	7.72	20	
Perfluoropentanoic acid (PFPeA)	641	2.0	ng/L	39.2	606	91.4		54-152	6.77	20	
Perfluorohexanoic acid (PFHxA)	541	0.98	ng/L	19.6	517	124		55-152	3.83	25	
Perfluoroheptanoic acid (PFHpA)	253	0.98	ng/L	19.6	222	**157**	*	54-154	4.52	25	MS-12
Perfluorooctanoic acid (PFOA)	542	0.98	ng/L	19.6	476	**336**	*	52-161	1.21	25	MS-12
Perfluorononanoic acid (PFNA)	54.7	0.98	ng/L	19.6	28.7	133		59-149	6.71	25	
Perfluorodecanoic acid (PFDA)	25.0	0.98	ng/L	19.6	1.27	121		52-147	12.0	25	
Perfluoroundecanoic acid (PFUnA)	24.8	0.98	ng/L	19.6	ND	127		48-159	10.9	30	

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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 B360529 - Draft Method 1633												
Matrix Spike Dup (B360529-MSD2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23								
Perfluorododecanoic acid (PFDoA)	24.9	0.98	ng/L	19.6	ND	127		64-142	10.6		25	
Perfluorotridecanoic acid (PFTrDA)	24.1	0.98	ng/L	19.6	ND	123		49-148	7.74		25	
Perfluorotetradecanoic acid (PFTeDA)	23.3	0.98	ng/L	19.6	ND	119		47-161	18.1		25	
Perfluorobutanesulfonic acid (PFBS)	39.0	0.98	ng/L	17.4	16.2	131		62-144	10.2		20	
Perfluoropentanesulfonic acid (PFPeS)	32.9	0.98	ng/L	18.4	8.90	131		59-151	9.20		25	
Perfluorohexanesulfonic acid (PFHxS)	58.8	0.98	ng/L	17.9	34.0	138		57-146	3.30		25	
Perfluoroheptanesulfonic acid (PFHpS)	32.7	0.98	ng/L	18.7	8.75	128		55-152	9.13		25	
Perfluorooctanesulfonic acid (PFOS)	273	0.98	ng/L	18.2	238	**193**	*	58-149	0.675		20	MS-12
Perfluorononanesulfonic acid (PFNS)	24.1	0.98	ng/L	18.8	ND	128		52-148	16.9		25	
Perfluorodecanesulfonic acid (PFDS)	22.1	0.98	ng/L	18.9	ND	117		51-147	12.7		25	
Perfluorododecanesulfonic acid (PFDoS)	22.1	0.98	ng/L	19.0	ND	116		36-145	6.12		30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	91.0	3.9	ng/L	73.4	ND	124		67-146	13.7		25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	91.0	3.9	ng/L	74.4	2.31	119		61-151	15.1		30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	93.9	3.9	ng/L	75.4	ND	125		63-152	22.0		30	
Perfluorooctanesulfonamide (PFOSA)	35.3	0.98	ng/L	19.6	7.29	143		61-148	**30.9**	*	20	R-06
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	26.1	0.98	ng/L	19.6	ND	133		63-145	15.4		25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	30.2	0.98	ng/L	19.6	ND	**154**	*	65-139	14.6		25	MS-12
N-MeFOSAA (NMeFOSAA)	23.9	0.98	ng/L	19.6	ND	122		58-144	18.0		25	
N-EtFOSAA (NEtFOSAA)	23.8	0.98	ng/L	19.6	ND	122		59-146	20.7		25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	244	9.8	ng/L	196	ND	124		71-136	7.68		20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	236	9.8	ng/L	196	ND	121		69-137	10.5		25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	98.8	3.9	ng/L	78.3	ND	126		63-144	4.22		25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	84.1	3.9	ng/L	73.9	ND	114		68-146	8.58		20	
9Cl-PF3ONS (F53B Minor)	77.0	3.9	ng/L	73.4	ND	105		56-156	10.4		30	
11Cl-PF3OUdS (F53B Major)	79.9	3.9	ng/L	73.9	ND	108		46-156	8.92		35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	197	9.8	ng/L	213	ND	92.3		62-129	8.34		20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1270	49	ng/L	1070	ND	119		63-134	5.82		20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1170	49	ng/L	1070	ND	110		50-138	2.91		25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	46.6	2.0	ng/L	34.9	ND	134		56-151	2.46		20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	42.9	2.0	ng/L	39.2	ND	109		51-145	2.25		25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.8	2.0	ng/L	39.2	ND	127		55-148	3.39		20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	56.2	2.0	ng/L	39.2	ND	143		48-161	2.23		35	
Surrogate: 13C4-PFBA	*32.4*		ng/L	97.9		33.1		10-130				
Surrogate: 13C5-PFPeA	*38.7*		ng/L	49.0		79.1		35-150				
Surrogate: 13C5-PFHxA	*17.3*		ng/L	24.5		70.8		55-150				
Surrogate: 13C4-PFHpA	*17.5*		ng/L	24.5		71.6		55-150				
Surrogate: 13C8-PFOA	*17.3*		ng/L	24.5		70.6		60-140				
Surrogate: 13C9-PFNA	*8.96*		ng/L	12.2		73.2		55-140				
Surrogate: 13C6-PFDA	*8.96*		ng/L	12.2		73.2		50-140				
Surrogate: 13C7-PFUnA	*8.52*		ng/L	12.2		69.6		30-140				
Surrogate: 13C2-PFDoA	*7.98*		ng/L	12.2		65.2		10-150				

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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 B360529 - Draft Method 1633										
Matrix Spike Dup (B360529-MSD2)	**Source: 23L1082-07**			Prepared: 12/21/23 Analyzed: 12/24/23						
Surrogate: 13C2-PFTeDA	*7.69*		ng/L	12.2		62.8	10-130			
Surrogate: 13C3-PFBS	*17.0*		ng/L	24.5		69.4	55-150			
Surrogate: 13C3-PFHxS	*17.4*		ng/L	24.5		71.0	55-150			
Surrogate: 13C8-PFOS	*17.0*		ng/L	24.5		69.3	45-140			
Surrogate: 13C2-4:2FTS	*33.2*		ng/L	49.0		67.7	60-200			
Surrogate: 13C2-6:2FTS	*30.0*		ng/L	49.0		61.2	60-200			
Surrogate: 13C2-8:2FTS	*36.0*		ng/L	49.0		73.4	50-200			
Surrogate: 13C8-PFOSA	*14.2*		ng/L	24.5		58.2	30-130			
Surrogate: D3-NMeFOSA	*9.09*		ng/L	24.5		37.1	15-130			
Surrogate: D5-NEtFOSA	*9.23*		ng/L	24.5		37.7	10-130			
Surrogate: D3-NMeFOSAA	*30.2*		ng/L	49.0		61.7	45-200			
Surrogate: D5-NEtFOSAA	*27.2*		ng/L	49.0		55.6	10-200			
Surrogate: D7-NMeFOSE	*157*		ng/L	245		64.3	10-150			
Surrogate: D9-NEtFOSE	*153*		ng/L	245		62.6	10-150			
Surrogate: 13C3-HFPO-DA	*75.7*		ng/L	97.9		77.3	25-160			
Batch B361788 - Draft Method 1633										
Blank (B361788-BLK1)				Prepared: 12/26/23 Analyzed: 12/29/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							PF-17
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							PF-17
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							PF-17
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							PF-17
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							PF-17
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							PF-17
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							PF-17
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							PF-17
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							PF-17
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							PF-17
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							PF-17
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							PF-17
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							PF-17
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							PF-17
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							

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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 B361788 - Draft Method 1633											
Blank (B361788-BLK1)				Prepared: 12/26/23 Analyzed: 12/29/23							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L								
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L								
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L								
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L								
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L								PF-17
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L								
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L								
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L								
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L								PF-17
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L								PF-17
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L								
Surrogate: 13C4-PFBA	*147*		ng/L	97.5		**151**	*	10-130			PF-17
Surrogate: 13C5-PFPeA	*75.7*		ng/L	48.8		**155**	*	35-150			PF-17
Surrogate: 13C5-PFHxA	*36.4*		ng/L	24.4		149		55-150			
Surrogate: 13C4-PFHpA	*34.8*		ng/L	24.4		143		55-150			
Surrogate: 13C8-PFOA	*37.1*		ng/L	24.4		**152**	*	60-140			PF-17
Surrogate: 13C9-PFNA	*18.4*		ng/L	12.2		**151**	*	55-140			PF-17
Surrogate: 13C6-PFDA	*18.8*		ng/L	12.2		**154**	*	50-140			PF-17
Surrogate: 13C7-PFUnA	*17.1*		ng/L	12.2		140		30-140			
Surrogate: 13C2-PFDoA	*17.0*		ng/L	12.2		140		10-150			
Surrogate: 13C2-PFTeDA	*17.0*		ng/L	12.2		**140**	*	10-130			PF-17
Surrogate: 13C3-PFBS	*35.8*		ng/L	24.4		147		55-150			
Surrogate: 13C3-PFHxS	*37.3*		ng/L	24.4		**153**	*	55-150			PF-17
Surrogate: 13C8-PFOS	*35.4*		ng/L	24.4		**145**	*	45-140			PF-17
Surrogate: 13C2-4:2FTS	*58.8*		ng/L	48.8		121		60-200			
Surrogate: 13C2-6:2FTS	*50.2*		ng/L	48.8		103		60-200			
Surrogate: 13C2-8:2FTS	*60.4*		ng/L	48.8		124		50-200			
Surrogate: 13C8-PFOSA	*35.7*		ng/L	24.4		**146**	*	30-130			PF-17
Surrogate: D3-NMeFOSA	*30.7*		ng/L	24.4		126		15-130			
Surrogate: D5-NEtFOSA	*30.8*		ng/L	24.4		126		10-130			
Surrogate: D3-NMeFOSAA	*60.1*		ng/L	48.8		123		45-200			
Surrogate: D5-NEtFOSAA	*53.4*		ng/L	48.8		109		10-200			
Surrogate: D7-NMeFOSE	*347*		ng/L	244		142		10-150			
Surrogate: D9-NEtFOSE	*355*		ng/L	244		145		10-150			
Surrogate: 13C3-HFPO-DA	*150*		ng/L	97.5		154		25-160			
LCS (B361788-BS1)				Prepared: 12/26/23 Analyzed: 12/29/23							
Perfluorobutanoic acid (PFBA)	107	3.9	ng/L	93.8		114		58-148			
Perfluoropentanoic acid (PFPeA)	52.7	2.0	ng/L	46.9		112		54-152			
Perfluorohexanoic acid (PFHxA)	26.5	0.98	ng/L	23.5		113		55-152			
Perfluoroheptanoic acid (PFHpA)	26.3	0.98	ng/L	23.5		112		54-154			
Perfluorooctanoic acid (PFOA)	24.6	0.98	ng/L	23.5		105		52-161			
Perfluorononanoic acid (PFNA)	25.8	0.98	ng/L	23.5		110		59-149			
Perfluorodecanoic acid (PFDA)	26.2	0.98	ng/L	23.5		112		52-147			
Perfluoroundecanoic acid (PFUnA)	28.3	0.98	ng/L	23.5		121		48-159			
Perfluorododecanoic acid (PFDoA)	27.4	0.98	ng/L	23.5		117		64-142			
Perfluorotridecanoic acid (PFTrDA)	27.8	0.98	ng/L	23.5		119		49-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B361788 - Draft Method 1633										
LCS (B361788-BS1)				Prepared: 12/26/23 Analyzed: 12/29/23						
Perfluorotetradecanoic acid (PFTeDA)	27.4	0.98	ng/L	23.5		117	47-161			
Perfluorobutanesulfonic acid (PFBS)	23.5	0.98	ng/L	20.8		113	62-144			
Perfluoropentanesulfonic acid (PFPeS)	24.7	0.98	ng/L	22.0		112	59-151			
Perfluorohexanesulfonic acid (PFHxS)	23.6	0.98	ng/L	21.5		110	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	26.0	0.98	ng/L	22.3		117	55-152			
Perfluorooctanesulfonic acid (PFOS)	24.2	0.98	ng/L	21.8		111	58-149			
Perfluorononanesulfonic acid (PFNS)	26.3	0.98	ng/L	22.6		117	52-148			
Perfluorodecanesulfonic acid (PFDS)	24.4	0.98	ng/L	22.6		108	51-147			
Perfluorododecanesulfonic acid (PFDoS)	23.5	0.98	ng/L	22.7		103	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	96.8	3.9	ng/L	87.9		110	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	103	3.9	ng/L	89.1		116	61-151			PF-17C
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	103	3.9	ng/L	90.3		115	63-152			
Perfluorooctanesulfonamide (PFOSA)	26.8	0.98	ng/L	23.5		114	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	26.7	0.98	ng/L	23.5		114	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	25.8	0.98	ng/L	23.5		110	65-139			
N-MeFOSAA (NMeFOSAA)	25.7	0.98	ng/L	23.5		110	58-144			
N-EtFOSAA (NEtFOSAA)	27.5	0.98	ng/L	23.5		117	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	273	9.8	ng/L	235		116	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	277	9.8	ng/L	235		118	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	112	3.9	ng/L	93.8		120	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	96.8	3.9	ng/L	88.5		109	68-146			
9Cl-PF3ONS (F53B Minor)	87.1	3.9	ng/L	87.9		99.1	56-156			
11Cl-PF3OUdS (F53B Major)	96.8	3.9	ng/L	88.5		109	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	262	9.8	ng/L	256		103	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1370	49	ng/L	1280		107	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1240	49	ng/L	1280		96.8	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	49.4	2.0	ng/L	41.7		118	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	55.9	2.0	ng/L	46.9		119	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	57.2	2.0	ng/L	46.9		122	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	61.7	2.0	ng/L	46.9		131	48-161			
Surrogate: 13C4-PFBA	*73.3*		ng/L	97.7		75.0	10-130			
Surrogate: 13C5-PFPeA	*39.2*		ng/L	48.9		80.2	35-150			
Surrogate: 13C5-PFHxA	*18.0*		ng/L	24.4		73.6	55-150			
Surrogate: 13C4-PFHpA	*17.5*		ng/L	24.4		71.6	55-150			
Surrogate: 13C8-PFOA	*18.5*		ng/L	24.4		75.8	60-140			
Surrogate: 13C9-PFNA	*9.08*		ng/L	12.2		74.3	55-140			
Surrogate: 13C6-PFDA	*9.05*		ng/L	12.2		74.1	50-140			
Surrogate: 13C7-PFUnA	*8.24*		ng/L	12.2		67.5	30-140			
Surrogate: 13C2-PFDoA	*8.03*		ng/L	12.2		65.8	10-150			
Surrogate: 13C2-PFTeDA	*7.95*		ng/L	12.2		65.1	10-130			
Surrogate: 13C3-PFBS	*18.3*		ng/L	24.4		75.1	55-150			

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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 B361788 - Draft Method 1633											
LCS (B361788-BS1)				Prepared: 12/26/23 Analyzed: 12/29/23							
Surrogate: 13C3-PFHxS	*18.2*		ng/L	24.4		74.4		55-150			
Surrogate: 13C8-PFOS	*17.6*		ng/L	24.4		72.1		45-140			
Surrogate: 13C2-4:2FTS	*32.7*		ng/L	48.9		66.9		60-200			
Surrogate: 13C2-6:2FTS	*28.3*		ng/L	48.9		**58.0**	*	60-200			PF-17C
Surrogate: 13C2-8:2FTS	*34.9*		ng/L	48.9		71.4		50-200			
Surrogate: 13C8-PFOSA	*17.8*		ng/L	24.4		72.8		30-130			
Surrogate: D3-NMeFOSA	*15.1*		ng/L	24.4		61.7		15-130			
Surrogate: D5-NEtFOSA	*16.1*		ng/L	24.4		65.7		10-130			
Surrogate: D3-NMeFOSAA	*29.3*		ng/L	48.9		59.9		45-200			
Surrogate: D5-NEtFOSAA	*26.1*		ng/L	48.9		53.4		10-200			
Surrogate: D7-NMeFOSE	*186*		ng/L	244		76.2		10-150			
Surrogate: D9-NEtFOSE	*181*		ng/L	244		74.1		10-150			
Surrogate: 13C3-HFPO-DA	*75.2*		ng/L	97.7		76.9		25-160			
MRL Check (B361788-MRL1)				Prepared: 12/26/23 Analyzed: 12/29/23							
Perfluorobutanoic acid (PFBA)	9.41	3.9	ng/L	7.82		120		44-157			
Perfluoropentanoic acid (PFPeA)	4.26	2.0	ng/L	3.91		109		57-148			
Perfluorohexanoic acid (PFHxA)	1.91	0.98	ng/L	1.95		97.6		62-149			
Perfluoroheptanoic acid (PFHpA)	2.01	0.98	ng/L	1.95		103		56-150			
Perfluorooctanoic acid (PFOA)	1.88	0.98	ng/L	1.95		96.0		57-161			
Perfluorononanoic acid (PFNA)	2.03	0.98	ng/L	1.95		104		53-157			
Perfluorodecanoic acid (PFDA)	1.95	0.98	ng/L	1.95		100		43-158			
Perfluoroundecanoic acid (PFUnA)	1.98	0.98	ng/L	1.95		102		50-155			
Perfluorododecanoic acid (PFDoA)	2.39	0.98	ng/L	1.95		122		60-141			
Perfluorotridecanoic acid (PFTrDA)	2.15	0.98	ng/L	1.95		110		52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.06	0.98	ng/L	1.95		106		52-156			
Perfluorobutanesulfonic acid (PFBS)	1.90	0.98	ng/L	1.73		110		63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.07	0.98	ng/L	1.84		113		58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.90	0.98	ng/L	1.79		106		44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.90	0.98	ng/L	1.86		102		51-150			
Perfluorooctanesulfonic acid (PFOS)	2.01	0.98	ng/L	1.81		111		43-162			
Perfluorononanesulfonic acid (PFNS)	1.93	0.98	ng/L	1.88		103		46-151			
Perfluorodecanesulfonic acid (PFDS)	1.83	0.98	ng/L	1.89		97.2		50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.84	0.98	ng/L	1.90		97.0		30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.54	3.9	ng/L	7.33		103		52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.75	3.9	ng/L	7.43		104		48-158			PF-17C
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.69	3.9	ng/L	7.52		102		46-165			
Perfluorooctanesulfonamide (PFOSA)	2.04	0.98	ng/L	1.95		104		47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.01	0.98	ng/L	1.95		103		54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.16	0.98	ng/L	1.95		110		49-156			
N-MeFOSAA (NMeFOSAA)	1.76	0.98	ng/L	1.95		90.1		32-160			
N-EtFOSAA (NEtFOSAA)	2.29	0.98	ng/L	1.95		117		51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	20.8	9.8	ng/L	19.5		106		56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.2	9.8	ng/L	19.5		108		60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.76	3.9	ng/L	7.82		99.2		58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.09	3.9	ng/L	7.38		96.1		61-148			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B361788 - Draft Method 1633											
MRL Check (B361788-MRL1)				Prepared: 12/26/23 Analyzed: 12/29/23							
9Cl-PF3ONS (F53B Minor)	6.30	3.9	ng/L	7.33		86.0		44-167			
11Cl-PF3OUdS (F53B Major)	6.77	3.9	ng/L	7.38		91.7		36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.7	9.8	ng/L	21.3		83.2		32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	87.1	49	ng/L	106		81.8		39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	79.3	49	ng/L	106		74.4		36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.03	2.0	ng/L	3.48		87.0		56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.75	2.0	ng/L	3.91		96.0		48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.68	2.0	ng/L	3.91		94.2		49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.86	2.0	ng/L	3.91		98.8		47-160			
Surrogate: 13C4-PFBA	*75.0*		ng/L	97.7		76.8		10-130			
Surrogate: 13C5-PFPeA	*39.4*		ng/L	48.9		80.7		35-150			
Surrogate: 13C5-PFHxA	*18.8*		ng/L	24.4		76.9		55-150			
Surrogate: 13C4-PFHpA	*17.9*		ng/L	24.4		73.2		55-150			
Surrogate: 13C8-PFOA	*18.2*		ng/L	24.4		74.5		60-140			
Surrogate: 13C9-PFNA	*8.92*		ng/L	12.2		73.0		55-140			
Surrogate: 13C6-PFDA	*8.79*		ng/L	12.2		72.0		50-140			
Surrogate: 13C7-PFUnA	*8.71*		ng/L	12.2		71.3		30-140			
Surrogate: 13C2-PFDoA	*8.53*		ng/L	12.2		69.9		10-150			
Surrogate: 13C2-PFTeDA	*9.08*		ng/L	12.2		74.4		10-130			
Surrogate: 13C3-PFBS	*18.1*		ng/L	24.4		74.0		55-150			
Surrogate: 13C3-PFHxS	*18.4*		ng/L	24.4		75.5		55-150			
Surrogate: 13C8-PFOS	*17.6*		ng/L	24.4		71.9		45-140			
Surrogate: 13C2-4:2FTS	*32.8*		ng/L	48.9		67.2		60-200			
Surrogate: 13C2-6:2FTS	*28.0*		ng/L	48.9		**57.3**	*	60-200			PF-17C
Surrogate: 13C2-8:2FTS	*38.3*		ng/L	48.9		78.5		50-200			
Surrogate: 13C8-PFOSA	*19.9*		ng/L	24.4		81.5		30-130			
Surrogate: D3-NMeFOSA	*14.8*		ng/L	24.4		60.6		15-130			
Surrogate: D5-NEtFOSA	*15.2*		ng/L	24.4		62.1		10-130			
Surrogate: D3-NMeFOSAA	*31.1*		ng/L	48.9		63.6		45-200			
Surrogate: D5-NEtFOSAA	*28.7*		ng/L	48.9		58.7		10-200			
Surrogate: D7-NMeFOSE	*188*		ng/L	244		77.0		10-150			
Surrogate: D9-NEtFOSE	*180*		ng/L	244		73.7		10-150			
Surrogate: 13C3-HFPO-DA	*73.4*		ng/L	97.7		75.1		25-160			

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QUALITY CONTROL

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B360378 - Draft Method 1633										
Blank (B360378-BLK1)				Prepared & Analyzed: 12/12/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B360378-BS1)				Prepared & Analyzed: 12/12/23						
Total Suspended Solids	153	5.0	mg/L	200		76.5	64.1-125			
Batch B360380 - Draft Method 1633										
Blank (B360380-BLK1)				Prepared & Analyzed: 12/12/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B360380-BS1)				Prepared & Analyzed: 12/12/23						
Total Suspended Solids	205	5.0	mg/L	200		102	64.1-125			

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-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.
MS-23	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 outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.
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-17C	Extracted internal standard is outside of control limits. Analyte is a known difficult compound.
PF-18	Re-analysis confirmed Extracted Internal Standard failure due to matrix effects.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
S-29	Extracted Internal Standard is outside of control limits.

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CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

Pace Analytical®
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Fax: 612-607-6344
1800 Elm Street SE
Minneapolis, MN 55414

23L1082

https://www.pacelabs.com/ KM Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

Page _____ of _____

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

Company Name:	NYSDEC
Address:	625 Broadway,12th Floor, Albany, NY 12233
Phone:	518-402-9802
Project Name:	Meadow Pond School
Project Location:	South Salem, NY
Project Number:	Spill #: 2100460; Callout ID: 147704
Project Manager:	Mohamed Sahraoui
Pace Analytical Quote Name/Number:	
Invoice Recipient:	NYSDEC
Sampled By:	M. Sahraoui/A.Bollasina/B. O'Brien-Drake

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date:

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

Data Delivery
Format: PDF ☑ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: mohamed.sahraoui@dec.ny.gov
Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	PFAS TOP Assay (40 list, pre/post)	MS/MSD 1633	TSS	# of Containers	[2] Preservation Code	[3] Container Code
											12	10	9
											I	I	I
											P	P	P
1	CB-01-20231206	12/6/23	10:05		X	O		X	X	X			
2	CB-02-20231206	12/6/23	10:15		X	O			X	X			
3	CB-03-20231206	12/6/23	10:20		X	O			X	X			
4	CB-04-20231206	12/6/23	10:27		X	O			X	X			
5	CB-05-20231206	12/6/23	10:35		X	O			X	X			
6	CB-DUP-20231206	12/6/23	—		X	O			X	X			
7 INCLUDES VOLUME FOR MS/MSD	TAP-20231206	12/6/23	11:05		X	O-W		X	X	X			
8	DUP-20231206	12/6/23	—		X	O-W			X	X			
9	CB-EB-20231206	12/6/23	10:55		X				X				
10	~~TAP~~ CB-06-20231206	12/6/23	10:45		X	O		X	X	X			

ANALYSIS REQUESTED

Dissolved Metals Samples: ☐ Field Filtered ☐ Lab to Filter

Orthophosphate Samples: ☐ Field Filtered ☐ Lab to Filter

Comments:
BOB ~~ATTN: NICOLE BROWN AND CHUCK NESLUND (Eurofins)~~--
~~Special prep per Chuck Nestlund~~ CAT B
deliverables and NYS EDD

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

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
BOB ~~Cleaning/finishing product~~ Stormwater

[2] **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)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Relinquished by: (signature)	Date/Time:	12/6/23 16:13
Received by: (signature)	Date/Time:	12-6-23 16:13
Relinquished by: (signature)	Date/Time:	12-6-23 16:30
Received by: (signature) 3.6	Date/Time:	12/7/23 1015
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
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non-Soxhlet

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client NYSDEC

Project Meadow Pond Street

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location South Salem, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time MEM 12/7/23 1015

Back-Sheet By / Date / Time LD 12/7/23 1012

Temperature Method Gun #5

Temp ✓6° C Actual Temperature 3.6

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

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

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client	☑	Analysis	☑	Sampler Name	☑
Project	☑	IDs	☑	Collection Date/Time	☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

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

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																					
8oz Amb/Clear																							
4oz Amb/Clear																							
2oz Amb/Clear																							
Unpreserved	1 Liter	Ambers																					
HCL																							
Sulfuric																							
Sulfuric	250mL																						
Phosphoric																							
HCl																							
Unpreserved	100mL																						
Unpreserved	1 Liter	Plastics																					
Sulfuric																							
Unpreserved	500mL			2	2					1	2	1											
Sulfuric																							
Unpreserved	250mL																						
Trizma																							
Sulfuric																							
Nitric																							
NaOH																							
Ammonium Acetate																							
NaOH/Zinc																							
Unpreserved		VOA Vials																					
HCl																							
MeOH																							
D.I. Water																							
BiSulfate																							
Col/Bact																							
125 ML Plastic		Other / Fill in		2		1							1										

Qualtrax ID: 120836