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AECOM Project
60610670

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Michigan Department of Environment,
Great Lakes, and Energy
Remediation and Redevelopment
Division
Bay City District Office
401 Ketchum Street
Bay City, Michigan 48708

DRAFT DELIBERATIVE

**Au Sable Boat Launch PFAS Investigation
Annual Groundwater Monitoring Report
July 2021 through July 2022**

Dear Ms. Gossen,

On behalf of the Michigan Department of Environment, Great Lakes and Energy (EGLE), AECOM has continued groundwater and surface water sampling using a network of eight existing monitoring wells and a surface water sampling point located near the mouth of the Au Sable River, in Oscoda, Michigan. This report includes the analytical data and information collected from sampling events completed in July 2021, October 2021, January 2022, and July 2022 in an effort to monitor concentrations of per- and polyfluoroalkyl substances (PFAS) in this study area (site).

1. Field Activities

1.1 Groundwater Sampling

During this reporting period, groundwater samples were collected from the shallow intervals of nested monitoring well locations RI-MW029 and RI-MW031, and from monitoring wells ASRBL-MW001, ASRBL-MW002, ASRBL-MW005, ASRBL-MW006, ASRBL-MW007, and ASRBL-MW008. The locations of these monitoring wells are shown on **Figure 1**. Please note that per EGLE direction, monitoring wells ASRBL-MW003 and ASRBL-MW004 were not selected for sampling. Also, at the direction of EGLE, monitoring well ASRBL-MW001 was not selected for sampling during the July 2021 event and monitoring well ASRBL-MW005 was no longer selected for sampling beginning with the October 2021 sampling event. Monitoring well location, screened interval, and groundwater elevation data are provided in **Table 1**.

Prior to sampling, static water levels were obtained using an electronic water level meter at each monitoring well to measure the groundwater elevation. Depth to groundwater and groundwater elevation data are provided in **Table 1**. These static groundwater elevations were used to create **Figures 2A through 2D** which show groundwater elevation contours and the general groundwater flow direction across the investigation area.

The monitoring wells were sampled using EGLE-approved, low-flow groundwater sampling techniques in accordance with EGLE PFAS sampling guidance documents. Water quality parameters (i.e., pH, temperature, specific conductance, oxidation reduction potential [ORP], turbidity and dissolved oxygen [DO]) were monitored and recorded approximately every five minutes during purging. Samples were collected after water quality parameters stabilized (i.e., three consecutive recordings) as follows: Depth to water drawdown <0.33 feet, pH +/- 0.1 standard units, Conductivity +/- 3%, Turbidity +/- 10%, Dissolved Oxygen +/- 10%, Temperature +/- 5%, and ORP +/- 10mV.

Samples were placed in laboratory provided sample containers, labeled, transferred to an ice-chilled cooler, and submitted under chain-of-custody directly to Vista Analytical Laboratories (Vista) for analysis of 28 PFAS compounds using Modified Method 537 with isotope dilution, including branched and linear isomers.

All non-dedicated equipment which came into contact with groundwater was decontaminated with a mixture of Liquinox® and deionized water. Field personnel performing the collection procedures donned a new pair of nitrile gloves prior to handling sampling equipment, between sampling and decontamination procedures at each sample location, and between sampling locations.

1.2 Surface Water Sampling

The study area is bounded to the north by the Au Sable River which flows from west to east, into Lake Huron. To correlate concentrations of PFAS in surface water with groundwater, a surface water sample was attempted to be collected during each sampling event from location ASRBL-SW005. The location of ASRBL-SW005 is shown on **Figure 1**. Samples were collected by immersion sampling techniques, with samples being collected by hand to immerse a closed sample bottle into the surface water body to a depth of approximately 6- to 8-inches below the water surface before being opened and then recapped before removing the sample bottle from the water. Following their collection in laboratory provided bottles, surface water samples were labeled and transferred to an ice-chilled cooler. The samples were then submitted to Vista under chain-of-custody documentation for analysis of 28 PFAS compounds using Modified Method 537 with isotope dilution, including branched and linear isomers.

1.3 Investigation Derived Waste

Investigation derived waste (IDW) generated during the sampling events included purged groundwater and decontamination water. All IDW was containerized in 55-gallon drums and stored in a locked storage yard maintained by the Oscoda Township Department of Public Works. Drums were transported by Northern A-1 Environmental Services of Kalkaska, Michigan to a licensed disposal facility following each sampling event.

2. Results and Discussion

2.1 Groundwater Elevation and Flow Direction

Groundwater potentiometric surface maps were created using water level measurements collected during the sampling events to evaluate groundwater flow direction at the site. Calculated groundwater flow directions during all sampling events during this reporting period were generally to the north-northeast, towards the Au Sable River. The highest and lowest elevations measured each quarter were consistently ASRBL-MW007 and ASRBL-MW004, respectively. Measured groundwater elevations showed spatial variation in hydraulic gradient throughout the investigation area. In general, the hydraulic gradient was greater to the west of US-23 and lower to the east, nearer to Lake Huron. The groundwater elevation contours are displayed on **Figures 2A, 2B, 2C, and 2D**. Groundwater elevation data are provided in **Table 1**.

2.2 Groundwater Sampling Results

The groundwater sampling results for each sampling event are summarized in the following subsections. **Table 2** lists PFAS compounds analyzed as a part of this investigation, their abbreviated names, and CAS numbers. Groundwater sample analytical results are summarized in **Table 3** and are depicted on **Figure 3**. Graphs showing concentrations of PFOA, PFOS, and total PFAS over time for each monitoring well are attached and discussed in **Section 2.2.5**. Please refer to the laboratory analytical reports included in **Appendix A** for additional details.

2.2.1 July 19 and 21, 2021 Groundwater Sampling Event

Groundwater samples were collected from the shallow intervals of nested monitoring well locations RI-MW029 and RI-MW031 and from monitoring wells ASRBL-MW002, ASRBL-MW005, ASRBL-MW006, and ASRBL-MW007 on July 19, 2021 and from monitoring well ASRBL-MW008 on July 21, 2021. Groundwater sample analytical results of total PFAS ranged from 24.41 nanograms per liter (ng/L) (ASRBL-MW005) to a maximum of 142.29 ng/L (ASRBL-MW007).

Concentrations of individual PFAS which exceeded the Part 201 cleanup criteria are detailed below.

Perfluorooctanoic acid (PFOA): The Drinking Water Criteria of 8 ng/L for PFOA was exceeded in samples collected from monitoring wells ASRBL-MW002, ASRBL-MW006, ASRBL-MW007, RI-MW029, and RI-MW031.

Perfluorooctane sulfonic acid (PFOS): The Drinking Water Criteria of 16 ng/L and the Groundwater Surface Water Interface Criteria (GSIC) of 12 ng/L for PFOS were exceeded in samples collected from monitoring wells ASRBL-MW007, ASRBL-MW008, and RI-MW029.

2.2.2 October 12 and 13, 2021 Groundwater Sampling Event

Groundwater samples were collected from the shallow screened intervals of nested monitoring well locations RI-MW029 and RI-MW031 and from monitoring wells ASRBL-MW001, ASRBL-MW002, ASRBL-MW006, and ASRBL-MW007 on October 12, 2021 and from monitoring well ASRBL-MW008 on October 13, 2021. Groundwater sample analytical results of total PFAS ranged from 36.16 ng/L (ASRBL-MW006) to a maximum of 114.18 ng/L (ASRBL-MW007).

Concentrations of individual PFAS which exceeded Part 201 cleanup criteria are detailed below.

PFOA: The Drinking Water Criteria of 8 ng/L for PFOA was exceeded in samples collected from monitoring wells ASRBL-MW002, ASRBL-MW006, ASRBL-MW007, ASRBL-MW008, RI-MW029, and RI-MW031.

PFOS: The Drinking Water Criteria of 16 ng/L and/or the GSIC of 12 ng/L for PFOS were exceeded in samples collected from monitoring wells ASRBL-MW002, ASRBL-MW007, ASRBL-MW008, and RI-MW029.

2.2.3 January 27 and 28, 2022 Groundwater Sampling Event

Groundwater samples were collected from the shallow screened intervals of nested monitoring well locations RI-MW029 and RI-MW031 and from monitoring wells ASRBL-MW001, ASRBL-MW002, ASRBL-MW006, and ASRBL-MW007 on January 27, 2022 and from monitoring well ASRBL-MW008 on January 28, 2022. Groundwater sample analytical results of total PFAS ranged from 21.90 ng/L (RI-MW031) to a maximum of 75.33 ng/L (RI-MW029).

Concentrations of individual PFAS which exceeded Part 201 cleanup criteria are detailed below.

PFOA: The Drinking Water Criterion of 8 ng/L for PFOA was exceeded in samples collected from monitoring wells ASRBL-MW001, ASRBL-MW006, ASRBL-MW008, and RI-MW029.

PFOS: The Drinking Water Criteria of 16 ng/L and the GSIC of 12 ng/L for PFOS were exceeded in samples collected from monitoring wells ASRBL-MW007, ASRBL-MW008, and RI-MW029.

2.2.4 July 11 and 13, 2022 Groundwater Sampling Event

Groundwater samples were collected from the shallow screened intervals of nested monitoring well locations RI-MW029 and RI-MW031 and from monitoring wells ASRBL-MW001, ASRBL-MW002, ASRBL-MW006, and ASRBL-MW007 on July 11, 2022 and from monitoring well ASRBL-MW008 on July 13, 2022. Groundwater sample analytical results of total PFAS ranged from 13.21 ng/L (RI-MW031) to a maximum of 146.76 ng/L (ASRBL-MW007).

Concentrations of individual PFAS which exceeded Part 201 cleanup criteria are detailed below.

PFOA: The Drinking Water Criterion of 8 ng/L for PFOA was exceeded in samples collected from monitoring wells ASRBL-MW001, ASRBL-MW007, and RI-MW029.

PFOS: The Drinking Water Criteria of 16 ng/L and the GSIC of 12 ng/L for PFOS were exceeded in samples collected from monitoring wells ASRBL-MW007, ASRBL-MW008, and RI-MW029.

2.2.5 PFAS Concentration Trends

The attached graphs display groundwater sample analytical results for PFOA, PFOS, and total PFAS over time. A review of the graphed data indicates concentrations of PFOA and PFOS reported during this monitoring period generally appear to be within historic concentration ranges with only minor fluctuations compared to previous data.

Concentrations of total PFAS were also generally within historic concentration ranges or have begun to indicate a decreasing trend.

2.3 Surface Water Sampling Results

Surface water samples were collected from the location of ASRBL-SW005 (**Figure 1**) during each sampling event, except the January 2022 event due to the presence of ice on the river. During this reporting period, concentrations of total PFAS measured in samples collected from ASRBL-SW005 ranged from 1.81 ng/L (July 2022) to 3.59 ng/L (October 2022). During this reporting period, concentrations of PFAS were not detected above the Part 201 GSIC.

The surface water analytical results are summarized in **Table 4** and **Figure 3**. Laboratory analytical reports are included in **Appendix A**.

2.4 Quality Control Samples

One duplicate sample was collected for every sampling event. Additionally, field and equipment blanks (if non-disposable equipment were used) were collected at a rate of one per every 20 samples collected. The laboratory analytical results for these samples are provided in the laboratory analytical reports attached in **Appendix A**.

3. Conclusions

3.1 Groundwater Sampling

During this reporting period, groundwater samples were collected from the shallow intervals of nested monitoring well locations RI-MW029 and RI-MW031 and from monitoring wells ASRBL-MW001, ASRBL-MW002, ASRBL-MW005, ASRBL-MW006, ASRBL-MW007, and ASRBL-MW008. With exception of the samples collected from monitoring well ASRBL-MW005, laboratory analytical results for the groundwater samples collected from monitoring wells during this reporting period indicated that PFAS concentrations have exceeded the Drinking Water Criteria and/or GSIC during one or more sampling events, which is consistent with previous sampling results. During this reporting period, minimum and maximum total PFAS concentrations in groundwater samples ranged from 13.21 ng/L [RI-MW031 (07/11/2022)] to 146.76 ng/L [ASRBL-MW007 (07/11/2022)].

Laboratory analytical results of groundwater samples collected at the site to date may indicate the presence of an additional source. Installation of additional monitoring wells in certain areas could potentially aid in further understanding the nature and extent of PFAS impacts in the vicinity of the Au Sable boat launch area.

3.2 Surface Water Sampling

Surface water samples were collected from the location of ASRBL-SW005 during each sampling event, except for the January 2022 event as the sampling location was iced over at that time. The laboratory analytical results for ASRBL-SW005 indicated the presence of concentrations of PFAS; however, the reported concentrations did not exceed the GSIC and were consistent with historical concentrations. Continued collection of surface water samples from the Au Sable River may aid in evaluating long-term trends in PFAS concentrations near the Au Sable Boat Launch study area.

AECOM appreciates the opportunity to work with EGLE on this project. AECOM would be glad to provide additional information or offer additional assistance through its project manager for the site, Mike Cox. You may contact Mr. Cox at 616-574-8391 or at mike.cox@aecom.com.

Yours sincerely,



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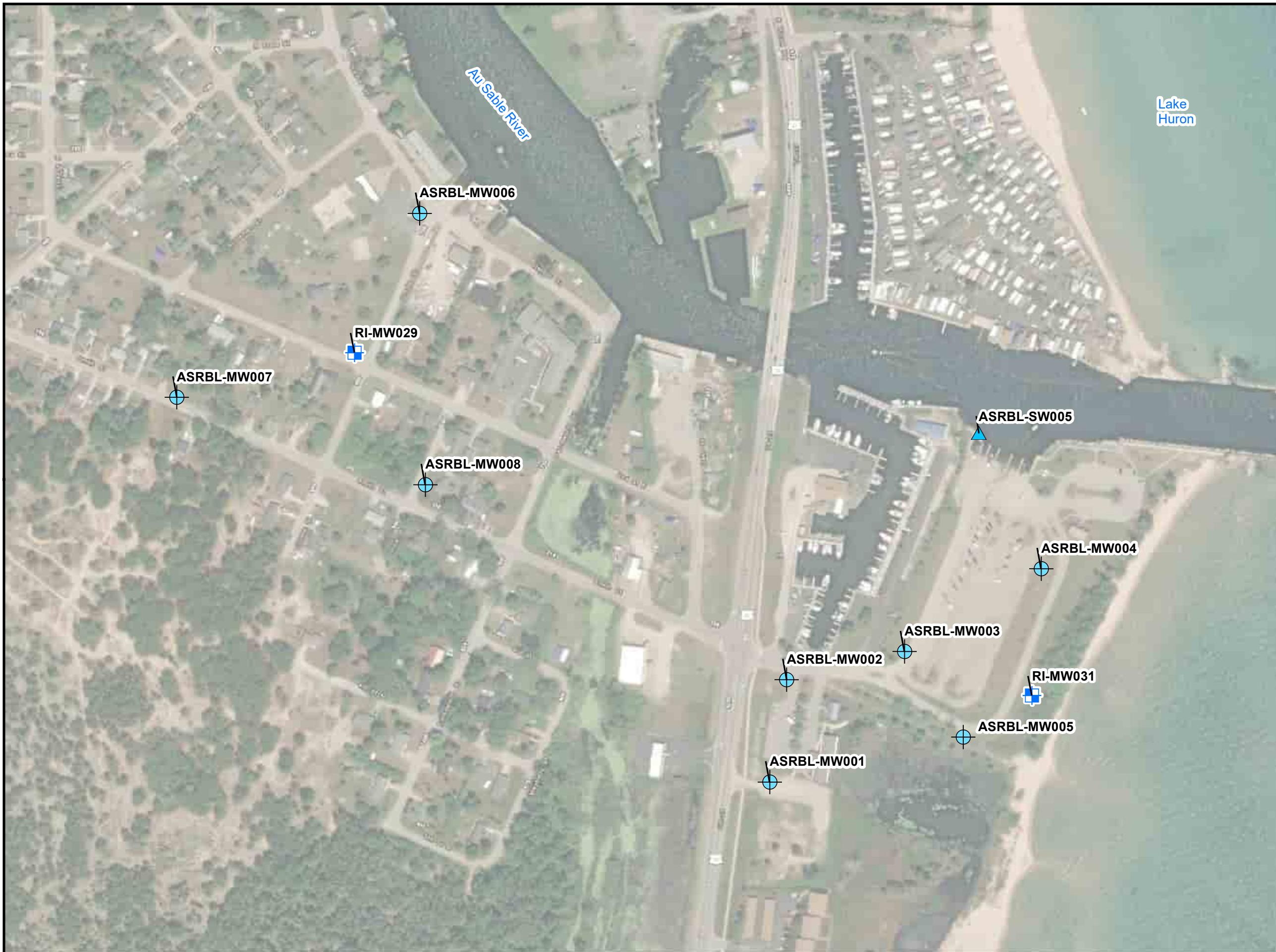
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enclosures: Figures
Tables
PFAS Concentration Trend Graphs
Appendix A – Laboratory Analytical Reports

Figures

Legend

- Monitoring Wells
- Wurtsmith RI Monitoring Wells
- ▲ Surface Water Sample



Legend

- Monitoring Wells
- Wurtsmith RI Monitoring Wells
- ~~~~ Groundwater Elevation Contours (ft AMSL)
- ~~~~ Inferred Groundwater Elevation Contours (ft AMSL)
- Estimated Groundwater Flow Direction

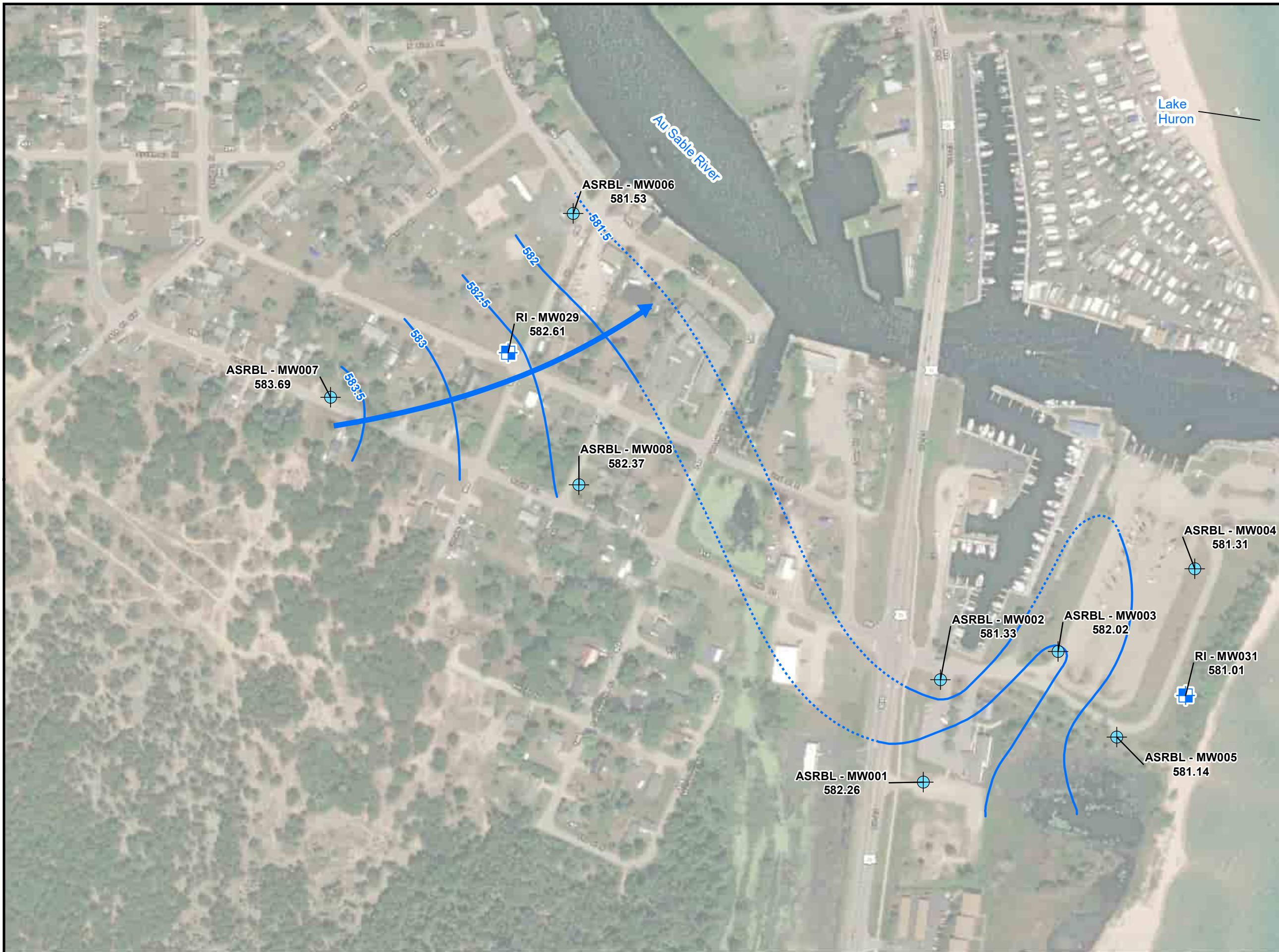


FIGURE 2A
GROUNDWATER ELEVATION
CONTOURS
JULY 2021

AU SABLE TOWNSHIP
IOSCO COUNTY,
MICHIGAN

0 260 520
Feet



Legend

- Monitoring Wells
- Wurtsmith RI Monitoring Wells
- Groundwater Elevation Contours (ft AMSL)
- - - Inferred Groundwater Elevation Contours (ft AMSL)
- Estimated Groundwater Flow Direction

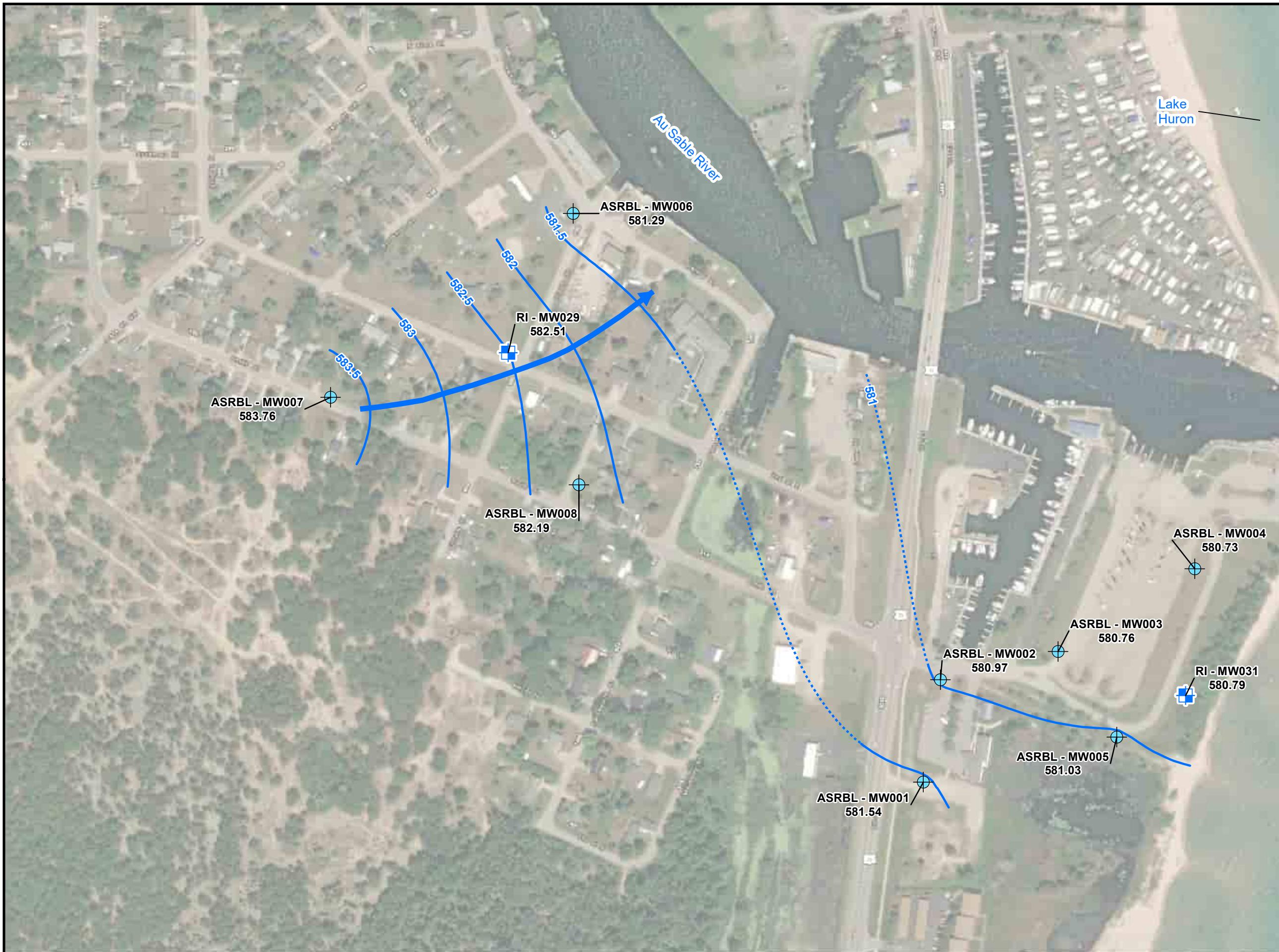


FIGURE 2B
GROUNDWATER ELEVATION
CONTOURS
OCTOBER 2021

AU SABLE TOWNSHIP
IOSCO COUNTY,
MICHIGAN

0 260 520
Feet



Legend

- Monitoring Wells
- Wurtsmith RI Monitoring Wells
- ~~~~ Groundwater Elevation Contours (ft AMSL)
- ~~~~ Inferred Groundwater Elevation Contours (ft AMSL)
- Estimated Groundwater Flow Direction



FIGURE 2C
GROUNDWATER ELEVATION
CONTOURS
JANUARY 2022

AU SABLE TOWNSHIP
IOSCO COUNTY,
MICHIGAN

0 260 520
Feet



Legend

- Monitoring Wells
- Wurtsmith RI Monitoring Wells
- ~~~~ Groundwater Elevation Contours (ft AMSL)
- ~~~~ Inferred Groundwater Elevation Contours (ft AMSL)
- Estimated Groundwater Flow Direction



FIGURE 2D
GROUNDWATER ELEVATION
CONTOURS
JULY 2022

AU SABLE TOWNSHIP
IOSCO COUNTY,
MICHIGAN

0 260 520
Feet



Legend
 Temporary Monitoring Well

 Wurtsmith RI Monitoring Well

 Surface Water Sample

ID		
Well Screen Depth Interval	Analyte	Total PFAS
Result (ppt)	Result (ppt)	

NS = Not sampled

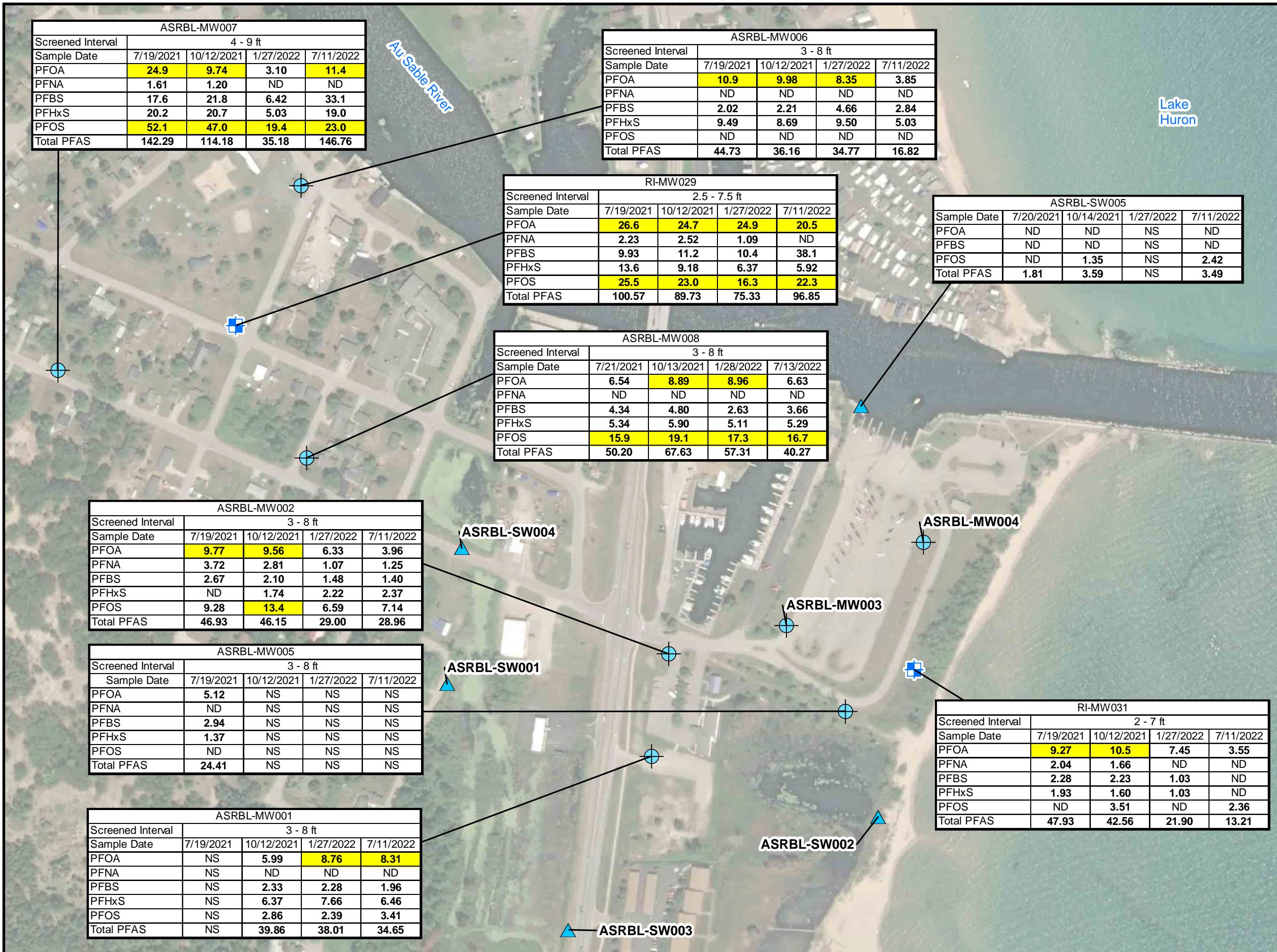
ND = Non-detect

Yellow highlight = Exceedance of Michigan Part 201 criteria for monitoring well samples or Michigan Rule 57 criteria for surface water samples

* No results = not sampled

FIGURE 3
GROUNDWATER AND SURFACE WATER SAMPLING JULY 2021 THROUGH JULY 2022

AU SABLE TOWNSHIP
IOSCO COUNTY,
MICHIGAN

Tables

Table 1
Monitoring Well Completion Information
and Groundwater Elevations
Au Sable River Boat Launch Site
Au Sable, Michigan

Well ID	Date of Completion	Northing (ft)	Easting (ft)	Surface Elevation (ft AMSL)	Monitoring Well Interval Completion Information		Groundwater Elevations							
					Interval-1		Quarter 8 - Jul 2021		Quarter 9 - Oct 2021		Quarter 10 - Jan 2022		Quarter 11 - Jul 2022	
					Screen (ft bgs)	TOC (ft AMSL)	Depth to Water (ft-btoc)	Elevation (ft-AMLS)						
ASRBL - MW001	October 2019	398146.16	19957269.21	583.23	3-8	583.08	0.82	582.26	1.54	581.54	2.44	580.64	2.01	581.07
ASRBL - MW002	October 2019	398427.10	19957316.00	584.96	3-8	584.38	3.05	581.33	3.41	580.97	4.38	580.00	3.83	580.55
ASRBL - MW003	October 2019	398504.48	19957639.31	582.80	3-8	582.46	0.44	582.02	1.70	580.76	2.79	579.67	2.12	580.34
ASRBL - MW004	October 2019	398732.21	19958014.64	583.91	3-8	583.59	2.28	581.31	2.86	580.73	4.05	579.54	3.22	580.37
ASRBL - MW005	October 2019	398269.09	19957800.79	583.04	3-8	582.77	1.63	581.14	1.74	581.03	2.95	579.82	2.35	580.42
ASRBL - MW006	October 2019	399708.47	19956307.85	585.83	3-8	585.58	4.05	581.53	4.29	581.29	5.14	580.44	4.62	580.96
ASRBL - MW007	October 2019	399203.11	19955641.19	588.90	4-9	588.60	4.91	583.69	4.84	583.76	5.48	583.12	5.18	583.42
ASRBL - MW008	October 2019	398963.02	19956323.40	586.28	3-8	585.85	3.48	582.37	3.66	582.19	4.38	581.47	4.12	581.73
RI - MW029	August 2017	399325.61	19956129.24	585.05	2.5-7.5	584.72	2.11	582.61	2.21	582.51	3.00	581.72	2.70	582.02
RI - MW031	August 2017	398383.21	19957989.39	581.89	2-7	581.49	0.48	581.01	0.70	580.79	1.86	579.63	1.27	580.22

Notes:

ft - Feet

AMSL - Above Mean Sea Level

bgs - Below Ground Surface

n/a - Not Applicable

-- - No Data

NM - Not Measured (underwater)

Table 2 - PFAS Families and Abbreviations

Au Sable River Boat Launch Site

Au Sable, Michigan

Chemical Name	Abbreviation	Cas Number
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluorodecane sulfonic acid	PFDS	335-77-3
Perfluorobutane sulfonic acid	PFBS	375-73-5
Perfluoropentane sulfonic acid	PFPeS	2706-91-4
Perfluorohexane sulfonic acid	PFHxS	355-46-4
Perfluoroheptane sulfonic acid	PFHpS	375-92-8
Perfluorooctane sulfonic acid	PFOS	1763-23-1
Perfluorononane sulfonic acid	PFNS	68259-12-1
Perfluorooctanesulfonamide	PFOSA	754-91-6
4:2 Fluorotelomer sulfonic acid	4:2 FTS	757124-72-4
6:2 Fluorotelomer sulfonic acid	6:2 FTS	27619-97-2
8:2 Fluorotelomer sulfonic acid	8:2 FTS	39108-34-4
N-Ethyl Perfluorooctane sulfonamido acetic acid	N-EtFOSAA	2991-50-6
N-Methyl Perfluorooctane sulfonamide	N-MeFOSAA	2355-31-9
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
9-chlorohexadecafluoro-3-oxane-1-sulfonic acid	9CI-PF3ONS	756426-58-1
11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid	11CI-PF3OUdS	763051-92-9

	Perfluoroalkyl Carboxylic Acids (PFCAAs)
	Perfluoroalkane Sulfonic Acids (PFSAs)
	Perfluoroalkane Sulfonamides (FASAs)
	Fluorotelomer Sulfonic Acids (FTSAs)
	N-Ethyl Perfluoroalkane Sulfonamidoacetic Acids (EtFASAAAs)
	N-Methyl Perfluoroalkane Sulfonamidoacetic Acids (MeFASAAAs)
	PFAS Replacement compounds

Table 3 - Groundwater Analytical Data

Au Sable River Boat Launch Site

Au Sable, Michigan

Compound	Unit	DWC	GSIC	ASRBL-MW001				ASRBL-MW002			
				GW2110121515BA 10/12/2021 2110156	GW2201271135RF 1/27/2022 2202042	GW2207111605RF 7/11/2022 2207130	GW2107191650RLF 7/19/2021 2107215	GW2110121535RF 10/12/2021 2110156	GW2201271030RF 1/27/2022 2202042	GW2207111450RF 7/11/2022 2207130	FD2207111455RF 7/11/2022 2207130
PFBA	ng/l	NCE	NCE	9.79	6.42	6.37	8.73	6.80	4.65	6.90	6.58
PFPeA	ng/l	NCE	NCE	4.62	2.66 J	2.43 J	< 1.02	2.53 J	2.08 J	2.35 J	2.02 J
PFHxA	ng/l	400,000 (A)	NA	4.91	4.24	3.05 J	5.41 Q	3.29 J	2.28 J	2.15 J, Q	1.81 J
PFHpA	ng/l	NCE	NCE	2.99 J	3.60 J	2.66 J	5.65	2.87 J	2.30 J	1.44 J	1.51 J
PFOA	ng/l	8 (A)	170 (X)	5.99	8.76	8.31	9.77	9.56	6.33	3.96	4.25
PFNA	ng/l	6 (A)	NA	< 0.985	< 0.989	< 1.00	3.72 J	2.81 J	1.07 J	1.25 J, Q	1.29 J, Q
PFDA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	1.05 J	< 1.01	< 0.977	< 0.998
PFUnDA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFDoDA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFTrDA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFTeDA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFDS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFBS	ng/l	420 (A)	670,000	2.33 J	2.28 J	1.96 J	2.67 J	2.10 J	1.48 J	1.40 J	1.84 J
PFPeS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFHxS	ng/l	51 (A)	NA	6.37	7.66	6.46	1.70 J	1.74 J	2.22 J	2.37 J	1.93 J
PFHpS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFOS	ng/l	16 (A)	12 (X)	2.86 J	2.39 J	3.41 J	9.28	13.4	6.59	7.14	7.66
PFNS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
PFOSA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
4:2 FTS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
6:2 FTS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
8:2 FTS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
N-EtFOSAA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
N-MeFOSAA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
HFPO-DA	ng/l	370	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
ADONA	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
9CI-PF3ONS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
11CI-PF3OUdS	ng/l	NCE	NCE	< 0.985	< 0.989	< 1.00	< 1.02	< 1.01	< 1.01	< 0.977	< 0.998
Total PFAS	ng/l	NCE	NCE	39.86	38.01	34.65	46.93	46.15	29.00	28.96	28.89

**Table 3 - Groundwater Analytical Data
Au Sable River Boat Launch Site
Au Sable, Michigan**

Compound	Unit	DWC	GSIC	ASRBL-MW005		ASRBL-MW006			
				Sample Date	Lab Report	GW2107191745RLF	FD2107191745RLF	Result	Result
						7/19/2021	7/19/2021		
PFBA	ng/l	NCE	NCE	11.0		9.30			
PFPeA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFHxA	ng/l	400,000 (A)	NA	< 1.02		4.17 Q			
PFHpA	ng/l	NCE	NCE	3.98 J, Q		4.47			
PFOA	ng/l	8 (A)	170 (X)	5.12		5.11			
PFNA	ng/l	6 (A)	NA	< 1.02		< 1.04			
PFDA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFUnDA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFDoDA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFTrDA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFTeDA	ng/l	NCE	NCE	< 1.02		< 1.04			
PFDS	ng/l	NCE	NCE	< 1.02		< 1.04			
PFBS	ng/l	420 (A)	670,000	2.94 J		1.93 J			
PFPeS	ng/l	NCE	NCE	< 1.02		< 1.04			
PFHxS	ng/l	51 (A)	NA	1.37 J		2.66 J			
PFHpS	ng/l	NCE	NCE	< 1.02		< 1.04			
PFOS	ng/l	16 (A)	12 (X)	< 1.02		< 1.04			
PFNS	ng/l	NCE	NCE	< 1.02		< 1.04			
PFOSA	ng/l	NCE	NCE	< 1.02		< 1.04			
4:2 FTS	ng/l	NCE	NCE	< 1.02		< 1.04			
6:2 FTS	ng/l	NCE	NCE	< 1.02		< 1.04			
8:2 FTS	ng/l	NCE	NCE	< 1.02		< 1.04			
N-EtFOSAA	ng/l	NCE	NCE	< 1.02		< 1.04			
N-MeFOSAA	ng/l	NCE	NCE	< 1.02		< 1.04			
HFPO-DA	ng/l	370	NCE	< 1.02		< 1.04			
ADONA	ng/l	NCE	NCE	< 1.02		< 1.04			
9CI-PF3ONS	ng/l	NCE	NCE	< 1.02		< 1.04			
11CI-PF3OUdS	ng/l	NCE	NCE	< 1.02		< 1.04			
Total PFAS	ng/l	NCE	NCE	24.41		27.64			

Table 3 - Groundwater Analytical Data
Au Sable River Boat Launch Site
Au Sable, Michigan

Compound	Unit	DWC	GSIC	ASRBL-MW007					ASRBL-MW008						
				Sample Lab Report	Sample Date Lab Report	-					-				
						GW2107191835MLH 7/19/2021 2107215	GW2110121715RF 10/12/2021 2110156	GW2201270925RF 1/27/2022 2202042	FD2201270930RF 1/27/2022 2202042	GW2207111715KN 7/11/2022 2207130	GW2107210655MLH 7/21/2021 2107214	GW2110131510RF 10/13/2021 2110156	FD2110131515RF 10/13/2021 2110156	GW2201280910RF 1/28/2022 2202042	GW2207131325RF 7/13/2022 2207130
PFBA	ng/l	NCE	NCE	5.21	9.18	1.23 J	1.02 J	23.3	9.12	14.5	13.8	11.8	5.16		
PFPeA	ng/l	NCE	NCE	4.89	1.36 J	< 1.02	< 1.01	12.2	3.57 J	5.16	5.08	4.10	1.26 J		
PFHxA	ng/l	400,000 (A)	NA	11.6 Q	2.16 J	< 1.02	< 1.01	20.6	3.61 J	5.30	5.30	3.53 J	< 0.988		
PFHpA	ng/l	NCE	NCE	4.18 Q	< 1.02	< 1.02	< 1.01	4.16	1.78 J	2.97 J	2.97 J	3.88 J	1.57 J		
PFOA	ng/l	8 (A)	170 (X)	24.9	9.74	3.10 J	3.28 J	11.4	6.54	8.89	8.22	8.96	6.63		
PFNA	ng/l	6 (A)	NA	1.61 J	1.20 J	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFDA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFUnDA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFDoDA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFTrDA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFTeDA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFDS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFBS	ng/l	420 (A)	670,000	17.6 Q	21.8	6.42	6.29	33.1	4.34	4.80	4.72	2.63 J	3.66 J		
PFPeS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	1.01 J	< 1.02	< 1.01	< 0.988		
PFHxS	ng/l	51 (A)	NA	20.2	20.7	5.03	5.08	19.0	5.34	5.90	6.40	5.11	5.29		
PFHpS	ng/l	NCE	NCE	< 1.01	1.04 J	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFOS	ng/l	16 (A)	12 (X)	52.1	47.0	19.4	21.7	23.0	15.9	19.1	20.1	17.3	16.7		
PFNS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
PFOSA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
4:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
6:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
8:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
N-EtFOSAA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
N-MeFOSAA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
HFPO-DA	ng/l	370	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
ADONA	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
9CI-PF3ONS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
11CI-PF3OUDS	ng/l	NCE	NCE	< 1.01	< 1.02	< 1.02	< 1.01	< 0.994	< 0.995	< 0.996	< 1.02	< 1.01	< 0.988		
Total PFAS	ng/l	NCE	NCE	142.29	114.18	35.18	37.37	146.76	50.2	67.63	66.59	57.31	40.27		

Table 3 - Groundwater Analytical Data
Au Sable River Boat Launch Site
Au Sable, Michigan

Compound	Unit	DWC	GSIC	RI-MW029				RI-MW031			
				2.5 - 7.5 ft				2 - 7 ft			
				Sample	Sample Date	Lab Report	GW2107191625MLH	GW2110121715BA	GW2201271645BA	GW2207111545KN	GW2107191840RLF
PFBA	ng/l	NCE	NCE	7.48	7.13	5.56	3.78 J	14.8	8.95	4.49	3.94
PFPeA	ng/l	NCE	NCE	3.35 J	2.79 J	3.97 J	1.42 J	6.63	3.76 J	1.75 J	1.00 J
PFHxA	ng/l	400,000 (A)	NA	6.75	5.10	3.56 J	1.97 J, Q	6.38 Q	5.84	2.76 J	1.17 J
PFHpA	ng/l	NCE	NCE	5.13 Q	4.11	3.18 J	1.84 J	4.60 Q	4.51	3.39 J	1.19 J
PFOA	ng/l	8 (A)	170 (X)	26.6	24.7	24.9	20.5	9.27	10.5	7.45	3.55 J
PFNA	ng/l	6 (A)	NA	2.23 J, Q	2.52 J	1.09 J	< 1.00	2.04 J	1.66 J	< 0.994	< 0.977
PFDA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFUnDA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFDoDA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFTrDA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFTeDA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFDS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFBS	ng/l	420 (A)	670,000	9.93	11.2	10.4	38.1	2.28 J	2.23 J	1.03 J	< 0.977
PFPeS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFHxS	ng/l	51 (A)	NA	13.6	9.18	6.37	5.92	1.93 J	1.60 J	1.03 J	< 0.977
PFHpS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	1.02 J	< 1.08	< 0.997	< 0.994	< 0.977
PFOS	ng/l	16 (A)	12 (X)	25.5	23.0	16.3	22.3	< 1.08	3.51 J	< 0.994	2.36 J
PFNS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
PFOSA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
4:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
6:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
8:2 FTS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
N-EtFOSAA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
N-MeFOSAA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
HFPO-DA	ng/l	370	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
ADONA	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
9CI-PF3ONS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
11CI-PF3OUdS	ng/l	NCE	NCE	< 1.01	< 1.01	< 1.03	< 1.00	< 1.08	< 0.997	< 0.994	< 0.977
Total PFAS	ng/l	NCE	NCE	100.57	89.73	75.33	96.85	47.93	42.56	21.90	13.21

Table 3 - Groundwater Analytical Data - Footnotes
Au Sable River Boat Launch Site
Au Sable, Michigan

< 2 = compound not detected above the method detection limit.

Bold values are concentrations detected above the method detection limit.

Shaded values exceed one or more Part 201 criteria.

ft = foot

DWC = EGLE Part 201 Residential Drinking Water Criteria

EGLE = Michigan Department of Environment, Great Lakes, and Energy

GSIC = EGLE Part 201 Groundwater Surface Water Interface Criteria

Part 201 = Part 201 of Michigan's Act 451 of 1994, as amended

FD = field duplicate sample

N = standard environmental sample

NA = criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NCE = no criteria established

ng/l = nanograms per liter

(A) = Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(X) = The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Lab Qualifiers

J = The amount detected is below the Reporting Limit/LOQ.

Q = The ion transition ratio is outside of the acceptance criteria.

Table 4 - Surface Water Analytical Data
Au Sable River Boat Launch Site
Au Sable, Michigan

Location		ASRBL-SW005										Result
Sample	Sample Date	SW1910080810GSC	SW2001210855RAP	SW2004141800GSC	SW2007161130GSC	SW2010290745RL	SW2101271750GSC	SW2104051720KEM	SW2107201610RLF	SW2110140855RF	7/11/2022 2207130	
Lab Report	10/8/2019 1903621	1/21/2020 2000164	4/14/2020 2000907	7/16/2020 2001524	10/29/2020 2002371	1/27/2021 2102066	4/5/2021 2104096	7/20/2021 2107215	10/14/2021 2110156	7/11/2022 2207130	7/11/2022 2207130	
Compound	Unit	DWC	GSIC	Result	Result	Result	Result	Result	Result	Result	Result	
PFBA	ng/l	NCE	NCE	< 1.42	2.42 J	1.61 J	1.66 J	< 1.03	< 0.992	< 1.03	< 1.05	2.24 J
PFPeA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFHxA	ng/l	400,000 (A)	NA	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFHpA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFOA	ng/l	8 (A)	170 (X)	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFNA	ng/l	6 (A)	NA	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFDA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFUnDA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFDoDA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFTrDA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFTeDA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFDS	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFBS	ng/l	420 (A)	670,000	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PPPeS	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFHxS	ng/l	51 (A)	NA	2.07 J	2.10 J	< 1.39	< 1.43	1.51 J	2.05 J	< 1.03	1.81 J	< 1.00
PFHpS	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
PFOS	ng/l	16 (A)	12 (X)	1.73 J	1.61 J	1.70 J	4.17 J	1.92 J	2.12 J	1.30 J	< 1.05	1.35 J
PFNS	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
FOSA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
4:2 FTSA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
6:2 FTSA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
8:2 FTSA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
N-EtFOSAA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
N-MeFOSAA	ng/l	NCE	NCE	< 1.42	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
HFPO-DA	ng/l	370	NCE	---	< 2.63	< 2.44	< 2.52	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
ADONA	ng/l	NCE	NCE	---	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
9CI-PF3ONS	ng/l	NCE	NCE	---	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
11CI-PF3OUDs	ng/l	NCE	NCE	---	< 1.49	< 1.39	< 1.43	< 1.03	< 0.992	< 1.03	< 1.05	< 1.00
Total PFAS	ng/l	NCE	NCE	3.80	6.13	3.31	5.83	3.43	4.17	1.30	1.81	3.59
												3.49

Table 4 - Surface Water Analytical Data - Footnotes**Au Sable River Boat Launch Site****Au Sable, Michigan**

< 2 = compound not detected above the method detection limit.

Bold values are concentrations detected above the method detection limit.

Shaded values exceed one or more Part 201 criteria.

ft = foot

DWC = EGLE Part 201 Residential Drinking Water Criteria

EGLE = Michigan Department of Environment, Great Lakes, and Energy

GSIC = EGLE Part 201 Groundwater Surface Water Interface Criteria

Part 201 = Part 201 of Michigan's Act 451 of 1994, as amended

FD = field duplicate sample

N = standard environmental sample

NA = criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NCE = no criteria established

ng/l = nanograms per liter

(A) = Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(X) = The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

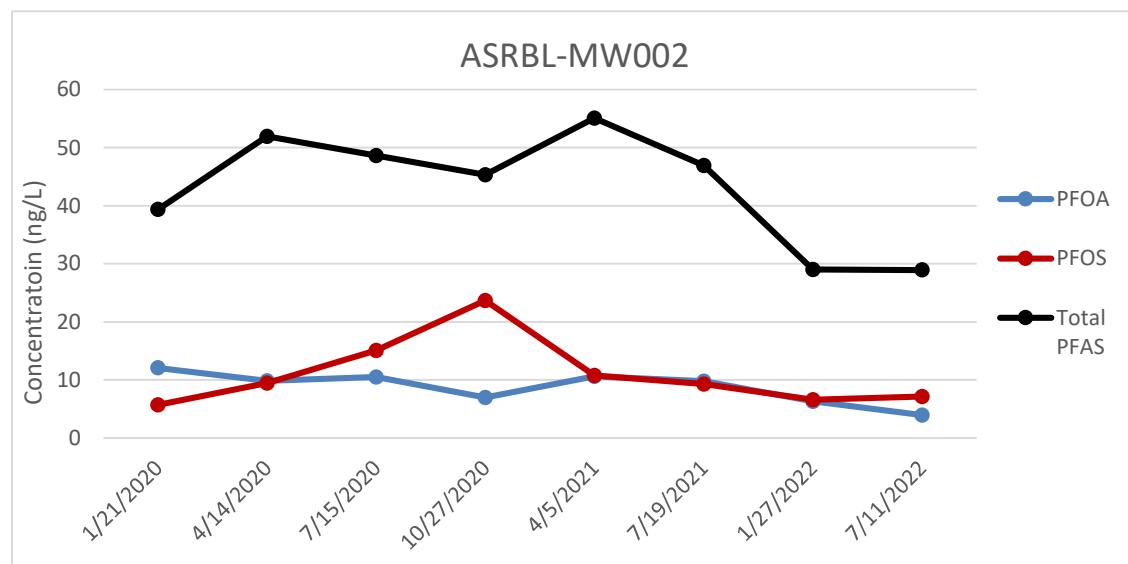
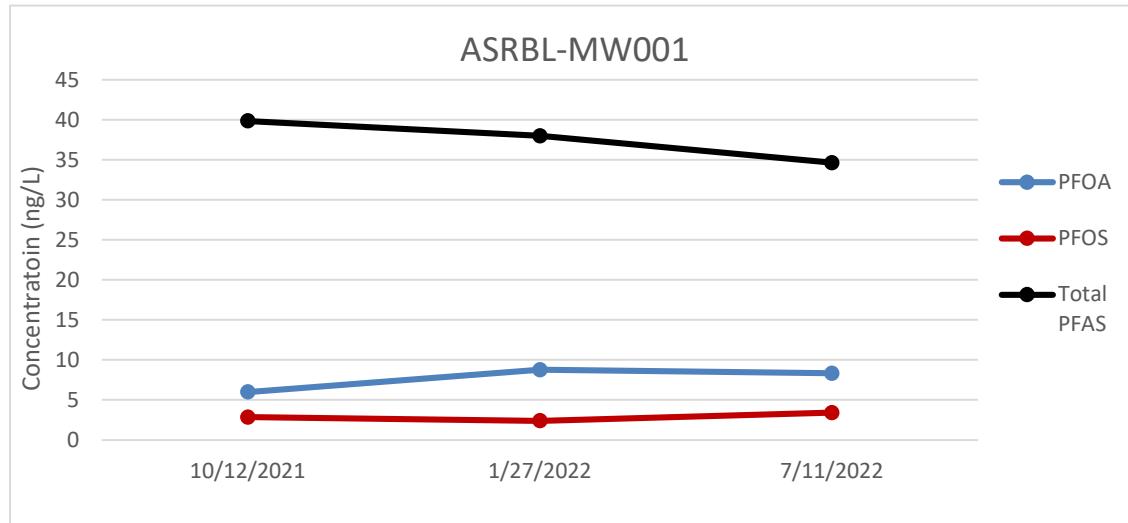
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Lab Qualifiers

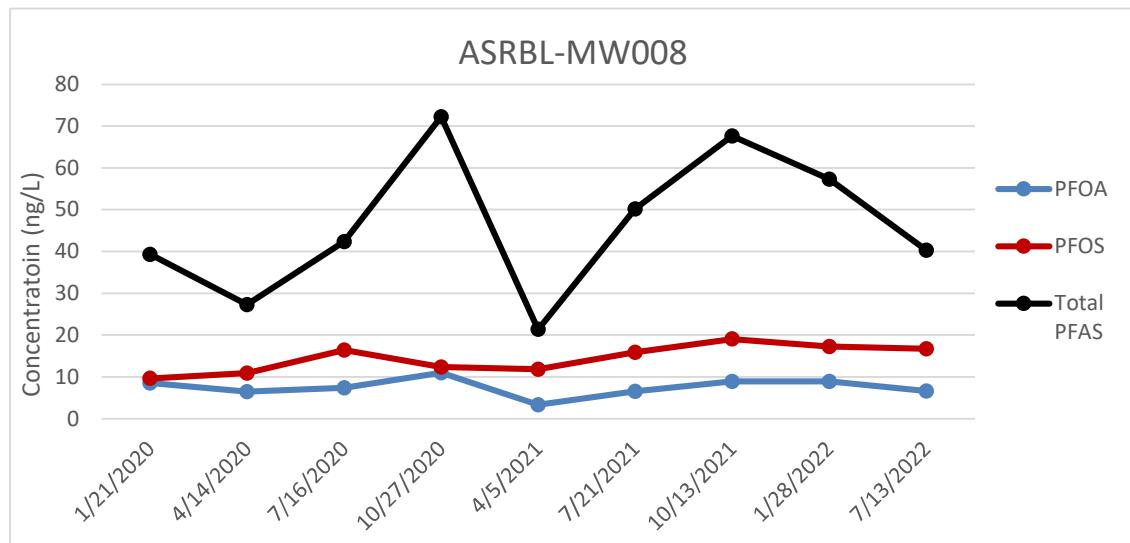
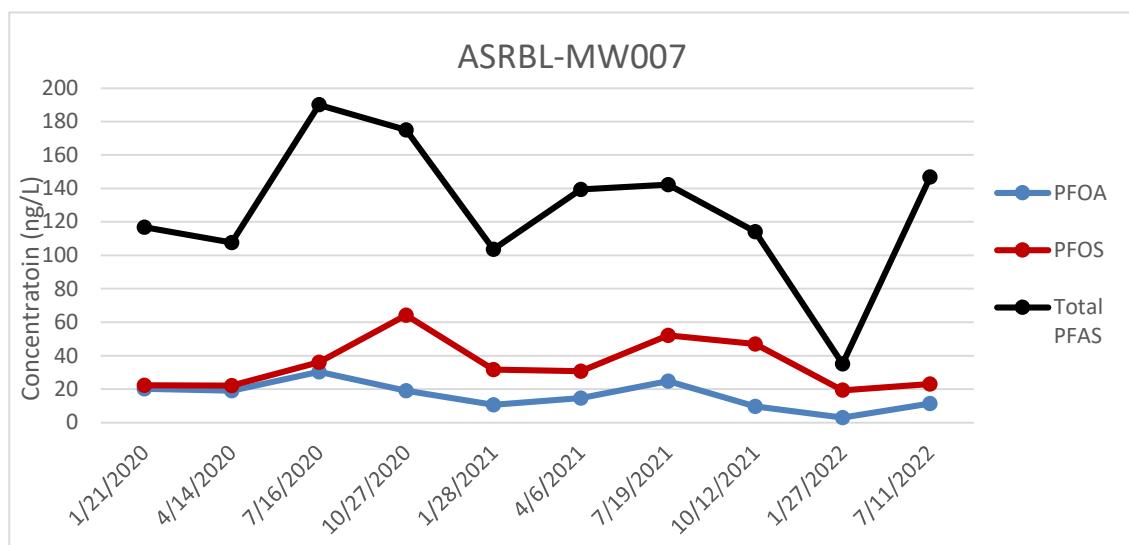
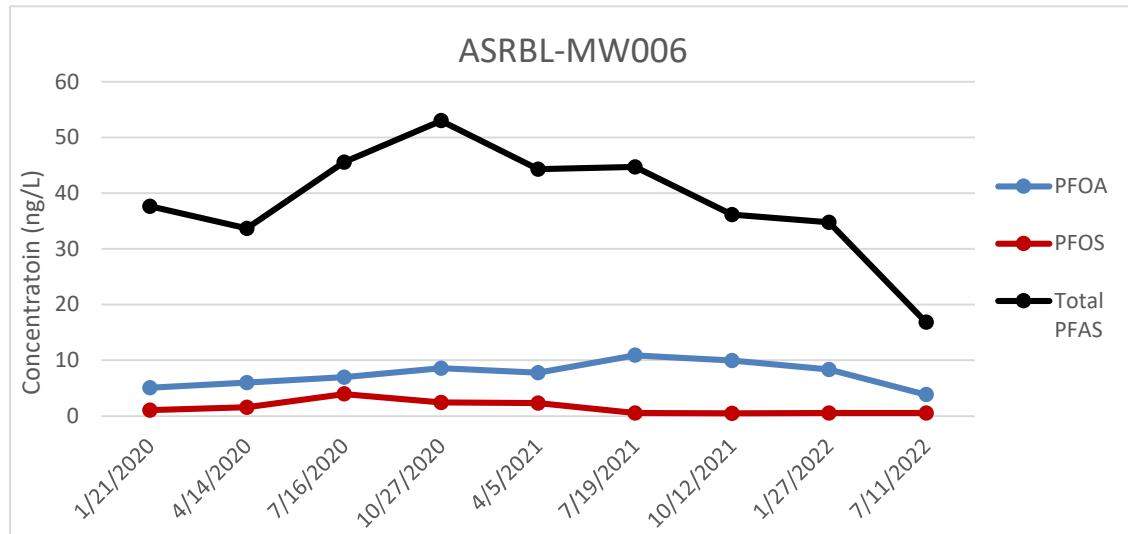
J = The amount detected is below the Reporting Limit/LOQ.

PFAS Concentration Trend Graphs

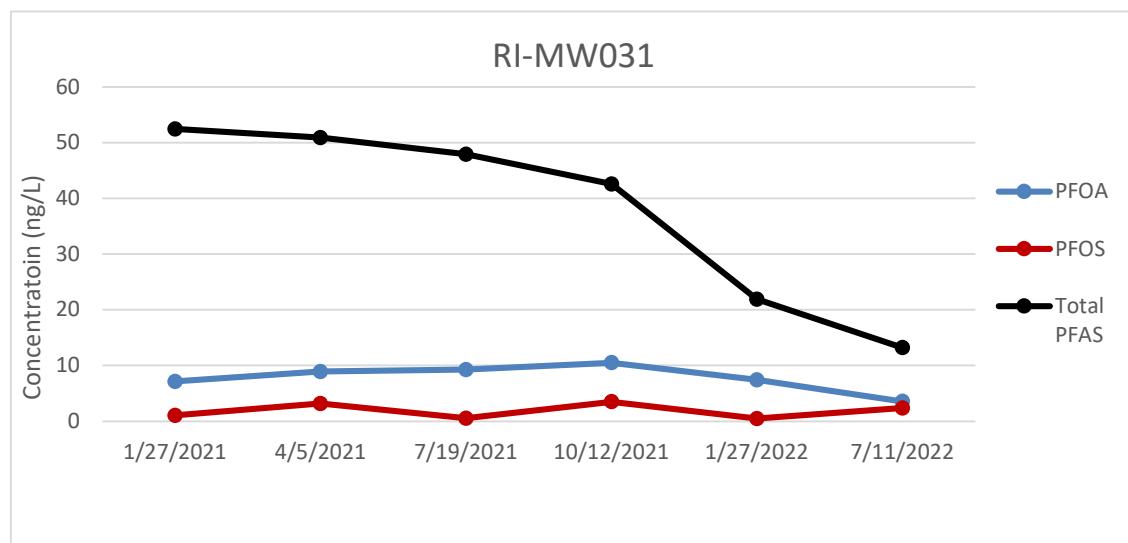
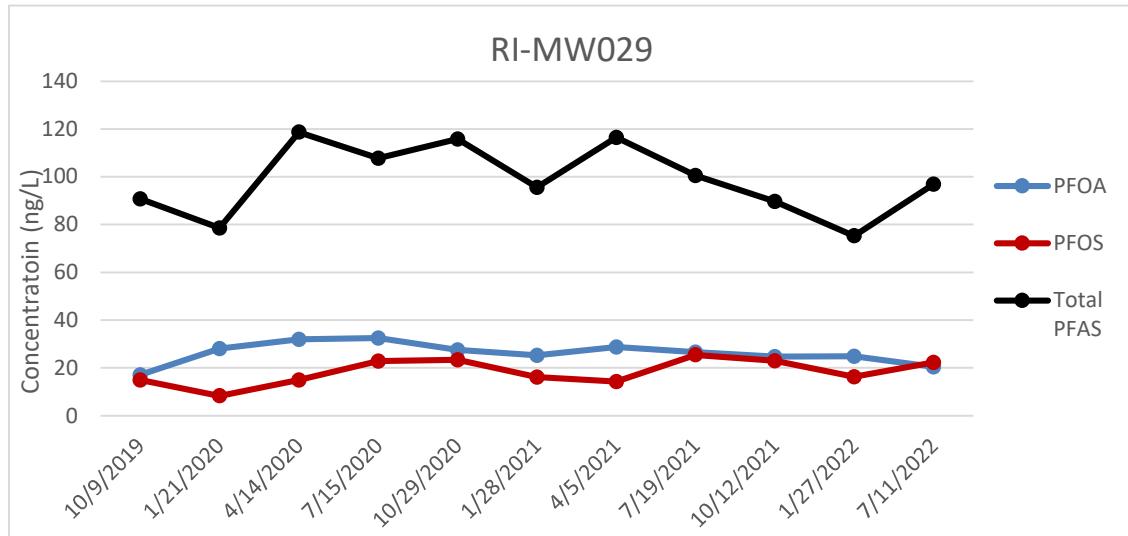
Au Sable River Boat Launch
PFAS Concentration Trend Graphs



Au Sable River Boat Launch
PFAS Concentration Trend Graphs



Au Sable River Boat Launch
PFAS Concentration Trend Graphs



Appendix A – Laboratory Analytical Reports



September 13, 2021

Vista Work Order No. 2107215

Mr. Jeremiah Morse
AECOM
3950 Sparks Drive SE
Grand Rapids, MI 49546

Dear Mr. Morse,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 23, 2021 under your Project Name 'Au Sable River Boat Launch'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Fox".

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2107215**Case Narrative****Sample Condition on Receipt:**

Eight aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:**PFAS Isotope Dilution Method**

The following samples contained particulate and were centrifuged prior to extraction:

<u>Laboratory ID</u>	<u>Sample Name</u>
2107215-02	GW2107191650RLF
2107215-03	GW2107191745RLF
2107215-06	GW2107191840RLF
2107215-08	FD2107191745RLF

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted outside of the hold time.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report



Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2107215-01	GW2107191625MLH	19-Jul-21 16:25	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-02	GW2107191650RLF	19-Jul-21 16:50	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-03	GW2107191745RLF	19-Jul-21 17:45	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-04	GW2107191730MLH	19-Jul-21 17:30	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-05	GW2107191835MLH	19-Jul-21 18:35	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-06	GW2107191840RLF	19-Jul-21 18:40	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-07	SW2107201610RLF	20-Jul-21 16:10	23-Jul-21 08:56	HDPE Bottle, 250 mL
2107215-08	FD2107191745RLF	19-Jul-21 17:45	23-Jul-21 08:56	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

Vista Project: 2107215

Client Project: Au Sable River Boat Launch

ANALYTICAL RESULTS

Sample ID: Method Blank								PFAS Isotope Dilution Method			
Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample:		B1H0063-BLK1		Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFBA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:33	1	
L-PFPeA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFBS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-4:2 FTS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFHxA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFPeS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
HFPO-DA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:33	1	
L-PFHxA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
ADONA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFHxS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Br-PFHxS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Total PFHxS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-6:2 FTS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFOA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Br-PFOA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Total PFOA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFHxS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFNA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFOSA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFOS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Br-PFOS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Total PFOS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
9Cl-PF3ONS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFDA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-8:2FTS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFNS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-MeFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Br-MeFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Total MeFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-EtFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Br-EtFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
Total EtFOSAA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFUuA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFDS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFDa	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFTrDA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	
L-PFteDA	ND	1.00	2.00	4.00		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1	

Sample ID: Method Blank								PFAS Isotope Dilution Method			
Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	B1H0063-BLK1	Column:	BEH C18				
Project:	Au Sable River Boat Launch										
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	98.0	25 - 150		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:33	1		
13C3-PFPcA	IS	62.1	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C3-PFBS	IS	55.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-4:2 FTS	IS	62.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFHxA	IS	57.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C4-PFHpA	IS	51.4	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C3-PFHxS	IS	59.6	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-6:2 FTS	IS	51.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFOA	IS	52.4	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C5-PFNA	IS	53.5	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C8-PFOSA	IS	29.1	10 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C8-PFOS	IS	63.3	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFDA	IS	49.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-8:2 FTS	IS	58.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
d3-MeFOSAA	IS	50.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
d5-EtFOSAA	IS	47.6	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFUnA	IS	50.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFDmA	IS	45.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C2-PFTeDA	IS	39.0	20 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 05:59	1		
13C3-HFPO-DA	IS	63.5	25 - 150		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:33	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: OPR
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:		B1H0063-BS1		Column:	BEH C18		
Analyte		Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA		36.4	40.0	91.0	65 - 135		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:44	1
L-PFPeA		38.8	40.0	97.0	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFBS		33.9	40.0	84.8	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-4:2 FTS		40.1	40.0	100	60 - 145		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFHxA		44.0	40.0	110	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFPeS		29.7	40.0	74.2	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
HFPO-DA		39.9	40.0	99.9	65 - 135		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:44	1
L-PFHxA		40.8	40.0	102	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
ADONA		36.5	40.0	91.3	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Total PFHxS		37.3	40.0	93.3	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-6:2 FTS		38.4	40.0	96.0	60 - 140		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Total PFOA		40.1	40.0	100	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFHxA		35.4	40.0	88.5	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFNA		39.6	40.0	98.9	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFOSA		36.5	40.0	91.2	65 - 140		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Total PFOS		38.8	40.0	96.9	65 - 140		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
9Cl-PF3ONS		38.3	40.0	95.8	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFDA		40.7	40.0	102	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-8:2FTS		40.0	40.0	100	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFNS		41.1	40.0	103	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Total MeFOSAA		37.6	40.0	94.1	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Total EtFOSAA		31.9	40.0	79.9	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFUnA		43.1	40.0	108	65 - 140		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFDS		37.9	40.0	94.8	50 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
11Cl-PF3OUdS		34.5	40.0	86.3	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFDaA		38.0	40.0	95.0	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFTrDA		35.8	40.0	89.4	60 - 140		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
L-PFTeDA		41.1	40.0	103	65 - 135		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
Labeled Standards		Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA		IS	109	25 - 150		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:44	1	
13C3-PFPeA		IS	67.6	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1	
13C3-PFBS		IS	62.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1	
13C2-4:2 FTS		IS	68.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1	
13C2-PFHxA		IS	58.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1	
13C4-PFHxA		IS	59.6	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1	

Sample ID: OPR
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch

Matrix: Aqueous

Laboratory Data

Lab Sample: B1H0063-BS1

Column: BEH C18

Labeled Standards

	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
--	------	-------	--------	------------	-------	-----------	-----------	----------	----------

13C3-PFHxS	IS	61.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-6:2 FTS	IS	54.5	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-PFOA	IS	55.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C5-PFNA	IS	58.2	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C8-PFOSA	IS	32.2	10 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C8-PFOS	IS	62.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-PFDA	IS	52.9	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-8:2 FTS	IS	66.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
d3-MeFOSAA	IS	55.8	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
d5-EtFOSAA	IS	54.6	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-PFUnA	IS	53.4	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-PFDmA	IS	51.7	25 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C2-PFTeDA	IS	45.2	20 - 150		B1H0063	26-Aug-21	0.250 L	05-Sep-21 06:10	1
13C3-HFPO-DA	IS	89.0	25 - 150		B1H0063	26-Aug-21	0.250 L	08-Sep-21 02:44	1

Sample ID: GW2107191625MLH
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 16:25 <th>Lab Sample:</th> <td>2107215-01</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-01	Column:	BEH C18				
Location:	RI-MW029(2.5-7.5)	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	7.48	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	08-Sep-21 02:54	1			
L-PFPeA	3.35	1.01	2.01	4.02	J	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFBs	9.93	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-4:2 FTS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFHxA	6.75	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFPeS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
HFPO-DA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	08-Sep-21 02:54	1			
L-PFHxA	5.13	1.01	2.01	4.02	Q	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
ADONA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFHxS	12.5	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Br-PFHxS	1.05	1.01	2.01	4.02	J	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Total PFHxS	13.6	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-6:2 FTS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFOA	24.5	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Br-PFOA	2.09	1.01	2.01	4.02	J	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Total PFOA	26.6	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFHxS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFNA	2.23	1.01	2.01	4.02	J, Q	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFOSA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFOS	10.1	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Br-PFOS	15.4	1.01	2.01	4.02	Q	B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Total PFOS	25.5	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
9Cl-PF3ONS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFDA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-8:2FTS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFNS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-MeFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Br-MeFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Total MeFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-EtFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Br-EtFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Total EtFOSAA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFUuN	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFDs	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
11Cl-PF3OUdS	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFDsA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
L-PFTrDA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			

Sample ID: GW2107191625MLH
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 16:25 <th>Lab Sample:</th> <td>2107215-01</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-01	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFTeDA	ND	1.01	2.01	4.02		B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
13C3-PFBA	IS	112	25 - 150			B1H0063	26-Aug-21	0.249 L	08-Sep-21 02:54	1			
13C3-PFPeA	IS	72.9	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C3-PFBS	IS	59.9	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-4:2 FTS	IS	69.2	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFHxA	IS	59.8	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C4-PFHpA	IS	55.8	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C3-PFHxS	IS	56.7	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-6:2 FTS	IS	64.0	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFOA	IS	54.8	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C5-PFNA	IS	56.7	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C8-PFOSA	IS	47.2	10 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C8-PFOS	IS	64.1	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFDA	IS	51.2	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-8:2 FTS	IS	69.0	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
d3-MeFOSAA	IS	63.9	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
d5-EtFOSAA	IS	60.6	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFUnA	IS	55.5	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFDaO	IS	56.6	25 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C2-PFTeDA	IS	53.3	20 - 150			B1H0063	26-Aug-21	0.249 L	05-Sep-21 06:20	1			
13C3-HFPO-DA	IS	63.0	25 - 150			B1H0063	26-Aug-21	0.249 L	08-Sep-21 02:54	1			

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2107191650RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 16:50 <th>Lab Sample:</th> <td>2107215-02</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-02	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	8.73	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	08-Sep-21 03:04	1			
L-PFPeA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFBs	2.67	1.02	2.04	4.08	J	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-4:2 FTS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFHxA	5.41	1.02	2.04	4.08	Q	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFPeS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
HFPO-DA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	08-Sep-21 03:04	1			
L-PFHpA	5.65	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
ADONA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFHxS	1.70	1.02	2.04	4.08	J	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Br-PFHxS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Total PFHxS	1.70	1.02	2.04	4.08	J	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-6:2 FTS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFOA	9.22	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Br-PFOA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Total PFOA	9.77	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFHpS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFNA	3.72	1.02	2.04	4.08	J	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFOSA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFOS	7.12	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Br-PFOS	2.16	1.02	2.04	4.08	J, Q	B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Total PFOS	9.28	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
9Cl-PF3ONS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFDA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-8:2FTS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFNS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-MeFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Br-MeFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Total MeFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-EtFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Br-EtFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
Total EtFOSAA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFUuN	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFDs	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
11Cl-PF3OUdS	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFDsO	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			
L-PFTrDA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1			

Sample ID: GW2107191650RLF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2107215-02<th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 16:50<th>Date Received:</th><td>23-Jul-21 08:56</td></td></td></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2107215-02<th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 16:50<th>Date Received:</th><td>23-Jul-21 08:56</td></td></td>	Lab Sample:	2107215-02 <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>19-Jul-21 16:50<th>Date Received:</th><td>23-Jul-21 08:56</td></td>	Column:	BEH C18	Date Collected:	19-Jul-21 16:50 <th>Date Received:</th> <td>23-Jul-21 08:56</td>	Date Received:	23-Jul-21 08:56
Project:	Au Sable River Boat Launch <th>Date Collected:</th> <td>19-Jul-21 16:50<th>Batch</th><td>2107215-02<th>Extracted</th><td>0.245 L</td><th>Samp Size</th><td>05-Sep-21 06:31</td><th>Analyzed</th><td>1</td></td></td>	Date Collected:	19-Jul-21 16:50 <th>Batch</th> <td>2107215-02<th>Extracted</th><td>0.245 L</td><th>Samp Size</th><td>05-Sep-21 06:31</td><th>Analyzed</th><td>1</td></td>	Batch	2107215-02 <th>Extracted</th> <td>0.245 L</td> <th>Samp Size</th> <td>05-Sep-21 06:31</td> <th>Analyzed</th> <td>1</td>	Extracted	0.245 L	Samp Size	05-Sep-21 06:31	Analyzed	1
Location:	ASRBL-MW002 <th>Qualifiers</th> <td></td> <th>Batch</th> <td>B1H0063</td> <th>Extracted</th> <td>0.245 L</td> <th>Samp Size</th> <td>05-Sep-21 06:31</td> <th>Analyzed</th> <td>1</td>	Qualifiers		Batch	B1H0063	Extracted	0.245 L	Samp Size	05-Sep-21 06:31	Analyzed	1
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.02	2.04	4.08		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	107	25 - 150		B1H0063	26-Aug-21	0.245 L	08-Sep-21 03:04	1		
13C3-PFPeA	IS	76.8	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C3-PFBS	IS	64.8	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-4:2 FTS	IS	68.2	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFHxA	IS	62.7	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C4-PFHpA	IS	57.2	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C3-PFHxS	IS	63.3	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-6:2 FTS	IS	66.6	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFOA	IS	58.4	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C5-PFNA	IS	56.6	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C8-PFOSA	IS	42.5	10 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C8-PFOS	IS	63.7	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFDA	IS	51.9	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-8:2 FTS	IS	71.4	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
d3-MeFOSAA	IS	56.1	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
d5-EtFOSAA	IS	54.2	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFUnA	IS	55.4	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFDmA	IS	51.0	25 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C2-PFTeDA	IS	45.8	20 - 150		B1H0063	26-Aug-21	0.245 L	05-Sep-21 06:31	1		
13C3-HFPO-DA	IS	91.5	25 - 150		B1H0063	26-Aug-21	0.245 L	08-Sep-21 03:04	1		

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2107191745RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 17:45 <th>Lab Sample:</th> <td>2107215-03</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-03	Column:	BEH C18				
Location:	ASRBL-MW005	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	11.0	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	08-Sep-21 03:15	1			
L-PFPeA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFBs	2.94	1.02	2.05	4.10	J	B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-4:2 FTS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFHxA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFPeS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
HFPO-DA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	08-Sep-21 03:15	1			
L-PFHpA	3.98	1.02	2.05	4.10	J, Q	B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
ADONA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFHxS	1.37	1.02	2.05	4.10	J	B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Br-PFHxS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Total PFHxS	1.37	1.02	2.05	4.10	J	B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-6:2 FTS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFOA	4.63	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Br-PFOA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Total PFOA	5.12	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFHpS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFNA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFOSA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFOS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Br-PFOS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Total PFOS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
9Cl-PF3ONS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFDA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-8:2FTS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFNS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-MeFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Br-MeFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Total MeFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-EtFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Br-EtFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
Total EtFOSAA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFUuN	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFDs	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
11Cl-PF3OUdS	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFDsA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			
L-PFTrDA	ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1			

Sample ID: GW2107191745RLF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2107215-03</td><th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 17:45<th>Date Received:</th><td>23-Jul-21 08:56</td></td></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2107215-03</td> <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>19-Jul-21 17:45<th>Date Received:</th><td>23-Jul-21 08:56</td></td>	Lab Sample:	2107215-03	Column:	BEH C18	Date Collected:	19-Jul-21 17:45 <th>Date Received:</th> <td>23-Jul-21 08:56</td>	Date Received:	23-Jul-21 08:56
Project:	Au Sable River Boat Launch	Date Collected:	19-Jul-21 17:45	Batch	B1H0063 <th>Extracted</th> <td>0.244 L</td> <th>Samp Size</th> <td>05-Sep-21 06:41</td> <th>Analyzed</th> <td>Dilution</td>	Extracted	0.244 L	Samp Size	05-Sep-21 06:41	Analyzed	Dilution
Location:	ASRBL-MW005	Qualifiers		Batch		Extracted		Samp Size		Analyzed	
Analyte	Type	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.02	2.05	4.10		B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	105		25 - 150			B1H0063	26-Aug-21	0.244 L	08-Sep-21 03:15	1
13C3-PFPeA	IS	68.9		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C3-PFBS	IS	61.6		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-4:2 FTS	IS	74.5		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFHxA	IS	60.7		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C4-PFHpA	IS	58.9		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C3-PFHxS	IS	60.0		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-6:2 FTS	IS	65.0		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFOA	IS	55.7		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C5-PFNA	IS	58.4		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C8-PFOSA	IS	38.9		10 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C8-PFOS	IS	63.0		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFDA	IS	52.0		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-8:2 FTS	IS	67.4		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
d3-MeFOSAA	IS	58.8		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
d5-EtFOSAA	IS	51.6		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFUnA	IS	52.8		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFDmA	IS	47.4		25 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C2-PFTeDA	IS	38.8		20 - 150			B1H0063	26-Aug-21	0.244 L	05-Sep-21 06:41	1
13C3-HFPO-DA	IS	83.7		25 - 150			B1H0063	26-Aug-21	0.244 L	08-Sep-21 03:15	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: GW2107191730MLH
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 17:30 <th>Lab Sample:</th> <td>2107215-04</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-04	Column:	BEH C18				
Location:	ASRBL-MW006	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	11.2	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:25	1			
L-PFPeA	3.26	1.01	2.02	4.03	J	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFBs	2.02	1.01	2.02	4.03	J	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-4:2 FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFHxA	4.38	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFPeS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
HFPO-DA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:25	1			
L-PFHxA	3.48	1.01	2.02	4.03	J	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
ADONA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFHxS	8.08	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Br-PFHxS	1.41	1.01	2.02	4.03	J	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Total PFHxS	9.49	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-6:2 FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFOA	9.92	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Br-PFOA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Total PFOA	10.9	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFHxS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFNA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFOSA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFOS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Br-PFOS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Total PFOS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
9Cl-PF3ONS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFDA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-8:2FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFNS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Br-MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Total MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Br-EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
Total EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFUuN	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFDs	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFDsA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			
L-PFTrDA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1			

Sample ID: GW2107191730MLH
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2107215-04<th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 17:30<th>Date Received:</th><td>23-Jul-21 08:56</td></td></td></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2107215-04<th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 17:30<th>Date Received:</th><td>23-Jul-21 08:56</td></td></td>	Lab Sample:	2107215-04 <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>19-Jul-21 17:30<th>Date Received:</th><td>23-Jul-21 08:56</td></td>	Column:	BEH C18	Date Collected:	19-Jul-21 17:30 <th>Date Received:</th> <td>23-Jul-21 08:56</td>	Date Received:	23-Jul-21 08:56
Project:	Au Sable River Boat Launch <th>Date Collected:</th> <td>19-Jul-21 17:30<th>Batch</th><td>Extracted</td><th>Samp Size</th><th>Analyzed</th><th>Dilution</th><th></th><th></th><th></th></td>	Date Collected:	19-Jul-21 17:30 <th>Batch</th> <td>Extracted</td> <th>Samp Size</th> <th>Analyzed</th> <th>Dilution</th> <th></th> <th></th> <th></th>	Batch	Extracted	Samp Size	Analyzed	Dilution			
Location:	ASRBL-MW006 <th>Qualifiers</th> <td></td> <th></th> <td></td> <td></td> <th></th> <th></th> <th></th> <th></th> <th></th>	Qualifiers									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	117	25 - 150		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:25	1		
13C3-PFPeA	IS	72.4	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C3-PFBS	IS	66.1	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-4:2 FTS	IS	67.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFHxA	IS	63.2	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C4-PFHpA	IS	57.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C3-PFHxS	IS	58.3	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-6:2 FTS	IS	57.4	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFOA	IS	53.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C5-PFNA	IS	56.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C8-PFOSA	IS	45.2	10 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C8-PFOS	IS	67.3	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFDA	IS	54.7	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-8:2 FTS	IS	69.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
d3-MeFOSAA	IS	59.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
d5-EtFOSAA	IS	60.1	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFUnA	IS	53.8	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFDmA	IS	55.0	25 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C2-PFTeDA	IS	51.2	20 - 150		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:22	1		
13C3-HFPO-DA	IS	105	25 - 150		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:25	1		

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2107191835MLH
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 18:35 <th>Lab Sample:</th> <td>2107215-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-05	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	5.21	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:35	1			
L-PFPeA	4.89	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFBs	17.6	1.01	2.02	4.03	Q	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-4:2 FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFHxA	11.6	1.01	2.02	4.03	Q	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFPeS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
HFPO-DA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:35	1			
L-PFHpA	4.18	1.01	2.02	4.03	Q	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
ADONA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFHxS	20.2	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Br-PFHxS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Total PFHxS	20.2	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-6:2 FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFOA	24.0	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Br-PFOA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Total PFOA	24.9	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFHpS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFNA	1.61	1.01	2.02	4.03	J	B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFOSA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFOS	34.5	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Br-PFOS	17.6	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Total PFOS	52.1	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
9Cl-PF3ONS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFDA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-8:2FTS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFNS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Br-MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Total MeFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Br-EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
Total EtFOSAA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFUuN	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFDs	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFDsO	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			
L-PFTrDA	ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1			

Sample ID: GW2107191835MLH
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch
 Location: ASRBL-MW007

Matrix: Aqueous
 Date Collected: 19-Jul-21 18:35

Laboratory Data

Lab Sample: 2107215-05
 Date Received: 23-Jul-21 08:56

Column: BEH C18

Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.01	2.02	4.03		B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	112		25 - 150			B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:35	1
13C3-PFPeA	IS	71.6		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C3-PFBS	IS	50.5		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-4:2 FTS	IS	62.6		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFHxA	IS	61.4		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C4-PFHpA	IS	57.0		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C3-PFHxS	IS	63.5		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-6:2 FTS	IS	55.0		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFOA	IS	56.2		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C5-PFNA	IS	56.8		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C8-PFOSA	IS	47.1		10 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C8-PFOS	IS	65.7		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFDA	IS	52.7		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-8:2 FTS	IS	64.6		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
d3-MeFOSAA	IS	61.5		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
d5-EtFOSAA	IS	58.6		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFUnA	IS	51.5		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFDmA	IS	55.6		25 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C2-PFTeDA	IS	52.5		20 - 150			B1H0063	26-Aug-21	0.248 L	05-Sep-21 07:33	1
13C3-HFPO-DA	IS	90.9		25 - 150			B1H0063	26-Aug-21	0.248 L	08-Sep-21 03:35	1

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2107191840RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 18:40 <th>Lab Sample:</th> <td>2107215-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-06	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Location:	RI-MW031(2-7)												
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	14.8	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	08-Sep-21 03:46	1			
L-PFPeA	6.63	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFBs	2.28	1.08	2.16	4.31	J	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-4:2 FTS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFHxA	6.38	1.08	2.16	4.31	Q	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFPeS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
HFPO-DA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	08-Sep-21 03:46	1			
L-PFHpA	4.60	1.08	2.16	4.31	Q	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
ADONA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFHxS	1.93	1.08	2.16	4.31	J	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Br-PFHxS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Total PFHxS	1.93	1.08	2.16	4.31	J	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-6:2 FTS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFOA	8.09	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Br-PFOA	1.18	1.08	2.16	4.31	J	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Total PFOA	9.27	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFHpS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFNA	2.04	1.08	2.16	4.31	J	B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFOSA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFOS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Br-PFOS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Total PFOS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
9Cl-PF3ONS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFDA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-8:2FTS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFNS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-MeFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Br-MeFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Total MeFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-EtFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Br-EtFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Total EtFOSAA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFUuN	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFDs	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
11Cl-PF3OUdS	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFDsA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
L-PFTrDA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			

Sample ID: GW2107191840RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 18:40 <th>Lab Sample:</th> <td>2107215-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-06	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Location:	RI-MW031(2-7)												
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFTeDA	ND	1.08	2.16	4.31		B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
13C3-PFBA	IS	111	25 - 150			B1H0063	26-Aug-21	0.232 L	08-Sep-21 03:46	1			
13C3-PFPeA	IS	77.5	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C3-PFBS	IS	64.1	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-4:2 FTS	IS	74.3	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFHxA	IS	63.2	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C4-PFHpA	IS	61.4	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C3-PFHxS	IS	54.9	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-6:2 FTS	IS	60.1	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFOA	IS	55.7	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C5-PFNA	IS	58.1	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C8-PFOSA	IS	40.7	10 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C8-PFOS	IS	65.8	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFDA	IS	51.1	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-8:2 FTS	IS	68.5	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
d3-MeFOSAA	IS	51.0	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
d5-EtFOSAA	IS	41.2	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFUnA	IS	48.3	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFDmA	IS	37.0	25 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C2-PFTeDA	IS	27.9	20 - 150			B1H0063	26-Aug-21	0.232 L	05-Sep-21 07:43	1			
13C3-HFPO-DA	IS	78.4	25 - 150			B1H0063	26-Aug-21	0.232 L	08-Sep-21 03:46	1			

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: SW2107201610RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	20-Jul-21 16:10 <th>Lab Sample:</th> <td>2107215-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-07	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	08-Sep-21 03:56	1			
L-PFPeA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFBs	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-4:2 FTS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFHxA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFPeS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
HFPO-DA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	08-Sep-21 03:56	1			
L-PFHpA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
ADONA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFHxS	1.81	1.05	2.09	4.19	J	B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Br-PFHxS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Total PFHxS	1.81	1.05	2.09	4.19	J	B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-6:2 FTS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFOA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Br-PFOA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Total PFOA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFHpS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFNA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFOSA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFOS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Br-PFOS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Total PFOS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
9Cl-PF3ONS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFDA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-8:2FTS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFNS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-MeFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Br-MeFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Total MeFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-EtFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Br-EtFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
Total EtFOSAA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFUuN	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFDs	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
11Cl-PF3OUdS	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFDsA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			
L-PFTrDA	ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1			

Sample ID: SW2107201610RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	20-Jul-21 16:10 <th>Lab Sample:</th> <td>2107215-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-07	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	23-Jul-21 08:56										
Location:	ASRBL-SW005												
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
L-PFTeDA		ND	1.05	2.09	4.19		B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	105		25 - 150			B1H0063	26-Aug-21	0.239 L	08-Sep-21 03:56	1		
13C3-PFPeA	IS	72.1		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C3-PFBS	IS	53.8		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-4:2 FTS	IS	73.6		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFHxA	IS	64.2		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C4-PFHpA	IS	55.9		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C3-PFHxS	IS	56.9		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-6:2 FTS	IS	53.1		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFOA	IS	57.6		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C5-PFNA	IS	55.6		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C8-PFOSA	IS	51.6		10 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C8-PFOS	IS	67.1		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFDA	IS	52.7		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-8:2 FTS	IS	68.5		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
d3-MeFOSAA	IS	61.1		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
d5-EtFOSAA	IS	59.0		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFUnA	IS	57.7		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFDmA	IS	54.5		25 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C2-PFTeDA	IS	48.2		20 - 150			B1H0063	26-Aug-21	0.239 L	05-Sep-21 07:54	1		
13C3-HFPO-DA	IS	65.2		25 - 150			B1H0063	26-Aug-21	0.239 L	08-Sep-21 03:56	1		

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: FD2107191745RLF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	19-Jul-21 17:45 <th>Lab Sample:</th> <td>2107215-08</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2107215-08	Column:	BEH C18				
Location:	ASRBL-MW005	Date Received:	23-Jul-21 08:56										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	9.30	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	08-Sep-21 04:38	1			
L-PFPeA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFBs	1.93	1.04	2.08	4.17	J	B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-4:2 FTS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFHxA	4.17	1.04	2.08	4.17	Q	B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFPeS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
HFPO-DA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	08-Sep-21 04:38	1			
L-PFHpA	4.47	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
ADONA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFHxS	2.66	1.04	2.08	4.17	J, Q	B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Br-PFHxS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Total PFHxS	2.66	1.04	2.08	4.17	J	B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-6:2 FTS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFOA	4.82	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Br-PFOA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Total PFOA	5.11	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFHpS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFNA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFOSA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFOS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Br-PFOS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Total PFOS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
9Cl-PF3ONS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFDA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-8:2FTS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFNS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-MeFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Br-MeFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Total MeFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-EtFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Br-EtFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
Total EtFOSAA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFUuN	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFDs	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
11Cl-PF3OUdS	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFDsA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			
L-PFTrDA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1			

Sample ID: FD2107191745RLF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2107215-08</td><th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>19-Jul-21 17:45</td><th>Date Received:</th><td>23-Jul-21 08:56</td></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2107215-08</td> <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>19-Jul-21 17:45</td> <th>Date Received:</th> <td>23-Jul-21 08:56</td>	Lab Sample:	2107215-08	Column:	BEH C18	Date Collected:	19-Jul-21 17:45	Date Received:	23-Jul-21 08:56
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.04	2.08	4.17		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	102	25 - 150		B1H0063	26-Aug-21	0.240 L	08-Sep-21 04:38	1		
13C3-PFPeA	IS	71.8	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C3-PFBS	IS	58.4	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-4:2 FTS	IS	67.5	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFHxA	IS	59.5	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C4-PFHxA	IS	51.7	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C3-PFHxS	IS	59.9	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-6:2 FTS	IS	56.8	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFOA	IS	52.5	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C5-PFNA	IS	51.7	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C8-PFOSA	IS	36.2	10 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C8-PFOS	IS	55.3	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFDA	IS	49.4	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-8:2 FTS	IS	65.5	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
d3-MeFOSAA	IS	53.1	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
d5-EtFOSAA	IS	49.3	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFUnA	IS	46.5	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFDmA	IS	43.0	25 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C2-PFTeDA	IS	40.4	20 - 150		B1H0063	26-Aug-21	0.240 L	05-Sep-21 08:04	1		
13C3-HFPO-DA	IS	85.4	25 - 150		B1H0063	26-Aug-21	0.240 L	08-Sep-21 04:38	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses $\frac{1}{2}$ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN OF CUSTODY

For Laboratory Use Only

 Work Order #: 2107215 Temp: 08/10 °C
 Storage ID: R-13, WR2 Storage Secured: Yes No
Project ID: Au Sable River Boat LaunchPO#: 60610670.01

Sampler:

Ron Friend / Madelyn Flanton
 (name)

TAT Standard: 21 days

Rush (surcharge may apply)

 14 days

 7 days Specify: _____

Invoice to: Name <u>Amanda Armbruster</u>	Company <u>EGLE - Bay City District</u>	Address <u>401 Ketchum Street Suite B</u>	City <u>Bay City</u>	State <u>MI 48708</u>	Ph# <u>(989) 894-6242</u>	Fax#
--	--	--	-------------------------	--------------------------	------------------------------	------

Relinquished by (printed name and signature) <u>Ron Friend</u>	Date <u>1/22/21</u>	Time <u>1700</u>	Received by (printed name and signature) <u>Karen Y. Aush Jr.</u>	Date <u>07/22/21</u>	Time <u>08:56</u>
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Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
--	------	------	--	------	------

 SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106
ATTN: Jennifer MillerMethod of Shipment:
FEDEX

Tracking No.: _____

Add Analysis(es) Requested

Container(s)

Mod. EPA
Method 537EPA Method
537(DW only)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6 537 List: 14	Full List of 24	EGLE List or 28	Branch and Linear	PFOA/PFOS UCMR3 PFAS List 6 PFAS List: 14	Comments
GW2107191625MLH	7/19/21	1625	R1-MW029(2-5-7.5)	2	P	AQ					x		
GW2107191650RLF	7/19/21	1650	ASRBL-MW002	2	P	AQ					x		
GW2107191745RLF	7/19/21	1745	ASRBL-MW005	2	P	AQ					x		
GW2107191730MLH	7/19/21	1730	ASRBL-MW006	2	P	AQ					x		
GW2107191835MLH	7/19/21	1835	ASRBL-MW007	2	P	AQ					x		
GW2107191840RLF	7/19/21	1840	R1-MW029	2	P	AQ					x		R1-MW031 (2-7) (location)
SW2107201610RLF	7/20/21	1610	ASRBL-SW005	2	P	AQ					x		
GW2107191745RLF	7/19/21	1745	ASRBL-MW005	2	P	AQ					x		
GW2107210655MLH	7/21/21	0655	ASRBL-MW008	2	P	AQ					x		

Special Instructions/Comments: Send Results and Acknowledgements to:

 (2) per client confirmed as a mistaken duplicate entry.
 Omitting sample. 06/08/21 Sample on Work# 2107214

Jeremiah.Morse@aecom.com

ARMBRUSTER@michigan.gov

SEND DOCUMENTATION AND RESULTS TO:
Name: Amanda ArmbrusterCompany: EGLE - Bay City District OfficeAddress: 401 Ketchum St. Suite BCity: Bay City State: MI Zip: 48708Phone: (989) 894-6242 Fax: _____Email: armbruster@michigan.gov

Container Types: P= HDPE, PJ= HDPE Jar

O = Other: _____

Bottle Preservation Type: T = Thiosulfate,

TZ = Trizma: _____ TZ _____

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,

SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other:



Sample Log-In Checklist

Page # 1 of 2

Vista Work Order #: 2107215 TAT STJ

Samples Arrival:	Date/Time <u>07/27/21, 08:56</u>		Initials: <u>KS</u>		Location: <u>W8-2</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GLS	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	Blue Ice		<input type="checkbox"/> Techni Ice		<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None
Temp °C: 0.9 (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N				Thermometer ID: <u>IR-4</u>		
Temp °C: 0.8 (corrected)							

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input type="checkbox"/>		
Airbill <u>10f2</u> Trk# <u>274334872524</u>	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input type="checkbox"/>		
Shipping Container <input type="checkbox"/> Vista <input type="checkbox"/> Client <input checked="" type="checkbox"/> Retain <input type="checkbox"/> Return <input type="checkbox"/> Dispose			
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>	
Chain of Custody / Sample Documentation Complete?			<input checked="" type="checkbox"/>
Holding Time Acceptable?			<input type="checkbox"/>
Logged In: <u>07/27/21, 11:19</u>	Initials: <u>KS</u>	Location: <u>R-13, W8-2</u>	Shelf/Rack: <u>A-4, F-4</u>
COC Anomaly/Sample Acceptance Form completed? <input checked="" type="checkbox"/> ✓ <input checked="" type="checkbox"/>			

Comments:

MWS 08/09/21



Sample Log-In Checklist

Page # 2 of 2

Vista Work Order #: 2107215 TAT 572

Samples Arrival:	Date/Time <u>07/23/21</u> <u>08:56</u>		Initials: <u>JK</u>		Location: <u>W2-2</u>	
Delivered By:	<input checked="" type="checkbox"/> FedEx	UPS	On Trac	GLS	DHL	Hand Delivered
Preservation:	<input checked="" type="checkbox"/> Ice	Blue Ice		Techni Ice	Dry Ice	None
Temp °C: <u>1.1</u> (uncorrected)	Probe used: Y <input checked="" type="checkbox"/> N			Thermometer ID: <u>IR-4</u>		
Temp °C: <u>1.0</u> (corrected)						

	YES	NO	NA				
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>						
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>						
Airbill <u>20f2</u> Trk # <u>7743 3487 7651</u>	<input checked="" type="checkbox"/>						
Shipping Documentation Present?	<input checked="" type="checkbox"/>						
Shipping Container	Vista	<input checked="" type="checkbox"/> Client	Retain	<input checked="" type="checkbox"/> Return	Dispose		
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>						
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>						
Holding Time Acceptable?	<input checked="" type="checkbox"/>						
Logged In:	Date/Time <u>07/23/21</u> <u>11:14</u>	Initials: <u>JK</u>	Location: <u>R13, W2-2</u>				
Shelf/Rack: <u>A-4, F-4</u>							
COC Anomaly/Sample Acceptance Form completed?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

WS 08/01/21

CoC/Label Reconciliation Report WO# 2107215

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
①	2107215-01 A GW2107191625MLH	RI-MW029(2.5-7.5)	19-Jul-21 16:25	HDPE Bottle, 250 mL	Aqueous	
①	2107215-01 B GW2107191625MLH	RI-MW029(2.5-7.5)	19-Jul-21 16:25	HDPE Bottle, 250 mL	Aqueous	
①	2107215-02 A GW2107191650RLF	ASRBL-MW002	19-Jul-21 16:50	HDPE Bottle, 250 mL	Aqueous	
①	2107215-02 B GW2107191650RLF	ASRBL-MW002	19-Jul-21 16:50	HDPE Bottle, 250 mL	Aqueous	
①	2107215-03 A GW2107191745RLF	ASRBL-MW005	19-Jul-21 17:45	HDPE Bottle, 250 mL	Aqueous	
①	2107215-03 B GW2107191745RLF	ASRBL-MW005	19-Jul-21 17:45	HDPE Bottle, 250 mL	Aqueous	
①	2107215-04 A GW2107191730MLH	ASRBL-MW006	19-Jul-21 17:30	HDPE Bottle, 250 mL	Aqueous	
①	2107215-04 B GW2107191730MLH	ASRBL-MW006	19-Jul-21 17:30	HDPE Bottle, 250 mL	Aqueous	
①	2107215-05 A GW2107191835MLH	ASRBL-MW007	19-Jul-21 18:35	HDPE Bottle, 250 mL	Aqueous	
①	2107215-05 B GW2107191835MLH	ASRBL-MW007	19-Jul-21 18:35	HDPE Bottle, 250 mL	Aqueous	
②	2107215-06 A GW2107191840RLF	RI-MW031(2-7)	19-Jul-21 18:40	HDPE Bottle, 250 mL	Aqueous	
②	2107215-06 B GW2107191840RLF	RI-MW031(2-7)	19-Jul-21 18:40	HDPE Bottle, 250 mL	Aqueous	
①	2107215-07 A SW2107201610RLF	ASRBL-SW005	20-Jul-21 16:10	HDPE Bottle, 250 mL	Aqueous	
①	2107215-07 B SW2107201610RLF	ASRBL-SW005	20-Jul-21 16:10	HDPE Bottle, 250 mL	Aqueous	
②	2107215-08 A FD2107191745RLF	ASRBL-MW005	19-Jul-21 17:45	HDPE Bottle, 250 mL	Aqueous	
②	2107215-08 B FD2107191745RLF	ASRBL-MW005	19-Jul-21 17:45	HDPE Bottle, 250 mL	Aqueous	
2107215-09 A GW210710655MLH	ASRBL-MW008	21-Jul-21 06:55	HDPE Bottle, 250 mL	Aqueous		
2107215-09 B GW210710655MLH	ASRBL-MW008	21-Jul-21 06:55	HDPE Bottle, 250 mL	Aqueous		

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?		✓	✓
Adequate Sample Volume?	/		
Container Type Appropriate for Analysis(es)	/		

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 None Other All

Verified by/Date: # 07/24/21

Comments:
 ① No time on sample label. Reconciled by sample ID and Date
 * ② Sample listed on COC, sample not present during reconciliation
 ③ Sample ID updated to reflect "GW2107210655MLH" by KA 07/24/21
 ① = cooler 1
 ② = cooler 2

* per client, confirmed as a mistaken duplicate entry. Omitting sample, # 07/24/21
 Sample on WO # 2107214



November 12, 2021

Vista Work Order No. 2110156

Mr. Jeremiah Morse
AECOM
3950 Sparks Drive SE
Grand Rapids, MI 49546

Dear Mr. Morse,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on October 20, 2021 under your Project Name 'Au Sable River Boat Launch'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Fox".

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2110156**Case Narrative****Sample Condition on Receipt:**

Nine aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:**PFAS Isotope Dilution Method**

Samples "GW2110121610BA" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report



Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2110156-01	GW2110121515BA	12-Oct-21 15:15	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-02	GW2110121535RF	12-Oct-21 15:35	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-03	GW2110121610BA	12-Oct-21 16:10	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-04	GW2110121630RF	12-Oct-21 16:30	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-05	GW2110121715RF	12-Oct-21 17:15	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-06	GW2110121715BA	12-Oct-21 17:15	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-07	GW2110131510RF	13-Oct-21 15:10	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-08	FD2110131515RF	13-Oct-21 15:15	20-Oct-21 09:58	HDPE Bottle, 250 mL
2110156-09	SW2110140855RF	14-Oct-21 08:55	20-Oct-21 09:58	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: Method Blank								PFAS Isotope Dilution Method			
Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample:		B1J0168-BLK1		Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFBA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFPeA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFBs	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-4:2 FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFHxA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFPeS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
HFPO-DA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFHxP	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
ADONA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFHxS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Br-PFHxS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Total PFHxS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-6:2 FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFOA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Br-PFOA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Total PFOA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFHxP	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFNA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFOSA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Br-PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Total PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
9Cl-PF3ONS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-8:2FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFNS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Br-MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Total MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Br-EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
Total EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFUuA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFDS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFDooA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFTrDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
L-PFTEDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	

Sample ID: Method Blank							PFAS Isotope Dilution Method			
Client Data				Laboratory Data						
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	B1J0168-BLK1	Column:	BEH C18			
Project:	Au Sable River Boat Launch									
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	84.1	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C3-PFPcA	IS	82.7	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C3-PFBS	IS	94.5	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C3-HFPO-DA	IS	92.7	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-4:2 FTS	IS	88.3	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFHxA	IS	83.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C4-PFHxA	IS	89.3	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C3-PFHxS	IS	82.1	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-6:2 FTS	IS	88.6	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFOA	IS	79.4	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C5-PFNA	IS	82.1	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C8-PFOSA	IS	33.5	10 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C8-PFOS	IS	79.2	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFDA	IS	89.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-8:2 FTS	IS	81.0	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
d3-MeFOSAA	IS	73.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
d5-EtFOSAA	IS	70.6	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFUnA	IS	73.2	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFDmA	IS	70.0	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	
13C2-PFTeDA	IS	64.5	20 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:51	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: OPR
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous		Lab Sample:	B1J0168-BS1		Column:	BEH C18		
Analyte		Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA		41.4	40.0	104	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFPeA		39.1	40.0	97.7	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFBS		33.4	40.0	83.6	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-4:2 FTS		41.5	40.0	104	60 - 145		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFHxA		40.9	40.0	102	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFPeS		38.7	40.0	96.8	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
HFPO-DA		34.7	40.0	86.7	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFHxA		36.3	40.0	90.8	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
ADONA		36.4	40.0	91.0	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Total PFHxS		43.0	40.0	107	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-6:2 FTS		40.7	40.0	102	60 - 140		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Total PFOA		39.8	40.0	99.4	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFHxA		37.1	40.0	92.7	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFNA		33.8	40.0	84.5	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFOSA		47.7	40.0	119	65 - 140		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Total PFOS		34.4	40.0	86.1	65 - 140		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
9Cl-PF3ONS		35.2	40.0	88.1	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFDA		41.9	40.0	105	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-8:2FTS		39.6	40.0	99.1	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFNS		38.3	40.0	95.8	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Total MeFOSAA		36.2	40.0	90.4	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Total EtFOSAA		41.1	40.0	103	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFUnA		39.0	40.0	97.4	65 - 140		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFDS		32.7	40.0	81.8	50 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
11Cl-PF3OUdS		41.3	40.0	103	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFDaA		39.2	40.0	98.0	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFTrDA		34.1	40.0	85.2	60 - 140		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
L-PFTeDA		36.2	40.0	90.4	65 - 135		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
Labeled Standards		Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA		IS	80.9	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	
13C3-PFPeA		IS	83.9	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	
13C3-PFBS		IS	98.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	
13C3-HFPO-DA		IS	79.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	
13C2-4:2 FTS		IS	85.5	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	
13C2-PFHxA		IS	82.6	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1	

Sample ID: OPR
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch

Matrix: Aqueous

Laboratory Data

Lab Sample: B1J0168-BS1

Column: BEH C18

Labeled Standards

	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFHpA	IS	90.4	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C3-PFHxS	IS	87.2	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-6:2 FTS	IS	84.6	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-PFOA	IS	81.8	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C5-PFNA	IS	89.7	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C8-PFOSA	IS	23.9	10 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C8-PFOS	IS	86.7	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-PFDA	IS	83.5	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-8:2 FTS	IS	83.5	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
d3-MeFOSAA	IS	70.2	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
d5-EtFOSAA	IS	64.5	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-PFUnA	IS	74.2	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-PFDaA	IS	71.0	25 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1
13C2-PFTeDA	IS	67.7	20 - 150		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:01	1

Sample ID: GW2110121515BA
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 15:15	Lab Sample:	2110156-01	Column:	BEH C18				
Location:	ASRBL-MW001	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	9.79	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFPeA	4.62	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFBs	2.33	0.985	1.97	3.94	J	B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-4:2 FTS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFHxA	4.91	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFPeS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
HFPO-DA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFHpA	2.99	0.985	1.97	3.94	J	B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
ADONA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFHxS	5.53	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Br-PFHxS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Total PFHxS	6.37	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-6:2 FTS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFOA	5.74	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Br-PFOA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Total PFOA	5.99	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFHpS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFNA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFOSA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFOS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Br-PFOS	2.53	0.985	1.97	3.94	J	B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Total PFOS	2.86	0.985	1.97	3.94	J	B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
9Cl-PF3ONS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFDA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-8:2FTS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFNS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-MeFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Br-MeFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Total MeFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-EtFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Br-EtFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
Total EtFOSAA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFUuN	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFDs	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
11Cl-PF3OUdS	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFDa	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			
L-PFTrDA	ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1			

Sample ID: GW2110121515BA
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample: 2110156-01				Column: BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 15:15	Date Received: 20-Oct-21 09:58							
Location:	ASRBL-MW001										
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	0.985	1.97	3.94		B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	77.0		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C3-PFPeA	IS	82.8		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C3-PFBS	IS	99.0		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C3-HFPO-DA	IS	83.1		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-4:2 FTS	IS	84.6		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFHxA	IS	85.8		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C4-PFHxA	IS	88.0		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C3-PFHxS	IS	85.1		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-6:2 FTS	IS	85.2		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFOA	IS	79.7		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C5-PFNA	IS	85.9		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C8-PFOSA	IS	57.1		10 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C8-PFOS	IS	82.8		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFDA	IS	87.1		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-8:2 FTS	IS	90.5		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
d3-MeFOSAA	IS	79.3		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
d5-EtFOSAA	IS	82.6		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFUnA	IS	77.0		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFDaA	IS	82.4		25 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1
13C2-PFTeDA	IS	79.5		20 - 150			B1J0168	25-Oct-21	0.254 L	07-Nov-21 01:12	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: GW2110121535RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 15:35 <th>Lab Sample:</th> <td>2110156-02</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2110156-02	Column:	BEH C18				
Location:	ASRBL-MW002	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.80	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFPeA	2.53	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFBs	2.10	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-4:2 FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFHxA	3.29	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFPeS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
HFPO-DA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFHxA	2.87	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
ADONA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFHxS	1.71	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Br-PFHxS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Total PFHxS	1.74	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-6:2 FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFOA	9.48	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Br-PFOA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Total PFOA	9.56	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFHxS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFNA	2.81	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFOS	9.32	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Br-PFOS	4.10	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Total PFOS	13.4	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
9Cl-PF3ONS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFDA	1.05	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-8:2FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFNS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Br-MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Total MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Br-EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
Total EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFUuN	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFDs	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFDsA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			
L-PFTrDA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1			

Sample ID: GW2110121535RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2110156-02		Column:	BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 15:35	Date Received:	20-Oct-21 09:58						
Location:	ASRBL-MW002										
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	75.2		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C3-PFPeA	IS	85.4		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C3-PFBS	IS	97.1		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C3-HFPO-DA	IS	86.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-4:2 FTS	IS	80.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFHxA	IS	85.1		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C4-PFHxA	IS	89.9		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C3-PFHxS	IS	81.3		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-6:2 FTS	IS	86.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFOA	IS	78.9		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C5-PFNA	IS	92.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C8-PFOSA	IS	54.0		10 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C8-PFOS	IS	76.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFDA	IS	89.2		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-8:2 FTS	IS	79.2		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
d3-MeFOSAA	IS	87.7		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
d5-EtFOSAA	IS	80.6		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFUnA	IS	81.2		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFDaA	IS	80.9		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1
13C2-PFTeDA	IS	66.7		20 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 01:22	1

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2110121610BA
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 16:10	Lab Sample:	2110156-03	Column:	BEH C18				
Location:	RI-MW031(2-7)	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	8.95	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFPeA	3.76	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFBs	2.23	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-4:2 FTS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFHxA	5.84	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFPeS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
HFPO-DA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFHpA	4.51	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
ADONA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFHxS	1.60	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Br-PFHxS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Total PFHxS	1.60	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-6:2 FTS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFOA	9.52	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Br-PFOA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Total PFOA	10.5	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFHpS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFNA	1.66	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFOSA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFOS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Br-PFOS	3.15	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Total PFOS	3.51	0.997	1.99	3.99	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
9Cl-PF3ONS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFDA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-8:2FTS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFNS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-MeFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Br-MeFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Total MeFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-EtFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Br-EtFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
Total EtFOSAA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFUuN	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFDs	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
11Cl-PF3OUdS	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFDsA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			
L-PFTrDA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1			

Sample ID: GW2110121610BA
PFAS Isotope Dilution Method

Client Data				Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2110156-03	Column:	BEH C18								
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 16:10	Date Received:	20-Oct-21 09:58										
Location:	RI-MW031(2-7)														
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
L-PFTeDA	ND	0.997	1.99	3.99		B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution					
13C3-PFBA	IS	70.9	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C3-PFPeA	IS	84.9	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C3-PFBS	IS	89.7	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C3-HFPO-DA	IS	103	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-4:2 FTS	IS	91.5	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFHxA	IS	85.9	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C4-PFHxA	IS	91.6	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C3-PFHxS	IS	89.6	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-6:2 FTS	IS	94.2	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFOA	IS	82.2	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C5-PFNA	IS	84.3	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C8-PFOSA	IS	57.6	10 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C8-PFOS	IS	84.3	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFDA	IS	81.5	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-8:2 FTS	IS	82.4	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
d3-MeFOSAA	IS	74.4	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
d5-EtFOSAA	IS	76.7	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFUnA	IS	78.0	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFDaA	IS	78.6	25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					
13C2-PFTeDA	IS	78.2	20 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 01:32	1					

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2110121630RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 16:30 <th>Lab Sample:</th> <td>2110156-04</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2110156-04	Column:	BEH C18				
Location:	ASRBL-MW006	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.48	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFPeA	2.81	1.00	2.00	4.00	J	B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFBs	2.21	1.00	2.00	4.00	J	B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-4:2 FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFHxA	3.47	1.00	2.00	4.00	J	B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFPeS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
HFPO-DA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFHpA	2.52	1.00	2.00	4.00	J	B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
ADONA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFHxS	8.10	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Br-PFHxS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Total PFHxS	8.69	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-6:2 FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFOA	9.28	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Br-PFOA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Total PFOA	9.98	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFHpS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFNA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFOSA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Br-PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Total PFOS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
9Cl-PF3ONS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-8:2FTS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFNS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Br-MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Total MeFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Br-EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
Total EtFOSAA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFUuN	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFDs	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFDsA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			
L-PFTrDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1			

Sample ID: GW2110121630RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2110156-04	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 16:30 <th>Date Received:</th> <td>20-Oct-21 09:58</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Date Received:	20-Oct-21 09:58						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.00	2.00	4.00		B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	78.3	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C3-PFPeA	IS	88.9	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C3-PFBS	IS	96.4	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C3-HFPO-DA	IS	91.0	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-4:2 FTS	IS	93.7	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFHxA	IS	87.3	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C4-PFHxA	IS	93.4	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C3-PFHxS	IS	84.7	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-6:2 FTS	IS	83.9	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFOA	IS	81.1	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C5-PFNA	IS	84.3	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C8-PFOSA	IS	68.5	10 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C8-PFOS	IS	82.1	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFDA	IS	95.6	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-8:2 FTS	IS	83.1	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
d3-MeFOSAA	IS	84.6	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
d5-EtFOSAA	IS	85.1	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFUnA	IS	83.9	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFDaA	IS	83.7	25 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	
13C2-PFTeDA	IS	75.6	20 - 150			B1J0168	25-Oct-21	0.250 L	07-Nov-21 01:42	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2110121715RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 17:15 <th>Lab Sample:</th> <td>2110156-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2110156-05	Column:	BEH C18				
Location:	ASRBL-MW007	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	9.18	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFPeA	1.36	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFBs	21.8	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-4:2 FTS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFHxA	2.16	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFPeS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
HFPO-DA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFHxA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
ADONA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFHxS	19.1	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Br-PFHxS	1.65	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Total PFHxS	20.7	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-6:2 FTS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFOA	8.66	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Br-PFOA	1.08	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Total PFOA	9.74	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFHxS	1.04	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFNA	1.20	1.02	2.04	4.08	J	B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFOSA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFOS	28.8	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Br-PFOS	18.2	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Total PFOS	47.0	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
9Cl-PF3ONS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFDA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-8:2FTS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFNS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-MeFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Br-MeFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Total MeFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-EtFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Br-EtFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
Total EtFOSAA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFUuN	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFDs	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
11Cl-PF3OUdS	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFDsA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			
L-PFTrDA	ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1			

Sample ID: GW2110121715RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2110156-05		Column:	BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 17:15	Date Received:	20-Oct-21 09:58						
Location:	ASRBL-MW007										
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.02	2.04	4.08		B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	82.6		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C3-PFPeA	IS	87.7		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C3-PFBS	IS	99.2		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C3-HFPO-DA	IS	82.2		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-4:2 FTS	IS	88.4		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFHxA	IS	88.5		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C4-PFHxA	IS	94.7		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C3-PFHxS	IS	93.4		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-6:2 FTS	IS	84.2		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFOA	IS	83.1		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C5-PFNA	IS	85.1		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C8-PFOSA	IS	64.1		10 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C8-PFOS	IS	78.6		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFDA	IS	91.7		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-8:2 FTS	IS	84.8		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
d3-MeFOSAA	IS	89.8		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
d5-EtFOSAA	IS	87.8		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFUnA	IS	86.3		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFDmA	IS	83.1		25 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1
13C2-PFTeDA	IS	81.0		20 - 150			B1J0168	25-Oct-21	0.245 L	07-Nov-21 01:52	1

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2110121715BA
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	12-Oct-21 17:15 <th>Lab Sample:</th> <td>2110156-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2110156-06	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	7.13	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFPeA	2.79	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFBs	11.2	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-4:2 FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFHxA	5.10	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFPeS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
HFPO-DA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFHxA	4.11	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
ADONA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFHxS	8.72	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Br-PFHxS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Total PFHxS	9.18	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-6:2 FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFOA	22.8	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Br-PFOA	1.98	1.01	2.02	4.03	J	B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Total PFOA	24.7	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFHxS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFNA	2.52	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFOS	8.37	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Br-PFOS	14.7	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Total PFOS	23.0	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
9Cl-PF3ONS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFDA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-8:2FTS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFNS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Br-MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Total MeFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Br-EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
Total EtFOSAA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFUuN	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFDs	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFDsA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			
L-PFTrDA	ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1			

Sample ID: GW2110121715BA
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample: 2110156-06				Column: BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	12-Oct-21 17:15	Date Received: 20-Oct-21 09:58							
Location:	RI-MW029(2.5-7.5)										
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.01	2.02	4.03		B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	79.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C3-PFPeA	IS	90.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C3-PFBS	IS	101		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C3-HFPO-DA	IS	67.4		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-4:2 FTS	IS	93.4		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFHxA	IS	88.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C4-PFHxA	IS	94.2		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C3-PFHxS	IS	87.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-6:2 FTS	IS	85.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFOA	IS	84.5		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C5-PFNA	IS	84.3		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C8-PFOSA	IS	64.6		10 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C8-PFOS	IS	96.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFDA	IS	93.4		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-8:2 FTS	IS	80.9		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
d3-MeFOSAA	IS	93.1		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
d5-EtFOSAA	IS	79.1		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFUnA	IS	84.6		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFDaA	IS	92.0		25 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1
13C2-PFTeDA	IS	78.4		20 - 150			B1J0168	25-Oct-21	0.248 L	07-Nov-21 02:03	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: GW2110131510RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	13-Oct-21 15:10	Lab Sample:	2110156-07	Column:	BEH C18				
Location:	ASRBL-MW008	Date Received:	20-Oct-21 09:58										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	14.5	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFPeA	5.16	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFBs	4.80	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-4:2 FTS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFHxA	5.30	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFPeS	1.01	0.996	1.99	3.98	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
HFPO-DA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFHpA	2.97	0.996	1.99	3.98	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
ADONA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFHxS	5.03	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Br-PFHxS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Total PFHxS	5.90	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-6:2 FTS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFOA	7.08	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Br-PFOA	1.81	0.996	1.99	3.98	J	B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Total PFOA	8.89	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFHpS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFNA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFOSA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFOS	10.1	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Br-PFOS	8.99	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Total PFOS	19.1	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
9Cl-PF3ONS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFDA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-8:2FTS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFNS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-MeFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Br-MeFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Total MeFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-EtFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Br-EtFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
Total EtFOSAA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFUuN	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFDs	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
11Cl-PF3OUdS	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFDa	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			
L-PFTrDA	ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1			

Sample ID: GW2110131510RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample: 2110156-07				Column: BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	13-Oct-21 15:10	Date Received: 20-Oct-21 09:58							
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	0.996	1.99	3.98		B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	79.9		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C3-PFPeA	IS	87.2		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C3-PFBS	IS	102		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C3-HFPO-DA	IS	79.8		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-4:2 FTS	IS	88.6		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFHxA	IS	90.8		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C4-PFHxA	IS	95.1		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C3-PFHxS	IS	91.1		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-6:2 FTS	IS	80.0		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFOA	IS	79.0		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C5-PFNA	IS	94.8		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C8-PFOSA	IS	67.6		10 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C8-PFOS	IS	88.1		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFDA	IS	94.6		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-8:2 FTS	IS	93.2		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
d3-MeFOSAA	IS	90.4		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
d5-EtFOSAA	IS	81.9		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFUnA	IS	85.6		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFDaA	IS	84.4		25 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1
13C2-PFTeDA	IS	75.6		20 - 150			B1J0168	25-Oct-21	0.251 L	07-Nov-21 02:13	1

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: FD2110131515RF										PFAS Isotope Dilution Method				
Client Data				Laboratory Data										
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2110156-08			Column:	BEH C18					
Project:	Au Sable River Boat Launch	Date Collected:	13-Oct-21 15:15	Date Received:	20-Oct-21 09:58									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution				
L-PFBA	13.8	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFPeA	5.08	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFBs	4.72	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-4:2 FTS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFHxA	5.30	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFPeS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
HFPO-DA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFHpA	2.97	1.02	2.03	4.07	J	B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
ADONA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFHxS	5.55	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Br-PFHxS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Total PFHxS	6.40	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-6:2 FTS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFOA	6.59	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Br-PFOA	1.63	1.02	2.03	4.07	J	B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Total PFOA	8.22	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFHpS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFNA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFOSA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFOS	10.6	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Br-PFOS	9.52	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Total PFOS	20.1	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
9Cl-PF3ONS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFDA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-8:2FTS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFNS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-MeFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Br-MeFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Total MeFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-EtFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Br-EtFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
Total EtFOSAA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFUuN	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFDs	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
11Cl-PF3OUdS	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFDsA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				
L-PFTrDA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1				

Sample ID: FD2110131515RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous <th>Lab Sample:</th> <td>2110156-08</td> <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>13-Oct-21 15:15</td> <th>Date Received:</th> <td>20-Oct-21 09:58</td>	Lab Sample:	2110156-08	Column:	BEH C18	Date Collected:	13-Oct-21 15:15	Date Received:	20-Oct-21 09:58
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.02	2.03	4.07		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	80.7	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C3-PFPeA	IS	90.8	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C3-PFBS	IS	99.4	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C3-HFPO-DA	IS	78.0	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-4:2 FTS	IS	89.5	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFHxA	IS	87.9	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C4-PFHxA	IS	90.2	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C3-PFHxS	IS	94.6	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-6:2 FTS	IS	95.9	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFOA	IS	84.9	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C5-PFNA	IS	93.7	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C8-PFOSA	IS	65.7	10 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C8-PFOS	IS	80.7	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFDA	IS	98.8	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-8:2 FTS	IS	93.4	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
d3-MeFOSAA	IS	91.9	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
d5-EtFOSAA	IS	85.9	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFUnA	IS	86.7	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFDaA	IS	86.6	25 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		
13C2-PFTeDA	IS	78.0	20 - 150		B1J0168	25-Oct-21	0.246 L	07-Nov-21 02:23	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: SW2110140855RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Date Collected:	14-Oct-21 08:55 <th>Lab Sample:</th> <td>2110156-09</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2110156-09	Column:	BEH C18		
Location:	ASRBL-SW005	Date Received:	20-Oct-21 09:58 <th data-cs="8" data-kind="parent"></th> <th data-kind="ghost"></th>								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFBA	2.24	1.00	2.01	4.01	J	B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFPeA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFBs	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-4:2 FTS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFHxA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFPeS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
HFPO-DA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFHpA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
ADONA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFHxS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Br-PFHxS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Total PFHxS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-6:2 FTS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFOA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Br-PFOA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Total PFOA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFHpS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFNA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFOSA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFOS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Br-PFOS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Total PFOS	1.35	1.00	2.01	4.01	J	B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
9Cl-PF3ONS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFDA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-8:2FTS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFNS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-MeFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Br-MeFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Total MeFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-EtFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Br-EtFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
Total EtFOSAA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFUuN	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFDs	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
11Cl-PF3OUdS	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFDsA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	
L-PFTrDA	ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33	1	

Sample ID: SW2110140855RF										PFAS Isotope Dilution Method			
Client Data					Laboratory Data								
Name:	AECOM	Matrix:	Aqueous		Date Collected:	14-Oct-21 08:55		Lab Sample:	2110156-09		Column:	BEH C18	
Project:	Au Sable River Boat Launch		Date Received:		20-Oct-21 09:58								
Location:	ASRBL-SW005												
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed		Analyzed	Dilution
L-PFTeDA		ND	1.00	2.01	4.01		B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed		Analyzed	Dilution
13C3-PFBA	IS	68.4		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C3-PFPeA	IS	91.1		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C3-PFBS	IS	97.5		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C3-HFPO-DA	IS	91.9		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-4:2 FTS	IS	103		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFHxA	IS	90.4		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C4-PFHxA	IS	93.6		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C3-PFHxS	IS	96.5		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-6:2 FTS	IS	93.0		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFOA	IS	79.9		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C5-PFNA	IS	87.4		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C8-PFOSA	IS	68.4		10 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C8-PFOS	IS	76.7		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFDA	IS	83.7		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-8:2 FTS	IS	84.6		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
d3-MeFOSAA	IS	90.8		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
d5-EtFOSAA	IS	87.5		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFUnA	IS	85.4		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFDaA	IS	88.8		25 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	
13C2-PFTeDA	IS	74.6		20 - 150			B1J0168	25-Oct-21	0.249 L	07-Nov-21 02:33		1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses $\frac{1}{2}$ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN OF CUSTODY

For Laboratory Use Only

Work Order #: 2110156 Temp: 0.2 °C
 Storage ID: R-13 UR-2 Storage Secured: Yes No

Project ID: Au Sable River Boat LaunchPO#: 60610670.01Sampler: Ron Freund 810-222-9696
(name)TAT Standard: 21 days

(check one): Rush (surcharge may apply)

 14 days 7 days Specify: _____

Invoice to:	Name: <u>Amanda Armbruster</u>	Company: <u>EGLE - Bay City District</u>	Address: <u>401 Ketchum Street Suite B</u>	City: <u>Bay City</u>	State: <u>MI</u>	Ph# <u>(989) 894-6242</u>	Fax# _____
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Relinquished by (printed name and signature): <u>Ron Freund</u>	Date: <u>10/14/21</u>	Time: _____	Received by (printed name and signature): <u>Justin Briseno</u>	Date: <u>10/20/21</u>	Time: <u>0958</u>
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Relinquished by (printed name and signature): _____	Date: _____	Time: _____	Received by (printed name and signature): _____	Date: _____	Time: _____
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SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment:
FedEx

Tracking No.: _____

Add Analysis(es) Requested

Container(s)

Mod. EPA
Method 537EPA Method
537(DW only)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMRA3 PFAS List 6	S37 List: 14	Full List of 24	EGLE List of 28	Branch and Linear	PFOA/PFOS	UCMRA3 PFAS List 6	PFAS List: 14	Comments
GW2110121SISBA	10/12/21	1515	ASRBL-MW001	2	P	AQ						x				
GW2110121535RF		1535	ASRBL-MW002	1								x				
GW2110121610 BA		1610	R1-MW031 (2.7)	1								x				
GW2110121630 RF		1630	ASRBL-MW006									x				
GW2110121715RF		1715	ASRBL-MW007									x				
GW2110121715 BA	▼	1715	R1-MW029(2.5.7.5)									x				
GW2110131510RF	10/13/21	1510	ASRBL-MW008									x				
FD2110131515RF	10/13/21	1515	ASRBL-MW008									x				
SW2110140855RF	10/14/21	855	ASRBL-SW005	▼	▼	▼						x				

Special Instructions/Comments: Send Results and Acknowledgements to:

Jeremiah.Morse@aecom.comARMBRUSTER@michigan.gov

SEND
DOCUMENTATION
AND RESULTS TO:

Name: Amanda ArmbrusterCompany: EGLE - Bay City District OfficeAddress: 401 Ketchum St. Suite BCity: Bay City State: MI Zip: 48708Phone: (989) 894-6242

Fax: _____

Email: armbruster@Michigan.gov



Sample Log-In Checklist

Page # 1 of 2

Vista Work Order #: 2110 156 TAT 57J

Samples Arrival:	Date/Time <u>10/20/21</u> <u>1950</u>		Initials: <u>LP</u>		Location: <u>W-2</u> Shelf/Rack: <u>N/A</u>		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Techni Ice	Dry Ice		None
Temp °C: <u>0.3</u> (uncorrected)	Probe used: Y / <u>N</u>			Thermometer ID: <u>I2-3</u>			
Temp °C: <u>0.2</u> (corrected)							

					YES	NO	NA
Shipping Container(s) Intact?					✓		
Shipping Custody Seals Intact?						✓	
Airbill <u>—</u> <u>Trk # 1850 9571 2350</u>					✓		
Shipping Documentation Present?						✓	
Shipping Container	Vista	Client	Retain	Return	Dispose		
Chain of Custody / Sample Documentation Present?					✓		
Chain of Custody / Sample Documentation Complete?					✓		
Holding Time Acceptable?					✓		
Logged In:	Date/Time <u>10/20/21</u> <u>13:14</u>	Initials: <u>LP</u>	Location: <u>R-13, W-2</u> Shelf/Rack: <u>A-7, B-6</u>				
COC Anomaly/Sample Acceptance Form completed?						✓	✓

Comments:

Sample Log-In Checklist

 Page # 2 of 2

 Vista Work Order #: 2110156 TAT Std

Samples Arrival:	Date/Time <u>10/20/2021 0958</u>			Initials: <u>OP</u>	Location: <u>WY-2</u> Shelf/Rack: <u>N/A</u>		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice			Techni Ice	Dry Ice	None
Temp °C: <u>0.6</u> (uncorrected)	Probe used: Y / <u>N</u>				Thermometer ID: <u>TP-3</u>		
Temp °C: <u>0.5</u> (corrected)							

					YES	NO	NA
Shipping Container(s) Intact?					<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Airbill	—	Trk #	<u>285095530012</u>			<input checked="" type="checkbox"/>	
Shipping Documentation Present?					<input checked="" type="checkbox"/>		
Shipping Container	Vista	Client	Retain	Return	Dispose		
Chain of Custody / Sample Documentation Present? <u>(A)</u>					<input checked="" type="checkbox"/>		
Chain of Custody / Sample Documentation Complete?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Holding Time Acceptable?					<input checked="" type="checkbox"/>		
Logged In:	Date/Time <u>10/20/2021, 13:14</u>	Initials: <u>162</u>	Location: <u>R-13, WR-2</u> Shelf/Rack: <u>A-3, B-6</u>				
COC Anomaly/Sample Acceptance Form completed?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Comments:

(A) COC located in cooler w/ tracking# 285095112350

CoC/Label Reconciliation Report WO# 2110156

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2110156-01	A GW2110121515BA	ASRBL-MW001	12-Oct-21 15:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-01	B GW2110121515BA	ASRBL-MW001	12-Oct-21 15:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-02	A GW2110121535RF	ASRBL-MW002	12-Oct-21 15:35	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-02	B GW2110121535RF	ASRBL-MW002	12-Oct-21 15:35	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-03	A GW2110121610BA	RI-MW031(2-7)	12-Oct-21 16:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-03	B GW2110121610BA	RI-MW031(2-7)	12-Oct-21 16:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-04	A GW2110121630RF	ASRBL-MW006	12-Oct-21 16:30	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-04	B GW2110121630RF	ASRBL-MW006	12-Oct-21 16:30	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-05	A GW2110121715RF	ASRBL-MW007	12-Oct-21 17:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-05	B GW2110121715RF	ASRBL-MW007	12-Oct-21 17:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-06	A GW2110121715BA	RI-MW029(2.5-7.5)	12-Oct-21 17:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-06	B GW2110121715BA	RI-MW029(2.5-7.5)	12-Oct-21 17:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-07	A GW2110131510RF	ASRBL-MW008	13-Oct-21 15:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-07	B GW2110131510RF	ASRBL-MW008	13-Oct-21 15:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-08	A FD2110131515RF	ASRBL-MW008	13-Oct-21 15:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-08	B FD2110131515RF	ASRBL-MW008	13-Oct-21 15:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-09	A SW2110140855RF	ASRBL-SW005	14-Oct-21 08:55	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2110156-09	B SW2110140855RF	ASRBL-SW005	14-Oct-21 08:55	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 None Other

Comments: ① Sample Label date ID: GW21601216100A
MM.012121

② Sample contains brown tint.

C1 = Cooler 1 of 2

C2 = Cooler 2 of 2

Verified by/Date: JA 10/21/21



February 28, 2022

Vista Work Order No. 2202042

Mr. Jeremiah Morse
AECOM
3950 Sparks Drive SE
Grand Rapids, MI 49546

Dear Mr. Morse,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on February 02, 2022 under your Project Name 'Au Sable River Boat Launch'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Fox".

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2202042**Case Narrative****Sample Condition on Receipt:**

Eight aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:**PFAS Isotope Dilution Method**

Samples "GW2201271030RF", "GW2201271135RF" and "GW2201271550BA" contained particulate and were centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report



Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2202042-01	GW2201270835RF	27-Jan-22 08:35	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-02	GW2201270925RF	27-Jan-22 09:25	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-03	FD2201270930RF	27-Jan-22 09:30	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-04	GW2201271030RF	27-Jan-22 10:30	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-05	GW2201271135RF	27-Jan-22 11:35	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-06	GW2201271550BA	27-Jan-22 15:50	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-07	GW2201271645BA	27-Jan-22 16:45	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL
2202042-08	GW2201280910RF	28-Jan-22 09:10	02-Feb-22 09:43	HDPE Bottle, 250 mL
				HDPE Bottle, 250 mL

Vista Project: 2202042

Client Project: Au Sable River Boat Launch

ANALYTICAL RESULTS

Sample ID: Method Blank							PFAS Isotope Dilution Method			
Client Data				Laboratory Data						
Name:	AECOM	Matrix:	Aqueous	Lab Sample:			B22B082-BLK1	Column:	BEH C18	
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFPeA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFBs	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-4:2 FTS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFHxA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFPeS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
HFPO-DA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFHxP	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
ADONA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFHxS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Br-PFHxS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Total PFHxS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-6:2 FTS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFOA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Br-PFOA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Total PFOA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFHxP	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFNA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFOSA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFOS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Br-PFOS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Total PFOS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
9Cl-PF3ONS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFDA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-8:2FTS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFNS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-MeFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Br-MeFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Total MeFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-EtFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Br-EtFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
Total EtFOSAA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFUuA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFDS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFDa	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFTrDA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1
L-PFTEDA	ND	1.00	2.00	4.00		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1

Sample ID: Method Blank							PFAS Isotope Dilution Method			
Client Data				Laboratory Data						
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	B22B082-BLK1	Column:	BEH C18			
Project:	Au Sable River Boat Launch									
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	94.9	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C3-PFPcA	IS	80.5	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C3-PFBS	IS	77.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C3-HFPO-DA	IS	81.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-4:2 FTS	IS	81.6	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFHxA	IS	81.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C4-PFHxA	IS	80.3	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C3-PFHxS	IS	82.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-6:2 FTS	IS	84.5	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C5-PFNA	IS	81.8	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C8-PFOSA	IS	38.4	10 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFOA	IS	89.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C8-PFOS	IS	86.4	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFDA	IS	82.6	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-8:2 FTS	IS	73.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
d3-MeFOSAA	IS	75.3	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFUnA	IS	75.7	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
d5-EtFOSAA	IS	64.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFDaA	IS	68.4	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	
13C2-PFTeDA	IS	70.9	20 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:08	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: OPR
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	B22B082-BS1			Column:	BEH C18		
Analyte		Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA		41.0	40.0	103	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFPeA		42.7	40.0	107	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFBS		40.4	40.0	101	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-4:2 FTS		42.2	40.0	106	60 - 145		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFHxA		43.5	40.0	109	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFPeS		43.2	40.0	108	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
HFPO-DA		40.2	40.0	100	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFHxA		43.0	40.0	107	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
ADONA		42.7	40.0	107	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Total PFHxS		39.8	40.0	99.5	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-6:2 FTS		37.4	40.0	93.4	60 - 140		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Total PFOA		39.6	40.0	98.9	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFHxA		40.6	40.0	102	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFNA		40.2	40.0	101	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFOSA		42.2	40.0	105	65 - 140		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Total PFOS		43.8	40.0	109	65 - 140		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
9Cl-PF3ONS		46.7	40.0	117	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFDA		41.8	40.0	105	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-8:2FTS		41.9	40.0	105	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFNS		39.2	40.0	97.9	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Total MeFOSAA		39.3	40.0	98.3	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Total EtFOSAA		41.3	40.0	103	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFUnA		43.2	40.0	108	65 - 140		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFDS		41.1	40.0	103	50 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
11Cl-PF3OUdS		44.9	40.0	112	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFDaA		46.3	40.0	116	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFTrDA		42.3	40.0	106	60 - 140		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
L-PFTeDA		50.2	40.0	125	65 - 135		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
Labeled Standards		Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA		IS	89.7	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	
13C3-PFPeA		IS	76.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	
13C3-PFBS		IS	79.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	
13C3-HFPO-DA		IS	73.9	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	
13C2-4:2 FTS		IS	80.3	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	
13C2-PFHxA		IS	81.3	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1	

Sample ID: OPR
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch

Matrix: Aqueous

Laboratory Data

Lab Sample: B22B082-BS1

Column: BEH C18

Labeled Standards

	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFHpA	IS	79.8	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C3-PFHxS	IS	83.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-6:2 FTS	IS	86.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C5-PFNA	IS	78.0	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C8-PFOSA	IS	37.9	10 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-PFOA	IS	84.7	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C8-PFOS	IS	77.7	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-PFDA	IS	80.2	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-8:2 FTS	IS	71.2	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
d3-MeFOSAA	IS	75.9	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-PFUnA	IS	74.7	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
d5-EtFOSAA	IS	63.2	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-PFDa	IS	71.1	25 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1
13C2-PFTeDA	IS	63.1	20 - 150		B22B082	18-Feb-22	0.250 L	22-Feb-22 11:18	1

Sample ID: GW2201270835RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 08:35 <th>Lab Sample:</th> <td>2202042-01</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-01	Column:	BEH C18				
Location:	ASRBL-MW006	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	5.16	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFPeA	2.09	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFBs	4.66	1.01	2.02	4.04	Q	B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-4:2 FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFHxA	2.55	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFPeS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
HFPO-DA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFHpA	2.46	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
ADONA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFHxS	8.70	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Br-PFHxS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Total PFHxS	9.50	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-6:2 FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFOA	7.51	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Br-PFOA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Total PFOA	8.35	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFHpS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFNA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFOSA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFOS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Br-PFOS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Total PFOS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
9Cl-PF3ONS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-8:2FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFNS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Br-MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Total MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Br-EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
Total EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFUuN	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFDs	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFDsA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			
L-PFTrDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1			

Sample ID: GW2201270835RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2202042-01	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 08:35	Date Received:	02-Feb-22 09:43						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	83.5	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C3-PFPeA	IS	81.1	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C3-PFBS	IS	82.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C3-HFPO-DA	IS	72.9	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-4:2 FTS	IS	79.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFHxA	IS	85.5	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C4-PFHxA	IS	83.9	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C3-PFHxS	IS	83.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-6:2 FTS	IS	93.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C5-PFNA	IS	87.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C8-PFOSA	IS	51.4	10 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFOA	IS	85.9	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C8-PFOS	IS	81.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFDA	IS	72.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-8:2 FTS	IS	70.2	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
d3-MeFOSAA	IS	84.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFUnA	IS	71.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
d5-EtFOSAA	IS	76.1	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFDaA	IS	75.2	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	
13C2-PFTeDA	IS	77.2	20 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 12:11	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2201270925RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 09:25 <th>Lab Sample:</th> <td>2202042-02</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-02	Column:	BEH C18				
Location:	ASRBL-MW007	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	1.23	1.02	2.04	4.08	J	B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFPeA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFBs	6.42	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-4:2 FTS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFHxA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFPeS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
HFPO-DA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFHpA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
ADONA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFHxS	5.03	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Br-PFHxS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Total PFHxS	5.03	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-6:2 FTS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFOA	2.86	1.02	2.04	4.08	J	B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Br-PFOA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Total PFOA	3.10	1.02	2.04	4.08	J	B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFHpS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFNA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFOSA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFOS	13.6	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Br-PFOS	5.77	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Total PFOS	19.4	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
9Cl-PF3ONS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFDA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-8:2FTS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFNS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-MeFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Br-MeFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Total MeFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-EtFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Br-EtFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
Total EtFOSAA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFUuN	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFDs	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
11Cl-PF3OUdS	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFDsA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			
L-PFTrDA	ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1			

Sample ID: GW2201270925RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous	Lab Sample: 2202042-02				Column: BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 09:25	Date Received: 02-Feb-22 09:43							
Location:	ASRBL-MW007										
Analyte		Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFTeDA		ND	1.02	2.04	4.08		B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C3-PFBA	IS	85.3		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C3-PFPeA	IS	85.6		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C3-PFBS	IS	77.8		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C3-HFPO-DA	IS	74.8		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-4:2 FTS	IS	84.3		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFHxA	IS	86.3		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C4-PFHxA	IS	87.0		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C3-PFHxS	IS	86.8		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-6:2 FTS	IS	95.2		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C5-PFNA	IS	88.6		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C8-PFOSA	IS	62.1		10 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFOA	IS	84.3		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C8-PFOS	IS	85.8		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFDA	IS	80.3		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-8:2 FTS	IS	73.7		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
d3-MeFOSAA	IS	85.1		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFUnA	IS	75.7		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
d5-EtFOSAA	IS	81.0		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFDaA	IS	83.7		25 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1
13C2-PFTeDA	IS	81.5		20 - 150			B22B082	18-Feb-22	0.245 L	22-Feb-22 12:21	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

PFAS Isotope Dilution Method										
Client Data				Laboratory Data						
Name:	AECOM	Matrix:	Aqueous	Lab Sample: 2202042-03						
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 09:30	Date Received: 02-Feb-22 09:43						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA	1.02	1.01	2.03	4.06	J	B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFPeA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFBs	6.29	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-4:2 FTS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFHxA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFPeS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
HFPO-DA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFHpA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
ADONA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFHxS	4.57	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Br-PFHxS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Total PFHxS	5.08	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-6:2 FTS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFOA	2.99	1.01	2.03	4.06	J	B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Br-PFOA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Total PFOA	3.28	1.01	2.03	4.06	J	B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFHpS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFNA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFOSA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFOS	15.7	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Br-PFOS	5.97	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Total PFOS	21.7	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
9Cl-PF3ONS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFDA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-8:2FTS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFNS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-MeFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Br-MeFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Total MeFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-EtFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Br-EtFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
Total EtFOSAA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFUuN	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFDs	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
11Cl-PF3OUdS	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFDsA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1
L-PFTrDA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1

Sample ID: FD2201270930RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2202042-03</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2202042-03</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-03	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 09:30 <th>Date Received:</th> <td>02-Feb-22 09:43<th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-cs="2" data-kind="parent"></th><th data-kind="ghost"></th></td>	Date Received:	02-Feb-22 09:43 <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.03	4.06		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	89.4	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C3-PFPeA	IS	84.9	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C3-PFBS	IS	76.9	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C3-HFPO-DA	IS	79.1	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-4:2 FTS	IS	81.0	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFHxA	IS	88.0	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C4-PFHxA	IS	88.1	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C3-PFHxS	IS	86.4	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-6:2 FTS	IS	91.7	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C5-PFNA	IS	80.9	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C8-PFOSA	IS	57.8	10 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFOA	IS	89.1	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C8-PFOS	IS	79.1	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFDA	IS	84.3	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-8:2 FTS	IS	70.3	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
d3-MeFOSAA	IS	85.8	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFUnA	IS	76.8	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
d5-EtFOSAA	IS	79.7	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFDmA	IS	76.6	25 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		
13C2-PFTeDA	IS	80.4	20 - 150		B22B082	18-Feb-22	0.246 L	22-Feb-22 12:32	1		

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2201271030RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 10:30 <th>Lab Sample:</th> <td>2202042-04</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-04	Column:	BEH C18				
Location:	ASRBL-MW002 <th>Date Received:</th> <td>02-Feb-22 09:43<th data-cs="10" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	4.65	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFPeA	2.08	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFBs	1.48	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-4:2 FTS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFHxA	2.28	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFPeS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
HFPO-DA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFHpA	2.30	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
ADONA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFHxS	1.77	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Br-PFHxS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Total PFHxS	2.22	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-6:2 FTS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFOA	6.11	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Br-PFOA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Total PFOA	6.33	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFHpS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFNA	1.07	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFOSA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFOS	3.43	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Br-PFOS	3.16	1.01	2.01	4.02	J	B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Total PFOS	6.59	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
9Cl-PF3ONS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFDA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-8:2FTS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFNS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-MeFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Br-MeFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Total MeFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-EtFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Br-EtFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
Total EtFOSAA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFUuN	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFDs	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
11Cl-PF3OUdS	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFDsA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			
L-PFTrDA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1			

Sample ID: GW2201271030RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2202042-04	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 10:30 <th>Date Received:</th> <td>02-Feb-22 09:43<th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-cs="2" data-kind="parent"></th><th data-kind="ghost"></th></td>	Date Received:	02-Feb-22 09:43 <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.01	4.02		B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	80.0	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C3-PFPeA	IS	84.2	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C3-PFBS	IS	85.3	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C3-HFPO-DA	IS	79.8	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-4:2 FTS	IS	82.3	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFHxA	IS	88.7	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C4-PFHxA	IS	85.5	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C3-PFHxS	IS	82.7	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-6:2 FTS	IS	82.2	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C5-PFNA	IS	86.8	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C8-PFOSA	IS	50.7	10 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFOA	IS	96.9	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C8-PFOS	IS	84.2	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFDA	IS	92.7	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-8:2 FTS	IS	79.2	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
d3-MeFOSAA	IS	80.7	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFUnA	IS	75.1	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
d5-EtFOSAA	IS	75.9	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFDaA	IS	76.2	25 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	
13C2-PFTeDA	IS	71.6	20 - 150			B22B082	18-Feb-22	0.249 L	22-Feb-22 12:42	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2201271135RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 11:35 <th>Lab Sample:</th> <td>2202042-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-05	Column:	BEH C18				
Location:	ASRBL-MW001	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.42	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFPeA	2.66	0.989	1.98	3.95	J	B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFBs	2.28	0.989	1.98	3.95	J	B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-4:2 FTS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFHxA	4.24	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFPeS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
HFPO-DA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFHpA	3.60	0.989	1.98	3.95	J	B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
ADONA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFHxS	6.74	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Br-PFHxS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Total PFHxS	7.66	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-6:2 FTS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFOA	8.33	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Br-PFOA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Total PFOA	8.76	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFHpS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFNA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFOSA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFOS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Br-PFOS	1.86	0.989	1.98	3.95	J	B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Total PFOS	2.39	0.989	1.98	3.95	J	B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
9Cl-PF3ONS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFDA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-8:2FTS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFNS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-MeFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Br-MeFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Total MeFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-EtFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Br-EtFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
Total EtFOSAA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFUuN	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFDs	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
11Cl-PF3OUdS	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFDsA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			
L-PFTrDA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1			

Sample ID: GW2201271135RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2202042-05</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2202042-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-05	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 11:35	Date Received:	02-Feb-22 09:43						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.989	1.98	3.95		B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	79.8	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C3-PFPeA	IS	84.8	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C3-PFBS	IS	77.9	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C3-HFPO-DA	IS	84.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-4:2 FTS	IS	86.6	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFHxA	IS	86.4	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C4-PFHxA	IS	86.8	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C3-PFHxS	IS	84.9	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-6:2 FTS	IS	91.9	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C5-PFNA	IS	79.5	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C8-PFOSA	IS	58.8	10 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFOA	IS	84.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C8-PFOS	IS	87.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFDA	IS	88.5	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-8:2 FTS	IS	72.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
d3-MeFOSAA	IS	84.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFUnA	IS	85.1	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
d5-EtFOSAA	IS	78.2	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFDaA	IS	69.5	25 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	
13C2-PFTeDA	IS	77.4	20 - 150			B22B082	18-Feb-22	0.253 L	22-Feb-22 12:53	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

Sample ID: GW2201271550BA
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 15:50 <th>Lab Sample:</th> <td>2202042-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-06	Column:	BEH C18				
Location:	RI-MW031 (2-7)	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	4.49	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFPeA	1.75	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFBs	1.03	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-4:2 FTS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFHxA	2.76	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFPeS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
HFPO-DA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFHpA	3.39	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
ADONA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFHxS	1.03	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Br-PFHxS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Total PFHxS	1.03	0.994	1.98	3.97	J	B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-6:2 FTS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFOA	6.48	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Br-PFOA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Total PFOA	7.45	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFHpS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFNA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFOSA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFOS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Br-PFOS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Total PFOS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
9Cl-PF3ONS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFDA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-8:2FTS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFNS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-MeFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Br-MeFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Total MeFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-EtFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Br-EtFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
Total EtFOSAA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFUuN	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFDs	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
11Cl-PF3OUdS	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFDsA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			
L-PFTrDA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1			

Sample ID: GW2201271550BA
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM	Matrix:	Aqueous <th>Lab Sample:</th> <td>2202042-06</td> <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>27-Jan-22 15:50</td> <th>Date Received:</th> <td>02-Feb-22 09:43</td>	Lab Sample:	2202042-06	Column:	BEH C18	Date Collected:	27-Jan-22 15:50	Date Received:	02-Feb-22 09:43
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.994	1.98	3.97		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	90.8	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C3-PFPeA	IS	84.6	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C3-PFBS	IS	79.7	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C3-HFPO-DA	IS	74.6	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-4:2 FTS	IS	85.8	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFHxA	IS	85.1	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C4-PFHxA	IS	82.7	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C3-PFHxS	IS	83.0	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-6:2 FTS	IS	81.0	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C5-PFNA	IS	81.8	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C8-PFOSA	IS	58.4	10 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFOA	IS	89.3	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C8-PFOS	IS	86.3	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFDA	IS	78.4	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-8:2 FTS	IS	66.0	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
d3-MeFOSAA	IS	80.9	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFUnA	IS	69.6	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
d5-EtFOSAA	IS	72.1	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFDaA	IS	76.8	25 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		
13C2-PFTeDA	IS	71.1	20 - 150		B22B082	18-Feb-22	0.252 L	22-Feb-22 13:03	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: GW2201271645BA
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	27-Jan-22 16:45 <th>Lab Sample:</th> <td>2202042-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-07	Column:	BEH C18				
Location:	RI-MW029 (2.5-7.5) <th>Date Received:</th> <td>02-Feb-22 09:43<th data-cs="10" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Date Received:	02-Feb-22 09:43 <th data-cs="10" data-kind="parent"></th> <th data-kind="ghost"></th>										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	5.56	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFPeA	3.97	1.03	2.06	4.11	J	B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFBs	10.4	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-4:2 FTS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFHxA	3.56	1.03	2.06	4.11	J	B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFPeS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
HFPO-DA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFHpA	3.18	1.03	2.06	4.11	J	B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
ADONA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFHxS	6.09	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Br-PFHxS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Total PFHxS	6.37	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-6:2 FTS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFOA	23.2	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Br-PFOA	1.63	1.03	2.06	4.11	J	B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Total PFOA	24.9	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFHpS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFNA	1.09	1.03	2.06	4.11	J	B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFOSA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFOS	4.76	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Br-PFOS	11.5	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Total PFOS	16.3	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
9Cl-PF3ONS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFDA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-8:2FTS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFNS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-MeFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Br-MeFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Total MeFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-EtFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Br-EtFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
Total EtFOSAA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFUuN	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFDs	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
11Cl-PF3OUdS	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFDsA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			
L-PFTrDA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1			

Sample ID: GW2201271645BA
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2202042-07</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2202042-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-07	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	27-Jan-22 16:45	Date Received:	02-Feb-22 09:43						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.03	2.06	4.11		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	86.8	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C3-PFPeA	IS	84.2	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C3-PFBS	IS	79.7	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C3-HFPO-DA	IS	74.0	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-4:2 FTS	IS	87.4	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFHxA	IS	91.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C4-PFHxA	IS	82.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C3-PFHxS	IS	86.3	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-6:2 FTS	IS	89.7	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C5-PFNA	IS	86.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C8-PFOSA	IS	59.3	10 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFOA	IS	91.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C8-PFOS	IS	89.5	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFDA	IS	89.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-8:2 FTS	IS	70.1	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
d3-MeFOSAA	IS	87.9	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFUnA	IS	81.8	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
d5-EtFOSAA	IS	82.8	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFDaA	IS	76.6	25 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		
13C2-PFTeDA	IS	80.8	20 - 150		B22B082	18-Feb-22	0.243 L	22-Feb-22 13:14	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

Sample ID: GW2201280910RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous <th>Date Collected:</th> <td>28-Jan-22 09:10<th>Lab Sample:</th><td>2202042-08</td><th>Date Received:</th><td>02-Feb-22 09:43<th>Column:</th><td>BEH C18</td></td></td>	Date Collected:	28-Jan-22 09:10 <th>Lab Sample:</th> <td>2202042-08</td> <th>Date Received:</th> <td>02-Feb-22 09:43<th>Column:</th><td>BEH C18</td></td>	Lab Sample:	2202042-08	Date Received:	02-Feb-22 09:43 <th>Column:</th> <td>BEH C18</td>	Column:	BEH C18
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFBA	11.8	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFPeA	4.10	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFBs	2.63	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-4:2 FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFHxA	3.53	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFPeS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
HFPO-DA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFHpA	3.88	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
ADONA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFHxS	4.58	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Br-PFHxS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Total PFHxS	5.11	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-6:2 FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFOA	7.50	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Br-PFOA	1.45	1.01	2.02	4.04	J	B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Total PFOA	8.96	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFHpS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFNA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFOSA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFOS	7.56	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Br-PFOS	9.77	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Total PFOS	17.3	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
9Cl-PF3ONS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-8:2FTS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFNS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Br-MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Total MeFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Br-EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Total EtFOSAA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFUuN	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFDs	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
11Cl-PF3OUdS	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFDsA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
L-PFTrDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	

Sample ID: GW2201280910RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2202042-08</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2202042-08</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2202042-08	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	28-Jan-22 09:10	Date Received:	02-Feb-22 09:43						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.02	4.04		B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	95.4	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C3-PFPeA	IS	89.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C3-PFBS	IS	89.0	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C3-HFPO-DA	IS	87.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-4:2 FTS	IS	98.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFHxA	IS	93.1	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C4-PFHxA	IS	94.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C3-PFHxS	IS	87.7	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-6:2 FTS	IS	89.0	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C5-PFNA	IS	88.0	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C8-PFOSA	IS	62.7	10 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFOA	IS	99.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C8-PFOS	IS	91.1	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFDA	IS	98.6	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-8:2 FTS	IS	76.8	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
d3-MeFOSAA	IS	94.8	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFUnA	IS	89.7	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
d5-EtFOSAA	IS	91.3	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFDaA	IS	83.2	25 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	
13C2-PFTeDA	IS	86.0	20 - 150			B22B082	18-Feb-22	0.248 L	22-Feb-22 13:24	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses $\frac{1}{2}$ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN OF CUSTODY

For Laboratory Use Only
Work Order #: 2202042Temp: 01,10 °CStorage ID: R-13 WR-2Storage Secured: Yes No Project ID: Au Sable River Boat LaunchPO#: 60610670.01Sampler: Ron Friend/Brendan Alvis
(name)TAT Standard: 21 days

Rush (surcharge may apply)

(check one): 14 days 7 days Specify: _____

Invoice to:	Name <u>Amanda Armbruster</u>	Company <u>EGLE - Bay City District</u>	Address <u>401 Ketchum Street Suite B</u>	City <u>Bay City</u>	State <u>MI</u>	Ph# <u>(989) 894-6242</u>	Fax#
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Relinquished by (printed name and signature) <u>Ron Friend</u> <u>lenturw</u>	Date <u>1/31/22</u>	Time <u>1600</u>	Received by (printed name and signature) <u>Marissa Sparks</u> <u>M. Sparks</u>	Date <u>02/02/22</u>	Time <u>0943</u>
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

Method of Shipment:

Tracking No.:

Add Analysis(es) Requested

Mod. EPA Method 537

EPA Method 537(DW only)

Container(s)

Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 24	EGLE List of 28	Branch and Linear	PFOA/PFOS	UCMR3 PFAS List 6	PFAS List 14
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Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	537 List 14	Full List of 24	EGLE List of 28	Branch and Linear	PFOA/PFOS	UCMR3 PFAS List 6	PFAS List 14	Comments
GW2201270835RF	1/27/22	0835	ASRBL-MW006	2	P	AQ						X				
GW2201270925RF	1/27/22	0925	ASRBL-MW007	2	P	AQ						X				
FD2201270930RF	1/27/22	0930	ASRBL-MW007	2	P	AQ						X				
GW2201271030RF	1/27/22	1030	ASRBL-MW002	2	P	AQ						X				
GW2201271135RF	1/27/22	1135	ASRBL-MW001	2	P	AQ						X				
GW2201271550BA	1/27/22	1550	RI-MW031 (2-7)	2	P	AQ						X				
GW2201271645BA	1/27/22	1645	RI-MW029 (2.5-7.5)	2	P	AQ						X				
GW2201280910RF	1/28/22	0910	ASRBL-MW008	2	P	AQ						X				

Special Instructions/Comments: **Send Results and Acknowledgements to:**
Jeremiali.Morse@aecom.com
ARMBRUSTER@michigan.gov
SEND DOCUMENTATION AND RESULTS TO:
Name: Amanda ArmbrusterCompany: EGLE - Bay City District OfficeAddress: 401 Ketchum St. Suite BCity: Bay CityState: MI Zip: 48708Phone: (989) 894-6242

Fax: _____

Email: jurym1@michigan.gov

Container Types: P= HDPE, PJ= HDPE Jar

Bottle Preservation Type: T = Thiosulfate,

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,

Sample Log-In Checklist

Page # 1 of 2

Vista Work Order #: 2202042

TAT STD

Samples Arrival:	Date/Time <u>02/02/22 0943</u>		Initials: <u>LN</u>		Location: <u>WR-2</u> Shelf/Rack: <u>N/A</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	<input checked="" type="checkbox"/> Ice	Blue Ice		Techni Ice	Dry Ice	None	
Temp °C:	<u>1.2</u> (uncorrected)	Probe used: Y <input checked="" type="checkbox"/> N			Thermometer ID: <u>IR-4</u>		
Temp °C:	<u>1.0</u> (corrected)						

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>
Airbill <u>1 of 2</u> Trk # <u>7759 1379 7390</u>	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Shipping Container <u>Vista</u>	Client	Retain	Return
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
Chain of Custody / Sample Documentation Complete?			<input checked="" type="checkbox"/>
Holding Time Acceptable?			<input checked="" type="checkbox"/>
Logged In:	Date/Time <u>02/04/22 0935</u>	Initials: <u>GB</u>	Location: <u>R-13 B-4</u> Shelf/Rack: <u>WR-2 A-3</u>
COC Anomaly/Sample Acceptance Form completed? <input checked="" type="checkbox"/> / / /			

Comments:

Sample Log-In Checklist

Page # 2 of 2

Vista Work Order #: 2202042 TAT STD

Samples Arrival:	Date/Time <u>02/02/22 0943</u>		Initials: <u>MJS</u>		Location: <u>WR-2</u> Shelf/Rack: <u>N/a</u>		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Techni Ice	Dry Ice		None
Temp °C:	<u>0.3</u> (uncorrected)	Probe used: Y / <u>N</u>			Thermometer ID: <u>IR-4</u>		
Temp °C:	<u>0.1</u> (corrected)						

	YES	NO	NA			
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>					
Shipping Custody Seals Intact?			<input checked="" type="checkbox"/>			
Airbill <u>2 of 2</u> Trk # <u>7750 1370 7508</u>	<input checked="" type="checkbox"/>					
Shipping Documentation Present?	<input checked="" type="checkbox"/>					
Shipping Container	Vista	Client	Retain	Return	Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>					
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>					
Holding Time Acceptable?	<input checked="" type="checkbox"/>					
Logged In:	Date/Time <u>02/04/22 0925</u>	Initials: <u>AP</u>	Location: <u>R-13 WR-2</u> Shelf/Rack: <u>A-3 B-4</u>			
COC Anomaly/Sample Acceptance Form completed?						

Comments:

CoC/Label Reconciliation Report WO# 2202042

Lab Number	CoC Sample ID	Sample Alias	Sample Date/Time	Container	Base Matrix	Sample Comments
2202042-01	A GW2201270835RF	C ₂ <input checked="" type="checkbox"/>	ASRBL-MW006	27-Jan-22 08:35 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-01	B GW2201270835RF	<input checked="" type="checkbox"/>	ASRBL-MW006	27-Jan-22 08:35 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-02	A GW2201270925RF	C ₁ <input checked="" type="checkbox"/>	ASRBL-MW007	27-Jan-22 09:25 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-02	B GW2201270925RF	<input checked="" type="checkbox"/>	ASRBL-MW007	27-Jan-22 09:25 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-03	A FD2201270930RF	<input checked="" type="checkbox"/>	ASRBL-MW007	27-Jan-22 09:30 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-03	B FD2201270930RF	<input checked="" type="checkbox"/>	ASRBL-MW007	27-Jan-22 09:30 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-04	A GW2201271030RF	<input checked="" type="checkbox"/>	ASRBL-MW002	27-Jan-22 10:30 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-04	B GW2201271030RF	<input checked="" type="checkbox"/>	ASRBL-MW002	27-Jan-22 10:30 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-05	A GW2201271135RF	<input checked="" type="checkbox"/>	ASRBL-MW001	27-Jan-22 11:35 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-05	B GW2201271135RF	<input checked="" type="checkbox"/>	ASRBL-MW001	27-Jan-22 11:35 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-06	A GW2201271550BA	C ₂ <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/>	RI-MW031 (2-7)	27-Jan-22 15:50 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-06	B GW2201271550BA	<input checked="" type="checkbox"/>	RI-MW031 (2-7)	27-Jan-22 15:50 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-07	A GW2201271645BA	<input checked="" type="checkbox"/>	RI-MW029 (2.5-7.5)	27-Jan-22 16:45 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-07	B GW2201271645BA	<input checked="" type="checkbox"/>	RI-MW029 (2.5-7.5)	27-Jan-22 16:45 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-08	A GW2201280910RF	<input checked="" type="checkbox"/>	ASRBL-MW008	28-Jan-22 09:10 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2202042-08	B GW2201280910RF	<input checked="" type="checkbox"/>	ASRBL-MW008	28-Jan-22 09:10 <input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Adequate Sample Volume?	<input checked="" type="checkbox"/>		
Container Type Appropriate for Analysis(es)	<input checked="" type="checkbox"/>		

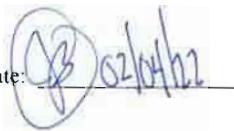
Comments:

A: Samples are rust orange in color.
 C₁ = Cooler 1 of 2
 C₂ = Cooler 2 of 2

Preservation Documented: Na₂S₂O₃ Trizma NH₄CH₃CO₂

None
 All

Other

Verified by/Date:  02/04/22



August 09, 2022

Vista Work Order No. 2207130

Mr. Jeremiah Morse
AECOM
3950 Sparks Drive SE
Grand Rapids, MI 49546

Dear Mr. Morse,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on July 15, 2022 under your Project Name 'Au Sable River Boat Launch'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Fox".

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2207130**Case Narrative****Sample Condition on Receipt:**

Ten aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements. A relinquishing signature was not included on the Chain-of-Custody (CoC). A sample ID discrepancy was noted for sample "GW2207131650RF" between the container label and the Chain-of-Custody (CoC). The sample ID has been reported as listed on the CoC.

Analytical Notes:**PFAS Isotope Dilution Method**

The following samples contained particulate and were centrifuged prior to extraction:

<u>Laboratory ID</u>	<u>Sample Name</u>
2207130-01	GW2207111450RF
2207130-02	FD2207111455RF
2207130-05	GW2207111605RF
2207130-06	GW2207131650RF

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report



Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2207130-01	GW2207111450RF	11-Jul-22 14:50	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-02	FD2207111455RF	11-Jul-22 14:55	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-03	GW2207111450KN	11-Jul-22 14:50	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-04	GW2207111545KN	11-Jul-22 15:45	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-05	GW2207111605RF	11-Jul-22 16:05	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-06	GW2207131650RF	11-Jul-22 16:50	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-07	SW2207111710RF	11-Jul-22 17:10	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-08	GW2207111715KN	11-Jul-22 17:15	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-09	GW2207131325RF	13-Jul-22 13:25	15-Jul-22 09:10	HDPE Bottle, 250 mL
2207130-10	FB2207131435RF	13-Jul-22 14:35	15-Jul-22 09:10	HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: Method Blank										PFAS Isotope Dilution Method		
Client Data				Laboratory Data								
Name:	AECOM	Matrix:	Aqueous	Lab Sample:		B22G162-BLK1		Column:	BEH C18			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
L-PFBA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFPeA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFBs	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-4:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFHxA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFPeS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
HFPO-DA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFHxP	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
ADONA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFHxS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Br-PFHxS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Total PFHxS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-6:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFOA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Br-PFOA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Total PFOA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFHxP	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFNA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFOSA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFOS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Br-PFOS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Total PFOS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
9Cl-PF3ONS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-8:2FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFNS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Br-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Total MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Br-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
Total EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFUuA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFDS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFDooA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFTrDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		
L-PFTEDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1		

Sample ID: Method Blank
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch

Matrix: Aqueous

Laboratory Data

Lab Sample: B22G162-BLK1 Column: BEH C18

Labeled Standards
Type
% Recovery
Limits
Qualifiers
Batch
Extracted
Samp Size
Analyzed
Dilution

13C3-PFBA	IS	109	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C3-PFPcA	IS	111	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C3-PFBS	IS	114	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C3-HFPO-DA	IS	108	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-4:2 FTS	IS	116	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFHxA	IS	111	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C4-PFHxA	IS	114	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C3-PFHxS	IS	105	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-6:2 FTS	IS	102	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C5-PFNA	IS	108	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C8-PFOSA	IS	53.3	10 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFOA	IS	102	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C8-PFOS	IS	108	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFDA	IS	107	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-8:2 FTS	IS	116	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
d3-MeFOSAA	IS	96.2	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFUnA	IS	105	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
d5-EtFOSAA	IS	91.9	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFDaA	IS	93.3	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1
13C2-PFTeDA	IS	81.3	20 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:14	1

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous		Lab Sample:	B22G162-BS1		Column:	BEH C18		
Analyte		Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
L-PFBA		34.7	40.0	86.9	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFPeA		34.8	40.0	87.0	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFBS		33.5	40.0	83.8	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-4:2 FTS		36.5	40.4	90.5	60 - 145		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFHxA		34.4	40.0	85.9	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFPeS		33.7	40.0	84.3	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
HFPO-DA		36.3	40.0	90.6	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFHxA		33.3	40.0	83.3	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
ADONA		34.8	40.0	86.9	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Total PFHxA		34.9	40.0	87.3	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-6:2 FTS		33.2	40.0	83.1	60 - 140		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Total PFOA		34.7	40.0	86.6	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFHxA		31.5	40.0	78.7	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFNA		35.7	40.0	89.3	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFOSA		33.3	40.0	83.3	65 - 140		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Total PFOS		32.5	40.0	81.4	65 - 140		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
9Cl-PF3ONS		32.4	40.0	80.9	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFDA		33.4	40.0	83.5	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-8:2FTS		35.5	40.0	88.8	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFNS		33.9	40.0	84.7	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Total MeFOSAA		36.9	40.0	92.1	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Total EtFOSAA		34.2	40.0	85.4	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFUnA		36.2	40.0	90.6	65 - 140		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFDS		33.6	40.0	84.0	50 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
11Cl-PF3OUdS		35.2	40.0	88.0	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFDaA		33.5	40.0	83.7	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFTrDA		29.5	40.0	73.8	60 - 140		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
L-PFTeDA		36.7	40.0	91.7	65 - 135		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
Labeled Standards		Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA		IS	101	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	
13C3-PFPeA		IS	101	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	
13C3-PFBS		IS	102	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	
13C3-HFPO-DA		IS	98.7	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	
13C2-4:2 FTS		IS	104	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	
13C2-PFHxA	Work Order 2207130	IS	104	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1	391

Sample ID: OPR
PFAS Isotope Dilution Method
Client Data

Name: AECOM
 Project: Au Sable River Boat Launch

Matrix: Aqueous

Laboratory Data

Lab Sample: B22G162-BS1

Column: BEH C18

Labeled Standards

	Type	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C4-PFHpA	IS	109	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C3-PFHxS	IS	99.5	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-6:2 FTS	IS	94.7	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C5-PFNA	IS	94.7	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C8-PFOSA	IS	55.8	10 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-PFOA	IS	96.2	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C8-PFOS	IS	106	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-PFDA	IS	106	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-8:2 FTS	IS	106	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
d3-MeFOSAA	IS	83.3	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-PFUnA	IS	95.9	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
d5-EtFOSAA	IS	86.9	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-PFDaA	IS	92.0	25 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1
13C2-PFTeDA	IS	75.5	20 - 150		B22G162	01-Aug-22	0.250 L	04-Aug-22 04:24	1

Sample ID: GW2207111450RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 14:50	Lab Sample:	2207130-01	Column:	BEH C18				
Location:	ASRBL-MW002	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.90	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFPeA	2.35	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFBs	1.40	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-4:2 FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFHxA	2.15	0.977	1.95	3.91	J, Q	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFPeS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
HFPO-DA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFHxA	1.44	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
ADONA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFHxS	1.93	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Br-PFHxS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Total PFHxS	2.37	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-6:2 FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFOA	3.76	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Br-PFOA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Total PFOA	3.96	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFHxS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFNA	1.25	0.977	1.95	3.91	J, Q	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFOSA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFOS	4.92	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Br-PFOS	2.22	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Total PFOS	7.14	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
9Cl-PF3ONS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-8:2FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFNS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Br-MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Total MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Br-EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
Total EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFUuN	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFDs	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
11Cl-PF3OUdS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFDsA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			
L-PFTrDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1			

Sample ID: GW2207111450RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-01</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-01</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-01	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	11-Jul-22 14:50	Date Received:	15-Jul-22 09:10						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	84.0	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C3-PFPeA	IS	95.2	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C3-PFBS	IS	97.6	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C3-HFPO-DA	IS	94.5	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-4:2 FTS	IS	91.6	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFHxA	IS	103	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C4-PFHxA	IS	104	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C3-PFHxS	IS	93.5	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-6:2 FTS	IS	89.7	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C5-PFNA	IS	91.2	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C8-PFOSA	IS	65.9	10 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFOA	IS	96.9	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C8-PFOS	IS	96.1	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFDA	IS	90.8	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-8:2 FTS	IS	90.9	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
d3-MeFOSAA	IS	81.0	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFUnA	IS	85.8	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
d5-EtFOSAA	IS	94.6	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFDaA	IS	86.4	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	
13C2-PFTeDA	IS	85.6	20 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 05:47	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: FD2207111455RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 14:55	Lab Sample:	2207130-02	Column:	BEH C18				
Location:	ASRBL-MW002	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.58	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFPeA	2.02	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFBs	1.84	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-4:2 FTS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFHxA	1.81	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFPeS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
HFPO-DA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFHxA	1.51	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
ADONA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFHxS	1.93	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Br-PFHxS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Total PFHxS	1.93	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-6:2 FTS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFOA	3.88	0.998	1.99	3.99	J	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Br-PFOA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Total PFOA	4.25	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFHxS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFNA	1.29	0.998	1.99	3.99	J, Q	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFOSA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFOS	5.32	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Br-PFOS	2.34	0.998	1.99	3.99	J, Q	B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Total PFOS	7.66	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
9Cl-PF3ONS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFDA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-8:2FTS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFNS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-MeFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Br-MeFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Total MeFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-EtFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Br-EtFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
Total EtFOSAA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFUuN	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFDs	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
11Cl-PF3OUdS	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFDsA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			
L-PFTrDA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1			

Sample ID: FD2207111455RF

PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-02</td><th>Column:</th><td>BEH C18</td><th>Date Collected:</th><td>11-Jul-22 14:55</td><th>Date Received:</th><td>15-Jul-22 09:10</td></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-02</td> <th>Column:</th> <td>BEH C18</td> <th>Date Collected:</th> <td>11-Jul-22 14:55</td> <th>Date Received:</th> <td>15-Jul-22 09:10</td>	Lab Sample:	2207130-02	Column:	BEH C18	Date Collected:	11-Jul-22 14:55	Date Received:	15-Jul-22 09:10
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.998	1.99	3.99		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	91.4	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C3-PFPeA	IS	107	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C3-PFBS	IS	98.3	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C3-HFPO-DA	IS	99.3	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-4:2 FTS	IS	103	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFHxA	IS	105	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C4-PFHxA	IS	105	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C3-PFHxS	IS	91.8	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-6:2 FTS	IS	95.9	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C5-PFNA	IS	94.1	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C8-PFOSA	IS	73.4	10 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFOA	IS	97.2	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C8-PFOS	IS	98.2	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFDA	IS	100	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-8:2 FTS	IS	98.9	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
d3-MeFOSAA	IS	93.7	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFUnA	IS	97.0	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
d5-EtFOSAA	IS	96.1	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFDaA	IS	93.3	25 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		
13C2-PFTeDA	IS	87.5	20 - 150		B22G162	01-Aug-22	0.251 L	04-Aug-22 05:58	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207111450KN
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 14:50	Lab Sample:	2207130-03	Column:	BEH C18				
Location:	ASRBL-MW006	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	3.85	1.01	2.02	4.06	J	B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFPeA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFBs	2.84	1.01	2.02	4.06	J	B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-4:2 FTS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFHxA	1.25	1.01	2.02	4.06	J	B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFPeS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
HFPO-DA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFHpA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
ADONA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFHxS	4.28	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Br-PFHxS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Total PFHxS	5.03	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-6:2 FTS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFOA	3.31	1.01	2.02	4.06	J	B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Br-PFOA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Total PFOA	3.85	1.01	2.02	4.06	J	B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFHpS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFNA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFOSA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFOS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Br-PFOS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Total PFOS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
9Cl-PF3ONS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFDA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-8:2FTS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFNS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-MeFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Br-MeFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Total MeFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-EtFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Br-EtFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
Total EtFOSAA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFUuN	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFDs	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
11Cl-PF3OUdS	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFDsA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			
L-PFTrDA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1			

Sample ID: GW2207111450KN
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 14:50 <th>Lab Sample:</th> <td>2207130-03</td> <th>Column:</th> <td>BEH C18</td> <td></td> <td></td>	Lab Sample:	2207130-03	Column:	BEH C18		
Project:	Au Sable River Boat Launch	Date Received:	15-Jul-22 09:10								
Location:	ASRBL-MW006										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.01	2.02	4.06		B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	104	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C3-PFPeA	IS	104	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C3-PFBS	IS	102	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C3-HFPO-DA	IS	91.7	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-4:2 FTS	IS	103	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFHxA	IS	104	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C4-PFHxA	IS	99.7	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C3-PFHxS	IS	94.3	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-6:2 FTS	IS	92.2	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C5-PFNA	IS	90.3	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C8-PFOSA	IS	73.4	10 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFOA	IS	91.5	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C8-PFOS	IS	94.7	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFDA	IS	94.2	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-8:2 FTS	IS	95.6	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
d3-MeFOSAA	IS	89.8	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFUnA	IS	91.7	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
d5-EtFOSAA	IS	95.0	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFDaA	IS	83.3	25 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	
13C2-PFTeDA	IS	78.2	20 - 150			B22G162	01-Aug-22	0.247 L	04-Aug-22 06:39	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207111545KN
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 15:45	Lab Sample:	2207130-04	Column:	BEH C18				
Location:	RI-MW029(2.5-7.5)	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	3.78	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFPeA	1.42	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFBs	38.1	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-4:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFHxA	1.97	1.00	2.00	4.00	J, Q	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFPeS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
HFPO-DA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFHpA	1.84	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
ADONA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFHxS	5.24	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Br-PFHxS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Total PFHxS	5.92	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-6:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFOA	19.5	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Br-PFOA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Total PFOA	20.5	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFHpS	1.02	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFNA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFOSA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFOS	11.3	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Br-PFOS	10.9	1.00	2.00	4.00	Q	B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Total PFOS	22.3	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
9Cl-PF3ONS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-8:2FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFNS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Br-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Total MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Br-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
Total EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFUuN	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFDs	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFDsA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			
L-PFTrDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1			

Sample ID: GW2207111545KN
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-04</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-04</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-04	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	11-Jul-22 15:45	Date Received:	15-Jul-22 09:10						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	107	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C3-PFPeA	IS	99.9	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C3-PFBS	IS	102	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C3-HFPO-DA	IS	104	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-4:2 FTS	IS	109	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFHxA	IS	107	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C4-PFHxA	IS	108	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C3-PFHxS	IS	100	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-6:2 FTS	IS	94.6	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C5-PFNA	IS	91.3	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C8-PFOSA	IS	73.5	10 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFOA	IS	101	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C8-PFOS	IS	98.1	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFDA	IS	93.7	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-8:2 FTS	IS	92.2	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
d3-MeFOSAA	IS	84.0	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFUnA	IS	86.9	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
d5-EtFOSAA	IS	87.3	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFDaO	IS	73.5	25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	
13C2-PFTeDA	IS	60.9	20 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 06:50	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207111605RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 16:05 <th>Lab Sample:</th> <td>2207130-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-05	Column:	BEH C18				
Location:	ASRBL-MW001	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	6.37	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFPeA	2.43	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFBs	1.96	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-4:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFHxA	3.05	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFPeS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
HFPO-DA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFHpA	2.66	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
ADONA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFHxS	5.61	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Br-PFHxS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Total PFHxS	6.46	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-6:2 FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFOA	7.83	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Br-PFOA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Total PFOA	8.31	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFHpS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFNA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFOSA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFOS	1.15	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Br-PFOS	2.26	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Total PFOS	3.41	1.00	2.00	4.00	J	B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
9Cl-PF3ONS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-8:2FTS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFNS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Br-MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Total MeFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Br-EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
Total EtFOSAA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFUuN	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFDs	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
11Cl-PF3OUdS	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFDsA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			
L-PFTrDA	ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1			

Sample ID: GW2207111605RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 16:05 <th>Lab Sample:</th> <td>2207130-05</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-05	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	15-Jul-22 09:10										
Analyte	Type	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
L-PFTeDA		ND	1.00	2.00	4.00		B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
Labeled Standards	Type	% Recovery		Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	69.6		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C3-PFPeA	IS	109		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C3-PFBS	IS	104		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C3-HFPO-DA	IS	102		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-4:2 FTS	IS	108		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFHxA	IS	110		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C4-PFHxA	IS	106		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C3-PFHxS	IS	101		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-6:2 FTS	IS	88.0		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C5-PFNA	IS	90.4		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C8-PFOSA	IS	63.8		10 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFOA	IS	97.3		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C8-PFOS	IS	101		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFDA	IS	94.4		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-8:2 FTS	IS	89.8		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
d3-MeFOSAA	IS	84.7		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFUnA	IS	92.5		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
d5-EtFOSAA	IS	96.9		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFDaA	IS	89.2		25 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		
13C2-PFTeDA	IS	79.1		20 - 150			B22G162	01-Aug-22	0.250 L	04-Aug-22 07:00	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207131650RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 16:50 <th>Lab Sample:</th> <td>2207130-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-06	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	15-Jul-22 09:10										
Location:	RI-MW031(2-7)												
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	3.94	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFPeA	1.00	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFBs	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-4:2 FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFHxA	1.17	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFPeS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
HFPO-DA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFHpA	1.19	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
ADONA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFHxS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Br-PFHxS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Total PFHxS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-6:2 FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFOA	3.16	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Br-PFOA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Total PFOA	3.55	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFHpS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFNA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFOSA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFOS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Br-PFOS	1.88	0.977	1.95	3.91	J, Q	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Total PFOS	2.36	0.977	1.95	3.91	J	B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
9Cl-PF3ONS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-8:2FTS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFNS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Br-MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Total MeFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Br-EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Total EtFOSAA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFUuN	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFDs	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
11Cl-PF3OUdS	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFDooA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
L-PFTrDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			

Sample ID: GW2207131650RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 16:50 <th>Lab Sample:</th> <td>2207130-06</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="3" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-06	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Received:	15-Jul-22 09:10										
Location:	RI-MW031(2-7)												
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFTeDA	ND	0.977	1.95	3.91		B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
13C3-PFBA	IS	107	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C3-PFPeA	IS	106	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C3-PFBS	IS	101	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C3-HFPO-DA	IS	104	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-4:2 FTS	IS	103	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFHxA	IS	108	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C4-PFHxA	IS	108	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C3-PFHxS	IS	97.0	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-6:2 FTS	IS	89.4	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C5-PFNA	IS	96.2	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C8-PFOSA	IS	68.9	10 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFOA	IS	99.3	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C8-PFOS	IS	104	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFDA	IS	96.3	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-8:2 FTS	IS	100	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
d3-MeFOSAA	IS	88.8	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFUnA	IS	85.9	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
d5-EtFOSAA	IS	84.0	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFDoA	IS	79.2	25 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			
13C2-PFTeDA	IS	52.6	20 - 150			B22G162	01-Aug-22	0.256 L	04-Aug-22 07:10	1			

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: SW2207111710RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 17:10 <th>Lab Sample:</th> <td>2207130-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-07	Column:	BEH C18				
Location:	ASRBL-SW005	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFPeA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFBs	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-4:2 FTS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFHxA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFPeS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
HFPO-DA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFHpA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
ADONA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFHxS	1.07	0.974	1.95	3.90	J	B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Br-PFHxS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Total PFHxS	1.07	0.974	1.95	3.90	J	B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-6:2 FTS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFOA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Br-PFOA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Total PFOA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFHpS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFNA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFOSA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFOS	1.66	0.974	1.95	3.90	J	B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Br-PFOS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Total PFOS	2.42	0.974	1.95	3.90	J	B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
9Cl-PF3ONS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFDA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-8:2FTS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFNS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-MeFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Br-MeFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Total MeFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-EtFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Br-EtFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
Total EtFOSAA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFUuN	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFDs	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
11Cl-PF3OUdS	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFDooA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			
L-PFTrDA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1			

Sample ID: SW2207111710RF
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-07</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-07</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-07	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	11-Jul-22 17:10	Date Received:	15-Jul-22 09:10						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.974	1.95	3.90		B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	102	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C3-PFPeA	IS	103	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C3-PFBS	IS	96.3	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C3-HFPO-DA	IS	98.3	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-4:2 FTS	IS	99.6	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFHxA	IS	109	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C4-PFHxA	IS	109	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C3-PFHxS	IS	97.6	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-6:2 FTS	IS	95.8	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C5-PFNA	IS	90.8	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C8-PFOSA	IS	84.3	10 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFOA	IS	98.7	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C8-PFOS	IS	100	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFDA	IS	97.2	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-8:2 FTS	IS	102	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
d3-MeFOSAA	IS	94.2	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFUnA	IS	92.5	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
d5-EtFOSAA	IS	95.1	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFDaA	IS	87.2	25 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	
13C2-PFTeDA	IS	58.1	20 - 150			B22G162	01-Aug-22	0.257 L	04-Aug-22 07:21	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207111715KN
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	11-Jul-22 17:15	Lab Sample:	2207130-08	Column:	BEH C18				
Location:	ASRBL-MW007	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	23.3	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFPeA	12.2	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFBs	33.1	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-4:2 FTS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFHxA	20.6	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFPeS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
HFPO-DA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFHpA	4.16	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
ADONA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFHxS	17.5	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Br-PFHxS	1.58	0.994	1.98	3.97	J	B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Total PFHxS	19.0	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-6:2 FTS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFOA	7.72	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Br-PFOA	3.66	0.994	1.98	3.97	J	B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Total PFOA	11.4	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFHpS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFNA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFOSA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFOS	16.3	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Br-PFOS	6.65	0.994	1.98	3.97	Q	B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Total PFOS	23.0	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
9Cl-PF3ONS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFDA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-8:2FTS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFNS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-MeFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Br-MeFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Total MeFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-EtFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Br-EtFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
Total EtFOSAA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFUuN	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFDs	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
11Cl-PF3OUdS	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFDooA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			
L-PFTrDA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1			

Sample ID: GW2207111715KN
PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-08</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-08</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-08	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	11-Jul-22 17:15	Date Received:	15-Jul-22 09:10 <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.994	1.98	3.97		B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	107	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C3-PFPeA	IS	103	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C3-PFBS	IS	99.8	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C3-HFPO-DA	IS	97.0	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-4:2 FTS	IS	99.5	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFHxA	IS	109	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C4-PFHxA	IS	104	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C3-PFHxS	IS	99.3	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-6:2 FTS	IS	95.1	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C5-PFNA	IS	96.2	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C8-PFOSA	IS	79.3	10 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFOA	IS	103	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C8-PFOS	IS	103	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFDA	IS	94.5	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-8:2 FTS	IS	88.4	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
d3-MeFOSAA	IS	94.0	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFUnA	IS	94.9	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
d5-EtFOSAA	IS	87.0	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFDaA	IS	91.2	25 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	
13C2-PFTeDA	IS	77.5	20 - 150			B22G162	01-Aug-22	0.252 L	04-Aug-22 07:31	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: GW2207131325RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data											
Name:	AECOM	Matrix:	Aqueous	Date Collected:	13-Jul-22 13:25 <th>Lab Sample:</th> <td>2207130-09</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-09	Column:	BEH C18				
Location:	ASRBL-MW008	Date Received:	15-Jul-22 09:10										
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution			
L-PFBA	5.16	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFPeA	1.26	0.988	1.98	3.95	J	B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFBs	3.66	0.988	1.98	3.95	J	B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-4:2 FTS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFHxA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFPeS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
HFPO-DA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFHpA	1.57	0.988	1.98	3.95	J	B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
ADONA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFHxS	4.64	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Br-PFHxS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Total PFHxS	5.29	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-6:2 FTS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFOA	6.07	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Br-PFOA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Total PFOA	6.63	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFHpS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFNA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFOSA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFOS	8.17	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Br-PFOS	8.51	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Total PFOS	16.7	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
9Cl-PF3ONS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFDA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-8:2FTS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFNS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-MeFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Br-MeFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Total MeFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-EtFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Br-EtFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
Total EtFOSAA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFUuN	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFDs	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
11Cl-PF3OUdS	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFDooA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			
L-PFTrDA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1			

Sample ID: GW2207131325RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Date Collected:	13-Jul-22 13:25	Lab Sample:	2207130-09	Column:	BEH C18		
Project:	Au Sable River Boat Launch	Date Received:	15-Jul-22 09:10								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.988	1.98	3.95		B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C3-PFBA	IS	109	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C3-PFPeA	IS	103	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C3-PFBS	IS	106	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C3-HFPO-DA	IS	106	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-4:2 FTS	IS	116	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFHxA	IS	111	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C4-PFHxA	IS	110	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C3-PFHxS	IS	101	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-6:2 FTS	IS	93.6	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C5-PFNA	IS	101	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C8-PFOSA	IS	81.0	10 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFOA	IS	104	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C8-PFOS	IS	108	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFDA	IS	101	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-8:2 FTS	IS	98.0	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
d3-MeFOSAA	IS	94.8	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFUnA	IS	101	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
d5-EtFOSAA	IS	100	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFDaA	IS	92.4	25 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	
13C2-PFTeDA	IS	95.7	20 - 150			B22G162	01-Aug-22	0.253 L	04-Aug-22 07:42	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: FB2207131435RF
PFAS Isotope Dilution Method

Client Data		Laboratory Data									
Name:	AECOM	Matrix:	Aqueous	Lab Sample:	2207130-10		Column:	BEH C18			
Project:	Au Sable River Boat Launch	Date Collected:	13-Jul-22 14:35 <th>Date Received:</th> <td data-cs="2" data-kind="parent">15-Jul-22 09:10</td> <td data-kind="ghost"></td> <th></th> <th></th> <th></th> <th></th>	Date Received:	15-Jul-22 09:10						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFBA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFPeA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFBs	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-4:2 FTS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFHxA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFPeS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
HFPO-DA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFHpA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
ADONA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFHxS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Br-PFHxS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Total PFHxS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-6:2 FTS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFOA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Br-PFOA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Total PFOA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFHpS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFNA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFOSA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFOS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Br-PFOS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Total PFOS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
9Cl-PF3ONS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFDA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-8:2FTS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFNS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-MeFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Br-MeFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Total MeFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-EtFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Br-EtFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Total EtFOSAA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFUuN	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFDs	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
11Cl-PF3OUdS	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFDsA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
L-PFTrDA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	

Sample ID: FB2207131435RF

PFAS Isotope Dilution Method

Client Data				Laboratory Data							
Name:	AECOM <th>Matrix:</th> <td>Aqueous<th>Lab Sample:</th><td>2207130-10</td><th>Column:</th><td>BEH C18</td><th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th></td>	Matrix:	Aqueous <th>Lab Sample:</th> <td>2207130-10</td> <th>Column:</th> <td>BEH C18</td> <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>	Lab Sample:	2207130-10	Column:	BEH C18				
Project:	Au Sable River Boat Launch	Date Collected:	13-Jul-22 14:35 <th>Date Received:</th> <td>15-Jul-22 09:10<th data-cs="4" data-kind="parent"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-kind="ghost"></th><th data-cs="2" data-kind="parent"></th><th data-kind="ghost"></th></td>	Date Received:	15-Jul-22 09:10 <th data-cs="4" data-kind="parent"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-cs="2" data-kind="parent"></th> <th data-kind="ghost"></th>						
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
L-PFTeDA	ND	0.962	1.92	3.85		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1	
Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution		
13C3-PFBA	IS	101	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C3-PFPeA	IS	106	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C3-PFBS	IS	97.6	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C3-HFPO-DA	IS	96.2	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-4:2 FTS	IS	100	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFHxA	IS	112	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C4-PFHxA	IS	112	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C3-PFHxS	IS	95.7	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-6:2 FTS	IS	95.8	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C5-PFNA	IS	105	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C8-PFOSA	IS	43.5	10 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFOA	IS	102	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C8-PFOS	IS	106	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFDA	IS	112	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-8:2 FTS	IS	95.0	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
d3-MeFOSAA	IS	92.2	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFUnA	IS	111	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
d5-EtFOSAA	IS	92.0	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFDaA	IS	94.4	25 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		
13C2-PFTeDA	IS	91.1	20 - 150		B22G162	01-Aug-22	0.260 L	04-Aug-22 07:52	1		

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses $\frac{1}{2}$ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	2211390
New Hampshire Environmental Accreditation Program	207721
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-021
Pennsylvania Department of Environmental Protection	018
Texas Commission on Environmental Quality	T104704189-22-13
Vermont Department of Health	VT-4042
Virginia Department of General Services	11276
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	PFAS Isotope Dilution
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	PFAS Isotope Dilution
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	PFAS Isotope Dilution
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	PFAS Isotope Dilution
Polychlorinated Dibenz-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN OF CUSTODY

1 of 1

For Laboratory Use Only

Work Order #: 2207130 Temp: 0 °F °C
 Storage ID: R-13, WPA2 Storage Secured: Yes No

Project ID: Au Sable River Boat Launch PO#: 60610670.01 Sampler: Ron Friend/Kirsten Nielsen
 (name)

TAT Standard: 21 days
 (check one): Rush (surcharge may apply)
 14 days 7 days Specify:

Invoice to: Name <u>Amanda Armbruster</u>	Company <u>EGLE - Bay City District</u>	Address <u>401 Ketchum Street Suite B</u>	City <u>Bay City</u>	State <u>MI 48708</u>	Ph# <u>(989) 894-6242</u>	Fax#
--	--	--	-------------------------	--------------------------	------------------------------	------

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature) <i>Marissa Sparks Msparks</i>	Date <u>07/15/22</u>	Time <u>0410</u>
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106

Method of Shipment:

ATTN: Jennifer Miller

Tracking No.:

Add Analysis(es) Requested

Mod. EPA Method 537

EPA Method 537(DW only)

Container(s)

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Mark	PFOA/PFOS	UCMR3 PFAS List:6	537 List: 14	Full List or 24	EGLE List of 28	Branch and Linear	PFOA/PFOS	UCMR3 PFAS List:6	PFAS List: 14	Comments
GW2207111450RF	7/11/22	1450	ASRBL-MW002	2	P	AQ				X						
FD2207111455RF	7/11/22	1455	ASRBL-MW002	2	P	AQ				X						
GW2207111450KN	7/11/22	1450	ASRBL-MW006	2	P	AQ				X						
GW2207111545KN	7/11/22	1545	RI-MW029(2.5-7.5)	2	P	AQ				X						
GW2207111605RF	7/11/22	1605	ASRBL-MW001	2	P	AQ				X						
GW2207131650RF	7/11/22	1650	RI-MW031(2-7)	2	P	AQ				X						
SW2207111710RF	7/11/22	1710	ASRBL-SW005	2	P	AQ				X						
GW2207111715KN	7/11/22	1715	ASRBL-MW007	2	P	AQ				X						
GW2207131325RF	7/13/22	1325	ASRBL-MW008	2	P	AQ				X						
FB2207131435RF	7/13/22	1435		1	P	AQ				X						

Special Instructions/Comments: Send Results and Acknowledgements to:

Jeremiah.Morse@aecom.com

ARMBRUSTER@michigan.gov

SEND DOCUMENTATION AND RESULTS TO:

Name: Amanda Armbruster

Company: EGLE - Bay City District Office

Address: 401 Ketchum St. Suite B

City: Bay City

State: MI

Zip: 48708

Phone: (989) 894-6242

Fax:

Email: lurym1@michigan.gov

Container Types: P = HDPE, PJ = HDPE Jar

O = Other

Bottle Preservation Type: T = Thiosulfate,

TZ = Trizma: TZ

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,

SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other.



Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2207130 TAT STD

Samples Arrival:	Date/Time <u>07/15/22 0910</u>	Initials: <u>WWS</u>	Location: <u>WR-2</u>		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL
Preservation:	Ice	Blue Ice		Techni Ice	Dry Ice
Temp °C: <u>0.6</u>	(uncorrected)	Probe used: Y / <u>N</u>		Thermometer ID: <u>IR-4</u>	
Temp °C: <u>0.4</u>	(corrected)				

		YES	NO	NA	
Shipping Container(s) Intact?		✓			
Shipping Custody Seals Intact?		✓			
Airbill — Trk # <u>2755 4021 6337</u>		✓			
Shipping Documentation Present?		✓			
Shipping Container	Vista	Client	Retain	Return	
Chain of Custody / Sample Documentation Present?		✓			
Chain of Custody / Sample Documentation Complete?		✓ ⁽¹⁾	✓		
Holding Time Acceptable?		✓			
Logged In:	Date/Time <u>07/18/22 13:12</u>	Initials: <u>WWS</u>	Location: <u>A-13, WR-2</u>		
COC Anomaly/Sample Acceptance Form completed?				✓	

Comments: (1) COC not relinquished



Sample Log-In Checklist

Page # 2 of 2

Vista Work Order #: 2207130 TAT Std

Samples Arrival:	Date/Time		Initials:		Location: WR-2		
	<u>17/15/22</u>	<u>0910</u>	<u>KW</u>		Shelf/Rack: <u>N/A</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	<input checked="" type="checkbox"/> Ice	Blue Ice		Techni Ice	Dry Ice	None	
Temp °C: <u>2.8</u> (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N			Thermometer ID: <u>TR-3</u>			
Temp °C: <u>2.7</u> (corrected)							

	YES	NO	NA		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>				
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>				
Airbill <u>2</u> Trk # <u>2755 4016 3925</u>	<input checked="" type="checkbox"/>				
Shipping Documentation Present?	<input checked="" type="checkbox"/>				
Shipping Container <input checked="" type="checkbox"/> Vista Client <input checked="" type="checkbox"/> Retain Return <input checked="" type="checkbox"/> Dispose					
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> V			
Chain of Custody / Sample Documentation Complete?		<input checked="" type="checkbox"/>			
Holding Time Acceptable?	<input checked="" type="checkbox"/>				
Logged In:	Date/Time <u>21/8/22 13:17</u>	Initials: <u>16</u>	Location: R-12, WR-2		
			Shelf/Rack: A-4 F-6		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>				

Comments:

(A) COC received in Cooler 1

CoC/Label Reconciliation Report WO# 2207130

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2207130-01	A GW2207111450RF	<input type="checkbox"/>	ASRBL-MW002	11-Jul-22 14:50	<input type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-01	B GW2207111450RF	<input checked="" type="checkbox"/>	ASRBL-MW002	11-Jul-22 14:50	<input type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-02	A FD2207111455RF	<input checked="" type="checkbox"/>	ASRBL-MW002	11-Jul-22 14:55	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-02	B FD2207111455RF	<input checked="" type="checkbox"/>	ASRBL-MW002	11-Jul-22 14:55	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-03	A GW2207111450KN	<input checked="" type="checkbox"/>	ASRBL-MW006	11-Jul-22 14:50	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-03	B GW2207111450KN	<input checked="" type="checkbox"/>	ASRBL-MW006	11-Jul-22 14:50	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-04	A GW2207111545KN	<input checked="" type="checkbox"/>	RI-MW029(2.5-7.5)	11-Jul-22 15:45	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-04	B GW2207111545KN	<input checked="" type="checkbox"/>	RI-MW029(2.5-7.5)	11-Jul-22 15:45	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-05	A GW2207111605RF	<input checked="" type="checkbox"/> <i>1105111710</i>	ASRBL-MW001	11-Jul-22 16:05	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-05	B GW2207111605RF	<input checked="" type="checkbox"/>	ASRBL-MW001	11-Jul-22 16:05	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-06	A GW2207131650RF	<input type="checkbox"/>	RI-MW031(2-7)	11-Jul-22 16:50	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-06	B GW2207131650RF	<input type="checkbox"/>	RI-MW031(2-7)	11-Jul-22 16:50	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-07	A SW2207111710RF	<input checked="" type="checkbox"/>	ASRBL-SW005	11-Jul-22 17:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-07	B SW2207111710RF	<input checked="" type="checkbox"/>	ASRBL-SW005	11-Jul-22 17:10	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-08	A GW2207111715KN	<input checked="" type="checkbox"/>	ASRBL-MW007	11-Jul-22 17:15	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-08	B GW2207111715KN	<input type="checkbox"/>	ASRBL-MW007	11-Jul-22 17:15	<input type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-09	A GW2207131325RF	<input checked="" type="checkbox"/>	ASRBL-MW008	13-Jul-22 13:25	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-09	B GW2207131325RF	<input checked="" type="checkbox"/>	ASRBL-MW008	13-Jul-22 13:25	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous
2207130-10	A FB2207131435RF	<input checked="" type="checkbox"/>		13-Jul-22 14:35	<input checked="" type="checkbox"/>	HDPE Bottle, 250 mL	Aqueous

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	/		
Sample Custody Seals Intact?			/
Adequate Sample Volume?	/		
Container Type Appropriate for Analysis(es)	/		

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 Non Other

Verified by/Date: VA 07/26/22 Originally labeled and reconciled
on 07/19/22 by ka

- Comments:
- (A) No time listed on sample label
 - (B) Underlined part is not present on sample label
 - (C) Sample contains brown tint
 - (D) ^{VA 07/26/22} Sample No back up volume
 - (E) Sample label ID - GW 2207111650 RF

$$C_1 = \text{Cooler } 1 + f_2$$

$$C_2 = \text{Cooler } 2 + f_2$$

ANOMALY FORM

Vista Work Order

2207130

Initial/Date The following checked issues were noted during sample receipt and login:

1. The samples were received out of temperature at (WI-PHT): _____
Was Ice present: Yes No Melted Blue Ice
- 10/27/19/22 2. The Chain-of-Custody (CoC) was not relinquished properly.
3. The CoC did not include collection time(s). 00:00 will be used unless notified otherwise.
4. The sample(s) did not include a sample collection time. All or Sample Name: _____
- 10/27/19/22 5. A sample ID discrepancy was found. See the Reconciliation report.
The CoC Sample ID will be used unless notified otherwise.
6. A sample date and/or time discrepancy was found. See the Reconciliation report.
The CoC Sample date/time will be used unless notified otherwise.
7. The CoC did not include a sample matrix. The following sample matrix will be used: _____
8. Insufficient volume received for analysis. All or Sample Name: _____
9. The backup bottle was received broken. Sample Name: _____
10. CoC not received, illegible or destroyed.
11. The sample(s) were received out of holding time. All or Sample Name: _____
12. The CoC did not include an analysis. All or Sample Name: _____
13. Sample(s) received without collection date. All or Sample Name: _____
14. Sample(s) not received. All or Sample Name: _____
15. Sample(s) received broken. All or Sample Name: _____
16. An incorrect container-type was used. All or Sample Name: _____
17. The Field Reagent Blank (FRB) preservative was from a different lot than the field samples.
Will proceed with analysis and narrate unless notified otherwise.
18. Other: _____

Bolded items require sign-off

Client Contacted: _____

Date of Contact: _____

Vista Client Manager: _____

Resolution: _____