REGION 9

SAN FRANCISCO, CA 94105

Region 9 Enforcement and Compliance Assurance Division

INSPECTION REPORT

Inspection Date:	June 3-7, 2024	**Inspection Announced:** Yes	
Media:	Safe Drinking Water Act		
Regulatory Program(s)	Public Water System Supervision		
Facility or Site Name:	Aliamanu Military Reservation		
Facility/Site Physical Location:	Bougainville Drive and Mahogany Lane		
(city, state, zip code)	Honolulu, HI 96818		
Mailing Address:	745 Wright Avenue, B. 107, Wheeler Army Airfield		
(city, state, zip code)	Schofield Barracks, HI 96857-5000		
County:	Honolulu		
Facility/Site Contact:	[redacted]	Safe Drinking Water Program Manager	
	[redacted]		
Facility/Site Identifier:	PWS I.D. HI0000337		
State Personnel:			
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Jeffrey Tsai	Environmental Engineer	(808) 586-4262	
Kelsey Yap	Environmental Health Specialist		
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EPA Inspectors:			
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SECTION I – INTRODUCTION

Purpose of the Inspection

From June 3-7, 2024, Claire Ong and I, Christopher Chen, conducted a public water system inspection with Mike Beck and Mike McFadden, EPA contractors from ERG, of the Aliamanu Military Reservation (AMR) public water system (the "System") to evaluate compliance with the Safe Drinking Water Act (SDWA). Personnel from the Hawaii Department of Health participated in the inspection. This inspection was performed under the authority vested in the Administrator of the United States Environmental Protection Agency (EPA), pursuant to Section 1445(j) of the SDWA, 42 U.S.C. § 300j-4(b), to determine compliance with the requirements of the SDWA, 42 U.S.C. § 300f *et seq.*

Opening Conference

At approximately 8:00 AM on June 3, 2024, Ong, McFadden, Beck, and I (hereafter referred to as "we" or "EPA inspection team") arrived at a NAVFAC Hawaii building to hold a joint opening conference with Army and Navy personnel. We conducted a joint opening conference as EPA was conducting an inspection of the Joint Base Pearl Harbor-Hickam (JBPHH) public water system in tandem with AMR. AMR is a consecutive water system to JBPHH – meaning that AMR receives all its water from JBPHH and does not have any other sources of drinking water.

McFadden and I presented our EPA-issued inspector credentials to [redacted], Environmental Division Chief. I explained to all attendees that EPA was conducting an inspection of the AMR and JBPHH public water systems throughout the week and we planned to collect drinking water samples at multiple locations, including the JBPHH sources, AMR's entry point to the distribution system (EPDS), and a few residences and childcare centers. EPA conducted sampling at all sample sites for a subset of analytes listed in Navy's Extended Drinking Water Monitoring (EDWM) Plan[1], and are listed below (see Appendix 3 for laboratory analytical results):

- 1,2 dibromoethane (commonly known as ethylene dibromide or EDB)
- Benzene
- Ethyl benzene
- Toluene
- 1,2,4-trimethylbenzene
- 1,3,5-trimethylbenzene
- Xylenes (total)
- M,p-xylenes
- o-xylenes
- JP-5 as combined TPH – gasoline range
- JP-5 as combined TPH – diesel and oil ranges
- Copper
- Lead

[1] A copy of the latest version of the EDWM Plan can be found at JBPHH Drinking Water Monitoring (jbphh-safewaters.org)

- Beryllium
- Mercury
- 1-methylnaphthalene
- 2-methylnaphthalene
- Naphthalene
- Benzo[a]pyrene

In addition, we collected samples for 75 per- and polyfluoroalkyl substances (PFAS) analytes at the locations below (see Appendix 3 for a full list of analytes and results for AMR's EPDS).

- Waiawa Shaft, the [redacted] source for JBPHH and AMR;
- Red Hill Shaft, currently an inactive source for JBPHH and physically disconnected;
- Aiea-Halawa Shaft, currently an inactive source for JBPHH and physically disconnected; and
- AMR EPDS.

Navy raised four concerns regarding EPA's collection of PFAS samples that they believed exceeded EPA's authority:

1. The collection of PFAS samples at the two inactive sources (Red Hill Shaft and Aiea-Halawa Shaft);
2. Alleged that PFAS sampling at AMR was unprecedented as AMR was part of the distribution system[2];
3. Raised concerns about the extensive PFAS sampling relying on a modified EPA method 537.1; and
4. PFAS sampling beyond the 29 PFAS analytes listed within EPA's Unregulated Contaminant Monitoring Rule.

These concerns were annotated directly onto the Notice of Inspection for JBPHH. For Army, [redacted], Safe Drinking Water Program Manager, signed the Notice of Inspection for AMR. [redacted] noted directly onto AMR's NOI that Army agreed with Navy on their disagreement of EPA collecting PFAS samples outside Methods 533 and 537.1.

I acknowledged their concerns and stated that we planned to move forward with the inspection and sampling plan; any concerns may also be communicated to EPA's leadership. While Navy and Army disagreed with the PFAS sampling, both clearly stated they would not impede the collection of any samples.

After Navy personnel described their water system, Army personnel explained AMR's system. Army had [redacted]. [redacted] explained that operators were working seven days a week and were available 24/7. Army has three certified operators and one

[2] Note: Army collected samples for six PFAS analytes under the Unregulated Contaminant Monitoring Rule (UCMR) 3 and collected samples for 29 PFAS analytes in 2023 under UCMR 5. Results were non-detect.

operator in training. These four operators maintain four water systems: AMR, Tripler Army Medical Center, Fort Shafter, and Schofield Barracks). [redacted] stated an operator visits [redacted] assets [redacted]

Facility/Site Description

The System, located in Honolulu County, is owned and operated by the United States Department of the Army. The System is a consecutive community water system that receives [redacted] its water from JBPHH and serves approximately [redacted] persons. JBPHH had one active groundwater source at the time of the inspection – Waiawa Shaft. The System does not have interconnections with any other systems.

After water from JBPHH enters AMR's system, the water goes through granulated activated carbon treatment and is then chlorinated before the water is distributed to consumers. Army installed GAC treatment after an incident in November 2021 that led to the contamination of JBPHH's Red Hill Shaft with jet fuel. The GAC treatment is designed for the removal of any potential jet fuel that may have been in the water because of the fuel contamination in the System. As the GAC treatment also removes chlorine, the System re-chlorinates the water before distribution.

The System has three active storage tanks and three pressure zones.

SECTION II – OBSERVATIONS

1.1 Entry Point to Distribution System

We inspected this site on June 3, 2024. The site had multiple assets onsite: GAC treatment, chlorination, South Pump Station, and two storage tanks (one active) that were part of JBPHH's distribution system. JBPHH water splits and goes to JBPHH's storage tank(s) and to AMR's system. Navy and Army have joint access to this site due to the shared space.

<u>GAC Treatment</u>

The GAC treatment was not maintained by Army operators but instead by [redacted]. [redacted] monitors the GAC treatment [redacted]. [redacted] stated that one of Army's operators was present for the [redacted] sample collection. [redacted] explained that Army did not intend to maintain the GAC treatment system indefinitely – the system may be removed after the current contract expires if the water is proven to be clear of potential fuel contamination from the 2021 incident. The [redacted] contractor, who was onsite, explained treatment as follows:

1. The System receives water from JBPHH.
2. The water main splits into two pathways.
3. Each path treats the water with two GAC vessels in parallel. Each path also chlorinates the water separately before the water lines combine back into one water main.

Chlorination

The GAC treatment removes chlorine from JBPHH's water, requiring the System to add chlorine back into the water after treatment. The System has two different chlorination injection points, one for each treatment path. As a result, there were two separate chlorination storage tanks. The System aims for a chlorine residual of approximately 0.6-0.8 mg/L at the entry point to the distribution system. I observed the two chlorine storage tanks both had an unsealed opening where the injection line went into the tanks. The chlorination treatment system was located outside, including the chlorine pumps.

South Pump Station

The System had two pumps to pump water to the southern portion of the distribution system. The south pumps had a back-up generator onsite. The target pressure after going through booster pumps was 40-60 psi. The pipes at the pump station had evidence of corrosion, including the pipe support beams.

1.2 Middle Tank

Middle Tank was inspected on June 6. This concrete tank had a capacity of [redacted] gallons. There were wasps along the ladder for the tank. McFadden and [redacted], one of the certified Army operators, climbed the tank. [redacted] was stung by a wasp during the tank climbing. McFadden stated [redacted] hatch key for the tank did not work so both were unable to observe the tank interior. McFadden felt a rubber gasket along the hatch door but was unable to observe the gasket's status since it was locked shut. McFadden did not note any concerns with the tank vent and the electrical conduit was properly sealed.

The tank had heavy vegetation growth, including trees, along one side of the foundation. [redacted].
The tank did have a partial barrier to protect from vehicle impact. The tank had numerous minor leaks halfway up the tank, which also led to vegetation growth along a couple of leaks. The tank wall had some spots with spalling and one spot was weathered to the point that re-bar was exposed.

The tank overflow was appropriately screened but was not raised to 12-24 inches above the ground level. There was also vegetation around the overflow, which decreased the drainage for the area.

Middle Tank also had a booster station which pumped water to the North Tank and to the distribution system. I read a pressure of 113 psi at a pressure gauge after the booster pumps. I observed [redacted] on one of the booster pumps.

1.3 North Tank

North Tank was inspected on June 7. The North Tank was an in-ground, [redacted]-gallon concrete tank built in 1941. One side of the tank was partially buried along the top by the hillside.

The operator stated the access hatch was installed approximately four years ago. Army personnel had difficulty removing the hatch lock and was only removed by breaking the hatch's connection point with the lock. The access hatch had a rubber gasket along the lid. I observed a couple of spider webs within the access hatch and the water had flakes along the surface. McFadden noted there was significant sediment build-up at the bottom of the tank.

The overflow had an appropriate screen attached at the end and was raised above ground level. The overflow was constructed of cast iron pipe and was rusty.

1.4 South Tank

Due to time limitations, we were unable to inspect the South Tank. [redacted] I requested AMR personnel take photographs of the storage tank, the vent, the access hatch exterior, the access hatch interior, and inside the storage tank.

Based on the photos provided by Army after the inspection, I did not observe any concerns. The tank relied on a duckbill valve for the overflow.

1.5 Operations

During the opening conference, Army representatives stated there were three certified operators and one operator in training. EPA also received a certified operator list which included seven certified operators to manage four Army water systems.

During an EPA inspection in 2022, EPA noted the lack of a valve exercising program. The System continued to not have a valve exercising program.

[redacted] was listed as the Water Treatment Plant Operator (WTPO) in charge on the list of certified operators provided by Army. During the inspection, [redacted] stated that [redacted] had retired. The list of certified operators, dated January 2024, was not accurate and needed to be updated and re-submitted to DOH.

According to a description of the water system provided by Army, US Army Corps of Engineers conducts the monthly bacteriological sampling at all Army operated systems on Oahu.

1.6 Risk and Resiliency Assessment (RRA) and Emergency Response Plan (ERP)

The System provided an Emergency Response Plan. Army personnel explained that the components of the RRA were included in the ERP, but we did not observe the required RRA components in the ERP. We evaluated the System's cybersecurity; any specific observations

regarding cybersecurity, the RRA, and the ERP are not available in this report due to the sensitive nature of the information.

SECTION III – SAMPLING AND FIELD MONITORING

The EPA inspection team collected treated water samples during the week of June 3 through 7, 2024. All samples were collected following an EPA-approved Quality Assurance Project Plan. The non-PFAS analytes were a subset of a longer list of analytes listed within Navy's Extended Drinking Water Monitoring Plan. All non-PFAS analytes were analyzed by EPA Region 9 Laboratory or BSK Laboratories, a subcontractor for EPA Region 9 Laboratory. PFAS samples were analyzed by Eurofins. For all samples collected by EPA, Navy also instructed AECOM, a Navy contractor, to collect split samples. AECOM was also the contractor responsible for collecting EDWM samples.

For AMR, the EPA inspection team collected samples from AMR's EPDS and two residences served by the System. EPA had Navy and Army schedule sample collection ahead of time with residences to ensure availability and consent to access the property.

Table 1 summarizes the samples taken during the inspection and the analyses performed. In summary, these samples were analyzed for the 75 PFAS analytes listed in Table 1, semivolatile organic compounds (SVOCs) listed in Table 3, volatile organic compounds (VOCs) listed in Table 5, total petroleum hydrocarbons (TPHs) listed in Table 7, metals (including mercury) listed in Table 9, and ethylene dibromide (EDB). Prior to sample collection, the EPA inspection team determined if the entry point was producing water at the time of arrival. System representatives operated each source (e.g., pump-to-waste, pump-to-entry point) and entry point for a minimum of 10 minutes prior to the EPA inspection team taking a sample. The System's authorized contractor removed sample tap fixtures (e.g., aerators), closed hot water plumbing valves to isolate treated sample taps, and otherwise prepared each raw and treated sample site prior to sampling. The EPA inspection team flushed each raw and treated sample tap for a minimum of five minutes prior to sample collection. The EPA inspection team measured free chlorine, total chlorine, temperature, and pH of each sample at the time of the first sample collected at each sample location. These field measurements are also compiled in Table 1 below.

Navy collected split samples immediately before or after for the EPA samples collected at the entry point and at Residence 1. Navy was not able to collect split samples at Residence 2 due to a leak at the sink that became more severe and the resident instructed personnel to cease further sampling. The Navy's split sample results are included in the tables below for comparison. This report does not cover data quality considerations for the Navy's split sample results.

Table 1. Summary of Locations Sampled for Each Analysis

Asset	*Sample Location*	*Sample Identifier*	*Sample Date/Time*	*Analysis Performed*	*Free Chlorine (mg/L)*	*Total Chlorine (mg/L)*	*Temp (deg. C)*	*pH*
AMR	AMR entry point to the distribution system	001	06/03/24 12:54	SVOC	0.64	0.67	27.6	7.2
			06/03/24 12:56	VOC				
			06/03/24 12:54	TPH				
			06/03/24 12:58	Metals				
			06/03/24 12:55	EDB				
		001P	06/05/24 09:17	PFAS	0.61	0.64	27.3	7.0
Field Blank	Field Blank	001FB	06/03/24 12:55	SVOC	n/a	n/a	n/a	n/a
Field Blank	Field Blank	001FBP	06/05/24 09:15	PFAS	n/a	n/a	n/a	n/a
Distribution System	Residence 1	007	06/05/24 08:18	SVOC	0.63	0.64	24.0	7.0
			06/05/24 08:20	VOC				
			06/05/24 08:13	TPH				
			06/05/24 08:16	Metals				
			06/05/24 08:20	EDB				
Distribution System	Residence 2*	009	06/05/24 11:47	SVOC	0.58	0.55	26.0	7.1
			06/05/24 11:40	VOC				
			06/05/24 11:38	TPH				
			06/05/24 11:43	Metals				
			06/05/24 11:40	EDB				
n/a	n/a	Trip Blank	n/a – trip blank	PFAS	n/a	n/a	n/a	n/a
n/a	n/a	TB-1	n/a – trip blank	EDB	n/a	n/a	n/a	n/a
n/a	n/a	TB-2	n/a – trip blank	VOC	n/a	n/a	n/a	n/a
n/a	n/a	TB-02	n/a – trip blank	TPH	n/a	n/a	n/a	n/a
n/a	n/a	TB-3	n/a – trip blank	TPH	n/a	n/a	n/a	n/a
n/a	n/a	TB-05	n/a – trip blank	EDB	n/a	n/a	n/a	n/a
n/a	n/a	TB-06	n/a – trip blank	EDB	n/a	n/a	n/a	n/a

PFAS Sampling

The laboratory used a modified version of EPA Method 537 with both liquid chromatography tandem mass spectrometry (LC-MS-MS) and gas chromatography tandem mass spectrometry (GC-MS-MS). Table 1 summarizes EPA's and HDOH's maximum contaminant levels (MCLs) for PFAS in drinking water and HDOH's final action levels (ALs) for PFAS in drinking water (rounded to two significant figures). Some of EPA's MCLs are reported in units of Hazard Index (HI). The Hazard Index is displayed in Equation 1, with all concentrations in parts per trillion (ppt), and connotated with brackets, ("[xx]").

$$\text{Hazard Index (1 unitless)} = \left(\frac{[\text{HFPO} - \text{DA}_{\text{ppt}}]}{[10\ \text{ppt}]}\right) + \left(\frac{[\text{PFBS}_{\text{ppt}}]}{[2000\ \text{ppt}]}\right) + \left(\frac{[\text{PFNA}_{\text{ppt}}]}{[10\ \text{ppt}]}\right) + \left(\frac{[\text{PFHxS}_{\text{ppt}}]}{[10\ \text{ppt}]}\right) \quad \text{(Equation 1)}$$

Table 1. List of Analytes Included in the PFAS Analysis and Associated Drinking Water Regulations

PFAS Compound	*Abbreviation*	*CAS Number*	*EPA and HI MCLs (ppt)*	*HDOH ALs (ppt)*
Method FTOH				
4:2 FTOH-2-Perfluorobutyl ethanol	4:2 FTOH	2043-47-2	-	-
7:2 FTOH-1-Perfluoroheptyl ethanol	7:2 FTOH	24015-83-6	-	-
6:2 FTOH-2-Perfluorohexyl ethanol	6:2 FTOH	647-42-7	-	5,000
8:2 FTOH-2-Perfluorooctyl ethanol	8:2 FTOH	678-39-7	-	4,200
10:2 FTOH-2-Perfluorodecyl ethanol	10:2 FTOH	N/A	-	-
Method 537 IDA				
Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7	-	-
10:2 Fluorotelomer Sulfonate	10:2 FTS	120226-60-0	-	-
Perfluoromethoxypropyl carboxylic acid	PMPA	13140-29-9	-	-
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	10	10
Perfluoroethylcyclohexane sulfonate	PFECHS	133201-07-7	-	-
Perfluoro-3,6-dioxaheptanoic acid	PFECA B	151772-58-6	-	-
Perfluoro-n-octadecanoic acid	PFODA	16517-11-6	-	-
N-ethyl perfluorooctane sulfonamido ethanol	NEtFOSE	1691-99-2	-	-
Perfluorooctanesulfonic acid	PFOS	1763-23-1	4.0	4.0
Perfluoroundecanoic acid	PFUnA	2058-94-8	-	-
N-methyl perfluorooctane sulfonamido acetic acid	NMeFOSAA	2355-31-9	-	-
Nafion Byproduct 4	R-PSDA	2416366-18-0	-	-
Nafion Byproduct 5	Hydrolyzed PSDA	2416366-19-1	-	-
Nafion Byproduct 6	R-PSDCA	2416366-21-5	-	-
-4(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-pentanoic acid	R-EVE	2416366-22-6	-	-
N-methyl perfluorooctane sulfonamido ethanol	NMeFOSE	24448-09-7	-	-
Perfluoroethoxypropyl carboxylic acid	PEPA	267239-61-2	-	-
Perfluoropentanoic acid	PFPeA	2706-90-3	-	1,500
Perfluoropentanesulfonic acid	PFPeS	2706-91-4	-	620
6:2 Fluorotelomer Sulfonate	6:2 FTS	27619-97-2	-	1,500
8:2 Fluorotelomer Carboxylic Acid	8:2 FTCA	27854-31-5	-	-
Nafion Byproduct 1	PS Acid	29311-67-9	-	-
N-ethyl perfluorooctane sulfonamido acetic acid	NEtFOSAA	2991-50-6	-	-
Perfluorohexanoic acid	PFHxA	307-24-4	-	1,900
Perfluorododecanoic acid	PFDoA	307-55-1	-	-
N-methyl perfluorooctane sulfonamide	NMeFOSA	31506-32-8	-	-
Perfluorooctanoic acid	PFOA	335-67-1	4.0	4.0
Perfluorodecanoic acid	PFDA	335-76-2	-	7.7
Perfluorodecanesulfonic acid	PFDS	335-77-3	-	38
Perfluorohexanesulfonic acid	PFHxS	355-46-4	10	10
3:3 Fluorotelomer Carboxylic Acid	3:3 FTCA	356-02-5	-	-
Perfluorobutanoic acid	PFBA	375-22-4	-	15,000
Perfluorobutanesulfonic acid	PFBS	375-73-5	2,000	2,000
Perfluoroheptanoic acid	PFHpA	375-85-9	-	77
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8	-	38
Perfluorononanoic acid	PFNA	375-95-1	10	10

Table 1. List of Analytes Included in the PFAS Analysis and Associated Drinking Water Regulations

PFAS Compound	*Abbreviation*	*CAS Number*	*EPA and HI MCLs (ppt)*	*HDOH ALs (ppt)*
Perfluorotetradecanoic acid	PFTeA	376-06-7	-	-
Perfluoro-3-methoxypropanoic acid	PFECA F	377-73-1	-	-
8:2 Fluorotelomer Sulfonate	8:2 FTS	39108-34-4	-	-
Perfluoro(3,5-dioxahexanoic) acid	PFO2HxA	39492-88-1	-	-
Perfluoro(3,5,7-trioxaoctanoic) acid	PFO3OA	39492-89-2	-	-
Perfluoro(3,5,7,9-tetraoxadecanoic) acid	PFO4DA	39492-90-5	-	-
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	TAF	39492-91-6	-	-
N-ethyl perfluorooctane sulfonamide	NEtFOSA	4151-50-2	-	-
Perfluoropropionic acid	PFPrA	422-64-0	-	510
Perfluoropropanesulfonic acid	PFPrS	423-41-6	-	-
6:2 Fluorotelomer Carboxylic Acid	6:2 FTCA	53826-12-3	-	-
10:2 Fluorotelomer Carboxylic Acid	10:2 FTCA	53826-13-4	-	-
Perfluoro-2-methoxyaceticacid	PFMOAA	674-13-5	-	-
Perfluoro-n-hexadecanoic acid	PFHxDA	67905-19-5	-	-
Perfluorononanesulfonic acid	PFNS	68259-12-1	-	-
Perfluoroethoxypropionic acid	EVE Acid	69087-46-3	-	-
8:2 Fluorotelomer Unsaturated Carboxylic Acid	8:2 FTUCA	70887-84-2	-	-
6:2 Fluorotelomer Unsaturated Carboxylic Acid	6:2 FTUCA	70887-88-6	-	-
10:2 Fluorotelomer Unsaturated Carboxylic Acid	10:2 FTUCA	70887-94-4	-	-
Perfluorotridecanoic acid	PFTrDA	72629-94-8	-	26
Nafion Byproduct 2	Hydro-PS Acid	749836-20-2	-	-
Perfluorooctanesulfonamide	PFOSA	754-91-6	-	46
9Cl-PF3ONS	9Cl-PF3ONS	756426-58-1	-	-
4:2 Fluorotelomer Sulfonate	4:2 FTS	757124-72-4	-	-
11Cl-PF3OUdS	11Cl-PF3OUdS	763051-92-9	-	-
Perfluoroethoxsypropanoic acid	Hydro-EVE Acid	773804-62-9	-	-
Perfluorododecanesulfonic acid	PFDoS	79780-39-5	-	-
Perfluoroethoxysulfonic acid	NVHOS	801209-99-4	-	-
Perfluoro-4-isopropoxybutanoic acid	PFECA G	801212-59-9	-	-
7:3 Fluorotelomer Carboxylic Acid	7:3 FTCA	812-70-4	-	-
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	-	-
5:3 Fluorotelomer Carboxylic Acid	5:3 FTCA	914637-49-3	-	-
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	-	1,200
-3(Methoxy)tetrafluoropropionic acid	MTP	93449-21-9	-	-
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS			1.0 (unitless) Hazard Index	-

Table 2 contains a summary of the EPA and Navy's split sample results, including a summary of the number of PFAS analytes detected, their detection range, and EPA MCLs that were exceeded for each sample. Note the following quality considerations for the EPA sample results:

Method FTOH Samples

- According to the laboratory, samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within the holding time for the following samples: 001P and Trip Blank.

Method 537 IDA

- The recovery of the labeled isotope for PFPrA in the sample for 001 FBP are outside acceptance limits. However, this analyte was not detected in the sample.
- Target analyte HFPODA was detected in the method blank associated with the Trip Blank sample. Therefore, the detection of HFPODA in the Trip Blank is not reliable.

The full EPA sample results are included in Table 14 and the laboratory reports in Attachment 1. Table 14 also contains the PFAS analysis results for all environmental and quality control samples taken.

In summary:

- Exceedances: No exceedances of MCLs or ALs were recorded.
- PFAS Detection: PFOSA was detected in EPA's sample 001P at 1.74 ppt. Navy's split sample analyzed PFOS with Method 533 and 537.1 – the result analyzed with Method 533 was non-detect while the result analyzed with Method 537.1 detected PFOS at 1.2 ppt. There were no other detections.
- Field Blank and Trip Blank: There were no detections in the field blank (001FB). HFPODA was detected in the trip blank; however, since this compound was detected in the laboratory method blank, this detection is not reliable.

Table 2. PFAS Sample Results Summary with MCL Exceedances

Sample Identifier	*Number of PFAS Detected* [a]	*Detection Range (ppt)*[a]	*Number of MCL/AL Exceedances*
001P	EPA: 1 Navy: 1	EPA: 1.74 (PFOSA) Navy: 1.2 (Method 537.1) (PFOS)	EPA: 0 Navy: 0
001FBP	0	No detections	0
Trip Blank	0	No detections	0

a – This range is only of the detected PFAS, meaning it does not include non-detect results. This excludes detections of HFPODA in sample Trip Blank due to laboratory method blank contamination.

SVOC Sampling

The laboratory used EPA Method 525.3 and EPA Method 8270E for the four SVOC analytes. Table 3 summarizes HDOH's MCLs and ALs for SVOCs in drinking water.

Table 3. List of Analytes Included in the SVOC Analysis and Associated Drinking Water Regulations

SVOC Compound	*CAS Number*	*HDOH MCLs (ug/L)*	*HDOH ALs (ug/L)*
Method 525.3			
Benzo(a)pyrene	50-32-8	0.20	0.20
Method 8270E			
1-Methylnaphthalene	90-12-0	-	11
2-Methylnaphthalene	91-57-6	-	30
Naphthalene	91-20-3	-	17

Table 4 provides the results for the four SVOCs tested. The laboratory reports can be found Attachment 2. Note the following quality considerations for the EPA sample results:

Method EPA 8270E Samples

- According to the laboratory, samples 007 and 009 were received above temperature (no ice in cooler; 12.8°C). These samples were rejected for analysis.

Method EPA 525.3 Samples

- According to the laboratory, sample 009 was received above temperature (no ice in cooler; 12.8°C). These samples were rejected for analysis.

In summary, there were no detections of SVOCs in any of the EPA samples and Navy's split samples.

Table 4. SVOCs Sample Results Summary

Sample Identifier	*Sample Results (ug/L)*				
	Benzo(a)pyrene	*1-Methylnaphthalene*	*2-Methylnaphthalene*	*Naphthalene*	*Navy Split Sample Results*
001	ND	ND	ND	ND	ND
001FB	ND	n/a	n/a	n/a	-
007	ND	NA*	NA*	NA*	ND
009	NA*	NA*	NA*	NA*	-

ND = Result is non-detect for the analyte(s).
n/a = Sample analysis not applicable.
NA* = Sample analysis not available due to quality observations explained above.

Volatile Organic Compounds (VOCs) Sampling

The laboratory used EPA Method 524.2 for the VOC analytes. Table 5 summarizes HDOH's MCLs and ALs for VOCs in drinking water.

Table 5. List of Analytes Included in the VOC Analysis and Associated Drinking Water Regulations

VOC Compound	*CAS Number*	*HDOH MCLs/ALs (ug/L)*
Method 524.2		
Chloroform	67-66-3	- / 70
Benzene	71-43-2	5.0 / 5.0
Bromodichloromethane	75-27-4	- / 13

Table 5. List of Analytes Included in the VOC Analysis and Associated Drinking Water Regulations

VOC Compound	*CAS Number*	*HDOH MCLs/ALs (ug/L)*
Toluene	108-88-3	1000 / 1000
Chlorodibromomethane	124-48-1	- / 0.87
Ethylbenzene	100-41-4	700 / 700
Xylenes (Total) m-Xylenes, p-Xylenes, o-Xylenes	108-38-3 106-42-3 95-47-6	1000 / 1000
Bromoform	75-25-2	80 / 80
1,2,4- Trimethylbenzene	95-63-6	-
1,3,5- Trimethylbenzene	108-67-8	-

Table 6 provides the results for the samples tested for VOCs. The laboratory reports can be found in Attachment 2.

In summary:

- Exceedances: None of the samples exceeded the HDOH MCLs or ALs for VOCs.
- Detection: Sample 009 contained detectable levels of VOCs for chlorodibromomethane and bromoform.

Table 6. VOCs Sample Results Summary and MCL/AL Exceedances

Sample Identifier	*Sample Results (ug/L)*											
	Chloro form	*Benzene*	*Bromo dichloro methane*	*Toluene*	*Chloro dibromo methane*	*Ethyl benzene*	*m&p-Xylene*	*o-Xylene*	*Bromo form*	*1,3,5-Trimethyl benzene*	*1,2,4-Trimethyl benzene*	*Navy Split Samples*
001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
009	ND	ND	ND	ND	0.60	ND	ND	ND	0.77	ND	ND	-
TB-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-

HDOH MCL/AL exceedances appear in bold.
ND = Result is non-detect for the analyte(s).

Total Petroleum Hydrocarbons (TPH) Sampling

The laboratory used EPA Method 8015 for TPH. Table 7 summarizes HDOH's MCLs and ALs for TPH in drinking water.

Table 7. List of Analytes Included in the TPH Analysis and Associated Drinking Water Regulations

TPH Compound	*CAS Number*	*HDOH MCLs/ALs (ug/L)*
Method 8015C		
TPH-g	n/a	-
TPH-d	n/a	-
TPH-o	n/a	-

Table 8 provides the results for the samples tested for TPH. The laboratory reports can be found in Attachment 2. Note the following quality considerations for these sample results:

- Sample 009 was prepped or analyzed past the recommended holding time for analytes TPH-d and TPH-o.

In summary:

- Exceedances: There were no MCLs or ALs for TPH at the time of this report.
- Detections: TPH-d was detected in the entry point (sample 001) to the distribution system sample – this detection came with multiple flags from the laboratory. The flags included: the reported concentration for this analyte is below the quantitation limit; fuel or product type: mixed or unknown; and the result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value. Navy's split sample did not have any detections.

Table 8. TPHs Sample Results Summary

Sample Identifier	*Sample Results (ug/L)*			
	TPH-g	*TPH-d*	*TPH-o*	*Navy Split Sample Results*
001	ND	84 C1,F13,J	ND	All ND
007	ND	ND	ND	All ND
009	ND	ND A3	ND A3	-
TB-02	ND	n/a	n/a	-
TB-3	ND	n/a	n/a	-

HDOH AL exceedances appear in bold.
A3 = The sample was prepped/analyzed past the recommended holding time.
F13 = Fuel or product type: mixed or unknown.
C1 = The reported concentration for this analyte is below the quantitation limit.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
ND = Result is non-detect for the analyte(s).
n/a = Sample analysis not applicable.

Metals Sampling

The laboratory used EPA Method 200.8 and 245.1 for the metal analytes. Table 9 summarizes HDOH's MCLs for four metal elements in drinking water. HI HDOH ALs are the same as the MCLs and, therefore, not separately summarized in Table 9.

Table 9. List of Analytes Included in the Metals Analysis and Associated Drinking Water Regulations

Metal Elements	*CAS Number*	*HDOH MCLs/ALs (ug/L)*
Method 200.8		
Copper	7440-50-8	1300
Lead	7439-92-1	15
Beryllium	7440-41-7	4.0
Method 245.1		
Mercury	7439-97-6	2.0

Table 10 provides the results for the samples tested for metals. The laboratory reports can be found in Attachment 2.

In summary:

- Exceedances: None of the samples exceeded the HDOH MCLs or ALs for any metals.
- Detections: Copper was detected in each sample. No lead, beryllium, or mercury was detected in any of the samples.

Table 10. Metals Sample Results Summary and MCL/AL Exceedances

Sample Identifier	*Sample Results (ug/L)*				
	Copper	*Lead*	*Beryllium*	*Mercury*	*Navy Split Samples (only detects listed)*
001	4.6	ND	ND	ND	Copper: 4.4
007	5.6	ND	ND	ND	Copper: 5.8
009	4.3	ND	ND	ND	-

HDOH MCL/AL exceedances appear in bold.
ND = Result is non-detect for the analyte(s).

EDB Sampling

The laboratory used EPA Method 524.2 SIM for EDB. Table 11 summarizes HDOH's MCL for EDB in drinking water. HI HDOH's AL is equal to the MCL and, therefore, not separately summarized in Table 11

Table 11. List of Analytes Included in the EDB Analysis and Associated Drinking Water Regulations

VOC Compound	*CAS Number*	*HDOH MCLs/ALs (ug/L)*
Method 524.2 SIM		
1,2 Dibromoethane (Ethylene Dibromide - EDB)	106-93-4	0.04

Table 12 provides the results for the samples tested for metals. The laboratory reports can be found in Attachment 2.

In summary, there were no detections of EBD in any samples.

Table 12. EDB Sample Results Summary and MCL/AL Exceedances

Sample Identifier	*Sample Results (ng/L)*	
	Ethylene Dibromide	*Navy Split Samples*
001	ND	ND
007	ND	ND
009	ND	-
TB-1	ND	-

Table 12. EDB Sample Results Summary and MCL/AL Exceedances

Sample Identifier	*Sample Results (ng/L)*	
	Ethylene Dibromide	*Navy Split Samples*
TB-05	ND	-
TB-06	ND	-

HDOH MCL/AL exceedances appear in bold.
ND = Result is non-detect for the analyte(s).

SECTION IV – AREAS OF CONCERN

The presentation of areas of concern does not constitute a formal compliance determination or violation. Reference documents used included, but were not limited to, EPA's *Sanitary Survey Learner's Guide (2019)* and the *Ten State Standards (2018)*.

1. The System did not have an RRA available as required by SDWA Section 1433.
2. The Emergency Response Plan did not have all the components as required within SDWA Section 1433.
3. The System did not have a valve exercising program.
4. The certified operator list provided was out of date as the WTPO in charge had retired and listed seven operators (besides the retired WTPO in charge). Army representatives stated there were four operators to manage four water systems. Each water system serves over 3,300 persons.
5. The two chlorination storage tanks at the EPDS had unsealed holes at the injection points.
6. The chlorine injection pumps were located outside, exposing them to environmental conditions.
7. A sodium hypochlorite container was stored out in the sunlight instead of protected in a building or shaded area.
8. System representatives were unable to open the Middle Tank hatch to verify hatch condition and tank interior conditions.
9. Middle Tank had multiple minor leaks halfway up the tank, which may indicate tiny holes in the tank walls.
10. Middle Tank had significant vegetation on one side of the foundation, including a tree growing out of the base of the foundation. The area around a tank's foundation should be free of vegetation.
11. The access hatch for Middle Tank was 3 inches high above the rooftop. It is recommended the access hatch rise at least 4 inches above the surface of the roof.
12. [redacted]
13. Middle Tank had a wasp infestation that posed a health and safety risk to personnel.

14. Middle Tank's overflow was not raised appropriately above the ground and the drainage area had a lot of vegetation. Overflows should terminate at least two pipe diameters above storm drains, sewers, or other catchment.
15. Middle Tank had a portion of the wall that had weathered down to the re-bar.
16. North Tank was partially buried by the hillside and the access hatch lock had to be broken during attempts to open it up for inspection.

SECTION V – LIST OF APPENDICES

Appendix 1 – Photograph Log
Appendix 2 – Notice of Inspection
Appendix 3 – Laboratory Analytical Results – Summary Table
Attachment 1: PFAS Laboratory Reports
Attachment 2: EPA Laboratory Reports

Appendix 1: Photograph Log

Unless otherwise indicated herein, all photographs were taken by Mike McFadden and Mike Beck of ERG during the inspection. The displayed date and time are the local time. Timestamps may be inaccurate. Photographs were not manipulated beyond minor cropping for sizing and labels or callouts to draw attention to the subject of the photograph.

Photograph 1. Pipe support at AMR EPDS had evidence of corrosion.

Photograph 2. Sodium hypochlorite tank had an opening at the top.

Photograph 3. The second sodium hypochlorite tank also had an unsealed hole.

Photograph 4. The chlorine injection pumps were exposed to the outside environment.

Photograph 5. Pictured is a chlorine injection point and a line to discharge flushed chlorine into a chlorine storage container. This chlorine storage container was partially full and was in the sunlight. The chlorine would be poured back into the chlorine tanks.

Photograph 6. The hatch at Middle Tank was not at least four inches above the surface of the roof. In addition, the operator was unable to open the hatch for inspection.

Photograph 7. [redacted]

Photograph 8. Middle Tank had vegetation along the foundation, including a tree.

Photograph 9. Middle Tank electrical components were not covered. This area also had a wasp infestation.

Photograph 10: Middle Tank had vegetation growth from a leak.

Photograph 11. Middle Tank's overflow flush with the ground and vegetation surrounding it made is more susceptible to potential flooding.

Photograph 12. [redacted]

[redacted]

Photograph 13. The concrete tank was leaking and had spalling.

Photograph 14. One spot of Middle Tank's wall had weathered down to the re-bar.

Photograph 15. Middle Tank was leaking water halfway up.

Photograph 16. The hillside was partially burying the North Tank.

Photograph 17. The access hatch lock was broken as operators attempted to open it.

[redacted]

U.S. ENVIRONMENTAL PROTECTION AGENCY **Notice of Inspection**	Address (EPA Regional Office) U.S. EPA Region IX Drinking Water Section (ENF-3-3) Enforcement and Compliance Assurance Division 75 Hawthorne Street San Francisco, CA 94105	
	Date 6/3/24	Time 0800
Facility Name: Aliamanu Military Reservation	[redacted]	
Inspector(s) Name Christopher Chen Claire Ong	Inspector Signature(s)	

Notice of Inspection is hereby given according to Section 1445 (b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).

Reason for Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to a national primary drinking water regulation has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

Section 1445 (b)(c) of the SDWA (42 U.S.C. §300 j-4 (b)(c) is quoted on the reverse of this form.

EPA FORM
Receipt of this Notice of Inspection is hereby acknowledged

USAG HI is in agreement with Navy, on the disagreement for US EPA to collect PFAS samples outside of the approved drinking water regulatory Method 533 and Method 537.1.

Name: [redacted]

Title: Safe Drinking Water & Program Manager, DPW ENV

Date: 3 June 2024

06/10/2024 09:03

Appendix 3 – Laboratory Analytical Results – Summary Table

This appendix contains a summary of the PFAS sample results in tabular format. The full laboratory reports are included as Attachment 1.

Sample results are presented with qualifiers, which are defined in Table 13. Table 14 contains the PFAS analysis results for each sample.

Table 13. Sample Result Qualifier Descriptions

Qualifier	Qualifier Description
*1	LCS/LCSD relative percent difference exceeds control limits.
H3	Sample was received and analyzed past holding time.
H	Sample was prepped or analyzed beyond the specified holding time.
B	Compound was found in the blank and sample.
I	Value is estimated maximum possible concentration.
J	Result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value.

Table 14. PFAS Analysis Results for All Samples Tested

Analyte	Sample Result (ppt)		
	001P	001FB	Trip Blank
4:2 FTOH	<0.178 H	<0.138 *1	<0.175 H H3 *1
7:2 FTOH	<0.178 H	<0.138 *1	<0.175 H H3 *1
6:2 FTOH	<0.178 H	<0.138	<0.175 H H3
8:2 FTOH	<0.178 H	<0.138	<0.175 H H3
10:2 FTOH	<0.267 H	<0.208	<0.262 H H3
PFEESA	<0.260	<0.303	<0.259
10:2 FTS	<0.694	<0.809	<0.692
PMPA	<0.521	<0.607	<0.519
HFPO-DA	<0.347	<0.404	0.649 J B
PFECHS	<0.260	<0.303	<0.259
PFECA B	<0.260	<0.303	<0.259
PFODA	<0.434	<0.505	<0.432
NEtFOSE	<0.347	<0.404	<0.346
PFOS	<0.434	<0.505	<0.432
PFUnA	<0.260	<0.303	<0.259
NMeFOSAA	<0.347	<0.404	<0.346
R-PSDA	<0.607	<0.708	<0.605
Hydrolyzed PSDA	<0.347	<0.404	<0.346
R-PSDCA	<0.260	<0.303	<0.259
R-EVE	<0.434	<0.505	<0.432
NMeFOSE	<0.347	<0.404	<0.346

Analyte	Sample Result (ppt)		
	001P	001FB	Trip Blank
PEPA	<0.521	<0.607	<0.519
PFPeA	<0.260	<0.303	<0.259
PFPeS	<0.260	<0.303	<0.259
6:2 FTS	<0.434	<0.505	<0.432
8:2 FTCA	<0.347	<0.404	<0.346
PS Acid	<0.521	<0.607	<0.519
NEtFOSAA	<0.434	<0.505	<0.432
PFHxA	<0.868	<1.01	<0.865
PFDoA	<0.347	<0.404	<0.346
NMeFOSA	<0.607	<0.708	<0.605
PFOA	<0.260	<0.303	<0.259
PFDA	<0.260	<0.303	<0.259
PFDS	<0.260	<0.303	<0.259
PFHxS	<0.174	<0.202	<0.173
3:3 FTCA	<0.434	<0.505	<0.432
PFBA	<0.868	<1.01	<0.865
PFBS	<0.260	<0.303	<0.259
PFHpA	<0.260	<0.303	<0.259
PFHpS	<0.260	<0.303	<0.259
PFNA	<0.174	<0.202	<0.173
PFTeA	<0.347	<0.404	<0.346
PFECA F	<0.260	<0.303	<0.259
8:2 FTS	<0.521	<0.607	<0.519
PFO2HxA	<0.607	<0.708	<0.605
PFO3OA	<0.868	<1.01	<0.865
PFO4DA	<0.694	<0.809	<0.692
TAF	<0.434	<0.505	<0.432
NEtFOSA	<0.347	<0.404	<0.346
PFPrA [a]	<4.34	<5.05	<4.32
PFPrS	<0.347	<0.404	<0.346
6:2 FTCA	<0.607	<0.708	<0.605
10:2 FTCA	<0.434	<0.505	<0.432
PFMOAA	<0.260	<0.303	<0.259
PFHxDA	<0.434	<0.505	<0.432
PFNS	<0.260	<0.303	<0.259
EVE Acid	<0.434	<0.505	<0.432
8:2 FTUCA	<0.347	<0.404	<0.346
6:2 FTUCA	<0.347	<0.404	<0.346
10:2 FTUCA	<0.347	<0.404	<0.346
PFTrDA	<0.347	<0.404	<0.346
Hydro-PS Acid	<0.434	<0.505	<0.432
FOSA	1.74	<0.303	<0.259
9Cl-PF3ONS	<0.434	<0.505	<0.432

Analyte	Sample Result (ppt)		
	001P	001FB	Trip Blank
4:2 FTS	<0.434	<0.505	<0.432
11Cl-PF3OUdS	<0.434	<0.505	<0.432
Hydro-EVE Acid	<0.434	<0.505	<0.432
PFDoS	<0.260	<0.303	<0.259
NVHOS	<0.347	<0.404	<0.346
PFECA G	<0.434	<0.505	<0.432
7:3 FTCA	<0.955	<1.11	<0.951
PFMBA	<0.260	<0.303	<0.259
5:3 FTCA	<0.434	<0.505	<0.432
ADONA	<0.434	<0.505	<0.432
MTP	<0.521	<0.607	<0.519

Attachment 1: PFAS Laboratory Reports

The laboratory reports may reference sample ID numbers that are not referenced within this inspection report; any additional sample locations are unrelated to this inspection and their location is intentionally not provided.

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ANALYTICAL REPORT

PREPARED FOR

Attn: Michelle Spiezio
Eastern Research Group, Inc.
14555 Avion Parkway
Suite 200
Chantilly, Virginia 20151-1102

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JOB DESCRIPTION

SDWA Region 9 - ERG

JOB NUMBER

410-175226-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

See page two for job notes and contact information.

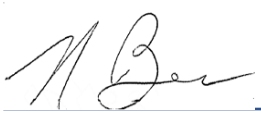
Eurofins Lancaster Laboratories Environment Testing, LLC

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Nicole Brown, Project Manager
Nicole.Brown@et.eurofinsus.com
(717)471-3265

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

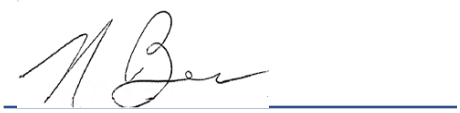

Table of Contents

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
cn	Refer to Case Narrative for further detail
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
I	Value is EMPC (estimated maximum possible concentration).

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 410-175226-1 Eurofins Lancaster Laboratories Environment

Job Narrative
410-175226-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/8/2024 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C.

Receipt Exceptions
The Chain-of-Custody (COC) was incomplete as received. The COC is missing Sample State, Sample Preservation, Number of containers per sample, amd Sample Type (Grab or Composite). This does not meet regulatory requirements. The client was contacted and responded that the sample state of collection is Hawaii, the samples were unpreserved and 4 X 250 ml bottles were submitted for each sample and that all were grab samples.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): 004-D (410-175226-5). The container labels list time of 09:50, while the COC lists time of 09:46. The client was contacted, and the lab was instructed to login as listed on the COC.

GC/MS Semi VOA
Method FTOH: The initial calibration verification (ICV) result for batch 410-520647 was above the upper control limit. Sample results were non-detects, and have been reported as qualified data.

004 FB (410-175226-6), 004 (410-175226-7), 006 (410-175226-8) and Trip Blank (410-175226-9)

Method FTOH: The initial calibration verification (ICV) result for batch 410-519643 was above the upper control limit. Sample results were non-detects, and have been reported as qualified data.

Method FTOH: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 001 P (410-175226-2), 002 (410-175226-3), 003 (410-175226-4), 004-D (410-175226-5), 004 FB (410-175226-6), 004 (410-175226-7), 006 (410-175226-8) and Trip Blank (410-175226-9).

Method FTOH: For the original extraction, the following sample was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 001 P (410-175226-2).

The re-extraction was also out of hold, but all surrogates are within specified windows.

The initial calibration verification (ICV) result for batch 410-521665 was above the upper control limit. Sample results were non-detects, and have been reported as qualified data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PFAS
Method PFC_IDA: The recovery for the internal standard peak areas is outside of QC acceptance limits in the laboratory control spike duplicate sample (LCSD) associated with samples: 004-D (410-175226-5), 004 FB (410-175226-6) and 006 (410-175226-8). Since the recovery for the labeled isotopes and targets are within QC acceptance limits in this LCSD, the data is reported.

Method PFC_IDA: The recovery for target analyte 3:3 FTCA is outside of QC acceptance limits in the initial calibration verification standard (ICV) associated with samples: 004-D (410-175226-5), 004 FB (410-175226-6) and 006 (410-175226-8). Since the recovery is high and this target analyte is not detected, the data is reported

Method PFC_IDA: Reporting limits were raised for the following sample: 004-D (410-175226-5) due to limited sample volume.

Method PFC_IDA: The recovery for target analyte 3:3 FTCAis outside of QC acceptance limits in the initial calibration verification standard (ICV) associated with sample: 004 (410-175226-7). Since the recovery is high and this target analyte is not detected, the data is reported

Method PFC_IDA: The recovery for the internal standard peak areas is outside of QC acceptance limits in the laboratory control spike duplicate sample (LCSD) associated with samples: 004 (410-175226-7). Since the recovery for the labeled isotopes and targets are within QC acceptance limits in this LCSD, the data is reported.

Method PFC_IDA: The recovery for target analyte 3:3 FTCA in the initial calibration verification standard associated with the following samples: 001 FBP (410-175226-1) and 001 P (410-175226-2) is outside of QC acceptance limits, biased high. Since the recovery is high and the native analyte is not detected in the sample(s), the result(s) is reported.

Method PFC_IDA: Isotope dilution analyte (IDA) recoveries were outside QC acceptance criteria in sample 001 FBP (410-175226-1). The isotope dilution technique corrects the results for the target analytes for any losses that occur during the sample extraction and/or concentration. For all IDA's, the signal to noise was greater than 10:1, therefore the data is reported.

Method PFC_IDA: Target analyte(s) HFPODA were detected in the method blank associated with the following samples: 002 (410-175226-3), 003 (410-175226-4) and Trip Blank (410-175226-9). The following action was taken: This sample(s) was re-extracted outside the required holding time and target analyte(s) were not detected in the re-extracted method blank.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: 001 FBP — Lab Sample ID: 410-175226-1

No Detections.

Client Sample ID: 001 P — Lab Sample ID: 410-175226-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonamide (PFOSA)	1.74		1.74	0.260	ng/L	1		537 IDA	Total/NA

Client Sample ID: 002 — Lab Sample ID: 410-175226-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.482	J B cn	1.79	0.357	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonamide (PFOSA)	2.99		1.79	0.268	ng/L	1		537 IDA	Total/NA

Client Sample ID: 003 — Lab Sample ID: 410-175226-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.715	J B cn	1.68	0.337	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonamide (PFOSA)	1.66	J	1.68	0.253	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	0.286	J	1.68	0.253	ng/L	1		537 IDA	Total/NA

Client Sample ID: 004-D — Lab Sample ID: 410-175226-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.491	J cn	2.11	0.422	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.47	cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	2.46	cn	2.11	1.05	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.88	cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.41	cn	2.11	0.211	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	5.23	cn	2.11	1.05	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.418	J cn	2.11	0.211	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonamide (PFOSA)	7.26	cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.59	cn	2.11	0.527	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	5.44	cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.607	J cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	6.56	cn	2.11	0.316	ng/L	1		537 IDA	Total/NA
Perfluoropropionic acid (PFPrA)	10.6	cn	10.5	5.27	ng/L	1		537 IDA	Total/NA

Client Sample ID: 004 FB — Lab Sample ID: 410-175226-6

No Detections.

Client Sample ID: 004 — Lab Sample ID: 410-175226-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	3.26	cn	1.91	0.287	ng/L	1		537 IDA	Total/NA
Perfluorobutanoic acid (PFBA)	2.29	cn	1.91	0.957	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.63	cn	1.91	0.287	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.16	cn	1.91	0.191	ng/L	1		537 IDA	Total/NA
Perfluorohexanoic acid (PFHxA)	4.59	cn	1.91	0.957	ng/L	1		537 IDA	Total/NA
Perfluorononanoic acid (PFNA)	0.364	J cn	1.91	0.191	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonamide (PFOSA)	7.84	cn	1.91	0.287	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.78	cn	1.91	0.479	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	5.09	cn	1.91	0.287	ng/L	1		537 IDA	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.612	J cn	1.91	0.287	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 004 (Continued) — Lab Sample ID: 410-175226-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	6.10	cn	1.91	0.287	ng/L	1		537 IDA	Total/NA
Perfluoropropanesulfonic acid	0.384	J cn	1.91	0.383	ng/L	1		537 IDA	Total/NA
Perfluoropropionic acid (PFPrA)	10.9	cn	9.57	4.79	ng/L	1		537 IDA	Total/NA

Client Sample ID: 006 — Lab Sample ID: 410-175226-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.406	J cn	1.93	0.387	ng/L	1		537 IDA	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.662	J cn	1.93	0.290	ng/L	1		537 IDA	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.402	J cn	1.93	0.290	ng/L	1		537 IDA	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.564	J cn	1.93	0.193	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.745	J cn	1.93	0.484	ng/L	1		537 IDA	Total/NA
Perfluorooctanoic acid (PFOA)	0.610	J cn	1.93	0.290	ng/L	1		537 IDA	Total/NA
Perfluoropentanoic acid (PFPeA)	0.713	J cn	1.93	0.290	ng/L	1		537 IDA	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 410-175226-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	0.649	J B cn	1.73	0.346	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: 001 FBP

Date Collected: 06/05/24 09:15
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-1

Matrix: Water

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.208	cn	0.692	0.208	ug/L		06/12/24 22:15	06/20/24 18:17	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.138	cn	0.692	0.138	ug/L		06/12/24 22:15	06/20/24 18:17	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.138	*1 cn	0.692	0.138	ug/L		06/12/24 22:15	06/20/24 18:17	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.138	cn	0.692	0.138	ug/L		06/12/24 22:15	06/20/24 18:17	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.138	*1 cn	0.692	0.138	ug/L		06/12/24 22:15	06/20/24 18:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*29*	*cn*	*14 - 120*	*06/12/24 22:15*	*06/20/24 18:17*	*1*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*73*	*cn*	*43 - 151*	*06/12/24 22:15*	*06/20/24 18:17*	*1*

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.809	cn	2.02	0.809	ng/L		07/01/24 16:44	07/10/24 02:14	1
10:2 FTCA	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
10:2 FTUCA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
11Cl-PF3OUdS	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
3:3 FTCA	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
4:2 Fluorotelomer sulfonic acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
5:3 FTCA	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
6:2 Fluorotelomer sulfonic acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
6:2 FTCA	<0.708	cn	2.02	0.708	ng/L		07/01/24 16:44	07/10/24 02:14	1
6:2 FTUCA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
7:3 FTCA	<1.11	cn	2.02	1.11	ng/L		07/01/24 16:44	07/10/24 02:14	1
8:2 Fluorotelomer sulfonic acid	<0.607	cn	2.02	0.607	ng/L		07/01/24 16:44	07/10/24 02:14	1
8:2 FTCA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
8:2 FTUCA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
9Cl-PF3ONS	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
EVE Acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
HFPODA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Hydro-EVE Acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
Hydrolyzed PSDA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Hydro-PS Acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
MTP	<0.607	cn	2.02	0.607	ng/L		07/01/24 16:44	07/10/24 02:14	1
NEtFOSA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
NEtFOSAA	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
NEtFOSE	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
NMeFOSA	<0.708	cn	2.02	0.708	ng/L		07/01/24 16:44	07/10/24 02:14	1
NMeFOSAA	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
NMeFOSE	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
NVHOS	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
PEPA	<0.607	cn	2.02	0.607	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1

Client Sample ID: 001 FBP
Date Collected: 06/05/24 09:15
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-1
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorobutanoic acid (PFBA)	<1.01	cn	2.02	1.01	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorodecanesulfonic acid (PFDS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorodecanoic acid (PFDA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorododecanesulfonic acid (PFDoS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorododecanoic acid (PFDoA)	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoroheptanoic acid (PFHpA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorohexanesulfonic acid (PFHxS)	<0.202	cn	2.02	0.202	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorohexanoic acid (PFHxA)	<1.01	cn	2.02	1.01	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorononanesulfonic acid (PFNS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorononanoic acid (PFNA)	<0.202	cn	2.02	0.202	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorooctanesulfonamide (PFOSA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorooctanoic acid (PFOA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoropentanesulfonic acid (PFPeS)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoropentanoic acid (PFPeA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoropropanesulfonic acid	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoropropionic acid (PFPrA)	<5.05	cn	10.1	5.05	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorotetradecanoic acid (PFTeDA)	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.404	cn	2.02	0.404	ng/L		07/01/24 16:44	07/10/24 02:14	1
Perfluoroundecanoic acid (PFUnA)	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
PFECHS	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
PFMOAA	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1
PFO2HxA	<0.708	cn	2.02	0.708	ng/L		07/01/24 16:44	07/10/24 02:14	1
PFO3OA	<1.01	cn	2.02	1.01	ng/L		07/01/24 16:44	07/10/24 02:14	1
PFO4DA	<0.809	cn	2.02	0.809	ng/L		07/01/24 16:44	07/10/24 02:14	1
PMPA	<0.607	cn	2.02	0.607	ng/L		07/01/24 16:44	07/10/24 02:14	1
PS Acid	<0.607	cn	2.02	0.607	ng/L		07/01/24 16:44	07/10/24 02:14	1
R-EVE	<0.505	cn	2.02	0.505	ng/L		07/01/24 16:44	07/10/24 02:14	1
R-PSDA	<0.708	cn	2.02	0.708	ng/L		07/01/24 16:44	07/10/24 02:14	1
R-PSDCA	<0.303	cn	2.02	0.303	ng/L		07/01/24 16:44	07/10/24 02:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*68*	*cn*	*11 - 200*	*07/01/24 16:44*	*07/10/24 02:14*	*1*
13C-10:2 FTUCA	*77*	*cn*	*10 - 166*	*07/01/24 16:44*	*07/10/24 02:14*	*1*
13C2 PFTeDA	*70*	*cn*	*10 - 171*	*07/01/24 16:44*	*07/10/24 02:14*	*1*
13C2-PFDoDA	*72*	*cn*	*22 - 165*	*07/01/24 16:44*	*07/10/24 02:14*	*1*
13C3 HFPO-DA	*75*	*cn*	*13 - 170*	*07/01/24 16:44*	*07/10/24 02:14*	*1*

Client Sample ID: 001 FBP

Lab Sample ID: 410-175226-1

Date Collected: 06/05/24 09:15

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	91	cn	34 - 200	07/01/24 16:44	07/10/24 02:14	1
13C3 PFHxS	71	cn	48 - 169	07/01/24 16:44	07/10/24 02:14	1
13C3-PFPrA	19	*5- cn	21 - 157	07/01/24 16:44	07/10/24 02:14	1
13C4 PFBA	61	cn	22 - 174	07/01/24 16:44	07/10/24 02:14	1
13C4 PFHpA	66	cn	40 - 165	07/01/24 16:44	07/10/24 02:14	1
13C5 PFHxA	76	cn	28 - 166	07/01/24 16:44	07/10/24 02:14	1
13C5 PFPeA	80	cn	33 - 196	07/01/24 16:44	07/10/24 02:14	1
13C6 PFDA	81	cn	53 - 151	07/01/24 16:44	07/10/24 02:14	1
13C-6:2 FTCA	74	cn	10 - 200	07/01/24 16:44	07/10/24 02:14	1
13C-6:2 FTUCA	68	cn	10 - 173	07/01/24 16:44	07/10/24 02:14	1
13C7 PFUnA	76	cn	41 - 163	07/01/24 16:44	07/10/24 02:14	1
13C8 FOSA	91	cn	10 - 155	07/01/24 16:44	07/10/24 02:14	1
13C8 PFOA	77	cn	52 - 153	07/01/24 16:44	07/10/24 02:14	1
13C8 PFOS	87	cn	59 - 155	07/01/24 16:44	07/10/24 02:14	1
13C-8:2 FTCA	77	cn	20 - 200	07/01/24 16:44	07/10/24 02:14	1
13C-8:2 FTUCA	81	cn	18 - 175	07/01/24 16:44	07/10/24 02:14	1
13C9 PFNA	79	cn	52 - 168	07/01/24 16:44	07/10/24 02:14	1
d3-NMeFOSAA	74	cn	38 - 168	07/01/24 16:44	07/10/24 02:14	1
d3-NMePFOSA	56	cn	10 - 130	07/01/24 16:44	07/10/24 02:14	1
d5-NEtFOSAA	71	cn	34 - 181	07/01/24 16:44	07/10/24 02:14	1
d5-NEtPFOSA	56	cn	10 - 130	07/01/24 16:44	07/10/24 02:14	1
d7-N-MeFOSE-M	75	cn	10 - 149	07/01/24 16:44	07/10/24 02:14	1
d9-N-EtFOSE-M	70	cn	10 - 151	07/01/24 16:44	07/10/24 02:14	1
M2-4:2 FTS	111	cn	35 - 200	07/01/24 16:44	07/10/24 02:14	1
M2-6:2 FTS	165	cn	40 - 200	07/01/24 16:44	07/10/24 02:14	1
M2-8:2 FTS	100	cn	37 - 200	07/01/24 16:44	07/10/24 02:14	1

Client Sample ID: 001 P

Lab Sample ID: 410-175226-2

Date Collected: 06/05/24 09:17

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.267	H cn	0.890	0.267	ug/L		06/26/24 08:13	06/26/24 12:43	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.178	H cn	0.890	0.178	ug/L		06/26/24 08:13	06/26/24 12:43	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.178	H cn	0.890	0.178	ug/L		06/26/24 08:13	06/26/24 12:43	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.178	H cn	0.890	0.178	ug/L		06/26/24 08:13	06/26/24 12:43	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.178	H cn	0.890	0.178	ug/L		06/26/24 08:13	06/26/24 12:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	33	cn	14 - 120	06/26/24 08:13	06/26/24 12:43	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	79	cn	43 - 151	06/26/24 08:13	06/26/24 12:43	1

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.694		1.74	0.694	ng/L		07/01/24 16:44	07/10/24 02:28	1
10:2 FTCA	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
10:2 FTUCA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
11Cl-PF3OUdS	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1

Client Sample ID: 001 P
Date Collected: 06/05/24 09:17
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-2
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3:3 FTCA	<0.434	cn	1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
4:2 Fluorotelomer sulfonic acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
5:3 FTCA	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
6:2 Fluorotelomer sulfonic acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
6:2 FTCA	<0.607		1.74	0.607	ng/L		07/01/24 16:44	07/10/24 02:28	1
6:2 FTUCA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
7:3 FTCA	<0.955		1.74	0.955	ng/L		07/01/24 16:44	07/10/24 02:28	1
8:2 Fluorotelomer sulfonic acid	<0.521		1.74	0.521	ng/L		07/01/24 16:44	07/10/24 02:28	1
8:2 FTCA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
8:2 FTUCA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
9Cl-PF3ONS	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
EVE Acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
HFPODA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Hydro-EVE Acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Hydrolyzed PSDA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Hydro-PS Acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
MTP	<0.521		1.74	0.521	ng/L		07/01/24 16:44	07/10/24 02:28	1
NEtFOSA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
NEtFOSAA	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
NEtFOSE	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
NMeFOSA	<0.607		1.74	0.607	ng/L		07/01/24 16:44	07/10/24 02:28	1
NMeFOSAA	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
NMeFOSE	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
NVHOS	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
PEPA	<0.521		1.74	0.521	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorobutanoic acid (PFBA)	<0.868		1.74	0.868	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorodecanesulfonic acid (PFDS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorodecanoic acid (PFDA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorododecanesulfonic acid (PFDoS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorododecanoic acid (PFDoA)	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoroheptanoic acid (PFHpA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorohexanesulfonic acid (PFHxS)	<0.174		1.74	0.174	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorohexanoic acid (PFHxA)	<0.868		1.74	0.868	ng/L		07/01/24 16:44	07/10/24 02:28	1

Client Sample ID: 001 P
Date Collected: 06/05/24 09:17
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-2
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorononanesulfonic acid (PFNS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorononanoic acid (PFNA)	<0.174		1.74	0.174	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorooctanesulfonamide (PFOSA)	**1.74**		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorooctanesulfonic acid (PFOS)	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorooctanoic acid (PFOA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoropentanesulfonic acid (PFPeS)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoropentanoic acid (PFPeA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoropropanesulfonic acid	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoropropionic acid (PFPrA)	<4.34		8.68	4.34	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorotetradecanoic acid (PFTeDA)	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluorotridecanoic acid (PFTrDA)	<0.347		1.74	0.347	ng/L		07/01/24 16:44	07/10/24 02:28	1
Perfluoroundecanoic acid (PFUnA)	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
PFECHS	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
PFMOAA	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1
PFO2HxA	<0.607		1.74	0.607	ng/L		07/01/24 16:44	07/10/24 02:28	1
PFO3OA	<0.868		1.74	0.868	ng/L		07/01/24 16:44	07/10/24 02:28	1
PFO4DA	<0.694		1.74	0.694	ng/L		07/01/24 16:44	07/10/24 02:28	1
PMPA	<0.521		1.74	0.521	ng/L		07/01/24 16:44	07/10/24 02:28	1
PS Acid	<0.521		1.74	0.521	ng/L		07/01/24 16:44	07/10/24 02:28	1
R-EVE	<0.434		1.74	0.434	ng/L		07/01/24 16:44	07/10/24 02:28	1
R-PSDA	<0.607		1.74	0.607	ng/L		07/01/24 16:44	07/10/24 02:28	1
R-PSDCA	<0.260		1.74	0.260	ng/L		07/01/24 16:44	07/10/24 02:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*79*		*11 - 200*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C-10:2 FTUCA	*81*		*10 - 166*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C2 PFTeDA	*81*		*10 - 171*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C2-PFDoDA	*78*		*22 - 165*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C3 HFPO-DA	*79*		*13 - 170*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C3 PFBS	*91*		*34 - 200*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C3 PFHxS	*80*		*48 - 169*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C3-PFPrA	*53*		*21 - 157*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C4 PFBA	*88*		*22 - 174*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C4 PFHpA	*74*		*40 - 165*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C5 PFHxA	*71*		*28 - 166*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C5 PFPeA	*80*		*33 - 196*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C6 PFDA	*87*		*53 - 151*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C-6:2 FTCA	*78*		*10 - 200*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C-6:2 FTUCA	*72*		*10 - 173*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C7 PFUnA	*80*		*41 - 163*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C8 FOSA	*88*		*10 - 155*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C8 PFOA	*84*		*52 - 153*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C8 PFOS	*93*		*59 - 155*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C-8:2 FTCA	*79*		*20 - 200*	*07/01/24 16:44*	*07/10/24 02:28*	*1*
13C-8:2 FTUCA	*82*		*18 - 175*	*07/01/24 16:44*	*07/10/24 02:28*	*1*

Client Sample ID: 001 P

Lab Sample ID: 410-175226-2

Date Collected: 06/05/24 09:17

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C9 PFNA	87		52 - 168	07/01/24 16:44	07/10/24 02:28	1
d3-NMeFOSAA	83		38 - 168	07/01/24 16:44	07/10/24 02:28	1
d3-NMePFOSA	28		10 - 130	07/01/24 16:44	07/10/24 02:28	1
d5-NEtFOSAA	79		34 - 181	07/01/24 16:44	07/10/24 02:28	1
d5-NEtPFOSA	27		10 - 130	07/01/24 16:44	07/10/24 02:28	1
d7-N-MeFOSE-M	83		10 - 149	07/01/24 16:44	07/10/24 02:28	1
d9-N-EtFOSE-M	76		10 - 151	07/01/24 16:44	07/10/24 02:28	1
M2-4:2 FTS	74		35 - 200	07/01/24 16:44	07/10/24 02:28	1
M2-6:2 FTS	149		40 - 200	07/01/24 16:44	07/10/24 02:28	1
M2-8:2 FTS	99		37 - 200	07/01/24 16:44	07/10/24 02:28	1

Client Sample ID: 002

Lab Sample ID: 410-175226-3

Date Collected: 06/03/24 15:38

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.262	H cn	0.872	0.262	ug/L		06/13/24 08:24	06/20/24 19:12	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.174	H cn	0.872	0.174	ug/L		06/13/24 08:24	06/20/24 19:12	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.174	H *1 cn	0.872	0.174	ug/L		06/13/24 08:24	06/20/24 19:12	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.174	H cn	0.872	0.174	ug/L		06/13/24 08:24	06/20/24 19:12	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.174	H *1 cn	0.872	0.174	ug/L		06/13/24 08:24	06/20/24 19:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	53	cn	14 - 120	06/13/24 08:24	06/20/24 19:12	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	95	cn	43 - 151	06/13/24 08:24	06/20/24 19:12	1

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.715		1.79	0.715	ng/L		06/26/24 16:17	06/30/24 05:19	1
10:2 FTCA	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
10:2 FTUCA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
11Cl-PF3OUdS	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
3:3 FTCA	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
4:2 Fluorotelomer sulfonic acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
5:3 FTCA	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
6:2 Fluorotelomer sulfonic acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
6:2 FTCA	<0.625		1.79	0.625	ng/L		06/26/24 16:17	06/30/24 05:19	1
6:2 FTUCA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
7:3 FTCA	<0.983		1.79	0.983	ng/L		06/26/24 16:17	06/30/24 05:19	1
8:2 Fluorotelomer sulfonic acid	<0.536		1.79	0.536	ng/L		06/26/24 16:17	06/30/24 05:19	1
8:2 FTCA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
8:2 FTUCA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
9Cl-PF3ONS	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
EVE Acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
HFPODA	**0.482**	**J B cn**	1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Hydro-EVE Acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: 002
Date Collected: 06/03/24 15:38
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-3
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrolyzed PSDA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Hydro-PS Acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
MTP	<0.536		1.79	0.536	ng/L		06/26/24 16:17	06/30/24 05:19	1
NEtFOSA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
NEtFOSAA	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
NEtFOSE	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
NMeFOSA	<0.625		1.79	0.625	ng/L		06/26/24 16:17	06/30/24 05:19	1
NMeFOSAA	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
NMeFOSE	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
NVHOS	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
PEPA	<0.536		1.79	0.536	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorobutanoic acid (PFBA)	<0.893		1.79	0.893	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorodecanesulfonic acid (PFDS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorodecanoic acid (PFDA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorododecanesulfonic acid (PFDoS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorododecanoic acid (PFDoA)	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoroheptanoic acid (PFHpA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.179		1.79	0.179	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorohexanoic acid (PFHxA)	<0.893		1.79	0.893	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorononanesulfonic acid (PFNS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorononanoic acid (PFNA)	<0.179		1.79	0.179	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorooctanesulfonamide (PFOSA)	**2.99**		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorooctanoic acid (PFOA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoropentanesulfonic acid (PFPeS)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoropentanoic acid (PFPeA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoropropanesulfonic acid	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluoropropionic acid (PFPrA)	<4.47		8.93	4.47	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorotetradecanoic acid (PFTeDA)	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1
Perfluorotridecanoic acid (PFTrDA)	<0.357		1.79	0.357	ng/L		06/26/24 16:17	06/30/24 05:19	1

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: 002
Date Collected: 06/03/24 15:38
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-3
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
PFECHS	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
PFMOAA	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1
PFO2HxA	<0.625		1.79	0.625	ng/L		06/26/24 16:17	06/30/24 05:19	1
PFO3OA	<0.893		1.79	0.893	ng/L		06/26/24 16:17	06/30/24 05:19	1
PFO4DA	<0.715		1.79	0.715	ng/L		06/26/24 16:17	06/30/24 05:19	1
PMPA	<0.536		1.79	0.536	ng/L		06/26/24 16:17	06/30/24 05:19	1
PS Acid	<0.536		1.79	0.536	ng/L		06/26/24 16:17	06/30/24 05:19	1
R-EVE	<0.447		1.79	0.447	ng/L		06/26/24 16:17	06/30/24 05:19	1
R-PSDA	<0.625		1.79	0.625	ng/L		06/26/24 16:17	06/30/24 05:19	1
R-PSDCA	<0.268		1.79	0.268	ng/L		06/26/24 16:17	06/30/24 05:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*101*		*11 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C-10:2 FTUCA	*101*		*10 - 166*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C2 PFTeDA	*83*		*10 - 171*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C2-PFDoDA	*93*		*22 - 165*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C3 HFPO-DA	*105*		*13 - 170*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C3 PFBS	*126*		*34 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C3 PFHxS	*101*		*48 - 169*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C3-PFPrA	*62*		*21 - 157*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C4 PFBA	*110*		*22 - 174*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C4 PFHpA	*103*		*40 - 165*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C5 PFHxA	*120*		*28 - 166*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C5 PFPeA	*104*		*33 - 196*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C6 PFDA	*106*		*53 - 151*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C-6:2 FTCA	*122*		*10 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C-6:2 FTUCA	*109*		*10 - 173*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C7 PFUnA	*111*		*41 - 163*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C8 FOSA	*90*		*10 - 155*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C8 PFOA	*102*		*52 - 153*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C8 PFOS	*111*		*59 - 155*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C-8:2 FTCA	*114*		*20 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C-8:2 FTUCA	*103*		*18 - 175*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
13C9 PFNA	*94*		*52 - 168*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d3-NMeFOSAA	*103*		*38 - 168*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d3-NMePFOSA	*53*		*10 - 130*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d5-NEtFOSAA	*109*		*34 - 181*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d5-NEtPFOSA	*46*		*10 - 130*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d7-N-MeFOSE-M	*75*		*10 - 149*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
d9-N-EtFOSE-M	*69*		*10 - 151*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
M2-4:2 FTS	*124*		*35 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
M2-6:2 FTS	*109*		*40 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*
M2-8:2 FTS	*110*		*37 - 200*	*06/26/24 16:17*	*06/30/24 05:19*	*1*

Client Sample ID: 003
Date Collected: 06/03/24 16:38
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-4
Matrix: Water

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.247	H cn	0.823	0.247	ug/L		06/13/24 08:24	06/20/24 19:26	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.165	H cn	0.823	0.165	ug/L		06/13/24 08:24	06/20/24 19:26	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.165	H *1 cn	0.823	0.165	ug/L		06/13/24 08:24	06/20/24 19:26	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.165	H cn	0.823	0.165	ug/L		06/13/24 08:24	06/20/24 19:26	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.165	H *1 cn	0.823	0.165	ug/L		06/13/24 08:24	06/20/24 19:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*55*	*cn*	*14 - 120*	*06/13/24 08:24*	*06/20/24 19:26*	*1*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*101*	*cn*	*43 - 151*	*06/13/24 08:24*	*06/20/24 19:26*	*1*

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.673		1.68	0.673	ng/L		06/26/24 16:17	06/30/24 05:32	1
10:2 FTCA	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
10:2 FTUCA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
11Cl-PF3OUdS	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
3:3 FTCA	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
4:2 Fluorotelomer sulfonic acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
5:3 FTCA	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
6:2 Fluorotelomer sulfonic acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
6:2 FTCA	<0.589		1.68	0.589	ng/L		06/26/24 16:17	06/30/24 05:32	1
6:2 FTUCA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
7:3 FTCA	<0.926		1.68	0.926	ng/L		06/26/24 16:17	06/30/24 05:32	1
8:2 Fluorotelomer sulfonic acid	<0.505		1.68	0.505	ng/L		06/26/24 16:17	06/30/24 05:32	1
8:2 FTCA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
8:2 FTUCA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
9Cl-PF3ONS	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
EVE Acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
HFPODA	**0.715**	**J B cn**	1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Hydro-EVE Acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
Hydrolyzed PSDA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Hydro-PS Acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
MTP	<0.505		1.68	0.505	ng/L		06/26/24 16:17	06/30/24 05:32	1
NEtFOSA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
NEtFOSAA	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
NEtFOSE	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
NMeFOSA	<0.589		1.68	0.589	ng/L		06/26/24 16:17	06/30/24 05:32	1
NMeFOSAA	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
NMeFOSE	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
NVHOS	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
PEPA	<0.505		1.68	0.505	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: 003
Date Collected: 06/03/24 16:38
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-4
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorobutanoic acid (PFBA)	<0.842		1.68	0.842	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorodecanesulfonic acid (PFDS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorodecanoic acid (PFDA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorododecanesulfonic acid (PFDoS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorododecanoic acid (PFDoA)	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoroheptanoic acid (PFHpA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.168		1.68	0.168	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorohexanoic acid (PFHxA)	<0.842		1.68	0.842	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorononanesulfonic acid (PFNS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorononanoic acid (PFNA)	<0.168		1.68	0.168	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorooctanesulfonamide (PFOSA)	**1.66**	**J**	1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorooctanoic acid (PFOA)	**0.286**	**J**	1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoropentanoic acid (PFPeA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoropropanesulfonic acid	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoropropionic acid (PFPrA)	<4.21		8.42	4.21	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorotetradecanoic acid (PFTeDA)	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluorotridecanoic acid (PFTrDA)	<0.337		1.68	0.337	ng/L		06/26/24 16:17	06/30/24 05:32	1
Perfluoroundecanoic acid (PFUnA)	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
PFECHS	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
PFMOAA	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1
PFO2HxA	<0.589		1.68	0.589	ng/L		06/26/24 16:17	06/30/24 05:32	1
PFO3OA	<0.842		1.68	0.842	ng/L		06/26/24 16:17	06/30/24 05:32	1
PFO4DA	<0.673		1.68	0.673	ng/L		06/26/24 16:17	06/30/24 05:32	1
PMPA	<0.505		1.68	0.505	ng/L		06/26/24 16:17	06/30/24 05:32	1
PS Acid	<0.505		1.68	0.505	ng/L		06/26/24 16:17	06/30/24 05:32	1
R-EVE	<0.421		1.68	0.421	ng/L		06/26/24 16:17	06/30/24 05:32	1
R-PSDA	<0.589		1.68	0.589	ng/L		06/26/24 16:17	06/30/24 05:32	1
R-PSDCA	<0.253		1.68	0.253	ng/L		06/26/24 16:17	06/30/24 05:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*120*		*11 - 200*	*06/26/24 16:17*	*06/30/24 05:32*	*1*
13C-10:2 FTUCA	*114*		*10 - 166*	*06/26/24 16:17*	*06/30/24 05:32*	*1*
13C2 PFTeDA	*90*		*10 - 171*	*06/26/24 16:17*	*06/30/24 05:32*	*1*
13C2-PFDoDA	*107*		*22 - 165*	*06/26/24 16:17*	*06/30/24 05:32*	*1*

Client Sample ID: 003

Lab Sample ID: 410-175226-4

Date Collected: 06/03/24 16:38

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	127		13 - 170	06/26/24 16:17	06/30/24 05:32	1
13C3 PFBS	142		34 - 200	06/26/24 16:17	06/30/24 05:32	1
13C3 PFHxS	121		48 - 169	06/26/24 16:17	06/30/24 05:32	1
13C3-PFPrA	51		21 - 157	06/26/24 16:17	06/30/24 05:32	1
13C4 PFBA	119		22 - 174	06/26/24 16:17	06/30/24 05:32	1
13C4 PFHpA	127		40 - 165	06/26/24 16:17	06/30/24 05:32	1
13C5 PFHxA	133		28 - 166	06/26/24 16:17	06/30/24 05:32	1
13C5 PFPeA	119		33 - 196	06/26/24 16:17	06/30/24 05:32	1
13C6 PFDA	115		53 - 151	06/26/24 16:17	06/30/24 05:32	1
13C-6:2 FTCA	136		10 - 200	06/26/24 16:17	06/30/24 05:32	1
13C-6:2 FTUCA	120		10 - 173	06/26/24 16:17	06/30/24 05:32	1
13C7 PFUnA	113		41 - 163	06/26/24 16:17	06/30/24 05:32	1
13C8 FOSA	94		10 - 155	06/26/24 16:17	06/30/24 05:32	1
13C8 PFOA	120		52 - 153	06/26/24 16:17	06/30/24 05:32	1
13C8 PFOS	126		59 - 155	06/26/24 16:17	06/30/24 05:32	1
13C-8:2 FTCA	121		20 - 200	06/26/24 16:17	06/30/24 05:32	1
13C-8:2 FTUCA	111		18 - 175	06/26/24 16:17	06/30/24 05:32	1
13C9 PFNA	114		52 - 168	06/26/24 16:17	06/30/24 05:32	1
d3-NMeFOSAA	105		38 - 168	06/26/24 16:17	06/30/24 05:32	1
d3-NMePFOSA	47		10 - 130	06/26/24 16:17	06/30/24 05:32	1
d5-NEtFOSAA	111		34 - 181	06/26/24 16:17	06/30/24 05:32	1
d5-NEtPFOSA	42		10 - 130	06/26/24 16:17	06/30/24 05:32	1
d7-N-MeFOSE-M	78		10 - 149	06/26/24 16:17	06/30/24 05:32	1
d9-N-EtFOSE-M	71		10 - 151	06/26/24 16:17	06/30/24 05:32	1
M2-4:2 FTS	150		35 - 200	06/26/24 16:17	06/30/24 05:32	1
M2-6:2 FTS	132		40 - 200	06/26/24 16:17	06/30/24 05:32	1
M2-8:2 FTS	118		37 - 200	06/26/24 16:17	06/30/24 05:32	1

Client Sample ID: 004-D

Lab Sample ID: 410-175226-5

Date Collected: 06/04/24 09:46

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.285	H cn	0.949	0.285	ug/L		06/13/24 08:24	06/20/24 19:40	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.190	H cn	0.949	0.190	ug/L		06/13/24 08:24	06/20/24 19:40	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.190	H *1 cn	0.949	0.190	ug/L		06/13/24 08:24	06/20/24 19:40	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.190	H cn	0.949	0.190	ug/L		06/13/24 08:24	06/20/24 19:40	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.190	H *1 cn	0.949	0.190	ug/L		06/13/24 08:24	06/20/24 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	62	cn	14 - 120	06/13/24 08:24	06/20/24 19:40	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	111	cn	43 - 151	06/13/24 08:24	06/20/24 19:40	1

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.844	cn	2.11	0.844	ng/L		06/27/24 14:30	07/05/24 23:54	1
10:2 FTCA	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
10:2 FTUCA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1

Client Sample ID: 004-D
Date Collected: 06/04/24 09:46
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-5
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11Cl-PF3OUdS	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
3:3 FTCA	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
4:2 Fluorotelomer sulfonic acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
5:3 FTCA	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
6:2 Fluorotelomer sulfonic acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
6:2 FTCA	<0.738	cn	2.11	0.738	ng/L		06/27/24 14:30	07/05/24 23:54	1
6:2 FTUCA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
7:3 FTCA	<1.16	cn	2.11	1.16	ng/L		06/27/24 14:30	07/05/24 23:54	1
8:2 Fluorotelomer sulfonic acid	<0.633	cn	2.11	0.633	ng/L		06/27/24 14:30	07/05/24 23:54	1
8:2 FTCA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
8:2 FTUCA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
9Cl-PF3ONS	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
EVE Acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
HFPODA	**0.491**	**J cn**	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Hydro-EVE Acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Hydrolyzed PSDA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Hydro-PS Acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
MTP	<0.633	cn	2.11	0.633	ng/L		06/27/24 14:30	07/05/24 23:54	1
NEtFOSA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
NEtFOSAA	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
NEtFOSE	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
NMeFOSA	<0.738	cn	2.11	0.738	ng/L		06/27/24 14:30	07/05/24 23:54	1
NMeFOSAA	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
NMeFOSE	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
NVHOS	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
PEPA	<0.633	cn	2.11	0.633	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorobutanesulfonic acid (PFBS)	**3.47**	**cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorobutanoic acid (PFBA)	**2.46**	**cn**	2.11	1.05	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorodecanesulfonic acid (PFDS)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorodecanoic acid (PFDA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorododecanesulfonic acid (PFDoS)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorododecanoic acid (PFDoA)	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoroheptanoic acid (PFHpA)	**2.88**	**cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1

Client Sample ID: 004-D
Date Collected: 06/04/24 09:46
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-5
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	**4.41**	**cn**	2.11	0.211	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorohexanoic acid (PFHxA)	**5.23**	**cn**	2.11	1.05	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorononanesulfonic acid (PFNS)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorononanoic acid (PFNA)	**0.418**	**J cn**	2.11	0.211	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorooctanesulfonamide (PFOSA)	**7.26**	**cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorooctanesulfonic acid (PFOS)	**7.59**	**cn**	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorooctanoic acid (PFOA)	**5.44**	**cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoropentanesulfonic acid (PFPeS)	**0.607**	**J cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoropentanoic acid (PFPeA)	**6.56**	**cn**	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoropropanesulfonic acid	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoropropionic acid (PFPrA)	**10.6**	**cn**	10.5	5.27	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorotetradecanoic acid (PFTeDA)	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluorotridecanoic acid (PFTrDA)	<0.422	cn	2.11	0.422	ng/L		06/27/24 14:30	07/05/24 23:54	1
Perfluoroundecanoic acid (PFUnA)	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
PFECHS	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
PFMOAA	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1
PFO2HxA	<0.738	cn	2.11	0.738	ng/L		06/27/24 14:30	07/05/24 23:54	1
PFO3OA	<1.05	cn	2.11	1.05	ng/L		06/27/24 14:30	07/05/24 23:54	1
PFO4DA	<0.844	cn	2.11	0.844	ng/L		06/27/24 14:30	07/05/24 23:54	1
PMPA	<0.633	cn	2.11	0.633	ng/L		06/27/24 14:30	07/05/24 23:54	1
PS Acid	<0.633	cn	2.11	0.633	ng/L		06/27/24 14:30	07/05/24 23:54	1
R-EVE	<0.527	cn	2.11	0.527	ng/L		06/27/24 14:30	07/05/24 23:54	1
R-PSDA	<0.738	cn	2.11	0.738	ng/L		06/27/24 14:30	07/05/24 23:54	1
R-PSDCA	<0.316	cn	2.11	0.316	ng/L		06/27/24 14:30	07/05/24 23:54	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*80*	*cn*	*11 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C-10:2 FTUCA	*85*	*cn*	*10 - 166*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C2 PFTeDA	*75*	*cn*	*10 - 171*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C2-PFDoDA	*75*	*cn*	*22 - 165*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C3 HFPO-DA	*76*	*cn*	*13 - 170*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C3 PFBS	*94*	*cn*	*34 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C3 PFHxS	*92*	*cn*	*48 - 169*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C3-PFPrA	*28*	*cn*	*21 - 157*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C4 PFBA	*89*	*cn*	*22 - 174*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C4 PFHpA	*86*	*cn*	*40 - 165*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C5 PFHxA	*83*	*cn*	*28 - 166*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C5 PFPeA	*88*	*cn*	*33 - 196*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C6 PFDA	*88*	*cn*	*53 - 151*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C-6:2 FTCA	*87*	*cn*	*10 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C-6:2 FTUCA	*84*	*cn*	*10 - 173*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C7 PFUnA	*88*	*cn*	*41 - 163*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C8 FOSA	*83*	*cn*	*10 - 155*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C8 PFOA	*92*	*cn*	*52 - 153*	*06/27/24 14:30*	*07/05/24 23:54*	*1*

Client Sample ID: 004-D

Lab Sample ID: 410-175226-5

Date Collected: 06/04/24 09:46

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 PFOS	*87*	*cn*	*59 - 155*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C-8:2 FTCA	*85*	*cn*	*20 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C-8:2 FTUCA	*85*	*cn*	*18 - 175*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
13C9 PFNA	*89*	*cn*	*52 - 168*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d3-NMeFOSAA	*79*	*cn*	*38 - 168*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d3-NMePFOSA	*42*	*cn*	*10 - 130*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d5-NEtFOSAA	*93*	*cn*	*34 - 181*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d5-NEtPFOSA	*36*	*cn*	*10 - 130*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d7-N-MeFOSE-M	*76*	*cn*	*10 - 149*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
d9-N-EtFOSE-M	*71*	*cn*	*10 - 151*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
M2-4:2 FTS	*89*	*cn*	*35 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
M2-6:2 FTS	*115*	*cn*	*40 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*
M2-8:2 FTS	*92*	*cn*	*37 - 200*	*06/27/24 14:30*	*07/05/24 23:54*	*1*

Client Sample ID: 004 FB

Lab Sample ID: 410-175226-6

Date Collected: 06/04/24 09:46

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.271	H cn	0.904	0.271	ug/L		06/13/24 08:24	06/24/24 15:00	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.181	H cn	0.904	0.181	ug/L		06/13/24 08:24	06/24/24 15:00	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.181	H *1 cn	0.904	0.181	ug/L		06/13/24 08:24	06/24/24 15:00	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.181	H cn	0.904	0.181	ug/L		06/13/24 08:24	06/24/24 15:00	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.181	H *1 cn	0.904	0.181	ug/L		06/13/24 08:24	06/24/24 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*54*	*cn*	*14 - 120*	*06/13/24 08:24*	*06/24/24 15:00*	*1*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*89*	*cn*	*43 - 151*	*06/13/24 08:24*	*06/24/24 15:00*	*1*

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.705	cn	1.76	0.705	ng/L		06/27/24 14:30	07/06/24 00:07	1
10:2 FTCA	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
10:2 FTUCA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
11Cl-PF3OUdS	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
3:3 FTCA	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
4:2 Fluorotelomer sulfonic acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
5:3 FTCA	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
6:2 Fluorotelomer sulfonic acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
6:2 FTCA	<0.617	cn	1.76	0.617	ng/L		06/27/24 14:30	07/06/24 00:07	1
6:2 FTUCA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
7:3 FTCA	<0.969	cn	1.76	0.969	ng/L		06/27/24 14:30	07/06/24 00:07	1
8:2 Fluorotelomer sulfonic acid	<0.529	cn	1.76	0.529	ng/L		06/27/24 14:30	07/06/24 00:07	1
8:2 FTCA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
8:2 FTUCA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
9Cl-PF3ONS	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1

Client Sample ID: 004 FB
Date Collected: 06/04/24 09:46
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-6
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EVE Acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
HFPODA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Hydro-EVE Acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Hydrolyzed PSDA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Hydro-PS Acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
MTP	<0.529	cn	1.76	0.529	ng/L		06/27/24 14:30	07/06/24 00:07	1
NEtFOSA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
NEtFOSAA	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
NEtFOSE	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
NMeFOSA	<0.617	cn	1.76	0.617	ng/L		06/27/24 14:30	07/06/24 00:07	1
NMeFOSAA	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
NMeFOSE	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
NVHOS	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
PEPA	<0.529	cn	1.76	0.529	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorobutanoic acid (PFBA)	<0.881	cn	1.76	0.881	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorodecanesulfonic acid (PFDS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorodecanoic acid (PFDA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorododecanesulfonic acid (PFDoS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorododecanoic acid (PFDoA)	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoroheptanoic acid (PFHpA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.176	cn	1.76	0.176	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorohexanoic acid (PFHxA)	<0.881	cn	1.76	0.881	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorononanesulfonic acid (PFNS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorononanoic acid (PFNA)	<0.176	cn	1.76	0.176	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorooctanesulfonamide (PFOSA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorooctanoic acid (PFOA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoropentanoic acid (PFPeA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoropropanesulfonic acid	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoropropionic acid (PFPrA)	<4.41	cn	8.81	4.41	ng/L		06/27/24 14:30	07/06/24 00:07	1

Client Sample ID: 004 FB
Date Collected: 06/04/24 09:46
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-6
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluorotridecanoic acid (PFTrDA)	<0.352	cn	1.76	0.352	ng/L		06/27/24 14:30	07/06/24 00:07	1
Perfluoroundecanoic acid (PFUnA)	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
PFECHS	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
PFMOAA	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1
PFO2HxA	<0.617	cn	1.76	0.617	ng/L		06/27/24 14:30	07/06/24 00:07	1
PFO3OA	<0.881	cn	1.76	0.881	ng/L		06/27/24 14:30	07/06/24 00:07	1
PFO4DA	<0.705	cn	1.76	0.705	ng/L		06/27/24 14:30	07/06/24 00:07	1
PMPA	<0.529	cn	1.76	0.529	ng/L		06/27/24 14:30	07/06/24 00:07	1
PS Acid	<0.529	cn	1.76	0.529	ng/L		06/27/24 14:30	07/06/24 00:07	1
R-EVE	<0.441	cn	1.76	0.441	ng/L		06/27/24 14:30	07/06/24 00:07	1
R-PSDA	<0.617	cn	1.76	0.617	ng/L		06/27/24 14:30	07/06/24 00:07	1
R-PSDCA	<0.264	cn	1.76	0.264	ng/L		06/27/24 14:30	07/06/24 00:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*70*	*cn*	*11 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C-10:2 FTUCA	*81*	*cn*	*10 - 166*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C2 PFTeDA	*75*	*cn*	*10 - 171*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C2-PFDoDA	*75*	*cn*	*22 - 165*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C3 HFPO-DA	*76*	*cn*	*13 - 170*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C3 PFBS	*90*	*cn*	*34 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C3 PFHxS	*87*	*cn*	*48 - 169*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C3-PFPrA	*22*	*cn*	*21 - 157*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C4 PFBA	*74*	*cn*	*22 - 174*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C4 PFHpA	*83*	*cn*	*40 - 165*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C5 PFHxA	*83*	*cn*	*28 - 166*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C5 PFPeA	*88*	*cn*	*33 - 196*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C6 PFDA	*88*	*cn*	*53 - 151*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C-6:2 FTCA	*86*	*cn*	*10 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C-6:2 FTUCA	*82*	*cn*	*10 - 173*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C7 PFUnA	*88*	*cn*	*41 - 163*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C8 FOSA	*85*	*cn*	*10 - 155*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C8 PFOA	*85*	*cn*	*52 - 153*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C8 PFOS	*89*	*cn*	*59 - 155*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C-8:2 FTCA	*81*	*cn*	*20 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C-8:2 FTUCA	*85*	*cn*	*18 - 175*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
13C9 PFNA	*94*	*cn*	*52 - 168*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d3-NMeFOSAA	*74*	*cn*	*38 - 168*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d3-NMePFOSA	*46*	*cn*	*10 - 130*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d5-NEtFOSAA	*88*	*cn*	*34 - 181*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d5-NEtPFOSA	*43*	*cn*	*10 - 130*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d7-N-MeFOSE-M	*75*	*cn*	*10 - 149*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
d9-N-EtFOSE-M	*68*	*cn*	*10 - 151*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
M2-4:2 FTS	*83*	*cn*	*35 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
M2-6:2 FTS	*104*	*cn*	*40 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*
M2-8:2 FTS	*94*	*cn*	*37 - 200*	*06/27/24 14:30*	*07/06/24 00:07*	*1*

Client Sample ID: 004
Date Collected: 06/04/24 09:54
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-7
Matrix: Water

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.300	H cn	0.999	0.300	ug/L		06/13/24 08:24	06/24/24 15:13	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.200	H cn	0.999	0.200	ug/L		06/13/24 08:24	06/24/24 15:13	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.200	H *1 cn	0.999	0.200	ug/L		06/13/24 08:24	06/24/24 15:13	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.200	H cn	0.999	0.200	ug/L		06/13/24 08:24	06/24/24 15:13	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.200	H *1 cn	0.999	0.200	ug/L		06/13/24 08:24	06/24/24 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*47*	*cn*	*14 - 120*	*06/13/24 08:24*	*06/24/24 15:13*	*1*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*82*	*cn*	*43 - 151*	*06/13/24 08:24*	*06/24/24 15:13*	*1*

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.766	cn	1.91	0.766	ng/L		06/27/24 14:30	07/09/24 17:24	1
10:2 FTCA	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
10:2 FTUCA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
11Cl-PF3OUdS	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
3:3 FTCA	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
4:2 Fluorotelomer sulfonic acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
5:3 FTCA	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
6:2 Fluorotelomer sulfonic acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
6:2 FTCA	<0.670	cn	1.91	0.670	ng/L		06/27/24 14:30	07/09/24 17:24	1
6:2 FTUCA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
7:3 FTCA	<1.05	cn	1.91	1.05	ng/L		06/27/24 14:30	07/09/24 17:24	1
8:2 Fluorotelomer sulfonic acid	<0.574	cn	1.91	0.574	ng/L		06/27/24 14:30	07/09/24 17:24	1
8:2 FTCA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
8:2 FTUCA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
9Cl-PF3ONS	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
EVE Acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
HFPODA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Hydro-EVE Acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
Hydrolyzed PSDA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Hydro-PS Acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
MTP	<0.574	cn	1.91	0.574	ng/L		06/27/24 14:30	07/09/24 17:24	1
NEtFOSA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
NEtFOSAA	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
NEtFOSE	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
NMeFOSA	<0.670	cn	1.91	0.670	ng/L		06/27/24 14:30	07/09/24 17:24	1
NMeFOSAA	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
NMeFOSE	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
NVHOS	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
PEPA	<0.574	cn	1.91	0.574	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1

Client Sample ID: 004
Date Collected: 06/04/24 09:54
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-7
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorobutanesulfonic acid (PFBS)	**3.26**	**cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorobutanoic acid (PFBA)	**2.29**	**cn**	1.91	0.957	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorodecanesulfonic acid (PFDS)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorodecanoic acid (PFDA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorododecanesulfonic acid (PFDoS)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorododecanoic acid (PFDoA)	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoroheptanoic acid (PFHpA)	**2.63**	**cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorohexanesulfonic acid (PFHxS)	**4.16**	**cn**	1.91	0.191	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorohexanoic acid (PFHxA)	**4.59**	**cn**	1.91	0.957	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorononanesulfonic acid (PFNS)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorononanoic acid (PFNA)	**0.364**	**J cn**	1.91	0.191	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorooctanesulfonamide (PFOSA)	**7.84**	**cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorooctanesulfonic acid (PFOS)	**6.78**	**cn**	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorooctanoic acid (PFOA)	**5.09**	**cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoropentanesulfonic acid (PFPeS)	**0.612**	**J cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoropentanoic acid (PFPeA)	**6.10**	**cn**	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoropropanesulfonic acid	**0.384**	**J cn**	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoropropionic acid (PFPrA)	**10.9**	**cn**	9.57	4.79	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorotetradecanoic acid (PFTeDA)	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluorotridecanoic acid (PFTrDA)	<0.383	cn	1.91	0.383	ng/L		06/27/24 14:30	07/09/24 17:24	1
Perfluoroundecanoic acid (PFUnA)	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
PFECHS	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
PFMOAA	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1
PFO2HxA	<0.670	cn	1.91	0.670	ng/L		06/27/24 14:30	07/09/24 17:24	1
PFO3OA	<0.957	cn	1.91	0.957	ng/L		06/27/24 14:30	07/09/24 17:24	1
PFO4DA	<0.766	cn	1.91	0.766	ng/L		06/27/24 14:30	07/09/24 17:24	1
PMPA	<0.574	cn	1.91	0.574	ng/L		06/27/24 14:30	07/09/24 17:24	1
PS Acid	<0.574	cn	1.91	0.574	ng/L		06/27/24 14:30	07/09/24 17:24	1
R-EVE	<0.479	cn	1.91	0.479	ng/L		06/27/24 14:30	07/09/24 17:24	1
R-PSDA	<0.670	cn	1.91	0.670	ng/L		06/27/24 14:30	07/09/24 17:24	1
R-PSDCA	<0.287	cn	1.91	0.287	ng/L		06/27/24 14:30	07/09/24 17:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*95*	*cn*	*11 - 200*	*06/27/24 14:30*	*07/09/24 17:24*	*1*
13C-10:2 FTUCA	*107*	*cn*	*10 - 166*	*06/27/24 14:30*	*07/09/24 17:24*	*1*

Client Sample ID: 004

Lab Sample ID: 410-175226-7

Date Collected: 06/04/24 09:54

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	113	cn	10 - 171	06/27/24 14:30	07/09/24 17:24	1
13C2-PFDoDA	102	cn	22 - 165	06/27/24 14:30	07/09/24 17:24	1
13C3 HFPO-DA	130	cn	13 - 170	06/27/24 14:30	07/09/24 17:24	1
13C3 PFBS	129	cn	34 - 200	06/27/24 14:30	07/09/24 17:24	1
13C3 PFHxS	132	cn	48 - 169	06/27/24 14:30	07/09/24 17:24	1
13C3-PFPrA	39	cn	21 - 157	06/27/24 14:30	07/09/24 17:24	1
13C4 PFBA	122	cn	22 - 174	06/27/24 14:30	07/09/24 17:24	1
13C4 PFHpA	118	cn	40 - 165	06/27/24 14:30	07/09/24 17:24	1
13C5 PFHxA	116	cn	28 - 166	06/27/24 14:30	07/09/24 17:24	1
13C5 PFPeA	111	cn	33 - 196	06/27/24 14:30	07/09/24 17:24	1
13C6 PFDA	114	cn	53 - 151	06/27/24 14:30	07/09/24 17:24	1
13C-6:2 FTCA	113	cn	10 - 200	06/27/24 14:30	07/09/24 17:24	1
13C-6:2 FTUCA	123	cn	10 - 173	06/27/24 14:30	07/09/24 17:24	1
13C7 PFUnA	110	cn	41 - 163	06/27/24 14:30	07/09/24 17:24	1
13C8 FOSA	117	cn	10 - 155	06/27/24 14:30	07/09/24 17:24	1
13C8 PFOA	117	cn	52 - 153	06/27/24 14:30	07/09/24 17:24	1
13C8 PFOS	125	cn	59 - 155	06/27/24 14:30	07/09/24 17:24	1
13C-8:2 FTCA	106	cn	20 - 200	06/27/24 14:30	07/09/24 17:24	1
13C-8:2 FTUCA	113	cn	18 - 175	06/27/24 14:30	07/09/24 17:24	1
13C9 PFNA	118	cn	52 - 168	06/27/24 14:30	07/09/24 17:24	1
d3-NMeFOSAA	114	cn	38 - 168	06/27/24 14:30	07/09/24 17:24	1
d3-NMePFOSA	59	cn	10 - 130	06/27/24 14:30	07/09/24 17:24	1
d5-NEtFOSAA	114	cn	34 - 181	06/27/24 14:30	07/09/24 17:24	1
d5-NEtPFOSA	49	cn	10 - 130	06/27/24 14:30	07/09/24 17:24	1
d7-N-MeFOSE-M	112	cn	10 - 149	06/27/24 14:30	07/09/24 17:24	1
d9-N-EtFOSE-M	101	cn	10 - 151	06/27/24 14:30	07/09/24 17:24	1
M2-4:2 FTS	130	cn	35 - 200	06/27/24 14:30	07/09/24 17:24	1
M2-6:2 FTS	154	cn	40 - 200	06/27/24 14:30	07/09/24 17:24	1
M2-8:2 FTS	139	cn	37 - 200	06/27/24 14:30	07/09/24 17:24	1

Client Sample ID: 006

Lab Sample ID: 410-175226-8

Date Collected: 06/04/24 14:50

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.291	H cn	0.972	0.291	ug/L		06/13/24 08:24	06/24/24 15:27	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.194	H cn	0.972	0.194	ug/L		06/13/24 08:24	06/24/24 15:27	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.194	H *1 cn	0.972	0.194	ug/L		06/13/24 08:24	06/24/24 15:27	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.194	H cn	0.972	0.194	ug/L		06/13/24 08:24	06/24/24 15:27	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.194	H *1 cn	0.972	0.194	ug/L		06/13/24 08:24	06/24/24 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	51	cn	14 - 120	06/13/24 08:24	06/24/24 15:27	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	88	cn	43 - 151	06/13/24 08:24	06/24/24 15:27	1

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.774	cn	1.93	0.774	ng/L		06/27/24 14:30	07/06/24 00:21	1

Client Sample ID: 006
Date Collected: 06/04/24 14:50
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-8
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
10:2 FTUCA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
11Cl-PF3OUdS	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
3:3 FTCA	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
4:2 Fluorotelomer sulfonic acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
5:3 FTCA	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
6:2 Fluorotelomer sulfonic acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
6:2 FTCA	<0.677	cn	1.93	0.677	ng/L		06/27/24 14:30	07/06/24 00:21	1
6:2 FTUCA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
7:3 FTCA	<1.06	cn	1.93	1.06	ng/L		06/27/24 14:30	07/06/24 00:21	1
8:2 Fluorotelomer sulfonic acid	<0.580	cn	1.93	0.580	ng/L		06/27/24 14:30	07/06/24 00:21	1
8:2 FTCA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
8:2 FTUCA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
9Cl-PF3ONS	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
EVE Acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
HFPODA	**0.406**	**J cn**	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Hydro-EVE Acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Hydrolyzed PSDA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Hydro-PS Acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
MTP	<0.580	cn	1.93	0.580	ng/L		06/27/24 14:30	07/06/24 00:21	1
NEtFOSA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
NEtFOSAA	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
NEtFOSE	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
NMeFOSA	<0.677	cn	1.93	0.677	ng/L		06/27/24 14:30	07/06/24 00:21	1
NMeFOSAA	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
NMeFOSE	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
NVHOS	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
PEPA	<0.580	cn	1.93	0.580	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorobutanesulfonic acid (PFBS)	**0.662**	**J cn**	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorobutanoic acid (PFBA)	<0.967	cn	1.93	0.967	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorodecanoic acid (PFDA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorododecanoic acid (PFDoA)	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1

Client Sample ID: 006
Date Collected: 06/04/24 14:50
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-8
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	**0.402**	**J cn**	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorohexanesulfonic acid (PFHxS)	**0.564**	**J cn**	1.93	0.193	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorohexanoic acid (PFHxA)	<0.967	cn	1.93	0.967	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorononanesulfonic acid (PFNS)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorononanoic acid (PFNA)	<0.193	cn	1.93	0.193	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorooctanesulfonamide (PFOSA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorooctanesulfonic acid (PFOS)	**0.745**	**J cn**	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorooctanoic acid (PFOA)	**0.610**	**J cn**	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoropentanoic acid (PFPeA)	**0.713**	**J cn**	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoropropanesulfonic acid	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoropropionic acid (PFPrA)	<4.84	cn	9.67	4.84	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorotetradecanoic acid (PFTeDA)	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluorotridecanoic acid (PFTrDA)	<0.387	cn	1.93	0.387	ng/L		06/27/24 14:30	07/06/24 00:21	1
Perfluoroundecanoic acid (PFUnA)	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
PFECHS	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
PFMOAA	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1
PFO2HxA	<0.677	cn	1.93	0.677	ng/L		06/27/24 14:30	07/06/24 00:21	1
PFO3OA	<0.967	cn	1.93	0.967	ng/L		06/27/24 14:30	07/06/24 00:21	1
PFO4DA	<0.774	cn	1.93	0.774	ng/L		06/27/24 14:30	07/06/24 00:21	1
PMPA	<0.580	cn	1.93	0.580	ng/L		06/27/24 14:30	07/06/24 00:21	1
PS Acid	<0.580	cn	1.93	0.580	ng/L		06/27/24 14:30	07/06/24 00:21	1
R-EVE	<0.484	cn	1.93	0.484	ng/L		06/27/24 14:30	07/06/24 00:21	1
R-PSDA	<0.677	cn	1.93	0.677	ng/L		06/27/24 14:30	07/06/24 00:21	1
R-PSDCA	<0.290	cn	1.93	0.290	ng/L		06/27/24 14:30	07/06/24 00:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*77*	*cn*	*11 - 200*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C-10:2 FTUCA	*82*	*cn*	*10 - 166*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C2 PFTeDA	*76*	*cn*	*10 - 171*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C2-PFDoDA	*76*	*cn*	*22 - 165*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C3 HFPO-DA	*85*	*cn*	*13 - 170*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C3 PFBS	*99*	*cn*	*34 - 200*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C3 PFHxS	*97*	*cn*	*48 - 169*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C3-PFPrA	*37*	*cn*	*21 - 157*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C4 PFBA	*98*	*cn*	*22 - 174*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C4 PFHpA	*94*	*cn*	*40 - 165*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C5 PFHxA	*90*	*cn*	*28 - 166*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C5 PFPeA	*96*	*cn*	*33 - 196*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C6 PFDA	*87*	*cn*	*53 - 151*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C-6:2 FTCA	*95*	*cn*	*10 - 200*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C-6:2 FTUCA	*91*	*cn*	*10 - 173*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C7 PFUnA	*82*	*cn*	*41 - 163*	*06/27/24 14:30*	*07/06/24 00:21*	*1*
13C8 FOSA	*83*	*cn*	*10 - 155*	*06/27/24 14:30*	*07/06/24 00:21*	*1*

Client Sample ID: 006

Lab Sample ID: 410-175226-8

Date Collected: 06/04/24 14:50

Matrix: Water

Date Received: 06/08/24 09:35

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	101	cn	52 - 153	06/27/24 14:30	07/06/24 00:21	1
13C8 PFOS	96	cn	59 - 155	06/27/24 14:30	07/06/24 00:21	1
13C-8:2 FTCA	79	cn	20 - 200	06/27/24 14:30	07/06/24 00:21	1
13C-8:2 FTUCA	85	cn	18 - 175	06/27/24 14:30	07/06/24 00:21	1
13C9 PFNA	99	cn	52 - 168	06/27/24 14:30	07/06/24 00:21	1
d3-NMeFOSAA	83	cn	38 - 168	06/27/24 14:30	07/06/24 00:21	1
d3-NMePFOSA	47	cn	10 - 130	06/27/24 14:30	07/06/24 00:21	1
d5-NEtFOSAA	90	cn	34 - 181	06/27/24 14:30	07/06/24 00:21	1
d5-NEtPFOSA	46	cn	10 - 130	06/27/24 14:30	07/06/24 00:21	1
d7-N-MeFOSE-M	77	cn	10 - 149	06/27/24 14:30	07/06/24 00:21	1
d9-N-EtFOSE-M	70	cn	10 - 151	06/27/24 14:30	07/06/24 00:21	1
M2-4:2 FTS	93	cn	35 - 200	06/27/24 14:30	07/06/24 00:21	1
M2-6:2 FTS	113	cn	40 - 200	06/27/24 14:30	07/06/24 00:21	1
M2-8:2 FTS	92	cn	37 - 200	06/27/24 14:30	07/06/24 00:21	1

Client Sample ID: Trip Blank

Lab Sample ID: 410-175226-9

Date Collected: 05/30/24 00:00

Matrix: Water

Date Received: 06/08/24 09:35

Method: ELLE - Lancaster SOP - SOP T-SSG-WI7750

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.262	H H3 cn	0.873	0.262	ug/L		06/13/24 08:24	06/24/24 15:41	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.175	H H3 cn	0.873	0.175	ug/L		06/13/24 08:24	06/24/24 15:41	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.175	H H3 *1 cn	0.873	0.175	ug/L		06/13/24 08:24	06/24/24 15:41	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.175	H H3 cn	0.873	0.175	ug/L		06/13/24 08:24	06/24/24 15:41	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.175	H H3 *1 cn	0.873	0.175	ug/L		06/13/24 08:24	06/24/24 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	45	cn	14 - 120	06/13/24 08:24	06/24/24 15:41	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	76	cn	43 - 151	06/13/24 08:24	06/24/24 15:41	1

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.692		1.73	0.692	ng/L		06/26/24 15:46	06/30/24 01:07	1
10:2 FTCA	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
10:2 FTUCA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
11Cl-PF3OUdS	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
3:3 FTCA	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
4:2 Fluorotelomer sulfonic acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
5:3 FTCA	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
6:2 Fluorotelomer sulfonic acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
6:2 FTCA	<0.605		1.73	0.605	ng/L		06/26/24 15:46	06/30/24 01:07	1
6:2 FTUCA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
7:3 FTCA	<0.951		1.73	0.951	ng/L		06/26/24 15:46	06/30/24 01:07	1
8:2 Fluorotelomer sulfonic acid	<0.519		1.73	0.519	ng/L		06/26/24 15:46	06/30/24 01:07	1
8:2 FTCA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
8:2 FTUCA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1

Client Sample ID: Trip Blank
Date Collected: 05/30/24 00:00
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-9
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9Cl-PF3ONS	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
EVE Acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
HFPODA	**0.649**	**J B cn**	1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Hydro-EVE Acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Hydrolyzed PSDA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Hydro-PS Acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
MTP	<0.519		1.73	0.519	ng/L		06/26/24 15:46	06/30/24 01:07	1
NEtFOSA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
NEtFOSAA	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
NEtFOSE	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
NMeFOSA	<0.605		1.73	0.605	ng/L		06/26/24 15:46	06/30/24 01:07	1
NMeFOSAA	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
NMeFOSE	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
NVHOS	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
PEPA	<0.519		1.73	0.519	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorobutanoic acid (PFBA)	<0.865		1.73	0.865	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorodecanesulfonic acid (PFDS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorodecanoic acid (PFDA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorododecanesulfonic acid (PFDoS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorododecanoic acid (PFDoA)	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoroheptanoic acid (PFHpA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.173		1.73	0.173	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorohexanoic acid (PFHxA)	<0.865		1.73	0.865	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorononanesulfonic acid (PFNS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorononanoic acid (PFNA)	<0.173		1.73	0.173	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorooctanesulfonamide (PFOSA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorooctanoic acid (PFOA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoropentanoic acid (PFPeA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoropropanesulfonic acid	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: Trip Blank
Date Collected: 05/30/24 00:00
Date Received: 06/08/24 09:35

Lab Sample ID: 410-175226-9
Matrix: Water

Method: EPA 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropropionic acid (PFPrA)	<4.32		8.65	4.32	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorotetradecanoic acid (PFTeDA)	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluorotridecanoic acid (PFTrDA)	<0.346		1.73	0.346	ng/L		06/26/24 15:46	06/30/24 01:07	1
Perfluoroundecanoic acid (PFUnA)	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
PFECHS	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
PFMOAA	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1
PFO2HxA	<0.605		1.73	0.605	ng/L		06/26/24 15:46	06/30/24 01:07	1
PFO3OA	<0.865		1.73	0.865	ng/L		06/26/24 15:46	06/30/24 01:07	1
PFO4DA	<0.692		1.73	0.692	ng/L		06/26/24 15:46	06/30/24 01:07	1
PMPA	<0.519		1.73	0.519	ng/L		06/26/24 15:46	06/30/24 01:07	1
PS Acid	<0.519		1.73	0.519	ng/L		06/26/24 15:46	06/30/24 01:07	1
R-EVE	<0.432		1.73	0.432	ng/L		06/26/24 15:46	06/30/24 01:07	1
R-PSDA	<0.605		1.73	0.605	ng/L		06/26/24 15:46	06/30/24 01:07	1
R-PSDCA	<0.259		1.73	0.259	ng/L		06/26/24 15:46	06/30/24 01:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*73*		*11 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C-10:2 FTUCA	*72*		*10 - 166*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C2 PFTeDA	*61*		*10 - 171*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C2-PFDoDA	*73*		*22 - 165*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C3 HFPO-DA	*83*		*13 - 170*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C3 PFBS	*95*		*34 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C3 PFHxS	*78*		*48 - 169*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C3-PFPrA	*70*		*21 - 157*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C4 PFBA	*82*		*22 - 174*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C4 PFHpA	*83*		*40 - 165*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C5 PFHxA	*95*		*28 - 166*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C5 PFPeA	*80*		*33 - 196*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C6 PFDA	*80*		*53 - 151*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C-6:2 FTCA	*88*		*10 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C-6:2 FTUCA	*76*		*10 - 173*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C7 PFUnA	*87*		*41 - 163*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C8 FOSA	*70*		*10 - 155*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C8 PFOA	*80*		*52 - 153*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C8 PFOS	*83*		*59 - 155*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C-8:2 FTCA	*76*		*20 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C-8:2 FTUCA	*70*		*18 - 175*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
13C9 PFNA	*77*		*52 - 168*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d3-NMeFOSAA	*85*		*38 - 168*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d3-NMePFOSA	*47*		*10 - 130*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d5-NEtFOSAA	*80*		*34 - 181*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d5-NEtPFOSA	*48*		*10 - 130*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d7-N-MeFOSE-M	*62*		*10 - 149*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
d9-N-EtFOSE-M	*59*		*10 - 151*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
M2-4:2 FTS	*97*		*35 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
M2-6:2 FTS	*88*		*40 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*
M2-8:2 FTS	*81*		*37 - 200*	*06/26/24 15:46*	*06/30/24 01:07*	*1*

Surrogate Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Method: SOP - SOP T-SSG-WI7750

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		MFOET	MFDET										
Lab Sample ID	Client Sample ID	(14-120)	(43-151)										
410-175226-1	001 FBP	29 cn	73 cn										
410-175226-2	001 P	33 cn	79 cn										
410-175226-3	002	53 cn	95 cn										
410-175226-4	003	55 cn	101 cn										
410-175226-5	004-D	62 cn	111 cn										
410-175226-6	004 FB	54 cn	89 cn										
410-175226-7	004	47 cn	82 cn										
410-175226-8	006	51 cn	88 cn										
410-175226-9	Trip Blank	45 cn	76 cn										
LCS 410-516779/2-A	Lab Control Sample	39	91										
LCS 410-521574/2-A	Lab Control Sample	37	78										
LCSD 410-516779/3-A	Lab Control Sample Dup	32	81										
LCSD 410-521574/3-A	Lab Control Sample Dup	53	93										
MB 410-516779/1-A	Method Blank	32	78										
MB 410-521574/1-A	Method Blank	41	84										

Surrogate Legend

MFOET = 2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)
MFDET = 2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)

Isotope Dilution Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		MFDEA	MFDUEA	PFTDA	PFDoDA	HFPODA	C3PFBS	C3PFHS	13C3PFPrA
Lab Sample ID	Client Sample ID	(11-200)	(10-166)	(10-171)	(22-165)	(13-170)	(34-200)	(48-169)	(21-157)
410-175226-1	001 FBP	68 cn	77 cn	70 cn	72 cn	75 cn	91 cn	71 cn	19 *5- cn
410-175226-2	001 P	79	81	81	78	79	91	80	53
410-175226-3	002	101	101	83	93	105	126	101	62
410-175226-4	003	120	114	90	107	127	142	121	51
410-175226-5	004-D	80 cn	85 cn	75 cn	75 cn	76 cn	94 cn	92 cn	28 cn
410-175226-6	004 FB	70 cn	81 cn	75 cn	75 cn	76 cn	90 cn	87 cn	22 cn
410-175226-7	004	95 cn	107 cn	113 cn	102 cn	130 cn	129 cn	132 cn	39 cn
410-175226-8	006	77 cn	82 cn	76 cn	76 cn	85 cn	99 cn	97 cn	37 cn
410-175226-9	Trip Blank	73	72	61	73	83	95	78	70
LCS 410-521851/2-A	Lab Control Sample	74	73	59	67	77	91	74	52
LCS 410-521869/2-A	Lab Control Sample	103	103	82	91	114	121	111	69
LCS 410-522328/2-A	Lab Control Sample	88	94	88	86	88	100	101	83
LCS 410-523604/2-A	Lab Control Sample	75	78	79	84	76	89	73	60
LCSD 410-521851/3-A	Lab Control Sample Dup	85	83	69	78	91	92	86	55
LCSD 410-522328/3-A	Lab Control Sample Dup	54	61	56	60	52	63	59	52
LCSD 410-523604/3-A	Lab Control Sample Dup	71	73	76	73	76	87	74	59
MB 410-521851/1-A	Method Blank	72	73	63	71	78	85	72	51
MB 410-521869/1-A	Method Blank	87	85	67	81	90	100	87	58
MB 410-522328/1-A	Method Blank	74	78	73	72	68	81	81	53
MB 410-523604/1-A	Method Blank	86	88	81	79	78	96	76	74

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	C4PFHA	13C5PHA	PFPeA	C6PFDA	MFHEA	MFHUEA	13C7PUA
Lab Sample ID	Client Sample ID	(22-174)	(40-165)	(28-166)	(33-196)	(53-151)	(10-200)	(10-173)	(41-163)
410-175226-1	001 FBP	61 cn	66 cn	76 cn	80 cn	81 cn	74 cn	68 cn	76 cn
410-175226-2	001 P	88	74	71	80	87	78	72	80
410-175226-3	002	110	103	120	104	106	122	109	111
410-175226-4	003	119	127	133	119	115	136	120	113
410-175226-5	004-D	89 cn	86 cn	83 cn	88 cn	88 cn	87 cn	84 cn	88 cn
410-175226-6	004 FB	74 cn	83 cn	83 cn	88 cn	88 cn	86 cn	82 cn	88 cn
410-175226-7	004	122 cn	118 cn	116 cn	111 cn	114 cn	113 cn	123 cn	110 cn
410-175226-8	006	98 cn	94 cn	90 cn	96 cn	87 cn	95 cn	91 cn	82 cn
410-175226-9	Trip Blank	82	83	95	80	80	88	76	87
LCS 410-521851/2-A	Lab Control Sample	72	80	83	78	72	80	73	79
LCS 410-521869/2-A	Lab Control Sample	99	115	117	105	102	117	104	99
LCS 410-522328/2-A	Lab Control Sample	95	93	101	101	104	99	97	109
LCS 410-523604/2-A	Lab Control Sample	72	71	69	80	83	74	70	86
LCSD 410-521851/3-A	Lab Control Sample Dup	74	90	96	83	81	97	84	98
LCSD 410-522328/3-A	Lab Control Sample Dup	60	58	54	62	62	59	56	62
LCSD 410-523604/3-A	Lab Control Sample Dup	70	70	67	79	80	75	68	78
MB 410-521851/1-A	Method Blank	69	79	85	74	76	84	76	85
MB 410-521869/1-A	Method Blank	75	92	97	86	86	96	87	100
MB 410-522328/1-A	Method Blank	65	79	75	78	82	82	77	86
MB 410-523604/1-A	Method Blank	78	71	69	85	87	76	71	87

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	C8PFOA	C8PFOS	MFOEA	MFOUEA	C9PFNA	d3NMFOS	d3NMFSA
Lab Sample ID	Client Sample ID	(10-155)	(52-153)	(59-155)	(20-200)	(18-175)	(52-168)	(38-168)	(10-130)
410-175226-1	001 FBP	91 cn	77 cn	87 cn	77 cn	81 cn	79 cn	74 cn	56 cn
410-175226-2	001 P	88	84	93	79	82	87	83	28
410-175226-3	002	90	102	111	114	103	94	103	53

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (10-155)	C8PFOA (52-153)	C8PFOS (59-155)	MFOEA (20-200)	MFOUEA (18-175)	C9PFNA (52-168)	d3NMFOS (38-168)	d3NMFSA (10-130)
410-175226-4	003	94	120	126	121	111	114	105	47
410-175226-5	004-D	83 cn	92 cn	87 cn	85 cn	85 cn	89 cn	79 cn	42 cn
410-175226-6	004 FB	85 cn	85 cn	89 cn	81 cn	85 cn	94 cn	74 cn	46 cn
410-175226-7	004	117 cn	117 cn	125 cn	106 cn	113 cn	118 cn	114 cn	59 cn
410-175226-8	006	83 cn	101 cn	96 cn	79 cn	85 cn	99 cn	83 cn	47 cn
410-175226-9	Trip Blank	70	80	83	76	70	77	85	47
LCS 410-521851/2-A	Lab Control Sample	61	75	77	78	68	73	70	33
LCS 410-521869/2-A	Lab Control Sample	87	110	110	107	94	104	100	41
LCS 410-522328/2-A	Lab Control Sample	86	103	104	97	97	104	91	36
LCS 410-523604/2-A	Lab Control Sample	86	80	84	85	84	81	83	37
LCSD 410-521851/3-A	Lab Control Sample Dup	72	82	89	82	78	81	89	43
LCSD 410-522328/3-A	Lab Control Sample Dup	55	63	63	59	63	64	61	25
LCSD 410-523604/3-A	Lab Control Sample Dup	78	81	84	75	78	80	77	46
MB 410-521851/1-A	Method Blank	64	76	80	72	69	70	81	41
MB 410-521869/1-A	Method Blank	75	90	90	85	85	86	86	33
MB 410-522328/1-A	Method Blank	74	82	83	76	84	86	78	46
MB 410-523604/1-A	Method Blank	95	83	93	85	88	88	89	46

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	d5NEFOS (34-181)	d5NPFSA (10-130)	NMFM (10-149)	NEFM (10-151)	M242FTS (35-200)	M262FTS (40-200)	M282FTS (37-200)
410-175226-1	001 FBP	71 cn	56 cn	75 cn	70 cn	111 cn	165 cn	100 cn
410-175226-2	001 P	79	27	83	76	74	149	99
410-175226-3	002	109	46	75	69	124	109	110
410-175226-4	003	111	42	78	71	150	132	118
410-175226-5	004-D	93 cn	36 cn	76 cn	71 cn	89 cn	115 cn	92 cn
410-175226-6	004 FB	88 cn	43 cn	75 cn	68 cn	83 cn	104 cn	94 cn
410-175226-7	004	114 cn	49 cn	112 cn	101 cn	130 cn	154 cn	139 cn
410-175226-8	006	90 cn	46 cn	77 cn	70 cn	93 cn	113 cn	92 cn
410-175226-9	Trip Blank	80	48	62	59	97	88	81
LCS 410-521851/2-A	Lab Control Sample	76	32	55	50	87	79	71
LCS 410-521869/2-A	Lab Control Sample	100	38	70	65	132	110	103
LCS 410-522328/2-A	Lab Control Sample	110	38	83	76	94	142	101
LCS 410-523604/2-A	Lab Control Sample	91	37	84	72	70	131	95
LCSD 410-521851/3-A	Lab Control Sample Dup	91	40	70	65	99	85	83
LCSD 410-522328/3-A	Lab Control Sample Dup	63	27	55	48	58	73	66
LCSD 410-523604/3-A	Lab Control Sample Dup	75	49	75	65	67	133	95
MB 410-521851/1-A	Method Blank	79	42	60	56	91	79	76
MB 410-521869/1-A	Method Blank	94	32	61	57	104	100	86
MB 410-522328/1-A	Method Blank	87	47	71	62	76	105	83
MB 410-523604/1-A	Method Blank	85	44	78	76	70	163	107

Surrogate Legend

MFDEA = 13C-10:2 FTCA
MFDUEA = 13C-10:2 FTUCA
PFTDA = 13C2 PFTeDA
PFDoDA = 13C2-PFDoDA
HFPODA = 13C3 HFPO-DA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
13C3PFPrA = 13C3-PFPrA

Isotope Dilution Summary

Client: Eastern Research Group, Inc.
Job ID: 410-175226-1
Project/Site: SDWA Region 9 - ERG

PFBA = 13C4 PFBA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
PFPeA = 13C5 PFPeA
C6PFDA = 13C6 PFDA
MFHEA = 13C-6:2 FTCA
MFHUEA = 13C-6:2 FTUCA
13C7PUA = 13C7 PFUnA
PFOSA = 13C8 FOSA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
MFOEA = 13C-8:2 FTCA
MFOUEA = 13C-8:2 FTUCA
C9PFNA = 13C9 PFNA
d3NMFOS = d3-NMeFOSAA
d3NMFSA = d3-NMePFOSA
d5NEFOS = d5-NEtFOSAA
d5NPFSA = d5-NEtPFOSA
NMFM = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
M242FTS = M2-4:2 FTS
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

Method: SOP - SOP T-SSG-WI7750

Lab Sample ID: MB 410-516779/1-A
Matrix: Water
Analysis Batch: 519643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 516779

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.300		1.00	0.300	ug/L		06/12/24 22:15	06/20/24 15:58	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.200		1.00	0.200	ug/L		06/12/24 22:15	06/20/24 15:58	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.200		1.00	0.200	ug/L		06/12/24 22:15	06/20/24 15:58	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.200		1.00	0.200	ug/L		06/12/24 22:15	06/20/24 15:58	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.200		1.00	0.200	ug/L		06/12/24 22:15	06/20/24 15:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*32*		*14 - 120*	*06/12/24 22:15*	*06/20/24 15:58*	*1*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*78*		*43 - 151*	*06/12/24 22:15*	*06/20/24 15:58*	*1*

Lab Sample ID: LCS 410-516779/2-A
Matrix: Water
Analysis Batch: 519643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 516779

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 FTOH-2-Perfluorodecyl ethanol	4.00	3.631		ug/L		91	50 - 120
8:2 FTOH-2-Perfluorooctyl ethanol	4.00	2.961	I	ug/L		74	34 - 120
7:2 FTOH-1-Perfluoroheptyl ethanol	4.00	1.462		ug/L		37	21 - 121
6:2 FTOH-2-Perfluorohexyl ethanol	4.00	1.784	I	ug/L		45	33 - 120
4:2 FTOH-2-Perfluorobutyl ethanol	4.00	1.062		ug/L		27	20 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*39*		*14 - 120*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*91*		*43 - 151*

Lab Sample ID: LCSD 410-516779/3-A
Matrix: Water
Analysis Batch: 519643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 516779

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 FTOH-2-Perfluorodecyl ethanol	4.00	3.269	I	ug/L		82	50 - 120	10	30
8:2 FTOH-2-Perfluorooctyl ethanol	4.00	2.345	I	ug/L		59	34 - 120	23	30
7:2 FTOH-1-Perfluoroheptyl ethanol	4.00	2.113	*1	ug/L		53	21 - 121	36	30
6:2 FTOH-2-Perfluorohexyl ethanol	4.00	1.973	I	ug/L		49	33 - 120	10	30
4:2 FTOH-2-Perfluorobutyl ethanol	4.00	2.212	*1	ug/L		55	20 - 120	70	30

Method: SOP - SOP T-SSG-WI7750 (Continued)

Lab Sample ID: LCSD 410-516779/3-A
Matrix: Water
Analysis Batch: 519643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 516779

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	32		14 - 120
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	81		43 - 151

Lab Sample ID: MB 410-521574/1-A
Matrix: Water
Analysis Batch: 521665

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521574

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTOH-2-Perfluorodecyl ethanol	<0.300		1.00	0.300	ug/L		06/26/24 08:13	06/26/24 12:02	1
8:2 FTOH-2-Perfluorooctyl ethanol	<0.200		1.00	0.200	ug/L		06/26/24 08:13	06/26/24 12:02	1
7:2 FTOH-1-Perfluoroheptyl ethanol	<0.200		1.00	0.200	ug/L		06/26/24 08:13	06/26/24 12:02	1
6:2 FTOH-2-Perfluorohexyl ethanol	<0.200		1.00	0.200	ug/L		06/26/24 08:13	06/26/24 12:02	1
4:2 FTOH-2-Perfluorobutyl ethanol	<0.200		1.00	0.200	ug/L		06/26/24 08:13	06/26/24 12:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	41		14 - 120	06/26/24 08:13	06/26/24 12:02	1
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	84		43 - 151	06/26/24 08:13	06/26/24 12:02	1

Lab Sample ID: LCS 410-521574/2-A
Matrix: Water
Analysis Batch: 521665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 FTOH-2-Perfluorodecyl ethanol	4.00	3.542	I	ug/L		89	50 - 120
8:2 FTOH-2-Perfluorooctyl ethanol	4.00	3.671	I	ug/L		92	34 - 120
7:2 FTOH-1-Perfluoroheptyl ethanol	4.00	3.093		ug/L		77	21 - 121
6:2 FTOH-2-Perfluorohexyl ethanol	4.00	3.391	I	ug/L		85	33 - 120
4:2 FTOH-2-Perfluorobutyl ethanol	4.00	2.902		ug/L		73	20 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	37		14 - 120
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	78		43 - 151

Lab Sample ID: LCSD 410-521574/3-A
Matrix: Water
Analysis Batch: 521665

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521574

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 FTOH-2-Perfluorodecyl ethanol	4.00	3.962		ug/L		99	50 - 120	11	30

Method: SOP - SOP T-SSG-WI7750 (Continued)

Lab Sample ID: LCSD 410-521574/3-A
Matrix: Water
Analysis Batch: 521665

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521574

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
8:2 FTOH-2-Perfluorooctyl ethanol			4.00	4.591	I	ug/L		115	34 - 120	22	30
7:2 FTOH-1-Perfluoroheptyl ethanol			4.00	3.659		ug/L		92	21 - 121	17	30
6:2 FTOH-2-Perfluorohexyl ethanol			4.00	4.114	I	ug/L		103	33 - 120	19	30
4:2 FTOH-2-Perfluorobutyl ethanol			4.00	2.676		ug/L		67	20 - 120	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Perfluorooctyl-[1,1-2H2]-[1,2-13C2]-ethanol(8:2)	*53*		*14 - 120*
2-Perfluorodecyl-[1,1-2H2]-[1,2-13C2]-ethanol(10:2)	*93*		*43 - 151*

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-521851/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.800		2.00	0.800	ng/L		06/26/24 15:46	06/29/24 23:26	1
10:2 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
10:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
11Cl-PF3OUdS	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
3:3 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
4:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
5:3 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
6:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
6:2 FTCA	<0.700		2.00	0.700	ng/L		06/26/24 15:46	06/29/24 23:26	1
6:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
7:3 FTCA	<1.10		2.00	1.10	ng/L		06/26/24 15:46	06/29/24 23:26	1
8:2 Fluorotelomer sulfonic acid	<0.600		2.00	0.600	ng/L		06/26/24 15:46	06/29/24 23:26	1
8:2 FTCA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
8:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
9Cl-PF3ONS	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
EVE Acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
HFPODA	0.7820	J	2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Hydro-EVE Acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Hydrolyzed PSDA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Hydro-PS Acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
MTP	<0.600		2.00	0.600	ng/L		06/26/24 15:46	06/29/24 23:26	1
NEtFOSA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
NEtFOSAA	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
NEtFOSE	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
NMeFOSA	<0.700		2.00	0.700	ng/L		06/26/24 15:46	06/29/24 23:26	1
NMeFOSAA	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-521851/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSE	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
NVHOS	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
PEPA	<0.600		2.00	0.600	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorobutanoic acid (PFBA)	<1.00		2.00	1.00	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorodecanoic acid (PFDA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorododecanoic acid (PFDoA)	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoroheptanoic acid (PFHpA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		2.00	0.200	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorohexanoic acid (PFHxA)	<1.00		2.00	1.00	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorononanesulfonic acid (PFNS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorononanoic acid (PFNA)	<0.200		2.00	0.200	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorooctanoic acid (PFOA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoropentanoic acid (PFPeA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoropropanesulfonic acid	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoropropionic acid (PFPrA)	<5.00		10.0	5.00	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.400		2.00	0.400	ng/L		06/26/24 15:46	06/29/24 23:26	1
Perfluoroundecanoic acid (PFUnA)	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
PFECHS	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
PFMOAA	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1
PFO2HxA	<0.700		2.00	0.700	ng/L		06/26/24 15:46	06/29/24 23:26	1
PFO3OA	<1.00		2.00	1.00	ng/L		06/26/24 15:46	06/29/24 23:26	1
PFO4DA	<0.800		2.00	0.800	ng/L		06/26/24 15:46	06/29/24 23:26	1
PMPA	<0.600		2.00	0.600	ng/L		06/26/24 15:46	06/29/24 23:26	1
PS Acid	<0.600		2.00	0.600	ng/L		06/26/24 15:46	06/29/24 23:26	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-521851/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521851

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
R-EVE	<0.500		2.00	0.500	ng/L		06/26/24 15:46	06/29/24 23:26	1
R-PSDA	<0.700		2.00	0.700	ng/L		06/26/24 15:46	06/29/24 23:26	1
R-PSDCA	<0.300		2.00	0.300	ng/L		06/26/24 15:46	06/29/24 23:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*72*		*11 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C-10:2 FTUCA	*73*		*10 - 166*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C2 PFTeDA	*63*		*10 - 171*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C2-PFDoDA	*71*		*22 - 165*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C3 HFPO-DA	*78*		*13 - 170*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C3 PFBS	*85*		*34 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C3 PFHxS	*72*		*48 - 169*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C3-PFPrA	*51*		*21 - 157*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C4 PFBA	*69*		*22 - 174*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C4 PFHpA	*79*		*40 - 165*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C5 PFHxA	*85*		*28 - 166*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C5 PFPeA	*74*		*33 - 196*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C6 PFDA	*76*		*53 - 151*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C-6:2 FTCA	*84*		*10 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C-6:2 FTUCA	*76*		*10 - 173*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C7 PFUnA	*85*		*41 - 163*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C8 FOSA	*64*		*10 - 155*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C8 PFOA	*76*		*52 - 153*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C8 PFOS	*80*		*59 - 155*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C-8:2 FTCA	*72*		*20 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C-8:2 FTUCA	*69*		*18 - 175*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
13C9 PFNA	*70*		*52 - 168*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d3-NMeFOSAA	*81*		*38 - 168*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d3-NMePFOSA	*41*		*10 - 130*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d5-NEtFOSAA	*79*		*34 - 181*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d5-NEtPFOSA	*42*		*10 - 130*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d7-N-MeFOSE-M	*60*		*10 - 149*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
d9-N-EtFOSE-M	*56*		*10 - 151*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
M2-4:2 FTS	*91*		*35 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
M2-6:2 FTS	*79*		*40 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*
M2-8:2 FTS	*76*		*37 - 200*	*06/26/24 15:46*	*06/29/24 23:26*	*1*

Lab Sample ID: LCS 410-521851/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 Fluorotelomer sulfonic acid	24.7	26.65		ng/L		108	47 - 141
10:2 FTCA	25.6	23.29		ng/L		91	36 - 130
10:2 FTUCA	25.6	24.61		ng/L		96	54 - 165
11Cl-PF3OUdS	23.8	23.40		ng/L		98	57 - 130
3:3 FTCA	25.6	27.43		ng/L		107	52 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	23.67		ng/L		98	61 - 130

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-521851/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4:2 Fluorotelomer sulfonic acid	23.9	21.76		ng/L		91	61 - 131
5:3 FTCA	25.6	24.90		ng/L		97	51 - 132
6:2 Fluorotelomer sulfonic acid	24.3	25.02		ng/L		103	61 - 132
6:2 FTCA	25.6	23.52		ng/L		92	42 - 130
6:2 FTUCA	25.6	27.42		ng/L		107	57 - 166
7:3 FTCA	25.6	20.58		ng/L		80	10 - 150
8:2 Fluorotelomer sulfonic acid	24.5	25.31		ng/L		103	55 - 134
8:2 FTCA	25.6	22.25		ng/L		87	44 - 130
8:2 FTUCA	25.6	26.06		ng/L		102	52 - 166
9Cl-PF3ONS	23.8	25.44		ng/L		107	60 - 130
EVE Acid	25.6	14.49		ng/L		57	10 - 130
HFPODA	25.6	26.38		ng/L		103	53 - 131
Hydro-EVE Acid	25.6	26.69		ng/L		104	48 - 154
Hydrolyzed PSDA	25.6	22.48		ng/L		88	35 - 166
Hydro-PS Acid	25.6	21.64		ng/L		85	50 - 147
MTP	25.6	22.19		ng/L		87	22 - 156
NEtFOSA	25.6	28.55		ng/L		112	67 - 135
NEtFOSAA	25.6	24.49		ng/L		96	63 - 130
NEtFOSE	25.6	26.06		ng/L		102	65 - 132
NMeFOSA	25.6	29.04		ng/L		113	53 - 167
NMeFOSAA	25.6	25.70		ng/L		100	62 - 131
NMeFOSE	25.6	26.56		ng/L		104	65 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	20.93		ng/L		82	60 - 130
NVHOS	25.6	22.60		ng/L		88	56 - 144
PEPA	25.6	29.35		ng/L		115	44 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.48		ng/L		86	60 - 130
Perfluoro-3,5,7,9,11-pentaoxado decanoic acid	25.6	27.81		ng/L		109	52 - 146
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	26.45		ng/L		103	62 - 133
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	27.85		ng/L		109	56 - 161
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	19.73		ng/L		77	57 - 133
Perfluorobutanesulfonic acid (PFBS)	22.7	23.02		ng/L		102	64 - 132
Perfluorobutanoic acid (PFBA)	25.6	24.81		ng/L		97	58 - 130
Perfluorodecanesulfonic acid (PFDS)	24.7	23.14		ng/L		94	55 - 130
Perfluorodecanoic acid (PFDA)	25.6	29.36		ng/L		115	62 - 133
Perfluorododecanesulfonic acid (PFDoS)	24.8	20.67		ng/L		83	56 - 130
Perfluorododecanoic acid (PFDoA)	25.6	28.59		ng/L		112	61 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	24.73		ng/L		101	59 - 130
Perfluoroheptanoic acid (PFHpA)	25.6	26.80		ng/L		105	64 - 130
Perfluorohexanesulfonic acid (PFHxS)	23.3	23.72		ng/L		102	62 - 130
Perfluorohexanoic acid (PFHxA)	25.6	24.98		ng/L		98	59 - 130

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-521851/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521851

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	24.61		ng/L		96	50 - 130
Perfluoro-n-octadecanoic acid (PFODA)	25.6	21.40		ng/L		84	45 - 137
Perfluorononanesulfonic acid (PFNS)	24.6	24.90		ng/L		101	56 - 130
Perfluorononanoic acid (PFNA)	25.6	25.53		ng/L		100	63 - 133
Perfluorooctanesulfonamide (PFOSA)	25.6	25.99		ng/L		102	67 - 132
Perfluorooctanesulfonic acid (PFOS)	23.7	21.41		ng/L		90	62 - 130
Perfluorooctanoic acid (PFOA)	25.6	26.61		ng/L		104	58 - 132
Perfluoropentanesulfonic acid (PFPeS)	24.0	19.82		ng/L		83	64 - 132
Perfluoropentanoic acid (PFPeA)	25.6	26.71		ng/L		104	60 - 130
Perfluoropropanesulfonic acid	23.4	31.07		ng/L		132	58 - 137
Perfluoropropionic acid (PFPrA)	25.6	30.46		ng/L		119	20 - 173
Perfluorotetradecanoic acid (PFTeDA)	25.6	26.20		ng/L		102	62 - 131
Perfluorotridecanoic acid (PFTrDA)	25.6	27.37		ng/L		107	59 - 136
Perfluoroundecanoic acid (PFUnA)	25.6	27.13		ng/L		106	62 - 131
PFECHS	23.6	25.27		ng/L		107	54 - 130
PFMOAA	25.6	22.91		ng/L		90	34 - 143
PFO2HxA	25.6	29.97		ng/L		117	58 - 140
PFO3OA	25.6	31.47		ng/L		123	52 - 148
PFO4DA	25.6	27.53		ng/L		108	49 - 150
PMPA	25.6	27.87		ng/L		109	54 - 135
PS Acid	25.6	8.999		ng/L		35	10 - 130
R-EVE	25.6	25.09		ng/L		98	46 - 141
R-PSDA	25.6	20.54		ng/L		80	38 - 144
R-PSDCA	25.6	20.35		ng/L		80	53 - 148

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-10:2 FTCA	*74*		*11 - 200*
13C-10:2 FTUCA	*73*		*10 - 166*
13C2 PFTeDA	*59*		*10 - 171*
13C2-PFDoDA	*67*		*22 - 165*
13C3 HFPO-DA	*77*		*13 - 170*
13C3 PFBS	*91*		*34 - 200*
13C3 PFHxS	*74*		*48 - 169*
13C3-PFPrA	*52*		*21 - 157*
13C4 PFBA	*72*		*22 - 174*
13C4 PFHpA	*80*		*40 - 165*
13C5 PFHxA	*83*		*28 - 166*
13C5 PFPeA	*78*		*33 - 196*
13C6 PFDA	*72*		*53 - 151*
13C-6:2 FTCA	*80*		*10 - 200*
13C-6:2 FTUCA	*73*		*10 - 173*
13C7 PFUnA	*79*		*41 - 163*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-521851/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521851

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 FOSA	61		10 - 155
13C8 PFOA	75		52 - 153
13C8 PFOS	77		59 - 155
13C-8:2 FTCA	78		20 - 200
13C-8:2 FTUCA	68		18 - 175
13C9 PFNA	73		52 - 168
d3-NMeFOSAA	70		38 - 168
d3-NMePFOSA	33		10 - 130
d5-NEtFOSAA	76		34 - 181
d5-NEtPFOSA	32		10 - 130
d7-N-MeFOSE-M	55		10 - 149
d9-N-EtFOSE-M	50		10 - 151
M2-4:2 FTS	87		35 - 200
M2-6:2 FTS	79		40 - 200
M2-8:2 FTS	71		37 - 200

Lab Sample ID: LCSD 410-521851/3-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521851

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 Fluorotelomer sulfonic acid			24.7	23.16		ng/L		94	47 - 141	14	30
10:2 FTCA			25.6	22.58		ng/L		88	36 - 130	3	30
10:2 FTUCA			25.6	24.69		ng/L		96	54 - 165	0	30
11Cl-PF3OUdS			23.8	22.31		ng/L		94	57 - 130	5	30
3:3 FTCA			25.6	24.58		ng/L		96	52 - 130	11	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.2	23.43		ng/L		97	61 - 130	1	30
4:2 Fluorotelomer sulfonic acid			23.9	21.35		ng/L		89	61 - 131	2	30
5:3 FTCA			25.6	23.46		ng/L		92	51 - 132	6	30
6:2 Fluorotelomer sulfonic acid			24.3	24.55		ng/L		101	61 - 132	2	30
6:2 FTCA			25.6	21.81		ng/L		85	42 - 130	8	30
6:2 FTUCA			25.6	26.42		ng/L		103	57 - 166	4	30
7:3 FTCA			25.6	19.09		ng/L		75	10 - 150	8	30
8:2 Fluorotelomer sulfonic acid			24.5	22.97		ng/L		94	55 - 134	10	30
8:2 FTCA			25.6	23.23		ng/L		91	44 - 130	4	30
8:2 FTUCA			25.6	26.13		ng/L		102	52 - 166	0	30
9Cl-PF3ONS			23.8	23.57		ng/L		99	60 - 130	8	30
EVE Acid			25.6	14.54		ng/L		57	10 - 130	0	30
HFPODA			25.6	24.86		ng/L		97	53 - 131	6	30
Hydro-EVE Acid			25.6	27.72		ng/L		108	48 - 154	4	30
Hydrolyzed PSDA			25.6	22.56		ng/L		88	35 - 166	0	30
Hydro-PS Acid			25.6	23.26		ng/L		91	50 - 147	7	30
MTP			25.6	21.45		ng/L		84	22 - 156	3	30
NEtFOSA			25.6	29.61		ng/L		116	67 - 135	4	30
NEtFOSAA			25.6	25.07		ng/L		98	63 - 130	2	30
NEtFOSE			25.6	25.43		ng/L		99	65 - 132	2	30
NMeFOSA			25.6	29.82		ng/L		116	53 - 167	3	30
NMeFOSAA			25.6	25.63		ng/L		100	62 - 131	0	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-521851/3-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521851

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
NMeFOSE	25.6	25.68		ng/L		100	65 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	21.71		ng/L		85	60 - 130	4	30
NVHOS	25.6	23.49		ng/L		92	56 - 144	4	30
PEPA	25.6	29.05		ng/L		113	44 - 150	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	20.94		ng/L		92	60 - 130	7	30
Perfluoro-3,5,7,9,11-pentaoxado decanoic acid	25.6	28.40		ng/L		111	52 - 146	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	26.76		ng/L		105	62 - 133	1	30
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	29.37		ng/L		115	56 - 161	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	19.76		ng/L		77	57 - 133	0	30
Perfluorobutanesulfonic acid (PFBS)	22.7	22.04		ng/L		97	64 - 132	4	30
Perfluorobutanoic acid (PFBA)	25.6	23.52		ng/L		92	58 - 130	5	30
Perfluorodecanesulfonic acid (PFDS)	24.7	22.52		ng/L		91	55 - 130	3	30
Perfluorodecanoic acid (PFDA)	25.6	26.83		ng/L		105	62 - 133	9	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	20.21		ng/L		82	56 - 130	2	30
Perfluorododecanoic acid (PFDoA)	25.6	27.67		ng/L		108	61 - 132	3	30
Perfluoroheptanesulfonic acid (PFHpS)	24.4	23.06		ng/L		95	59 - 130	7	30
Perfluoroheptanoic acid (PFHpA)	25.6	25.91		ng/L		101	64 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	23.3	22.46		ng/L		96	62 - 130	5	30
Perfluorohexanoic acid (PFHxA)	25.6	25.18		ng/L		98	59 - 130	1	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	23.72		ng/L		93	50 - 130	4	30
Perfluoro-n-octadecanoic acid (PFODA)	25.6	19.02		ng/L		74	45 - 137	12	30
Perfluorononanesulfonic acid (PFNS)	24.6	23.84		ng/L		97	56 - 130	4	30
Perfluorononanoic acid (PFNA)	25.6	24.62		ng/L		96	63 - 133	4	30
Perfluorooctanesulfonamide (PFOSA)	25.6	26.05		ng/L		102	67 - 132	0	30
Perfluorooctanesulfonic acid (PFOS)	23.7	20.77		ng/L		88	62 - 130	3	30
Perfluorooctanoic acid (PFOA)	25.6	24.37		ng/L		95	58 - 132	9	30
Perfluoropentanesulfonic acid (PFPeS)	24.0	19.85		ng/L		83	64 - 132	0	30
Perfluoropentanoic acid (PFPeA)	25.6	25.84		ng/L		101	60 - 130	3	30
Perfluoropropanesulfonic acid	23.4	31.77		ng/L		135	58 - 137	2	30
Perfluoropropionic acid (PFPrA)	25.6	31.10		ng/L		121	20 - 173	2	30
Perfluorotetradecanoic acid (PFTeDA)	25.6	25.94		ng/L		101	62 - 131	1	30
Perfluorotridecanoic acid (PFTrDA)	25.6	27.35		ng/L		107	59 - 136	0	30
Perfluoroundecanoic acid (PFUnA)	25.6	24.89		ng/L		97	62 - 131	9	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-521851/3-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 521851

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PFECHS			23.6	23.94		ng/L		101	54 - 130	5	30
PFMOAA			25.6	24.89		ng/L		97	34 - 143	8	30
PFO2HxA			25.6	30.44		ng/L		119	58 - 140	2	30
PFO3OA			25.6	30.48		ng/L		119	52 - 148	3	30
PFO4DA			25.6	27.66		ng/L		108	49 - 150	0	30
PMPA			25.6	26.83		ng/L		105	54 - 135	4	30
PS Acid			25.6	9.468		ng/L		37	10 - 130	5	30
R-EVE			25.6	25.30		ng/L		99	46 - 141	1	30
R-PSDA			25.6	21.29		ng/L		83	38 - 144	4	30
R-PSDCA			25.6	22.72		ng/L		89	53 - 148	11	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-10:2 FTCA	*85*		*11 - 200*
13C-10:2 FTUCA	*83*		*10 - 166*
13C2 PFTeDA	*69*		*10 - 171*
13C2-PFDoDA	*78*		*22 - 165*
13C3 HFPO-DA	*91*		*13 - 170*
13C3 PFBS	*92*		*34 - 200*
13C3 PFHxS	*86*		*48 - 169*
13C3-PFPrA	*55*		*21 - 157*
13C4 PFBA	*74*		*22 - 174*
13C4 PFHpA	*90*		*40 - 165*
13C5 PFHxA	*96*		*28 - 166*
13C5 PFPeA	*83*		*33 - 196*
13C6 PFDA	*81*		*53 - 151*
13C-6:2 FTCA	*97*		*10 - 200*
13C-6:2 FTUCA	*84*		*10 - 173*
13C7 PFUnA	*98*		*41 - 163*
13C8 FOSA	*72*		*10 - 155*
13C8 PFOA	*82*		*52 - 153*
13C8 PFOS	*89*		*59 - 155*
13C-8:2 FTCA	*82*		*20 - 200*
13C-8:2 FTUCA	*78*		*18 - 175*
13C9 PFNA	*81*		*52 - 168*
d3-NMeFOSAA	*89*		*38 - 168*
d3-NMePFOSA	*43*		*10 - 130*
d5-NEtFOSAA	*91*		*34 - 181*
d5-NEtPFOSA	*40*		*10 - 130*
d7-N-MeFOSE-M	*70*		*10 - 149*
d9-N-EtFOSE-M	*65*		*10 - 151*
M2-4:2 FTS	*99*		*35 - 200*
M2-6:2 FTS	*85*		*40 - 200*
M2-8:2 FTS	*83*		*37 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-521869/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.800		2.00	0.800	ng/L		06/26/24 16:17	06/30/24 03:26	1
10:2 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
10:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
11Cl-PF3OUdS	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
3:3 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
4:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
5:3 FTCA	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
6:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
6:2 FTCA	<0.700		2.00	0.700	ng/L		06/26/24 16:17	06/30/24 03:26	1
6:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
7:3 FTCA	<1.10		2.00	1.10	ng/L		06/26/24 16:17	06/30/24 03:26	1
8:2 Fluorotelomer sulfonic acid	<0.600		2.00	0.600	ng/L		06/26/24 16:17	06/30/24 03:26	1
8:2 FTCA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
8:2 FTUCA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
9Cl-PF3ONS	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
EVE Acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
HFPODA	0.5586	J	2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Hydro-EVE Acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Hydrolyzed PSDA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Hydro-PS Acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
MTP	<0.600		2.00	0.600	ng/L		06/26/24 16:17	06/30/24 03:26	1
NEtFOSA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
NEtFOSAA	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
NEtFOSE	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
NMeFOSA	<0.700		2.00	0.700	ng/L		06/26/24 16:17	06/30/24 03:26	1
NMeFOSAA	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
NMeFOSE	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
NVHOS	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
PEPA	<0.600		2.00	0.600	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorobutanoic acid (PFBA)	<1.00		2.00	1.00	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorodecanesulfonic acid (PFDS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorodecanoic acid (PFDA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorododecanesulfonic acid (PFDoS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorododecanoic acid (PFDoA)	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-521869/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoroheptanoic acid (PFHpA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		2.00	0.200	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorohexanoic acid (PFHxA)	<1.00		2.00	1.00	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorononanesulfonic acid (PFNS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorononanoic acid (PFNA)	<0.200		2.00	0.200	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorooctanesulfonamide (PFOSA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorooctanoic acid (PFOA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoropentanoic acid (PFPeA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoropropanesulfonic acid	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoropropionic acid (PFPrA)	<5.00		10.0	5.00	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.400		2.00	0.400	ng/L		06/26/24 16:17	06/30/24 03:26	1
Perfluoroundecanoic acid (PFUnA)	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
PFECHS	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
PFMOAA	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1
PFO2HxA	<0.700		2.00	0.700	ng/L		06/26/24 16:17	06/30/24 03:26	1
PFO3OA	<1.00		2.00	1.00	ng/L		06/26/24 16:17	06/30/24 03:26	1
PFO4DA	<0.800		2.00	0.800	ng/L		06/26/24 16:17	06/30/24 03:26	1
PMPA	<0.600		2.00	0.600	ng/L		06/26/24 16:17	06/30/24 03:26	1
PS Acid	<0.600		2.00	0.600	ng/L		06/26/24 16:17	06/30/24 03:26	1
R-EVE	<0.500		2.00	0.500	ng/L		06/26/24 16:17	06/30/24 03:26	1
R-PSDA	<0.700		2.00	0.700	ng/L		06/26/24 16:17	06/30/24 03:26	1
R-PSDCA	<0.300		2.00	0.300	ng/L		06/26/24 16:17	06/30/24 03:26	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*87*		*11 - 200*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C-10:2 FTUCA	*85*		*10 - 166*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C2 PFTeDA	*67*		*10 - 171*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C2-PFDoDA	*81*		*22 - 165*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C3 HFPO-DA	*90*		*13 - 170*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C3 PFBS	*100*		*34 - 200*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C3 PFHxS	*87*		*48 - 169*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C3-PFPrA	*58*		*21 - 157*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C4 PFBA	*75*		*22 - 174*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C4 PFHpA	*92*		*40 - 165*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C5 PFHxA	*97*		*28 - 166*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C5 PFPeA	*86*		*33 - 196*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C6 PFDA	*86*		*53 - 151*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C-6:2 FTCA	*96*		*10 - 200*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C-6:2 FTUCA	*87*		*10 - 173*	*06/26/24 16:17*	*06/30/24 03:26*	*1*
13C7 PFUnA	*100*		*41 - 163*	*06/26/24 16:17*	*06/30/24 03:26*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-521869/1-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 521869

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	75		10 - 155	06/26/24 16:17	06/30/24 03:26	1
13C8 PFOA	90		52 - 153	06/26/24 16:17	06/30/24 03:26	1
13C8 PFOS	90		59 - 155	06/26/24 16:17	06/30/24 03:26	1
13C-8:2 FTCA	85		20 - 200	06/26/24 16:17	06/30/24 03:26	1
13C-8:2 FTUCA	85		18 - 175	06/26/24 16:17	06/30/24 03:26	1
13C9 PFNA	86		52 - 168	06/26/24 16:17	06/30/24 03:26	1
d3-NMeFOSAA	86		38 - 168	06/26/24 16:17	06/30/24 03:26	1
d3-NMePFOSA	33		10 - 130	06/26/24 16:17	06/30/24 03:26	1
d5-NEtFOSAA	94		34 - 181	06/26/24 16:17	06/30/24 03:26	1
d5-NEtPFOSA	32		10 - 130	06/26/24 16:17	06/30/24 03:26	1
d7-N-MeFOSE-M	61		10 - 149	06/26/24 16:17	06/30/24 03:26	1
d9-N-EtFOSE-M	57		10 - 151	06/26/24 16:17	06/30/24 03:26	1
M2-4:2 FTS	104		35 - 200	06/26/24 16:17	06/30/24 03:26	1
M2-6:2 FTS	100		40 - 200	06/26/24 16:17	06/30/24 03:26	1
M2-8:2 FTS	86		37 - 200	06/26/24 16:17	06/30/24 03:26	1

Lab Sample ID: LCS 410-521869/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 Fluorotelomer sulfonic acid	24.7	21.63		ng/L		88	47 - 141
10:2 FTCA	25.6	21.84		ng/L		85	36 - 130
10:2 FTUCA	25.6	22.55		ng/L		88	54 - 165
11Cl-PF3OUdS	23.8	22.20		ng/L		93	57 - 130
3:3 FTCA	25.6	23.76		ng/L		93	52 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	22.69		ng/L		94	61 - 130
4:2 Fluorotelomer sulfonic acid	23.9	20.16		ng/L		84	61 - 131
5:3 FTCA	25.6	22.71		ng/L		89	51 - 132
6:2 Fluorotelomer sulfonic acid	24.3	23.30		ng/L		96	61 - 132
6:2 FTCA	25.6	22.56		ng/L		88	42 - 130
6:2 FTUCA	25.6	26.51		ng/L		104	57 - 166
7:3 FTCA	25.6	20.15		ng/L		79	10 - 150
8:2 Fluorotelomer sulfonic acid	24.5	22.49		ng/L		92	55 - 134
8:2 FTCA	25.6	22.35		ng/L		87	44 - 130
8:2 FTUCA	25.6	25.73		ng/L		101	52 - 166
9Cl-PF3ONS	23.8	25.73		ng/L		108	60 - 130
EVE Acid	25.6	13.73		ng/L		54	10 - 130
HFPODA	25.6	23.63		ng/L		92	53 - 131
Hydro-EVE Acid	25.6	25.85		ng/L		101	48 - 154
Hydrolyzed PSDA	25.6	22.06		ng/L		86	35 - 166
Hydro-PS Acid	25.6	22.41		ng/L		88	50 - 147
MTP	25.6	18.14		ng/L		71	22 - 156
NEtFOSA	25.6	25.80		ng/L		101	67 - 135
NEtFOSAA	25.6	24.23		ng/L		95	63 - 130
NEtFOSE	25.6	23.72		ng/L		93	65 - 132
NMeFOSA	25.6	26.19		ng/L		102	53 - 167
NMeFOSAA	25.6	23.32		ng/L		91	62 - 131

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-521869/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
NMeFOSE	25.6	24.45		ng/L		96	65 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	21.20		ng/L		83	60 - 130
NVHOS	25.6	22.60		ng/L		88	56 - 144
PEPA	25.6	26.13		ng/L		102	44 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	18.80		ng/L		83	60 - 130
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	25.6	29.81		ng/L		116	52 - 146
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	25.04		ng/L		98	62 - 133
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	27.55		ng/L		108	56 - 161
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	19.20		ng/L		75	57 - 133
Perfluorobutanesulfonic acid (PFBS)	22.7	20.51		ng/L		91	64 - 132
Perfluorobutanoic acid (PFBA)	25.6	22.20		ng/L		87	58 - 130
Perfluorodecanesulfonic acid (PFDS)	24.7	20.73		ng/L		84	55 - 130
Perfluorodecanoic acid (PFDA)	25.6	26.18		ng/L		102	62 - 133
Perfluorododecanesulfonic acid (PFDoS)	24.8	18.95		ng/L		76	56 - 130
Perfluorododecanoic acid (PFDoA)	25.6	26.01		ng/L		102	61 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	22.16		ng/L		91	59 - 130
Perfluoroheptanoic acid (PFHpA)	25.6	25.34		ng/L		99	64 - 130
Perfluorohexanesulfonic acid (PFHxS)	23.3	21.40		ng/L		92	62 - 130
Perfluorohexanoic acid (PFHxA)	25.6	23.87		ng/L		93	59 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	23.30		ng/L		91	50 - 130
Perfluoro-n-octadecanoic acid (PFODA)	25.6	19.57		ng/L		76	45 - 137
Perfluorononanesulfonic acid (PFNS)	24.6	24.09		ng/L		98	56 - 130
Perfluorononanoic acid (PFNA)	25.6	24.01		ng/L		94	63 - 133
Perfluorooctanesulfonamide (PFOSA)	25.6	23.91		ng/L		93	67 - 132
Perfluorooctanesulfonic acid (PFOS)	23.7	20.65		ng/L		87	62 - 130
Perfluorooctanoic acid (PFOA)	25.6	24.05		ng/L		94	58 - 132
Perfluoropentanesulfonic acid (PFPeS)	24.0	20.37		ng/L		85	64 - 132
Perfluoropentanoic acid (PFPeA)	25.6	25.36		ng/L		99	60 - 130
Perfluoropropanesulfonic acid	23.4	29.59		ng/L		126	58 - 137
Perfluoropropionic acid (PFPrA)	25.6	26.87		ng/L		105	20 - 173
Perfluorotetradecanoic acid (PFTeDA)	25.6	24.23		ng/L		95	62 - 131
Perfluorotridecanoic acid (PFTrDA)	25.6	25.89		ng/L		101	59 - 136
Perfluoroundecanoic acid (PFUnA)	25.6	25.81		ng/L		101	62 - 131

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-521869/2-A
Matrix: Water
Analysis Batch: 523096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 521869

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PFECHS			23.6	22.47		ng/L		95	54 - 130		
PFMOAA			25.6	20.24		ng/L		79	34 - 143		
PFO2HxA			25.6	29.54		ng/L		115	58 - 140		
PFO3OA			25.6	30.04		ng/L		117	52 - 148		
PFO4DA			25.6	26.79		ng/L		105	49 - 150		
PMPA			25.6	25.30		ng/L		99	54 - 135		
PS Acid			25.6	9.093		ng/L		36	10 - 130		
R-EVE			25.6	23.53		ng/L		92	46 - 141		
R-PSDA			25.6	20.92		ng/L		82	38 - 144		
R-PSDCA			25.6	20.86		ng/L		81	53 - 148		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-10:2 FTCA	*103*		*11 - 200*
13C-10:2 FTUCA	*103*		*10 - 166*
13C2 PFTeDA	*82*		*10 - 171*
13C2-PFDoDA	*91*		*22 - 165*
13C3 HFPO-DA	*114*		*13 - 170*
13C3 PFBS	*121*		*34 - 200*
13C3 PFHxS	*111*		*48 - 169*
13C3-PFPrA	*69*		*21 - 157*
13C4 PFBA	*99*		*22 - 174*
13C4 PFHpA	*115*		*40 - 165*
13C5 PFHxA	*117*		*28 - 166*
13C5 PFPeA	*105*		*33 - 196*
13C6 PFDA	*102*		*53 - 151*
13C-6:2 FTCA	*117*		*10 - 200*
13C-6:2 FTUCA	*104*		*10 - 173*
13C7 PFUnA	*99*		*41 - 163*
13C8 FOSA	*87*		*10 - 155*
13C8 PFOA	*110*		*52 - 153*
13C8 PFOS	*110*		*59 - 155*
13C-8:2 FTCA	*107*		*20 - 200*
13C-8:2 FTUCA	*94*		*18 - 175*
13C9 PFNA	*104*		*52 - 168*
d3-NMeFOSAA	*100*		*38 - 168*
d3-NMePFOSA	*41*		*10 - 130*
d5-NEtFOSAA	*100*		*34 - 181*
d5-NEtPFOSA	*38*		*10 - 130*
d7-N-MeFOSE-M	*70*		*10 - 149*
d9-N-EtFOSE-M	*65*		*10 - 151*
M2-4:2 FTS	*132*		*35 - 200*
M2-6:2 FTS	*110*		*40 - 200*
M2-8:2 FTS	*103*		*37 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-522328/1-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.800		2.00	0.800	ng/L		06/27/24 14:30	07/05/24 20:30	1
10:2 FTCA	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
10:2 FTUCA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
11Cl-PF3OUdS	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
3:3 FTCA	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
4:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
5:3 FTCA	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
6:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
6:2 FTCA	<0.700		2.00	0.700	ng/L		06/27/24 14:30	07/05/24 20:30	1
6:2 FTUCA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
7:3 FTCA	<1.10		2.00	1.10	ng/L		06/27/24 14:30	07/05/24 20:30	1
8:2 Fluorotelomer sulfonic acid	<0.600		2.00	0.600	ng/L		06/27/24 14:30	07/05/24 20:30	1
8:2 FTCA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
8:2 FTUCA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
9Cl-PF3ONS	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
EVE Acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
HFPODA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Hydro-EVE Acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Hydrolyzed PSDA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Hydro-PS Acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
MTP	<0.600		2.00	0.600	ng/L		06/27/24 14:30	07/05/24 20:30	1
NEtFOSA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
NEtFOSAA	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
NEtFOSE	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
NMeFOSA	<0.700		2.00	0.700	ng/L		06/27/24 14:30	07/05/24 20:30	1
NMeFOSAA	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
NMeFOSE	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
NVHOS	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
PEPA	<0.600		2.00	0.600	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorobutanoic acid (PFBA)	<1.00		2.00	1.00	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorodecanesulfonic acid (PFDS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorodecanoic acid (PFDA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorododecanesulfonic acid (PFDoS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorododecanoic acid (PFDoA)	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-522328/1-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoroheptanoic acid (PFHpA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		2.00	0.200	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorohexanoic acid (PFHxA)	<1.00		2.00	1.00	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorononanesulfonic acid (PFNS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorononanoic acid (PFNA)	<0.200		2.00	0.200	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorooctanesulfonamide (PFOSA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorooctanoic acid (PFOA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoropentanoic acid (PFPeA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoropropanesulfonic acid	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoropropionic acid (PFPrA)	<5.00		10.0	5.00	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorotetradecanoic acid (PFTeDA)	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluorotridecanoic acid (PFTrDA)	<0.400		2.00	0.400	ng/L		06/27/24 14:30	07/05/24 20:30	1
Perfluoroundecanoic acid (PFUnA)	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
PFECHS	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
PFMOAA	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1
PFO2HxA	<0.700		2.00	0.700	ng/L		06/27/24 14:30	07/05/24 20:30	1
PFO3OA	<1.00		2.00	1.00	ng/L		06/27/24 14:30	07/05/24 20:30	1
PFO4DA	<0.800		2.00	0.800	ng/L		06/27/24 14:30	07/05/24 20:30	1
PMPA	<0.600		2.00	0.600	ng/L		06/27/24 14:30	07/05/24 20:30	1
PS Acid	<0.600		2.00	0.600	ng/L		06/27/24 14:30	07/05/24 20:30	1
R-EVE	<0.500		2.00	0.500	ng/L		06/27/24 14:30	07/05/24 20:30	1
R-PSDA	<0.700		2.00	0.700	ng/L		06/27/24 14:30	07/05/24 20:30	1
R-PSDCA	<0.300		2.00	0.300	ng/L		06/27/24 14:30	07/05/24 20:30	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*74*		*11 - 200*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C-10:2 FTUCA	*78*		*10 - 166*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C2 PFTeDA	*73*		*10 - 171*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C2-PFDoDA	*72*		*22 - 165*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C3 HFPO-DA	*68*		*13 - 170*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C3 PFBS	*81*		*34 - 200*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C3 PFHxS	*81*		*48 - 169*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C3-PFPrA	*53*		*21 - 157*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C4 PFBA	*65*		*22 - 174*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C4 PFHpA	*79*		*40 - 165*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C5 PFHxA	*75*		*28 - 166*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C5 PFPeA	*78*		*33 - 196*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C6 PFDA	*82*		*53 - 151*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C-6:2 FTCA	*82*		*10 - 200*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C-6:2 FTUCA	*77*		*10 - 173*	*06/27/24 14:30*	*07/05/24 20:30*	*1*
13C7 PFUnA	*86*		*41 - 163*	*06/27/24 14:30*	*07/05/24 20:30*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-522328/1-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 522328

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	74		10 - 155	06/27/24 14:30	07/05/24 20:30	1
13C8 PFOA	82		52 - 153	06/27/24 14:30	07/05/24 20:30	1
13C8 PFOS	83		59 - 155	06/27/24 14:30	07/05/24 20:30	1
13C-8:2 FTCA	76		20 - 200	06/27/24 14:30	07/05/24 20:30	1
13C-8:2 FTUCA	84		18 - 175	06/27/24 14:30	07/05/24 20:30	1
13C9 PFNA	86		52 - 168	06/27/24 14:30	07/05/24 20:30	1
d3-NMeFOSAA	78		38 - 168	06/27/24 14:30	07/05/24 20:30	1
d3-NMePFOSA	46		10 - 130	06/27/24 14:30	07/05/24 20:30	1
d5-NEtFOSAA	87		34 - 181	06/27/24 14:30	07/05/24 20:30	1
d5-NEtPFOSA	47		10 - 130	06/27/24 14:30	07/05/24 20:30	1
d7-N-MeFOSE-M	71		10 - 149	06/27/24 14:30	07/05/24 20:30	1
d9-N-EtFOSE-M	62		10 - 151	06/27/24 14:30	07/05/24 20:30	1
M2-4:2 FTS	76		35 - 200	06/27/24 14:30	07/05/24 20:30	1
M2-6:2 FTS	105		40 - 200	06/27/24 14:30	07/05/24 20:30	1
M2-8:2 FTS	83		37 - 200	06/27/24 14:30	07/05/24 20:30	1

Lab Sample ID: LCS 410-522328/2-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 Fluorotelomer sulfonic acid	24.7	23.24		ng/L		94	47 - 141
10:2 FTCA	25.6	21.45		ng/L		84	36 - 130
10:2 FTUCA	25.6	22.94		ng/L		90	54 - 165
11Cl-PF3OUdS	23.8	20.58		ng/L		86	57 - 130
3:3 FTCA	25.6	21.50		ng/L		84	52 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	24.16		ng/L		100	61 - 130
4:2 Fluorotelomer sulfonic acid	23.9	23.39		ng/L		98	61 - 131
5:3 FTCA	25.6	24.90		ng/L		97	51 - 132
6:2 Fluorotelomer sulfonic acid	24.3	22.26		ng/L		92	61 - 132
6:2 FTCA	25.6	20.95		ng/L		82	42 - 130
6:2 FTUCA	25.6	25.00		ng/L		98	57 - 166
7:3 FTCA	25.6	21.11		ng/L		82	10 - 150
8:2 Fluorotelomer sulfonic acid	24.5	21.87		ng/L		89	55 - 134
8:2 FTCA	25.6	20.00		ng/L		78	44 - 130
8:2 FTUCA	25.6	23.87		ng/L		93	52 - 166
9Cl-PF3ONS	23.8	20.20		ng/L		85	60 - 130
EVE Acid	25.6	10.97		ng/L		43	10 - 130
HFPODA	25.6	24.88		ng/L		97	53 - 131
Hydro-EVE Acid	25.6	28.29		ng/L		111	48 - 154
Hydrolyzed PSDA	25.6	24.24		ng/L		95	35 - 166
Hydro-PS Acid	25.6	26.73		ng/L		104	50 - 147
MTP	25.6	21.14		ng/L		83	22 - 156
NEtFOSA	25.6	29.62		ng/L		116	67 - 135
NEtFOSAA	25.6	20.57		ng/L		80	63 - 130
NEtFOSE	25.6	23.31		ng/L		91	65 - 132
NMeFOSA	25.6	34.43		ng/L		134	53 - 167
NMeFOSAA	25.6	23.75		ng/L		93	62 - 131

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-522328/2-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
NMeFOSE	25.6	23.20		ng/L		91	65 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	23.98		ng/L		94	60 - 130
NVHOS	25.6	24.84		ng/L		97	56 - 144
PEPA	25.6	25.30		ng/L		99	44 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	20.24		ng/L		89	60 - 130
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	25.6	27.11		ng/L		106	52 - 146
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	23.83		ng/L		93	62 - 133
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	28.11		ng/L		110	56 - 161
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	21.18		ng/L		83	57 - 133
Perfluorobutanesulfonic acid (PFBS)	22.7	21.06		ng/L		93	64 - 132
Perfluorobutanoic acid (PFBA)	25.6	22.76		ng/L		89	58 - 130
Perfluorodecanesulfonic acid (PFDS)	24.7	18.67		ng/L		76	55 - 130
Perfluorodecanoic acid (PFDA)	25.6	23.83		ng/L		93	62 - 133
Perfluorododecanesulfonic acid (PFDoS)	24.8	20.13		ng/L		81	56 - 130
Perfluorododecanoic acid (PFDoA)	25.6	24.90		ng/L		97	61 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	22.86		ng/L		94	59 - 130
Perfluoroheptanoic acid (PFHpA)	25.6	25.56		ng/L		100	64 - 130
Perfluorohexanesulfonic acid (PFHxS)	23.3	21.21		ng/L		91	62 - 130
Perfluorohexanoic acid (PFHxA)	25.6	22.68		ng/L		89	59 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	22.24		ng/L		87	50 - 130
Perfluoro-n-octadecanoic acid (PFODA)	25.6	18.44		ng/L		72	45 - 137
Perfluorononanesulfonic acid (PFNS)	24.6	21.65		ng/L		88	56 - 130
Perfluorononanoic acid (PFNA)	25.6	22.83		ng/L		89	63 - 133
Perfluorooctanesulfonamide (PFOSA)	25.6	24.86		ng/L		97	67 - 132
Perfluorooctanesulfonic acid (PFOS)	23.7	20.07		ng/L		85	62 - 130
Perfluorooctanoic acid (PFOA)	25.6	24.23		ng/L		95	58 - 132
Perfluoropentanesulfonic acid (PFPeS)	24.0	21.06		ng/L		88	64 - 132
Perfluoropentanoic acid (PFPeA)	25.6	24.04		ng/L		94	60 - 130
Perfluoropropanesulfonic acid	23.4	30.07		ng/L		128	58 - 137
Perfluoropropionic acid (PFPrA)	25.6	25.84		ng/L		101	20 - 173
Perfluorotetradecanoic acid (PFTeDA)	25.6	23.40		ng/L		91	62 - 131
Perfluorotridecanoic acid (PFTrDA)	25.6	26.03		ng/L		102	59 - 136
Perfluoroundecanoic acid (PFUnA)	25.6	19.80		ng/L		77	62 - 131

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-522328/2-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 522328

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PFECHS			23.6	21.59		ng/L		91	54 - 130		
PFMOAA			25.6	23.02		ng/L		90	34 - 143		
PFO2HxA			25.6	25.58		ng/L		100	58 - 140		
PFO3OA			25.6	25.36		ng/L		99	52 - 148		
PFO4DA			25.6	25.03		ng/L		98	49 - 150		
PMPA			25.6	24.81		ng/L		97	54 - 135		
PS Acid			25.6	8.356		ng/L		33	10 - 130		
R-EVE			25.6	24.29		ng/L		95	46 - 141		
R-PSDA			25.6	23.20		ng/L		91	38 - 144		
R-PSDCA			25.6	24.81		ng/L		97	53 - 148		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-10:2 FTCA	*88*		*11 - 200*
13C-10:2 FTUCA	*94*		*10 - 166*
13C2 PFTeDA	*88*		*10 - 171*
13C2-PFDoDA	*86*		*22 - 165*
13C3 HFPO-DA	*88*		*13 - 170*
13C3 PFBS	*100*		*34 - 200*
13C3 PFHxS	*101*		*48 - 169*
13C3-PFPrA	*83*		*21 - 157*
13C4 PFBA	*95*		*22 - 174*
13C4 PFHpA	*93*		*40 - 165*
13C5 PFHxA	*101*		*28 - 166*
13C5 PFPeA	*101*		*33 - 196*
13C6 PFDA	*104*		*53 - 151*
13C-6:2 FTCA	*99*		*10 - 200*
13C-6:2 FTUCA	*97*		*10 - 173*
13C7 PFUnA	*109*		*41 - 163*
13C8 FOSA	*86*		*10 - 155*
13C8 PFOA	*103*		*52 - 153*
13C8 PFOS	*104*		*59 - 155*
13C-8:2 FTCA	*97*		*20 - 200*
13C-8:2 FTUCA	*97*		*18 - 175*
13C9 PFNA	*104*		*52 - 168*
d3-NMeFOSAA	*91*		*38 - 168*
d3-NMePFOSA	*36*		*10 - 130*
d5-NEtFOSAA	*110*		*34 - 181*
d5-NEtPFOSA	*38*		*10 - 130*
d7-N-MeFOSE-M	*83*		*10 - 149*
d9-N-EtFOSE-M	*76*		*10 - 151*
M2-4:2 FTS	*94*		*35 - 200*
M2-6:2 FTS	*142*		*40 - 200*
M2-8:2 FTS	*101*		*37 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-522328/3-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522328

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 Fluorotelomer sulfonic acid	24.7	20.95		ng/L		85	47 - 141	10	30
10:2 FTCA	25.6	20.84		ng/L		81	36 - 130	3	30
10:2 FTUCA	25.6	21.45		ng/L		84	54 - 165	7	30
11Cl-PF3OUdS	23.8	19.75		ng/L		83	57 - 130	4	30
3:3 FTCA	25.6	23.19		ng/L		91	52 - 130	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	23.16		ng/L		96	61 - 130	4	30
4:2 Fluorotelomer sulfonic acid	23.9	21.95		ng/L		92	61 - 131	6	30
5:3 FTCA	25.6	24.26		ng/L		95	51 - 132	3	30
6:2 Fluorotelomer sulfonic acid	24.3	24.81		ng/L		102	61 - 132	11	30
6:2 FTCA	25.6	22.10		ng/L		86	42 - 130	5	30
6:2 FTUCA	25.6	24.94		ng/L		97	57 - 166	0	30
7:3 FTCA	25.6	22.78		ng/L		89	10 - 150	8	30
8:2 Fluorotelomer sulfonic acid	24.5	22.03		ng/L		90	55 - 134	1	30
8:2 FTCA	25.6	22.01		ng/L		86	44 - 130	10	30
8:2 FTUCA	25.6	23.34		ng/L		91	52 - 166	2	30
9Cl-PF3ONS	23.8	20.22		ng/L		85	60 - 130	0	30
EVE Acid	25.6	10.74		ng/L		42	10 - 130	2	30
HFPODA	25.6	25.19		ng/L		98	53 - 131	1	30
Hydro-EVE Acid	25.6	27.90		ng/L		109	48 - 154	1	30
Hydrolyzed PSDA	25.6	22.58		ng/L		88	35 - 166	7	30
Hydro-PS Acid	25.6	25.71		ng/L		100	50 - 147	4	30
MTP	25.6	20.71		ng/L		81	22 - 156	2	30
NEtFOSA	25.6	29.80		ng/L		116	67 - 135	1	30
NEtFOSAA	25.6	22.28		ng/L		87	63 - 130	8	30
NEtFOSE	25.6	24.70		ng/L		96	65 - 132	6	30
NMeFOSA	25.6	34.61		ng/L		135	53 - 167	1	30
NMeFOSAA	25.6	22.49		ng/L		88	62 - 131	5	30
NMeFOSE	25.6	22.12		ng/L		86	65 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	23.14		ng/L		90	60 - 130	4	30
NVHOS	25.6	23.76		ng/L		93	56 - 144	4	30
PEPA	25.6	24.98		ng/L		98	44 - 150	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	20.20		ng/L		89	60 - 130	0	30
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	25.6	27.14		ng/L		106	52 - 146	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	24.41		ng/L		95	62 - 133	2	30
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	27.42		ng/L		107	56 - 161	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	20.50		ng/L		80	57 - 133	3	30
Perfluorobutanesulfonic acid (PFBS)	22.7	20.46		ng/L		90	64 - 132	3	30
Perfluorobutanoic acid (PFBA)	25.6	23.14		ng/L		90	58 - 130	2	30
Perfluorodecanesulfonic acid (PFDS)	24.7	19.55		ng/L		79	55 - 130	5	30
Perfluorodecanoic acid (PFDA)	25.6	25.66		ng/L		100	62 - 133	7	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	21.01		ng/L		85	56 - 130	4	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-522328/3-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522328

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorododecanoic acid (PFDoA)			25.6	23.47		ng/L		92	61 - 132	6	30
Perfluoroheptanesulfonic acid (PFHpS)			24.4	23.57		ng/L		97	59 - 130	3	30
Perfluoroheptanoic acid (PFHpA)			25.6	24.17		ng/L		94	64 - 130	6	30
Perfluorohexanesulfonic acid (PFHxS)			23.3	21.19		ng/L		91	62 - 130	0	30
Perfluorohexanoic acid (PFHxA)			25.6	25.60		ng/L		100	59 - 130	12	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			25.6	22.06		ng/L		86	50 - 130	1	30
Perfluoro-n-octadecanoic acid (PFODA)			25.6	19.23		ng/L		75	45 - 137	4	30
Perfluorononanesulfonic acid (PFNS)			24.6	21.42		ng/L		87	56 - 130	1	30
Perfluorononanoic acid (PFNA)			25.6	23.09		ng/L		90	63 - 133	1	30
Perfluorooctanesulfonamide (PFOSA)			25.6	24.63		ng/L		96	67 - 132	1	30
Perfluorooctanesulfonic acid (PFOS)			23.7	20.00		ng/L		84	62 - 130	0	30
Perfluorooctanoic acid (PFOA)			25.6	24.02		ng/L		94	58 - 132	1	30
Perfluoropentanesulfonic acid (PFPeS)			24.0	20.01		ng/L		83	64 - 132	5	30
Perfluoropentanoic acid (PFPeA)			25.6	24.00		ng/L		94	60 - 130	0	30
Perfluoropropanesulfonic acid			23.4	29.39		ng/L		125	58 - 137	2	30
Perfluoropropionic acid (PFPrA)			25.6	26.80		ng/L		105	20 - 173	4	30
Perfluorotetradecanoic acid (PFTeDA)			25.6	23.72		ng/L		93	62 - 131	1	30
Perfluorotridecanoic acid (PFTrDA)			25.6	23.28		ng/L		91	59 - 136	11	30
Perfluoroundecanoic acid (PFUnA)			25.6	23.30		ng/L		91	62 - 131	16	30
PFECHS			23.6	22.50		ng/L		95	54 - 130	4	30
PFMOAA			25.6	24.58		ng/L		96	34 - 143	7	30
PFO2HxA			25.6	25.70		ng/L		100	58 - 140	0	30
PFO3OA			25.6	25.22		ng/L		98	52 - 148	1	30
PFO4DA			25.6	25.20		ng/L		98	49 - 150	1	30
PMPA			25.6	25.43		ng/L		99	54 - 135	2	30
PS Acid			25.6	7.830		ng/L		31	10 - 130	7	30
R-EVE			25.6	24.20		ng/L		95	46 - 141	0	30
R-PSDA			25.6	21.83		ng/L		85	38 - 144	6	30
R-PSDCA			25.6	24.14		ng/L		94	53 - 148	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-10:2 FTCA	*54*		*11 - 200*
13C-10:2 FTUCA	*61*		*10 - 166*
13C2 PFTeDA	*56*		*10 - 171*
13C2-PFDoDA	*60*		*22 - 165*
13C3 HFPO-DA	*52*		*13 - 170*
13C3 PFBS	*63*		*34 - 200*
13C3 PFHxS	*59*		*48 - 169*
13C3-PFPrA	*52*		*21 - 157*
13C4 PFBA	*60*		*22 - 174*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-522328/3-A
Matrix: Water
Analysis Batch: 524969

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 522328

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFHpA	58		40 - 165
13C5 PFHxA	54		28 - 166
13C5 PFPeA	62		33 - 196
13C6 PFDA	62		53 - 151
13C-6:2 FTCA	59		10 - 200
13C-6:2 FTUCA	56		10 - 173
13C7 PFUnA	62		41 - 163
13C8 FOSA	55		10 - 155
13C8 PFOA	63		52 - 153
13C8 PFOS	63		59 - 155
13C-8:2 FTCA	59		20 - 200
13C-8:2 FTUCA	63		18 - 175
13C9 PFNA	64		52 - 168
d3-NMeFOSAA	61		38 - 168
d3-NMePFOSA	25		10 - 130
d5-NEtFOSAA	63		34 - 181
d5-NEtPFOSA	27		10 - 130
d7-N-MeFOSE-M	55		10 - 149
d9-N-EtFOSE-M	48		10 - 151
M2-4:2 FTS	58		35 - 200
M2-6:2 FTS	73		40 - 200
M2-8:2 FTS	66		37 - 200

Lab Sample ID: MB 410-523604/1-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523604

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 Fluorotelomer sulfonic acid	<0.800		2.00	0.800	ng/L		07/01/24 16:44	07/09/24 23:31	1
10:2 FTCA	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
10:2 FTUCA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
11Cl-PF3OUdS	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
3:3 FTCA	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
4:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
5:3 FTCA	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
6:2 Fluorotelomer sulfonic acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
6:2 FTCA	<0.700		2.00	0.700	ng/L		07/01/24 16:44	07/09/24 23:31	1
6:2 FTUCA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
7:3 FTCA	<1.10		2.00	1.10	ng/L		07/01/24 16:44	07/09/24 23:31	1
8:2 Fluorotelomer sulfonic acid	<0.600		2.00	0.600	ng/L		07/01/24 16:44	07/09/24 23:31	1
8:2 FTCA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
8:2 FTUCA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
9Cl-PF3ONS	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
EVE Acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
HFPODA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Hydro-EVE Acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Hydrolyzed PSDA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-523604/1-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523604

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydro-PS Acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
MTP	<0.600		2.00	0.600	ng/L		07/01/24 16:44	07/09/24 23:31	1
NEtFOSA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
NEtFOSAA	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
NEtFOSE	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
NMeFOSA	<0.700		2.00	0.700	ng/L		07/01/24 16:44	07/09/24 23:31	1
NMeFOSAA	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
NMeFOSE	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
NVHOS	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
PEPA	<0.600		2.00	0.600	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorobutanesulfonic acid (PFBS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorobutanoic acid (PFBA)	<1.00		2.00	1.00	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorodecanoic acid (PFDA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorododecanesulfonic acid (PFDoS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorododecanoic acid (PFDoA)	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoroheptanoic acid (PFHpA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorohexanesulfonic acid (PFHxS)	<0.200		2.00	0.200	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorohexanoic acid (PFHxA)	<1.00		2.00	1.00	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoro-n-octadecanoic acid (PFODA)	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorononanesulfonic acid (PFNS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorononanoic acid (PFNA)	<0.200		2.00	0.200	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorooctanesulfonamide (PFOSA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorooctanesulfonic acid (PFOS)	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorooctanoic acid (PFOA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoropentanesulfonic acid (PFPeS)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoropentanoic acid (PFPeA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoropropanesulfonic acid	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoropropionic acid (PFPrA)	<5.00		10.0	5.00	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorotetradecanoic acid (PFTeDA)	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluorotridecanoic acid (PFTrDA)	<0.400		2.00	0.400	ng/L		07/01/24 16:44	07/09/24 23:31	1
Perfluoroundecanoic acid (PFUnA)	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-523604/1-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 523604

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PFECHS	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
PFMOAA	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1
PFO2HxA	<0.700		2.00	0.700	ng/L		07/01/24 16:44	07/09/24 23:31	1
PFO3OA	<1.00		2.00	1.00	ng/L		07/01/24 16:44	07/09/24 23:31	1
PFO4DA	<0.800		2.00	0.800	ng/L		07/01/24 16:44	07/09/24 23:31	1
PMPA	<0.600		2.00	0.600	ng/L		07/01/24 16:44	07/09/24 23:31	1
PS Acid	<0.600		2.00	0.600	ng/L		07/01/24 16:44	07/09/24 23:31	1
R-EVE	<0.500		2.00	0.500	ng/L		07/01/24 16:44	07/09/24 23:31	1
R-PSDA	<0.700		2.00	0.700	ng/L		07/01/24 16:44	07/09/24 23:31	1
R-PSDCA	<0.300		2.00	0.300	ng/L		07/01/24 16:44	07/09/24 23:31	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-10:2 FTCA	*86*		*11 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C-10:2 FTUCA	*88*		*10 - 166*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C2 PFTeDA	*81*		*10 - 171*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C2-PFDoDA	*79*		*22 - 165*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C3 HFPO-DA	*78*		*13 - 170*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C3 PFBS	*96*		*34 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C3 PFHxS	*76*		*48 - 169*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C3-PFPrA	*74*		*21 - 157*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C4 PFBA	*78*		*22 - 174*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C4 PFHpA	*71*		*40 - 165*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C5 PFHxA	*69*		*28 - 166*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C5 PFPeA	*85*		*33 - 196*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C6 PFDA	*87*		*53 - 151*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C-6:2 FTCA	*76*		*10 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C-6:2 FTUCA	*71*		*10 - 173*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C7 PFUnA	*87*		*41 - 163*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C8 FOSA	*95*		*10 - 155*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C8 PFOA	*83*		*52 - 153*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C8 PFOS	*93*		*59 - 155*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C-8:2 FTCA	*85*		*20 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C-8:2 FTUCA	*88*		*18 - 175*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
13C9 PFNA	*88*		*52 - 168*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d3-NMeFOSAA	*89*		*38 - 168*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d3-NMePFOSA	*46*		*10 - 130*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d5-NEtFOSAA	*85*		*34 - 181*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d5-NEtPFOSA	*44*		*10 - 130*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d7-N-MeFOSE-M	*78*		*10 - 149*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
d9-N-EtFOSE-M	*76*		*10 - 151*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
M2-4:2 FTS	*70*		*35 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
M2-6:2 FTS	*163*		*40 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*
M2-8:2 FTS	*107*		*37 - 200*	*07/01/24 16:44*	*07/09/24 23:31*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-523604/2-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523604

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
10:2 Fluorotelomer sulfonic acid	24.7	20.24		ng/L		82	47 - 141
10:2 FTCA	25.6	22.73		ng/L		89	36 - 130
10:2 FTUCA	25.6	22.58		ng/L		88	54 - 165
11Cl-PF3OUdS	23.8	19.90		ng/L		84	57 - 130
3:3 FTCA	25.6	23.68		ng/L		93	52 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.2	22.33		ng/L		92	61 - 130
4:2 Fluorotelomer sulfonic acid	23.9	22.00		ng/L		92	61 - 131
5:3 FTCA	25.6	24.33		ng/L		95	51 - 132
6:2 Fluorotelomer sulfonic acid	24.3	24.46		ng/L		101	61 - 132
6:2 FTCA	25.6	23.12		ng/L		90	42 - 130
6:2 FTUCA	25.6	25.18		ng/L		98	57 - 166
7:3 FTCA	25.6	20.81		ng/L		81	10 - 150
8:2 Fluorotelomer sulfonic acid	24.5	24.44		ng/L		100	55 - 134
8:2 FTCA	25.6	21.26		ng/L		83	44 - 130
8:2 FTUCA	25.6	23.44		ng/L		92	52 - 166
9Cl-PF3ONS	23.8	21.16		ng/L		89	60 - 130
EVE Acid	25.6	16.49		ng/L		64	10 - 130
HFPODA	25.6	22.07		ng/L		86	53 - 131
Hydro-EVE Acid	25.6	29.52		ng/L		115	48 - 154
Hydrolyzed PSDA	25.6	18.58		ng/L		73	35 - 166
Hydro-PS Acid	25.6	24.20		ng/L		95	50 - 147
MTP	25.6	19.12		ng/L		75	22 - 156
NEtFOSA	25.6	28.52		ng/L		111	67 - 135
NEtFOSAA	25.6	21.59		ng/L		84	63 - 130
NEtFOSE	25.6	26.45		ng/L		103	65 - 132
NMeFOSA	25.6	34.20		ng/L		134	53 - 167
NMeFOSAA	25.6	23.54		ng/L		92	62 - 131
NMeFOSE	25.6	23.90		ng/L		93	65 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	22.04		ng/L		86	60 - 130
NVHOS	25.6	24.98		ng/L		98	56 - 144
PEPA	25.6	31.02		ng/L		121	44 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	19.79		ng/L		87	60 - 130
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	25.6	32.00		ng/L		125	52 - 146
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	24.50		ng/L		96	62 - 133
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	29.94		ng/L		117	56 - 161
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	19.20		ng/L		75	57 - 133
Perfluorobutanesulfonic acid (PFBS)	22.7	21.85		ng/L		96	64 - 132
Perfluorobutanoic acid (PFBA)	25.6	24.55		ng/L		96	58 - 130
Perfluorodecanesulfonic acid (PFDS)	24.7	20.40		ng/L		83	55 - 130
Perfluorodecanoic acid (PFDA)	25.6	25.80		ng/L		101	62 - 133
Perfluorododecanesulfonic acid (PFDoS)	24.8	20.29		ng/L		82	56 - 130

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-523604/2-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523604

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	25.6	23.88		ng/L		93	61 - 132
Perfluoroheptanesulfonic acid (PFHpS)	24.4	26.29		ng/L		108	59 - 130
Perfluoroheptanoic acid (PFHpA)	25.6	25.02		ng/L		98	64 - 130
Perfluorohexanesulfonic acid (PFHxS)	23.3	21.73		ng/L		93	62 - 130
Perfluorohexanoic acid (PFHxA)	25.6	23.89		ng/L		93	59 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	22.27		ng/L		87	50 - 130
Perfluoro-n-octadecanoic acid (PFODA)	25.6	14.76		ng/L		58	45 - 137
Perfluorononanesulfonic acid (PFNS)	24.6	21.14		ng/L		86	56 - 130
Perfluorononanoic acid (PFNA)	25.6	23.32		ng/L		91	63 - 133
Perfluorooctanesulfonamide (PFOSA)	25.6	26.69		ng/L		104	67 - 132
Perfluorooctanesulfonic acid (PFOS)	23.7	21.29		ng/L		90	62 - 130
Perfluorooctanoic acid (PFOA)	25.6	26.56		ng/L		104	58 - 132
Perfluoropentanesulfonic acid (PFPeS)	24.0	21.57		ng/L		90	64 - 132
Perfluoropentanoic acid (PFPeA)	25.6	25.97		ng/L		101	60 - 130
Perfluoropropanesulfonic acid	23.4	30.18		ng/L		129	58 - 137
Perfluoropropionic acid (PFPrA)	25.6	28.20		ng/L		110	20 - 173
Perfluorotetradecanoic acid (PFTeDA)	25.6	24.68		ng/L		96	62 - 131
Perfluorotridecanoic acid (PFTrDA)	25.6	22.28		ng/L		87	59 - 136
Perfluoroundecanoic acid (PFUnA)	25.6	26.10		ng/L		102	62 - 131
PFECHS	23.6	21.22		ng/L		90	54 - 130
PFMOAA	25.6	22.45		ng/L		88	34 - 143
PFO2HxA	25.6	29.19		ng/L		114	58 - 140
PFO3OA	25.6	29.56		ng/L		115	52 - 148
PFO4DA	25.6	30.87		ng/L		121	49 - 150
PMPA	25.6	26.12		ng/L		102	54 - 135
PS Acid	25.6	12.17		ng/L		48	10 - 130
R-EVE	25.6	23.38		ng/L		91	46 - 141
R-PSDA	25.6	22.14		ng/L		87	38 - 144
R-PSDCA	25.6	23.72		ng/L		93	53 - 148

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-10:2 FTCA	*75*		*11 - 200*
13C-10:2 FTUCA	*78*		*10 - 166*
13C2 PFTeDA	*79*		*10 - 171*
13C2-PFDoDA	*84*		*22 - 165*
13C3 HFPO-DA	*76*		*13 - 170*
13C3 PFBS	*89*		*34 - 200*
13C3 PFHxS	*73*		*48 - 169*
13C3-PFPrA	*60*		*21 - 157*
13C4 PFBA	*72*		*22 - 174*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-523604/2-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 523604

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFHpA	71		40 - 165
13C5 PFHxA	69		28 - 166
13C5 PFPeA	80		33 - 196
13C6 PFDA	83		53 - 151
13C-6:2 FTCA	74		10 - 200
13C-6:2 FTUCA	70		10 - 173
13C7 PFUnA	86		41 - 163
13C8 FOSA	86		10 - 155
13C8 PFOA	80		52 - 153
13C8 PFOS	84		59 - 155
13C-8:2 FTCA	85		20 - 200
13C-8:2 FTUCA	84		18 - 175
13C9 PFNA	81		52 - 168
d3-NMeFOSAA	83		38 - 168
d3-NMePFOSA	37		10 - 130
d5-NEtFOSAA	91		34 - 181
d5-NEtPFOSA	37		10 - 130
d7-N-MeFOSE-M	84		10 - 149
d9-N-EtFOSE-M	72		10 - 151
M2-4:2 FTS	70		35 - 200
M2-6:2 FTS	131		40 - 200
M2-8:2 FTS	95		37 - 200

Lab Sample ID: LCSD 410-523604/3-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523604

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
10:2 Fluorotelomer sulfonic acid			24.7	21.45		ng/L		87	47 - 141	6	30
10:2 FTCA			25.6	23.98		ng/L		94	36 - 130	5	30
10:2 FTUCA			25.6	23.33		ng/L		91	54 - 165	3	30
11Cl-PF3OUdS			23.8	20.10		ng/L		84	57 - 130	1	30
3:3 FTCA			25.6	23.72		ng/L		93	52 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.2	24.08		ng/L		100	61 - 130	8	30
4:2 Fluorotelomer sulfonic acid			23.9	22.52		ng/L		94	61 - 131	2	30
5:3 FTCA			25.6	25.41		ng/L		99	51 - 132	4	30
6:2 Fluorotelomer sulfonic acid			24.3	23.89		ng/L		98	61 - 132	2	30
6:2 FTCA			25.6	23.59		ng/L		92	42 - 130	2	30
6:2 FTUCA			25.6	26.14		ng/L		102	57 - 166	4	30
7:3 FTCA			25.6	20.79		ng/L		81	10 - 150	0	30
8:2 Fluorotelomer sulfonic acid			24.5	24.52		ng/L		100	55 - 134	0	30
8:2 FTCA			25.6	23.22		ng/L		91	44 - 130	9	30
8:2 FTUCA			25.6	25.02		ng/L		98	52 - 166	7	30
9Cl-PF3ONS			23.8	22.11		ng/L		93	60 - 130	4	30
EVE Acid			25.6	16.80		ng/L		66	10 - 130	2	30
HFPODA			25.6	22.49		ng/L		88	53 - 131	2	30
Hydro-EVE Acid			25.6	31.60		ng/L		123	48 - 154	7	30
Hydrolyzed PSDA			25.6	18.16		ng/L		71	35 - 166	2	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-523604/3-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523604

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hydro-PS Acid	25.6	25.95		ng/L		101	50 - 147	7	30
MTP	25.6	19.76		ng/L		77	22 - 156	3	30
NEtFOSA	25.6	29.86		ng/L		117	67 - 135	5	30
NEtFOSAA	25.6	25.52		ng/L		100	63 - 130	17	30
NEtFOSE	25.6	27.59		ng/L		108	65 - 132	4	30
NMeFOSA	25.6	32.39		ng/L		127	53 - 167	5	30
NMeFOSAA	25.6	25.93		ng/L		101	62 - 131	10	30
NMeFOSE	25.6	26.30		ng/L		103	65 - 130	10	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	25.6	22.34		ng/L		87	60 - 130	1	30
NVHOS	25.6	24.91		ng/L		97	56 - 144	0	30
PEPA	25.6	31.33		ng/L		122	44 - 150	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	22.8	20.30		ng/L		89	60 - 130	3	30
Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	25.6	34.48		ng/L		135	52 - 146	7	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	25.6	25.74		ng/L		101	62 - 133	5	30
Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)	25.6	31.36		ng/L		123	56 - 161	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	25.6	19.93		ng/L		78	57 - 133	4	30
Perfluorobutanesulfonic acid (PFBS)	22.7	22.55		ng/L		100	64 - 132	3	30
Perfluorobutanoic acid (PFBA)	25.6	24.74		ng/L		97	58 - 130	1	30
Perfluorodecanesulfonic acid (PFDS)	24.7	20.21		ng/L		82	55 - 130	1	30
Perfluorodecanoic acid (PFDA)	25.6	27.22		ng/L		106	62 - 133	5	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	20.38		ng/L		82	56 - 130	0	30
Perfluorododecanoic acid (PFDoA)	25.6	26.17		ng/L		102	61 - 132	9	30
Perfluoroheptanesulfonic acid (PFHpS)	24.4	26.22		ng/L		108	59 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	25.6	25.47		ng/L		100	64 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	23.3	22.79		ng/L		98	62 - 130	5	30
Perfluorohexanoic acid (PFHxA)	25.6	24.53		ng/L		96	59 - 130	3	30
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	22.05		ng/L		86	50 - 130	1	30
Perfluoro-n-octadecanoic acid (PFODA)	25.6	16.31		ng/L		64	45 - 137	10	30
Perfluorononanesulfonic acid (PFNS)	24.6	22.61		ng/L		92	56 - 130	7	30
Perfluorononanoic acid (PFNA)	25.6	24.40		ng/L		95	63 - 133	5	30
Perfluorooctanesulfonamide (PFOSA)	25.6	27.59		ng/L		108	67 - 132	3	30
Perfluorooctanesulfonic acid (PFOS)	23.7	22.00		ng/L		93	62 - 130	3	30
Perfluorooctanoic acid (PFOA)	25.6	26.08		ng/L		102	58 - 132	2	30
Perfluoropentanesulfonic acid (PFPeS)	24.0	21.08		ng/L		88	64 - 132	2	30
Perfluoropentanoic acid (PFPeA)	25.6	26.72		ng/L		104	60 - 130	3	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-523604/3-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523604

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropropanesulfonic acid			23.4	30.62		ng/L		131	58 - 137	1	30
Perfluoropropionic acid (PFPrA)			25.6	27.87		ng/L		109	20 - 173	1	30
Perfluorotetradecanoic acid (PFTeDA)			25.6	25.29		ng/L		99	62 - 131	2	30
Perfluorotridecanoic acid (PFTrDA)			25.6	25.53		ng/L		100	59 - 136	14	30
Perfluoroundecanoic acid (PFUnA)			25.6	25.97		ng/L		101	62 - 131	1	30
PFECHS			23.6	21.55		ng/L		91	54 - 130	2	30
PFMOAA			25.6	22.48		ng/L		88	34 - 143	0	30
PFO2HxA			25.6	29.98		ng/L		117	58 - 140	3	30
PFO3OA			25.6	30.42		ng/L		119	52 - 148	3	30
PFO4DA			25.6	31.95		ng/L		125	49 - 150	3	30
PMPA			25.6	26.45		ng/L		103	54 - 135	1	30
PS Acid			25.6	12.04		ng/L		47	10 - 130	1	30
R-EVE			25.6	23.49		ng/L		92	46 - 141	0	30
R-PSDA			25.6	21.70		ng/L		85	38 - 144	2	30
R-PSDCA			25.6	24.79		ng/L		97	53 - 148	4	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-10:2 FTCA	*71*		*11 - 200*
13C-10:2 FTUCA	*73*		*10 - 166*
13C2 PFTeDA	*76*		*10 - 171*
13C2-PFDoDA	*73*		*22 - 165*
13C3 HFPO-DA	*76*		*13 - 170*
13C3 PFBS	*87*		*34 - 200*
13C3 PFHxS	*74*		*48 - 169*
13C3-PFPrA	*59*		*21 - 157*
13C4 PFBA	*70*		*22 - 174*
13C4 PFHpA	*70*		*40 - 165*
13C5 PFHxA	*67*		*28 - 166*
13C5 PFPeA	*79*		*33 - 196*
13C6 PFDA	*80*		*53 - 151*
13C-6:2 FTCA	*75*		*10 - 200*
13C-6:2 FTUCA	*68*		*10 - 173*
13C7 PFUnA	*78*		*41 - 163*
13C8 FOSA	*78*		*10 - 155*
13C8 PFOA	*81*		*52 - 153*
13C8 PFOS	*84*		*59 - 155*
13C-8:2 FTCA	*75*		*20 - 200*
13C-8:2 FTUCA	*78*		*18 - 175*
13C9 PFNA	*80*		*52 - 168*
d3-NMeFOSAA	*77*		*38 - 168*
d3-NMePFOSA	*46*		*10 - 130*
d5-NEtFOSAA	*75*		*34 - 181*
d5-NEtPFOSA	*49*		*10 - 130*
d7-N-MeFOSE-M	*75*		*10 - 149*
d9-N-EtFOSE-M	*65*		*10 - 151*
M2-4:2 FTS	*67*		*35 - 200*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-523604/3-A
Matrix: Water
Analysis Batch: 526021

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 523604

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
M2-6:2 FTS	133		40 - 200
M2-8:2 FTS	95		37 - 200

GC/MS Semi VOA

Prep Batch: 516779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-1	001 FBP	Total/NA	Water	SOP	
410-175226-3	002	Total/NA	Water	SOP	
410-175226-4	003	Total/NA	Water	SOP	
410-175226-5	004-D	Total/NA	Water	SOP	
410-175226-6	004 FB	Total/NA	Water	SOP	
410-175226-7	004	Total/NA	Water	SOP	
410-175226-8	006	Total/NA	Water	SOP	
410-175226-9	Trip Blank	Total/NA	Water	SOP	
MB 410-516779/1-A	Method Blank	Total/NA	Water	SOP	
LCS 410-516779/2-A	Lab Control Sample	Total/NA	Water	SOP	
LCSD 410-516779/3-A	Lab Control Sample Dup	Total/NA	Water	SOP	

Analysis Batch: 519643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-1	001 FBP	Total/NA	Water	SOP	516779
410-175226-3	002	Total/NA	Water	SOP	516779
410-175226-4	003	Total/NA	Water	SOP	516779
410-175226-5	004-D	Total/NA	Water	SOP	516779
MB 410-516779/1-A	Method Blank	Total/NA	Water	SOP	516779
LCS 410-516779/2-A	Lab Control Sample	Total/NA	Water	SOP	516779
LCSD 410-516779/3-A	Lab Control Sample Dup	Total/NA	Water	SOP	516779

Analysis Batch: 520647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-6	004 FB	Total/NA	Water	SOP	516779
410-175226-7	004	Total/NA	Water	SOP	516779
410-175226-8	006	Total/NA	Water	SOP	516779
410-175226-9	Trip Blank	Total/NA	Water	SOP	516779

Prep Batch: 521574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-2	001 P	Total/NA	Water	SOP	
MB 410-521574/1-A	Method Blank	Total/NA	Water	SOP	
LCS 410-521574/2-A	Lab Control Sample	Total/NA	Water	SOP	
LCSD 410-521574/3-A	Lab Control Sample Dup	Total/NA	Water	SOP	

Analysis Batch: 521665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-2	001 P	Total/NA	Water	SOP	521574
MB 410-521574/1-A	Method Blank	Total/NA	Water	SOP	521574
LCS 410-521574/2-A	Lab Control Sample	Total/NA	Water	SOP	521574
LCSD 410-521574/3-A	Lab Control Sample Dup	Total/NA	Water	SOP	521574

LCMS

Prep Batch: 521851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-9	Trip Blank	Total/NA	Water	SPE	
MB 410-521851/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-521851/2-A	Lab Control Sample	Total/NA	Water	SPE	
LCSD 410-521851/3-A	Lab Control Sample Dup	Total/NA	Water	SPE	

LCMS

Prep Batch: 521869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-3	002	Total/NA	Water	SPE	
410-175226-4	003	Total/NA	Water	SPE	
MB 410-521869/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-521869/2-A	Lab Control Sample	Total/NA	Water	SPE	

Prep Batch: 522328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-5	004-D	Total/NA	Water	SPE	
410-175226-6	004 FB	Total/NA	Water	SPE	
410-175226-7	004	Total/NA	Water	SPE	
410-175226-8	006	Total/NA	Water	SPE	
MB 410-522328/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-522328/2-A	Lab Control Sample	Total/NA	Water	SPE	
LCSD 410-522328/3-A	Lab Control Sample Dup	Total/NA	Water	SPE	

Analysis Batch: 523096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-3	002	Total/NA	Water	537 IDA	521869
410-175226-4	003	Total/NA	Water	537 IDA	521869
410-175226-9	Trip Blank	Total/NA	Water	537 IDA	521851
MB 410-521851/1-A	Method Blank	Total/NA	Water	537 IDA	521851
MB 410-521869/1-A	Method Blank	Total/NA	Water	537 IDA	521869
LCS 410-521851/2-A	Lab Control Sample	Total/NA	Water	537 IDA	521851
LCS 410-521869/2-A	Lab Control Sample	Total/NA	Water	537 IDA	521869
LCSD 410-521851/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	521851

Prep Batch: 523604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-1	001 FBP	Total/NA	Water	SPE	
410-175226-2	001 P	Total/NA	Water	SPE	
MB 410-523604/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-523604/2-A	Lab Control Sample	Total/NA	Water	SPE	
LCSD 410-523604/3-A	Lab Control Sample Dup	Total/NA	Water	SPE	

Analysis Batch: 524969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-5	004-D	Total/NA	Water	537 IDA	522328
410-175226-6	004 FB	Total/NA	Water	537 IDA	522328
410-175226-8	006	Total/NA	Water	537 IDA	522328
MB 410-522328/1-A	Method Blank	Total/NA	Water	537 IDA	522328
LCS 410-522328/2-A	Lab Control Sample	Total/NA	Water	537 IDA	522328
LCSD 410-522328/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	522328

Analysis Batch: 526021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-1	001 FBP	Total/NA	Water	537 IDA	523604
410-175226-2	001 P	Total/NA	Water	537 IDA	523604
410-175226-7	004	Total/NA	Water	537 IDA	522328
MB 410-523604/1-A	Method Blank	Total/NA	Water	537 IDA	523604
LCS 410-523604/2-A	Lab Control Sample	Total/NA	Water	537 IDA	523604
LCSD 410-523604/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	523604

QC Association Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

LCMS

Prep Batch: 526206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-3 - RE	002	Total/NA	Water	SPE	
410-175226-4 - RE	003	Total/NA	Water	SPE	
410-175226-9 - RE	Trip Blank	Total/NA	Water	SPE	
MB 410-526206/1-A	Method Blank	Total/NA	Water	SPE	
LCS 410-526206/2-A	Lab Control Sample	Total/NA	Water	SPE	

Analysis Batch: 527927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-175226-3 - RE	002	Total/NA	Water	537 IDA	526206
410-175226-4 - RE	003	Total/NA	Water	537 IDA	526206
410-175226-9 - RE	Trip Blank	Total/NA	Water	537 IDA	526206
MB 410-526206/1-A	Method Blank	Total/NA	Water	537 IDA	526206
LCS 410-526206/2-A	Lab Control Sample	Total/NA	Water	537 IDA	526206

Client Sample ID: 001 FBP

Lab Sample ID: 410-175226-1

Date Collected: 06/05/24 09:15

Matrix: Water

Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/12/24 22:15
Total/NA	Analysis	SOP		1	519643	UAD3	ELLE	06/20/24 18:17
Total/NA	Prep	SPE			523604	V3FW	ELLE	07/01/24 16:44
Total/NA	Analysis	537 IDA		1	526021	V4RH	ELLE	07/10/24 02:14

Client Sample ID: 001 P

Lab Sample ID: 410-175226-2

Date Collected: 06/05/24 09:17

Matrix: Water

Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			521574	UJSZ	ELLE	06/26/24 08:13
Total/NA	Analysis	SOP		1	521665	UAD3	ELLE	06/26/24 12:43
Total/NA	Prep	SPE			523604	V3FW	ELLE	07/01/24 16:44
Total/NA	Analysis	537 IDA		1	526021	V4RH	ELLE	07/10/24 02:28

Client Sample ID: 002

Lab Sample ID: 410-175226-3

Date Collected: 06/03/24 15:38

Matrix: Water

Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	519643	UAD3	ELLE	06/20/24 19:12
Total/NA	Prep	SPE			521869	V3FW	ELLE	06/26/24 16:17
Total/NA	Analysis	537 IDA		1	523096	R7RE	ELLE	06/30/24 05:19
Total/NA	Prep	SPE	RE		526206	V3FW	ELLE	07/09/24 15:58
Total/NA	Analysis	537 IDA	RE	1	527927	R7RE	ELLE	07/14/24 06:17

Client Sample ID: 003

Lab Sample ID: 410-175226-4

Date Collected: 06/03/24 16:38

Matrix: Water

Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	519643	UAD3	ELLE	06/20/24 19:26
Total/NA	Prep	SPE			521869	V3FW	ELLE	06/26/24 16:17
Total/NA	Analysis	537 IDA		1	523096	R7RE	ELLE	06/30/24 05:32
Total/NA	Prep	SPE	RE		526206	V3FW	ELLE	07/09/24 15:58
Total/NA	Analysis	537 IDA	RE	1	527927	R7RE	ELLE	07/14/24 06:30

Client Sample ID: 004-D

Lab Sample ID: 410-175226-5

Date Collected: 06/04/24 09:46

Matrix: Water

Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	519643	UAD3	ELLE	06/20/24 19:40

Lab Chronicle

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Client Sample ID: 004-D

Lab Sample ID: 410-175226-5

Date Collected: 06/04/24 09:46
Matrix: Water
Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SPE			522328	V3FW	ELLE	06/27/24 14:30
Total/NA	Analysis	537 IDA		1	524969	FDE4	ELLE	07/05/24 23:54

Client Sample ID: 004 FB

Lab Sample ID: 410-175226-6

Date Collected: 06/04/24 09:46
Matrix: Water
Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	520647	UAD3	ELLE	06/24/24 15:00
Total/NA	Prep	SPE			522328	V3FW	ELLE	06/27/24 14:30
Total/NA	Analysis	537 IDA		1	524969	FDE4	ELLE	07/06/24 00:07

Client Sample ID: 004

Lab Sample ID: 410-175226-7

Date Collected: 06/04/24 09:54
Matrix: Water
Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	520647	UAD3	ELLE	06/24/24 15:13
Total/NA	Prep	SPE			522328	V3FW	ELLE	06/27/24 14:30
Total/NA	Analysis	537 IDA		1	526021	V4RH	ELLE	07/09/24 17:24

Client Sample ID: 006

Lab Sample ID: 410-175226-8

Date Collected: 06/04/24 14:50
Matrix: Water
Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	520647	UAD3	ELLE	06/24/24 15:27
Total/NA	Prep	SPE			522328	V3FW	ELLE	06/27/24 14:30
Total/NA	Analysis	537 IDA		1	524969	FDE4	ELLE	07/06/24 00:21

Client Sample ID: Trip Blank

Lab Sample ID: 410-175226-9

Date Collected: 05/30/24 00:00
Matrix: Water
Date Received: 06/08/24 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SOP			516779	SJ7Z	ELLE	06/13/24 08:24
Total/NA	Analysis	SOP		1	520647	UAD3	ELLE	06/24/24 15:41
Total/NA	Prep	SPE			521851	V3FW	ELLE	06/26/24 15:46
Total/NA	Analysis	537 IDA		1	523096	R7RE	ELLE	06/30/24 01:07
Total/NA	Prep	SPE	RE		526206	V3FW	ELLE	07/09/24 15:58
Total/NA	Analysis	537 IDA	RE	1	527927	R7RE	ELLE	07/14/24 06:42

Client: Eastern Research Group, Inc.
Job ID: 410-175226-1
Project/Site: SDWA Region 9 - ERG

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	N/A	01-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	SPE	Water	10:2 Fluorotelomer sulfonic acid
537 IDA	SPE	Water	10:2 FTCA
537 IDA	SPE	Water	10:2 FTUCA
537 IDA	SPE	Water	11Cl-PF3OUdS
537 IDA	SPE	Water	3:3 FTCA
537 IDA	SPE	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537 IDA	SPE	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	SPE	Water	5:3 FTCA
537 IDA	SPE	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	SPE	Water	6:2 FTCA
537 IDA	SPE	Water	6:2 FTUCA
537 IDA	SPE	Water	7:3 FTCA
537 IDA	SPE	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	SPE	Water	8:2 FTCA
537 IDA	SPE	Water	8:2 FTUCA
537 IDA	SPE	Water	9Cl-PF3ONS
537 IDA	SPE	Water	EVE Acid
537 IDA	SPE	Water	HFPODA
537 IDA	SPE	Water	Hydro-EVE Acid
537 IDA	SPE	Water	Hydrolyzed PSDA
537 IDA	SPE	Water	Hydro-PS Acid
537 IDA	SPE	Water	MTP
537 IDA	SPE	Water	NEtFOSA
537 IDA	SPE	Water	NEtFOSAA
537 IDA	SPE	Water	NEtFOSE
537 IDA	SPE	Water	NMeFOSA
537 IDA	SPE	Water	NMeFOSAA
537 IDA	SPE	Water	NMeFOSE
537 IDA	SPE	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
537 IDA	SPE	Water	NVHOS
537 IDA	SPE	Water	PEPA
537 IDA	SPE	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
537 IDA	SPE	Water	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid
537 IDA	SPE	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
537 IDA	SPE	Water	Perfluoro-4-isopropoxybutanoic acid (PFIpOBA)
537 IDA	SPE	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
537 IDA	SPE	Water	Perfluorobutanesulfonic acid (PFBS)
537 IDA	SPE	Water	Perfluorobutanoic acid (PFBA)
537 IDA	SPE	Water	Perfluorodecanesulfonic acid (PFDS)
537 IDA	SPE	Water	Perfluorodecanoic acid (PFDA)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	SPE	Water	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	SPE	Water	Perfluorododecanoic acid (PFDoA)
537 IDA	SPE	Water	Perfluoroheptanesulfonic acid (PFHpS)
537 IDA	SPE	Water	Perfluoroheptanoic acid (PFHpA)
537 IDA	SPE	Water	Perfluorohexanesulfonic acid (PFHxS)
537 IDA	SPE	Water	Perfluorohexanoic acid (PFHxA)
537 IDA	SPE	Water	Perfluoro-n-hexadecanoic acid (PFHxDA)
537 IDA	SPE	Water	Perfluoro-n-octadecanoic acid (PFODA)
537 IDA	SPE	Water	Perfluorononanesulfonic acid (PFNS)
537 IDA	SPE	Water	Perfluorononanoic acid (PFNA)
537 IDA	SPE	Water	Perfluorooctanesulfonamide (PFOSA)
537 IDA	SPE	Water	Perfluorooctanesulfonic acid (PFOS)
537 IDA	SPE	Water	Perfluorooctanoic acid (PFOA)
537 IDA	SPE	Water	Perfluoropentanesulfonic acid (PFPeS)
537 IDA	SPE	Water	Perfluoropentanoic acid (PFPeA)
537 IDA	SPE	Water	Perfluoropropanesulfonic acid
537 IDA	SPE	Water	Perfluoropropionic acid (PFPrA)
537 IDA	SPE	Water	Perfluorotetradecanoic acid (PFTeDA)
537 IDA	SPE	Water	Perfluorotridecanoic acid (PFTrDA)
537 IDA	SPE	Water	Perfluoroundecanoic acid (PFUnA)
537 IDA	SPE	Water	PFECHS
537 IDA	SPE	Water	PFMOAA
537 IDA	SPE	Water	PFO2HxA
537 IDA	SPE	Water	PFO3OA
537 IDA	SPE	Water	PFO4DA
537 IDA	SPE	Water	PMPA
537 IDA	SPE	Water	PS Acid
537 IDA	SPE	Water	R-EVE
537 IDA	SPE	Water	R-PSDA
537 IDA	SPE	Water	R-PSDCA
SOP	SOP	Water	10:2 FTOH-2-Perfluorodecyl ethanol
SOP	SOP	Water	4:2 FTOH-2-Perfluorobutyl ethanol
SOP	SOP	Water	6:2 FTOH-2-Perfluorohexyl ethanol
SOP	SOP	Water	7:2 FTOH-1-Perfluoroheptyl ethanol
SOP	SOP	Water	8:2 FTOH-2-Perfluorooctyl ethanol

Method Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Method	Method Description	Protocol	Laboratory
SOP	SOP T-SSG-WI7750	ELLE - Lancaster	ELLE
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
SOP	SOP T-SSG-WI7750	ELLE - Lancaster	ELLE
SPE	PFAS by SPE	Lab SOP	ELLE

Protocol References:

ELLE - Lancaster = Eurofins Lancaster, Facility Standard Operating Procedure.

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Eastern Research Group, Inc.
Project/Site: SDWA Region 9 - ERG

Job ID: 410-175226-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-175226-1	001 FBP	Water	06/05/24 09:15	06/08/24 09:35
410-175226-2	001 P	Water	06/05/24 09:17	06/08/24 09:35
410-175226-3	002	Water	06/03/24 15:38	06/08/24 09:35
410-175226-4	003	Water	06/03/24 16:38	06/08/24 09:35
410-175226-5	004-D	Water	06/04/24 09:46	06/08/24 09:35
410-175226-6	004 FB	Water	06/04/24 09:46	06/08/24 09:35
410-175226-7	004	Water	06/04/24 09:54	06/08/24 09:35
410-175226-8	006	Water	06/04/24 14:50	06/08/24 09:35
410-175226-9	Trip Blank	Water	05/30/24 00:00	06/08/24 09:35

410-175226 Chain of Custody

PFAS Drinking Water
EPA

CHAIN OF CUSTODY RECORD

TURNAROUND TIME				DELIVERABLES		PAGE: 1 OF 1
Standard ☐	48 hours ☐			EDD ☐		Condition upon receipt
Same Day ☐	72 hours ☐			EDF ☐		Sealed Yes ☐ No ☐
24 hours ☐	96 hours ☐			Level 3 ☐		Intact Yes ☐ No ☐
Other				Level 4 ☐		Chilled ____ deg C

Project No.:	SDWA Region 9 - ERG
Project Name:	
Report To:	Michelle Spiezo
Company:	ERG
Street:	14555 Avion Pkwy
City/State/Zip:	Chantilly, VA
Phone& Fax:	217-418-3573
e-mail:	mike.mcfadden@erg.com

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	ANALYSIS REQUEST: PFAS 20 537	ANALYSIS REQUEST: PFAS FTOH
	001 FB	6/5/24	0915	HDPE			X	X
	001 P	6/5/24	0917	HDPE			X	X
	002	6/5/24	1538	HDPE			X	X
	003	6/5/24	1632	HDPE			X	X
	004 D	6/4/24	0946	HDPE			X	X
	004 FB	6/4/24	0946	HDPE			X	X
	004	6/4/24	0954	HDPE			X	X
	006	6/4/24	1450	HDPE			X	X
	Trip Blanks	6/5/24	-	HDPE			X	X

AUTHORIZATION TO PERFORM WORK: Mike Beck	COMPANY: ERG	DATE/TIME: 6/6/24	1200	COMMENTS
SAMPLED BY: Mike Beck	COMPANY: ERG	DATE/TIME: 6/6/24	1200	
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	
RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME: 6/6/24	0935

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other

R: 2.3 C: 2.2

Login Sample Receipt Checklist

Client: Eastern Research Group, Inc.

Job Number: 410-175226-1

Login Number: 175226

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Santiago, Nathaniel

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Attachment 2: EPA and BSK Laboratory Reports

The EPA and BSK laboratory reports may reference sample ID numbers that are not referenced within this inspection report; any additional sample locations are unrelated to this inspection and their location is intentionally not provided.

United States Environmental Protection Agency

Region 9 Laboratory

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 09:06
Project: R24L06	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2406015 01									**Water - Sampled: 06/03/24 12:55**
Sample ID: 001									**Total Metals by EPA 200 Series Methods**
Mercury		ND	U	0.030	ug/L	B24F029	06/17/24	06/17/24	245.1
Beryllium		ND	U	0.50	"	B24F061	06/17/24	06/17/24	200.8
Copper		4.6		2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Sample ID: 001									**Volatile Organic Compounds by EPA Method 524.2**
Chloroform		ND	U	0.50	"	B24F031	06/11/24	06/11/24	524.2
Benzene		ND	U	0.50	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.50	"	"	"	"	524.2
Toluene		ND	U	0.50	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.50	"	"	"	"	524.2
Ethylbenzene		ND	U	0.50	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.50	"	"	"	"	524.2
Bromoform		ND	U	0.50	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4			99 %	*70-130%*		"	"	"	
Surrogate: Toluene-d8			102 %	*70-130%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			100 %	*70-130%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			99 %	*70-130%*		"	"	"	
1,2-Dibromoethane (EDB)		ND	U	5	ng/L	B24F047	06/13/24	06/13/24	524.2
Surrogate: 4-Bromofluorobenzene			85 %	*70-130%*		"	"	"	
Sample ID: 001									**Purgeable Petroleum Hydrocarbons**
TPH - Gasoline Range Organics		ND	U	50	ug/L	B24F041	06/12/24	06/12/24	8015C
Surrogate: a,a,a-Trifluorotoluene			108 %	*70-130%*		"	"	"	
Sample ID: 001									**Extractable Petroleum Hydrocarbons**
TPH - Diesel Range Organics		84	C1, F13, J	150	"	B24F027	06/10/24	07/10/24	8015C
TPH - Oil Range Organics		ND	U	300	"	"	"	"	8015C
Surrogate: Hexacosane			112 %	*70-130%*		"	"	"	
[redacted]									
Sample ID: [redacted]									**Volatile Organic Compounds by EPA Method 524.2**

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 09:06
Project: R24L06	**San Francisco CA, 94105**	

Qualifiers and Comments

J	The reported result for this analyte should be considered an estimated value.
F13	Fuel or Product Type: mixed or unknown
C1	The reported concentration for this analyte is below the quantitation limit.
U	Not Detected
NR	Not Reported
RE1, RE2, etc:	Result is from a sample re-analysis.

Certificate of Analysis

Sample ID: AHF0626-03
Sampled By: [redacted]
Sample Description: 001

Sample Date - Time: 06/03/2024 - 12:54
Matrix: Drinking Water
Sample Type: Grab

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS										
Benzo(a)pyrene	EPA 525.3	ND	[redacted]	0.020	ug/L	1	AHF0484	06/09/24	06/10/24	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.3	106 %		*Acceptable range: 70-130 %*						
Surrogate: Benzo(a)pyrene-d12	EPA 525.3	79 %		*Acceptable range: 70-130 %*						
Surrogate: Triphenyl Phosphate	EPA 525.3	123 %		*Acceptable range: 70-130 %*						

Certificate of Analysis

Sample ID: AHF0626-04
Sampled By: [redacted]
Sample Description: 001

Sample Date - Time: 06/03/2024 - 12:54
Matrix: Drinking Water
Sample Type: Grab

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics (PAHs, 8100 List) by GC-MS										
1-Methylnaphthalene	EPA 8270E	ND	[redacted]	0.010	ug/L	1	AHF0497	06/10/24	06/12/24	
2-Methylnaphthalene	EPA 8270E	ND	[redacted]	0.010	ug/L	1	AHF0497	06/10/24	06/12/24	
Naphthalene	EPA 8270E	ND	[redacted]	0.010	ug/L	1	AHF0497	06/10/24	06/12/24	
Surrogate: 2-Fluorobiphenyl	EPA 8270E	95 %		*Acceptable range: 40-127 %*						
Surrogate: Nitrobenzene-d5	EPA 8270E	96 %		*Acceptable range: 49-133 %*						
Surrogate: p-Terphenyl-d14	EPA 8270E	101 %		*Acceptable range: 39-135 %*						

Certificate of Analysis

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected below MRL/MDL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	PicoCuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit	U:	The analyte was not detected at or above the reported sample quantitation limit.

Please see the individual Subcontract Lab's report for applicable certifications.

The following parameters are not available for certification through CA ELAP:

Odor Diisopropyl ether (DIPE) by EPA 524.2

The following parameters are calculated values and are outside the scope of our NELAP accreditation:

Total Nitrogen Aggressive Index Trivalent Chromium

BSK is not accredited under the NELAP program for the following additional parameters: **NA**

United States Environmental Protection Agency

Region 9 Laboratory

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 10:22
Project: R24L06	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: **2406018-01**									**Water - Sampled: 06/04/24 15:08**
[redacted]									
Lab ID: **2406018-02**									**Water - Sampled: 06/05/24 08:20**
Sample ID: **007**									**Total Metals by EPA 200 Series Methods**
Mercury		ND	U	0.030	ug/L	B24F030	06/17/24	06/17/24	245.1
Beryllium		ND	U	0.50	"	B24F061	06/17/24	06/17/24	200.8
Copper		5.6		2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Sample ID: **007**									**Volatile Organic Compounds by EPA Method 524.2**

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 10:22
Project: R24L06	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2406018-02									**Water - Sampled: 06/05/24 08:20**
Sample ID: 007									**Volatile Organic Compounds by EPA Method 524.2**
Chloroform		ND	U	0.50	ug/L	B24F031	06/11/24	06/11/24	524.2
Benzene		ND	U	0.50	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.50	"	"	"	"	524.2
Toluene		ND	U	0.50	"	"	"	"	524.2
Chlorodibromomethane		ND	U	0.50	"	"	"	"	524.2
Ethylbenzene		ND	U	0.50	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.50	"	"	"	"	524.2
Bromoform		ND	U	0.50	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4			98 %	*70-130%*		"	"	"	
Surrogate: Toluene-d8			102 %	*70-130%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			100 %	*70-130%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			99 %	*70-130%*		"	"	"	
1,2-Dibromoethane (EDB)		ND	U	5	ng/L	B24F047	06/13/24	06/13/24	524.2
Surrogate: 4-Bromofluorobenzene			88 %	*70-130%*		"	"	"	
Sample ID: 007									**Purgeable Petroleum Hydrocarbons**
TPH - Gasoline Range Organics		ND	U	50	ug/L	B24F041	06/12/24	06/12/24	8015C
Surrogate: a,a,a-Trifluorotoluene			108 %	*70-130%*		"	"	"	
Sample ID: 007									**Extractable Petroleum Hydrocarbons**
TPH - Diesel Range Organics		ND	U	150	"	B24F027	06/10/24	07/10/24	8015C
TPH - Oil Range Organics		ND	U	300	"	"	"	"	8015C
Surrogate: Hexacosane			114 %	*70-130%*		"	"	"	
[redacted]									
[redacted]									

United States Environmental Protection Agency
Region 9 Laboratory

200 sw 35th street, Corvallis, OR 97333
Phone: (541) 754-4701

Project Manager: Corine Li	**COR_Enforcement**	**SDG:** 24162A
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 10:22
Project: R24L06	**San Francisco CA, 94105**	

Qualifiers and Comments

J	The reported result for this analyte should be considered an estimated value.
C1	The reported concentration for this analyte is below the quantitation limit.
U	Not Detected
NR	Not Reported
RE1, RE2, etc:	Result is from a sample re-analysis.

Certificate of Analysis

Sample ID: AHF0936-01
Sampled By: [redacted]
Sample Description: 007

Sample Date - Time: 06/05/2024 - 08:20
Matrix: Drinking Water
Sample Type: Grab

BSK Associates Laboratory Fresno

Organics

Analyte	Method	Result	MDL	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Semi-Volatile Organics by GC-MS										
Benzo(a)pyrene	EPA 525.3	ND	[redacted]	0.020	ug/L	1	AHF0983	06/15/24	06/19/24	
Surrogate: 1,3-Dimethyl-2-nitrobenzene	EPA 525.3	93 %		*Acceptable range:*		*70-130 %*				
Surrogate: Benzo(a)pyrene-d12	EPA 525.3	111 %		*Acceptable range:*		*70-130 %*				
Surrogate: Triphenyl Phosphate	EPA 525.3	120 %		*Acceptable range:*		*70-130 %*				

Certificate of Analysis

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected below MRL/MDL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	PicoCuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit	U:	The analyte was not detected at or above the reported sample quantitation limit.

Please see the individual Subcontract Lab's report for applicable certifications.

The following parameters are not available for certification through CA ELAP:

Odor Diisopropyl ether (DIPE) by EPA 524.2

The following parameters are calculated values and are outside the scope of our NELAP accreditation:

Total Nitrogen Aggressive Index Trivalent Chromium

BSK is not accredited under the NELAP program for the following additional parameters: **NA**

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 08:09
Project: R24L06	**San Francisco CA, 94105**	

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 2406034 01									**Water - Sampled: 06/05/24 11:40**
Sample ID: 009									**Total Metals by EPA 200 Series Methods**
Mercury		ND	U	0.030	ug/L	B24F030	06/17/24	06/17/24	245.1
Beryllium		ND	U	0.50	"	B24F061	06/17/24	06/17/24	200.8
Copper		4.3		2	"	"	"	"	200.8
Lead		ND	U	1	"	"	"	"	200.8
Sample ID: 009									**Volatile Organic Compounds by EPA Method 524.2**
Chloroform		ND	U	0.50	"	B24F048	06/13/24	06/13/24	524.2
Benzene		ND	U	0.50	"	"	"	"	524.2
Bromodichloromethane		ND	U	0.50	"	"	"	"	524.2
Toluene		ND	U	0.50	"	"	"	"	524.2
Chlorodibromomethane		0.60		0.50	"	"	"	"	524.2
Ethylbenzene		ND	U	0.50	"	"	"	"	524.2
m&p-Xylene		ND	U	1	"	"	"	"	524.2
o-Xylene		ND	U	0.50	"	"	"	"	524.2
Bromoform		0.77		0.50	"	"	"	"	524.2
1,3,5-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
1,2,4-Trimethylbenzene		ND	U	0.50	"	"	"	"	524.2
Surrogate: 1,2-Dichloroethane-d4			101 %	*70-130%*		"	"	"	
Surrogate: Toluene-d8			101 %	*70-130%*		"	"	"	
Surrogate: 4-Bromofluorobenzene			97 %	*70-130%*		"	"	"	
Surrogate: 1,2-Dichlorobenzene-d4			98 %	*70-130%*		"	"	"	
1,2-Dibromoethane (EDB)		ND	U	5	ng/L	B24F047	06/13/24	06/13/24	524.2
Surrogate: 4-Bromofluorobenzene			85 %	*70-130%*		"	"	"	
Sample ID: 009									**Purgeable Petroleum Hydrocarbons**
TPH - Gasoline Range Organics		ND	U	50	ug/L	B24F049	06/13/24	06/13/24	8015C
Surrogate: a,a,a-Trifluorotoluene			108 %	*70-130%*		"	"	"	
Sample ID: 009									**Extractable Petroleum Hydrocarbons**
TPH - Diesel Range Organics		ND	A3, J, U	140	"	B24F065	06/17/24	07/10/24	8015C
TPH - Oil Range Organics		ND	A3, J, U	280	"	"	"	"	8015C
Surrogate: Hexacosane			120 %	*70-130%*		"	"	"	

[redacted]

[redacted]

Project Manager: [redacted]	[redacted]	**SDG:** [redacted]
Project Number: R24L06	**75 Hawthorne St**	**Reported:** 08/14/24 08:09
Project: R24L06	**San Francisco CA, 94105**	

Qualifiers and Comments

J	The reported result for this analyte should be considered an estimated value.
F12	Single component, unidentified
C4	The calibration verification check did not meet % difference criteria for this analyte.
A3	The sample was prepped/analyzed past the recommended holding time.
U	Not Detected
NR	Not Reported
RE1, RE2, etc:	Result is from a sample re-analysis.