State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name			DNR ID # (BRRTS #)
Waupaca Foundry Plant 4			02-38-584102
Address	**City**	**State**	**ZIP Code**
805 Ogden Street	Marinette	WI	54143

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner			
Waupaca Foundry, Inc - Plant 4			
Address	**City**	**State**	**ZIP Code**
805 Ogden Street	Marinette	WI	54143
Contact Person		**Phone Number (include area code)**	
Bryant Esch		(715) 258-6674	

Person or company that collected samples

AECOM

Sample Results (Results Attached)

Reason for Sampling: ○ Routine ◉ Other (define) Third Site Investigation Round

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil? Yes	In Soil? No	In Groundwater? Yes	In Groundwater? No
Gasoline	○	○	○	○
Diesel or Fuel Oil	○	○	○	○
Solvents	○	○	○	○
Heavy Metals	○	○	○	○
Pesticides	○	○	○	○
Other: PFAS (Wis 33)	○	◉	◉	○

This sampling event included sampling of a drinking water well.
○ Yes ◉ No

If yes, the sampled drinking water well had detectable contaminants.
○ Yes ○ No

Contaminants in Vapor	Yes	No
Indoor Air	○	◉
Sub-slab	○	◉
Exterior Soil Gas	○	◉

Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a $700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name	Contact Person Last Name	First Name
AECOM	Mott	Andrew

Address	City	State	ZIP Code
558 North Main Street	Oshkosh	WI	54902

Phone # (inc. area code)	Email
(920) 236-6713	andrew.mott@aecom.com

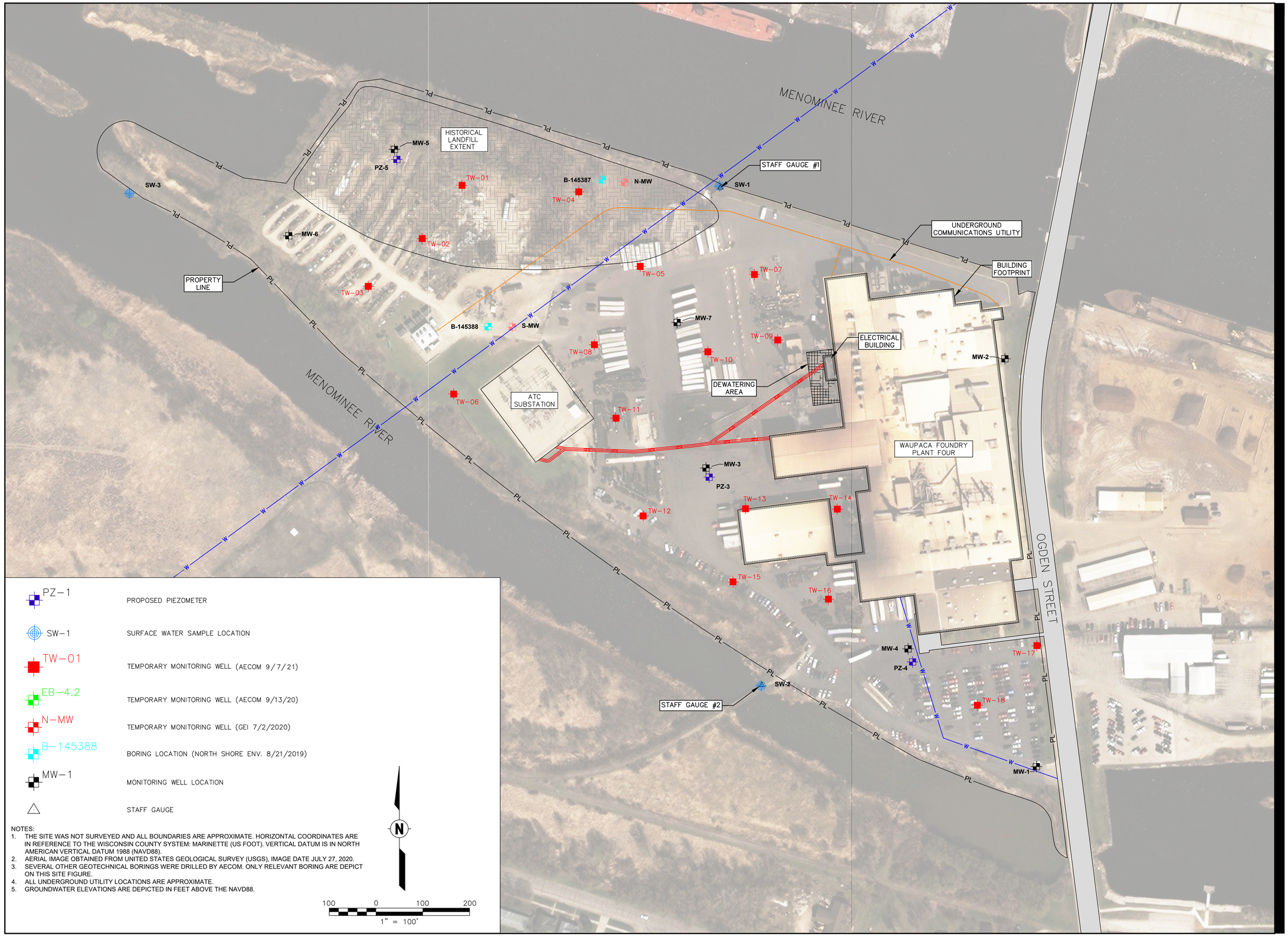
Select which agency: (●) Natural Resources ( ) Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name	First Name	Phone # (inc. area code)
Neste	David	(920) 424-0399

Address	City	State	ZIP Code
625 East Cty Y, Suite 700	Oshkosh	WI	54901

Email
david.neste@wisconsin.gov



PZ-1 PROPOSED PIEZOMETER

SW-1 SURFACE WATER SAMPLE LOCATION

TW-01 TEMPORARY MONITORING WELL (AECOM 9/7/21)

EB-4.2 TEMPORARY MONITORING WELL (AECOM 9/13/20)

N-MW TEMPORARY MONITORING WELL (GEI 7/2/2020)

B-145388 BORING LOCATION (NORTH SHORE ENV. 8/21/2019)

MW-1 MONITORING WELL LOCATION

STAFF GAUGE

NOTES:
1. THE SITE WAS NOT SURVEYED AND ALL BOUNDARIES ARE APPROXIMATE. HORIZONTAL COORDINATES ARE IN REFERENCE TO THE WISCONSIN COUNTY SYSTEM: MARINETTE (US FOOT). VERTICAL DATUM IS IN NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
2. AERIAL IMAGE OBTAINED FROM UNITED STATES GEOLOGICAL SURVEY (USGS), IMAGE DATE JULY 27, 2020.
3. SEVERAL OTHER GEOTECHNICAL BORINGS WERE DRILLED BY AECOM. ONLY RELEVANT BORING ARE DEPICT ON THIS SITE FIGURE.
4. ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE.
5. GROUNDWATER ELEVATIONS ARE DEPICTED IN FEET ABOVE THE NAVD88.

N

100 0 100 200
1" = 100'

AECOM

PROJECT

WAUPACA FOUNDRY
PLANT 4
PFAS SITE INVESTIGATION
805 OGDEN STREET
MARINETTE, WISCONSIN 54143

CLIENT

WAUPACA
FOUNDRY, INC.
1955 BRUNNER DRIVE
WAUPACA, WISCONSIN 54981
715.258.6611 tel
www.waupacafoundry.com

CONSULTANT

AECOM
558 North Main Street
Oshkosh, WI 54901
(920) 468-1978 tel
(920) 468-3312 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

1	09/25/2020	ISSUED FOR REVIEW
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60662758

SHEET TITLE

Sample Locations

FIGURE NUMBER

1

Table 1
PFAS Groundwater and Surface Water Results

					Field Sample ID:	**MW1**	**MW2**	**MW3**	**MW3 (092022DUP)**	**MW4**
					Sample Date:	**9/20/2022**	**9/20/2022**	**9/20/2022**	**9/20/2022**	**9/20/2022**
Acronym	**Analyte**	**CAS No**	**Units**	**ES (proposed)**	**PAL (proposed)**					
Carboxylic Acids:										
PFBA	Perfluorobutanoic acid	375-22-4	ng/L	10000	2000	19	15	140	160 J-	34 J
PFPeA	Perfluoropentanoic acid	2706-90-3	ng/L	--	--	74	21	330	320 J-	100
PFHxA	Perfluorohexanoic acid	307-24-4	ng/L	150000	30000	59	20	1000	1100 J-	83
PFHpA	Perfluoroheptanoic acid	375-85-9	ng/L	--	--	35	14	550	540 J-	41
PFOA	Perfluorooctanoic acid	335-67-1	ng/L	20[c]	2[c]	140	22	35000	34000 J-	1500
PFNA	Perfluorononaoic acid	375-95-1	ng/L	30	3	0.95 J	1.2 J	*6.3 J*	*5.6 J-*	< 2.7
PFDA	Perfluorodecanoic acid	335-76-2	ng/L	300	60	< 0.28	< 0.28	< 5.5	< 5.6 UJ	< 3.1
PFUnA	Perfluoroundecanoic acid	2058-94-8	ng/L	3000	600	< 0.98	< 0.98	< 20	< 20 UJ	< 11
PFDoA	Perfluorododecanoic acid	307-55-1	ng/L	500	100	< 0.49	< 0.49	< 9.8	< 9.9 UJ	< 5.4
PFTrDA	Perfluorotridecanoic acid	72629-94-8	ng/L	--	--	< 1.2	< 1.2	< 23	< 23 UJ	< 13
PFTeDA	Perfluorotetradecanoic acid	376-06-7	ng/L	10000	2000	< 0.65	< 0.65	< 13	< 13 UJ	< 7.2
Sulfonic Acids:										
PFBS	Perfluorobutanesulfonic acid	375-73-5	ng/L	450000	90000	8.3	1.2 J	11 J	10 J-	8.3 J
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4	ng/L	--	--	6.9	< 0.27	32 J	31 J-	< 3
PFHxS	Perfluorohexanesulfonoic acid	355-46-4	ng/L	**40**	*4*	*23*	0.89 J	**120**	**130 J-**	*30*
PFHpS	Perfluoroheptanesulfonic acid	375-92-8	ng/L	--	--	0.75 J	< 0.17	25 J	25 J-	< 1.9
PFOS	Perfluorooctanesulfonic acid	1763-23-1	ng/L	20[c]	2[c]	22	6.9 J	760	760 J-	170
PFNS	Perfluorononanesulfonic acid	68259-12-1	ng/L	--	--	< 0.33	< 0.33	< 6.6	< 6.7 UJ	< 3.6
PFDS	Perfluorodecanesulfonic acid	335-77-3	ng/L	--	--	< 0.29	< 0.29	< 5.7	< 5.8 UJ	< 3.2
PFDoS	Perfluorododecanesulfonic acid	79780-39-5	ng/L	--	--	< 0.87	< 0.87	< 17	< 17 UJ	< 9.6
4:2 FTS	4:2 Fluorotelomer Sulfonic Acid	757124-72-4	ng/L	--	--	1.1 J	< 0.21	< 4.3	< 4.3 UJ	< 2.4
6:2 FTS	6:2 Fluorotelomer sulfonic acid	27619-97-2	ng/L	--	--	11	< 2.2	< 44	< 45 UJ	< 25
8:2 FTS	8:2 Fluorotelomer sulfonic acid	39108-34-4	ng/L	--	--	< 0.41	< 0.41	< 8.2	< 8.3 UJ	< 4.5
Sulfonamides, Sulfomidoacetic acids, Sulfonamidoethanols:										
PFOSA	Perfluorooctane sulfonamide	754-91-6	ng/L	20[c]	2[c]	< 0.88	< 0.87	< 17	< 18 UJ	< 9.7
NMeFOSA	N-Methyl perfluorooctane sulfonamide	31506-32-8	ng/L	--	--	< 0.38	< 0.38	< 7.6	< 7.7 UJ	< 4.2
NEtFOSA	N-Ethyl perfluorooctane sulfonamide	4151-50-2	ng/L	20[c]	2[c]	< 0.78	< 0.78	< 15	< 16 UJ	< 8.6
MeFOSAA	N-Methylperfluorooctanesulfonamidoacetic acid	2355-31-9	ng/L	--	--	< 1.1	< 1.1	< 21	< 22 UJ	< 12
EtFOSAA	N-Ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	ng/L	20[c]	2[c]	< 1.2	< 1.2	290	260 J-	14 J
NMeFOSE	N-Methyl perfluorooctane sulfonamidoethanol	24448-09-7	ng/L	--	--	< 1.3	< 1.2	< 25	< 25 UJ	< 14
NEtFOSE	N-Ethyl perfluorooctane sulfonamidoethanol	1691-99-2	ng/L	20[c]	2[c]	< 0.76	< 0.76	< 15	< 15 UJ	< 8.4
Replacement Chemicals:										
HFPO-DA	Hexafluoropropylene oxide dimer acid	13252-13-6	ng/L	300	30	< 1.3	< 1.3	< 27	< 27 UJ	< 15
DONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4	ng/L	3000	600	< 0.36	< 0.36	< 7.1	< 7.2 UJ	< 3.9
9Cl-PF3ONS	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic	756426-58-1	ng/L	--	--	< 0.21	< 0.21	< 4.3	< 4.3 UJ	< 2.4
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic	763051-92-9	ng/L	--	--	< 0.29	< 0.29	< 5.7	< 5.8 UJ	< 3.2
[c] Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA,	Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS, and PFOA		ng/L	**20[c]**	*2*[c]	**160**	**29**	**36000**	**35000**	**1700**

Notes:
[c] DHS recommends a combined (c) standard for NEtFOSE, NEtFOSA, NEtFOSAA, FOSA, PFOS and PFOA.
ng/L - nanograms per liter
J - Estimated concentration (+/- indicate the direction of bias).
UJ - The reported limit is approximated and may be inaccurate or imprecise.
Non-detects reported as < MDL
Bold indicates a ES exceedance, proposed. Recommended Groundwater Standards (Cycle 11), November 6, 2020.
Italics and underlining indicates an PAL exceedance, proposed. Recommended Groundwater Standards (Cycle 11), November 6, 2020.
-- No NR 140 ES or PAL established.

Table 1
PFAS Groundwater and Surface Water Results

					Field Sample ID:	MW5	MW6	MW7	PZ3	PZ4	PZ5	SW1	SW2	SW3	092022FB
					Sample Date:	9/19/2022	9/21/2022	9/21/2022	9/20/2022	9/20/2022	9/19/2022	9/19/2022	9/19/2022	9/19/2022	9/20/2022
Acronym	**Analyte**	**CAS No**	**Units**	**ES (proposed)**	**PAL (proposed)**										
Carboxylic Acids:															
PFBA	Perfluorobutanoic acid	375-22-4	ng/L	10000	2000	56	150	93	150 J+	37	63	2.2 J	5.7	2.4 J	< 2.1
PFPeA	Perfluoropentanoic acid	2706-90-3	ng/L	--	--	140	350	260	490	84	240	0.84 J	10	1 J	< 0.44
PFHxA	Perfluorohexanoic acid	307-24-4	ng/L	150000	30000	200	320	240	2700	110	470	1 J	9.5	1.3 J	< 0.52
PFHpA	Perfluoroheptanoic acid	375-85-9	ng/L	--	--	120	210	87	1100	66	190	0.8 J	7.8	0.91 J	< 0.22
PFOA	Perfluorooctanoic acid	335-67-1	ng/L	20[c]	2[c]	3500	1500	4100	58000	5300	6700	1.1 J	68	3.1	< 0.76
PFNA	Perfluorononaoic acid	375-95-1	ng/L	30	3	*9.1*	*4.3*	*3.3*	*11*	< 0.26	2.6	< 0.25	0.99 J	0.44 J	< 0.24
PFDA	Perfluorodecanoic acid	335-76-2	ng/L	300	60	< 0.27	< 0.27	< 0.28	< 0.28	< 0.3	< 0.28	< 0.28	< 0.29	< 0.28	< 0.28
PFUnA	Perfluoroundecanoic acid	2058-94-8	ng/L	3000	600	12 J	< 0.96	< 0.98	< 0.99	< 1.1	< 0.98	< 1	< 1	< 1	< 0.98
PFDoA	Perfluorododecanoic acid	307-55-1	ng/L	500	100	< 0.49	< 0.48	< 0.49	< 0.5	< 0.53	< 0.49	< 0.5	< 0.51	< 0.5	< 0.49
PFTrDA	Perfluorotridecanoic acid	72629-94-8	ng/L	--	--	< 1.2	< 1.1	< 1.2	< 1.2	< 1.3	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
PFTeDA	Perfluorotetradecanoic acid	376-06-7	ng/L	10000	2000	< 0.65	< 0.64	< 0.65	< 0.66	< 0.7	< 0.65	< 0.66	< 0.67	< 0.67	< 0.65
Sulfonic Acids:															
PFBS	Perfluorobutanesulfonic acid	375-73-5	ng/L	450000	90000	2.1	1.7 J	2.2	9	3.7	3.8	< 0.18	0.41 J	< 0.18	< 0.18
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4	ng/L	--	--	4.3	3.7	5.1	37	3.2	9.9	< 0.27	< 0.28	< 0.27	< 0.27
PFHxS	Perfluorohexanesulfonoic acid	355-46-4	ng/L	**40**	*4*	*34*	*19*	*21*	**89**	*13*	**78**	< 0.52	0.63 J	< 0.52	< 0.51
PFHpS	Perfluoroheptanesulfonic acid	375-92-8	ng/L	--	--	2.8	1.5 J	4.3	6.3	< 0.18	0.34 J	< 0.17	< 0.17	< 0.17	< 0.17
PFOS	Perfluorooctanesulfonic acid	1763-23-1	ng/L	20[c]	2[c]	160	56	240	79	4.4 J	< 0.48	< 0.49	2.2	< 0.49	< 0.48
PFNS	Perfluorononanesulfonic acid	68259-12-1	ng/L	--	--	< 0.33	< 0.32	< 0.33	< 0.33	< 0.36	< 0.33	< 0.34	< 0.34	< 0.34	< 0.33
PFDS	Perfluorodecanesulfonic acid	335-77-3	ng/L	--	--	< 0.28	< 0.28	< 0.28	< 0.29	< 0.31	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
PFDoS	Perfluorododecanesulfonic acid	79780-39-5	ng/L	--	--	< 0.86	< 0.85	< 0.86	< 0.87	< 0.94	< 0.86	< 0.88	< 0.89	< 0.89	< 0.87
4:2 FTS	4:2 Fluorotelomer Sulfonic Acid	757124-72-4	ng/L	--	--	< 4.3	1.7 J	< 0.21	< 0.22	0.68 J	< 0.21	< 0.22	< 0.22	< 0.22	< 0.21
6:2 FTS	6:2 Fluorotelomer sulfonic acid	27619-97-2	ng/L	--	--	< 44	20	7.6	14	5.9	61 J-	2.5 J	< 2.3	3.4 J	< 2.2
8:2 FTS	8:2 Fluorotelomer sulfonic acid	39108-34-4	ng/L	--	--	< 8.1	< 0.4	< 0.41	< 0.41	< 0.44	< 0.41	< 0.42	< 0.42	< 0.42	< 0.41
Sulfonamides, Sulfomidoacetic acids, Sulfonamidoethanols:															
PFOSA	Perfluorooctane sulfonamide	754-91-6	ng/L	20[c]	2[c]	2.6	< 0.86	14	< 0.88	< 0.95	< 0.87	< 0.89	< 0.9	< 0.89	< 0.88
NMeFOSA	N-Methyl perfluorooctane sulfonamide	31506-32-8	ng/L	--	--	< 0.38	< 0.38	< 0.38	< 0.39	< 0.41	< 0.38	< 0.39	< 0.4	< 0.39	< 0.38
NEtFOSA	N-Ethyl perfluorooctane sulfonamide	4151-50-2	ng/L	20[c]	2[c]	< 0.77	< 0.76	< 0.77	< 0.78	< 0.84	< 0.77	< 0.79	< 0.8	< 0.79	< 0.78
MeFOSAA	N-Methylperfluorooctanesulfonamidoacetic acid	2355-31-9	ng/L	--	--	2.3 J	1.1 J	< 1.1	< 1.1	< 1.2	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
EtFOSAA	N-Ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	ng/L	20[c]	2[c]	36	16	2.6 J	< 1.2	< 1.3	1.3 J	< 1.2	< 1.2	< 1.2	< 1.2
NMeFOSE	N-Methyl perfluorooctane sulfonamidoethanol	24448-09-7	ng/L	--	--	< 1.2	< 1.2	< 1.2	< 1.3	< 1.4	< 1.2	< 1.3	< 1.3	< 1.3	< 1.3
NEtFOSE	N-Ethyl perfluorooctane sulfonamidoethanol	1691-99-2	ng/L	20[c]	2[c]	< 0.75	1.5 J	< 0.75	< 0.77	< 0.82	< 0.76	< 0.77	< 0.78	< 0.78	< 0.76
Replacement Chemicals:															
HFPO-DA	Hexafluoropropylene oxide dimer acid	13252-13-6	ng/L	300	30	< 1.3	< 1.3	< 1.3	< 1.4	< 1.4	< 1.3	< 1.4	< 1.4	< 1.4	< 1.3
DONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4	ng/L	3000	600	< 0.35	< 0.35	< 0.35	< 0.36	< 0.39	< 0.36	< 0.36	< 0.37	< 0.37	< 0.36
9Cl-PF3ONS	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic	756426-58-1	ng/L	--	--	< 0.21	< 0.21	< 0.21	< 0.22	< 0.23	< 0.21	< 0.22	< 0.22	< 0.22	< 0.21
11Cl-PF3OUdS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic	763051-92-9	ng/L	--	--	< 0.28	< 0.28	< 0.28	< 0.29	< 0.31	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
[C] Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA,	Sum of FOSA, NEtFOSE, NEtFOSA, NEtFOSAA, PFOS, and PFOA		ng/L	**20[c]**	*2*[c]	**3700**	**1600**	**4400**	**58000**	**5300**	**6700**	1.1	**70**	*3.1*	--

Notes:
[C] DHS recommends a combined (c) standard for NEtFOSE, NEtFOSA, NEtFOSAA, FOSA, PFOS and PFOA.
ng/L - nanograms per liter
J - Estimated concentration (+/- indicate the direction of bias).
UJ - The reported limit is approximated and may be inaccurate or imprecise.
Non-detects reported as < MDL
Bold indicates a ES exceedance, proposed. Recommended Groundwater Standards (Cycle 11), November 6, 2020.
Italics and underlining indicates an PAL exceedance, proposed. Recommended Groundwater Standards (Cycle 11), November 6, 202(
-- No NR 140 ES or PAL established.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

ANALYTICAL REPORT

PREPARED FOR

Attn: Robert Weseljak
AECOM
2985 South Ridge Road
Suite B
Green Bay Wisconsin 54304

Generated 11/15/2022 4:23:14 PM Revision 1

JOB DESCRIPTION

PFAS, Wisconsin

JOB NUMBER

320-92441-1

Eurofins Sacramento
880 Riverside Parkway
West Sacramento CA95605

myEOL

Table of Contents

Definitions/Glossary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
H	Sample was prepped or analyzed beyond the specified holding time
I	Value is EMPC (estimated maximum possible concentration).
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

Case Narrative

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Job ID: 320-92441-1

Laboratory: Eurofins Sacramento

Narrative

Revision
This report was revised on 11/15/22 to update several sample IDs per the client's request.

Receipt
The samples were received on 9/22/2022 9:15 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 was 3.8º C.

LCMS
Method 537 (modified): The "I" qualifier means the transition mass ratio for the indicated analyte was above the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty, and the reported value may have some high bias. However, analyst judgment was used to positively identify the analyte.

Method 537 (modified): Results for samples MW3 (320-92441-3), MW4 (320-92441-4), MW5 (320-92441-5), MW6 (320-92441-6), MW7 (320-92441-7), PZ4 (320-92441-8), PZ3 (320-92441-9), PZ5 (320-92441-10) and 092022DUP (320-92441-11) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method 537 (modified): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: PZ3 (320-92441-9). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: MW4 (320-92441-4), MW5 (320-92441-5) and PZ5 (320-92441-10). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 537 (modified): Due to the high concentration for Perfluorooctanoic acid (PFOA) in the original extract, the following sample required a 250x dilution: PZ3 (320-92441-9). Internal standard and isotope dilution analyte solutions were refortified into the extract after dilution so quantitation could be performed.

Method 537 (modified): Internal standard (ISTD) response for the following sample in analytical batch 320-629784 was outside acceptance criteria: 092022DUP (320-92441-11). The internal standard is not used to quantitate target analytes; therefore, the data have been reported.

Method 537 (modified): Reanalysis of the following sample was performed outside of the analytical holding time due to scheduling constraints: 092022DUP (320-92441-11).

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

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

Detection Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: MW1 — Lab Sample ID: 320-92441-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	19		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	74		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	59		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	35		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	140		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.95	J	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.3		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	6.9		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	23		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.75	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	22		1.8	0.48	ng/L	1		537 (modified)	Total/NA
4:2 FTS	1.1	J	1.8	0.21	ng/L	1		537 (modified)	Total/NA
6:2 FTS	11		4.5	2.2	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW2 — Lab Sample ID: 320-92441-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	15		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	21		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	20		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	14		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	22		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.2	J	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.2	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.89	J	1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.9	I	1.8	0.48	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW3 — Lab Sample ID: 320-92441-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	140		89	43	ng/L	20		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	330		36	8.7	ng/L	20		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1000		36	10	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	550		36	4.4	ng/L	20		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	6.3	J	36	4.8	ng/L	20		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	11	J	36	3.6	ng/L	20		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	32	J	36	5.3	ng/L	20		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	120		36	10	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	25	J	36	3.4	ng/L	20		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	760		36	9.6	ng/L	20		537 (modified)	Total/NA
NEtFOSAA	290		89	23	ng/L	20		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	35000		180	76	ng/L	100		537 (modified)	Total/NA

Client Sample ID: MW4 — Lab Sample ID: 320-92441-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	34	J	49	24	ng/L	10		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	100		20	4.8	ng/L	10		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	83		20	5.7	ng/L	10		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: MW4 (Continued) — Lab Sample ID: 320-92441-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	41		20	2.5	ng/L	10		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1500		20	8.4	ng/L	10		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	8.3	J	20	2.0	ng/L	10		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	30		20	5.6	ng/L	10		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	170		20	5.3	ng/L	10		537 (modified)	Total/NA
NEtFOSAA	14	J	49	13	ng/L	10		537 (modified)	Total/NA

Client Sample ID: MW5 — Lab Sample ID: 320-92441-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	56		4.4	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	140		1.8	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	200		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	120		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	9.1		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	12	I	1.8	0.97	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	4.3		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	34		1.8	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	2.8		1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	160		1.8	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	2.6		1.8	0.87	ng/L	1		537 (modified)	Total/NA
NMeFOSAA	2.3	J	4.4	1.1	ng/L	1		537 (modified)	Total/NA
NEtFOSAA	36		4.4	1.2	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	3500		35	15	ng/L	20		537 (modified)	Total/NA

Client Sample ID: MW6 — Lab Sample ID: 320-92441-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	150		4.4	2.1	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	320		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	210		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	4.3		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.7	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	3.7		1.8	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	19		1.8	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	1.5	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	56		1.8	0.47	ng/L	1		537 (modified)	Total/NA
NMeFOSAA	1.1	J	4.4	1.1	ng/L	1		537 (modified)	Total/NA
NEtFOSAA	16		4.4	1.1	ng/L	1		537 (modified)	Total/NA
NEtFOSE	1.5	J	1.8	0.74	ng/L	1		537 (modified)	Total/NA
4:2 FTS	1.7	J	1.8	0.21	ng/L	1		537 (modified)	Total/NA
6:2 FTS	20		4.4	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	350		18	4.3	ng/L	10		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	1500		18	7.4	ng/L	10		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: MW7 — Lab Sample ID: 320-92441-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	93		4.4	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	260		1.8	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	240		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	87		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	3.3		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.2		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	5.1		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	21		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	4.3		1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	240		1.8	0.48	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	14		1.8	0.87	ng/L	1		537 (modified)	Total/NA
NEtFOSAA	2.6	J	4.4	1.2	ng/L	1		537 (modified)	Total/NA
6:2 FTS	7.6		4.4	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	4100		35	15	ng/L	20		537 (modified)	Total/NA

Client Sample ID: PZ4 — Lab Sample ID: 320-92441-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	37		4.8	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	84		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	110		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	66		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	3.2		1.9	0.29	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	13		1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.4	I	1.9	0.52	ng/L	1		537 (modified)	Total/NA
4:2 FTS	0.68	J	1.9	0.23	ng/L	1		537 (modified)	Total/NA
6:2 FTS	5.9		4.8	2.4	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	5300		39	16	ng/L	20		537 (modified)	Total/NA

Client Sample ID: PZ3 — Lab Sample ID: 320-92441-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	150		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	11		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	9.0		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	37		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	89		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	6.3		1.8	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	79		1.8	0.49	ng/L	1		537 (modified)	Total/NA
6:2 FTS	14		4.5	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	490		90	22	ng/L	50		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	2700		90	26	ng/L	50		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	1100		90	11	ng/L	50		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL2	58000		450	190	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: PZ5 — Lab Sample ID: 320-92441-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	63		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	240		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	190		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.6		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.8		1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	9.9		1.8	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	78		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	0.34	J	1.8	0.17	ng/L	1		537 (modified)	Total/NA
NEtFOSAA	1.3	J	4.5	1.2	ng/L	1		537 (modified)	Total/NA
6:2 FTS	61		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA) - DL	470		36	10	ng/L	20		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	6700		36	15	ng/L	20		537 (modified)	Total/NA

Client Sample ID: 092022DUP — Lab Sample ID: 320-92441-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	160	H	90	43	ng/L	20		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	320	H	36	8.8	ng/L	20		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1100	H	36	10	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	540	H	36	4.5	ng/L	20		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	5.6	J H	36	4.9	ng/L	20		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	10	J H	36	3.6	ng/L	20		537 (modified)	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	31	J H	36	5.4	ng/L	20		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	130	H	36	10	ng/L	20		537 (modified)	Total/NA
Perfluoroheptanesulfonic acid (PFHpS)	25	J H	36	3.4	ng/L	20		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	760	H	36	9.7	ng/L	20		537 (modified)	Total/NA
NEtFOSAA	260	H	90	23	ng/L	20		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	34000		180	76	ng/L	100		537 (modified)	Total/NA

Client Sample ID: 092022FB — Lab Sample ID: 320-92441-12

No Detections.

Client Sample ID: SW1 — Lab Sample ID: 320-92441-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.2	J	4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.84	J	1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.0	J	1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.80	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.1	J	1.8	0.77	ng/L	1		537 (modified)	Total/NA
6:2 FTS	2.5	J	4.5	2.3	ng/L	1		537 (modified)	Total/NA

Client Sample ID: SW2 — Lab Sample ID: 320-92441-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.7		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	10		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	9.5		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	7.8		1.8	0.23	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: SW2 (Continued)

Lab Sample ID: 320-92441-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	68		1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.99	J	1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.41	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.63	J	1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		1.8	0.50	ng/L	1		537 (modified)	Total/NA

Client Sample ID: SW3

Lab Sample ID: 320-92441-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.4	J	4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.0	J	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.3	J	1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.91	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.44	J	1.8	0.25	ng/L	1		537 (modified)	Total/NA
6:2 FTS	3.4	J	4.6	2.3	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW1

Date Collected: 09/20/22 14:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-1

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**19**		4.5	2.1	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluoropentanoic acid (PFPeA)	**74**		1.8	0.44	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorohexanoic acid (PFHxA)	**59**		1.8	0.52	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluoroheptanoic acid (PFHpA)	**35**		1.8	0.22	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorooctanoic acid (PFOA)	**140**		1.8	0.76	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorononanoic acid (PFNA)	**0.95**	**J**	1.8	0.24	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorobutanesulfonic acid (PFBS)	**8.3**		1.8	0.18	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluoropentanesulfonic acid (PFPeS)	**6.9**		1.8	0.27	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorohexanesulfonic acid (PFHxS)	**23**		1.8	0.51	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluoroheptanesulfonic acid (PFHpS)	**0.75**	**J**	1.8	0.17	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorooctanesulfonic acid (PFOS)	**22**		1.8	0.48	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/09/22 07:28	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		09/30/22 05:20	10/09/22 07:28	1
NEtFOSA	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/09/22 07:28	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/09/22 07:28	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/09/22 07:28	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		09/30/22 05:20	10/09/22 07:28	1
NMeFOSE	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/09/22 07:28	1
NEtFOSE	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/09/22 07:28	1
4:2 FTS	**1.1**	**J**	1.8	0.21	ng/L		09/30/22 05:20	10/09/22 07:28	1
6:2 FTS	**11**		4.5	2.2	ng/L		09/30/22 05:20	10/09/22 07:28	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/09/22 07:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/09/22 07:28	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/09/22 07:28	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/09/22 07:28	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/09/22 07:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*54*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C5 PFPeA	*47*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C2 PFHxA	*85*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C4 PFHpA	*67*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C4 PFOA	*98*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C5 PFNA	*83*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C2 PFDA	*105*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C2 PFUnA	*98*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C2 PFDoA	*94*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*
13C2 PFTeDA	*105*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:28*	*1*

Client Sample ID: MW1

Date Collected: 09/20/22 14:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-1
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	62		25 - 150	09/30/22 05:20	10/09/22 07:28	1
18O2 PFHxS	94		25 - 150	09/30/22 05:20	10/09/22 07:28	1
13C4 PFOS	97		25 - 150	09/30/22 05:20	10/09/22 07:28	1
13C8 FOSA	101		10 - 150	09/30/22 05:20	10/09/22 07:28	1
d3-NMeFOSAA	100		25 - 150	09/30/22 05:20	10/09/22 07:28	1
d5-NEtFOSAA	99		25 - 150	09/30/22 05:20	10/09/22 07:28	1
d-N-MeFOSA-M	96		10 - 150	09/30/22 05:20	10/09/22 07:28	1
d-N-EtFOSA-M	88		10 - 150	09/30/22 05:20	10/09/22 07:28	1
d7-N-MeFOSE-M	76		10 - 150	09/30/22 05:20	10/09/22 07:28	1
d9-N-EtFOSE-M	82		10 - 150	09/30/22 05:20	10/09/22 07:28	1
M2-4:2 FTS	116		25 - 150	09/30/22 05:20	10/09/22 07:28	1
M2-6:2 FTS	112		25 - 150	09/30/22 05:20	10/09/22 07:28	1
M2-8:2 FTS	113		25 - 150	09/30/22 05:20	10/09/22 07:28	1
13C3 HFPO-DA	77		25 - 150	09/30/22 05:20	10/09/22 07:28	1
13C2 10:2 FTS	94		25 - 150	09/30/22 05:20	10/09/22 07:28	1

Client Sample ID: MW2

Date Collected: 09/20/22 13:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**15**		4.5	2.1	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluoropentanoic acid (PFPeA)	**21**		1.8	0.44	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorohexanoic acid (PFHxA)	**20**		1.8	0.52	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluoroheptanoic acid (PFHpA)	**14**		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorooctanoic acid (PFOA)	**22**		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorononanoic acid (PFNA)	**1.2**	**J**	1.8	0.24	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorobutanesulfonic acid (PFBS)	**1.2**	**J**	1.8	0.18	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorohexanesulfonic acid (PFHxS)	**0.89**	**J**	1.8	0.51	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorooctanesulfonic acid (PFOS)	**6.9**	**I**	1.8	0.48	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 06:40	1
Perfluorooctanesulfonamide (FOSA)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 06:40	1
NEtFOSA	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 06:40	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 06:40	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/04/22 06:40	1

Client Sample ID: MW2

Date Collected: 09/20/22 13:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	<1.2		4.5	1.2	ng/L		09/30/22 05:20	10/04/22 06:40	1
NMeFOSE	<1.2		3.6	1.2	ng/L		09/30/22 05:20	10/04/22 06:40	1
NEtFOSE	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 06:40	1
4:2 FTS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 06:40	1
6:2 FTS	<2.2		4.5	2.2	ng/L		09/30/22 05:20	10/04/22 06:40	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/04/22 06:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/04/22 06:40	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 06:40	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 06:40	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 06:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*50*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C5 PFPeA	*68*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 PFHxA	*78*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C4 PFHpA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C4 PFOA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C5 PFNA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 PFDA	*86*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 PFUnA	*80*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 PFDoA	*75*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 PFTeDA	*69*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C3 PFBS	*77*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
18O2 PFHxS	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C4 PFOS	*86*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C8 FOSA	*79*		*10 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d3-NMeFOSAA	*77*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d5-NEtFOSAA	*75*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d-N-MeFOSA-M	*66*		*10 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d-N-EtFOSA-M	*60*		*10 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d7-N-MeFOSE-M	*70*		*10 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
d9-N-EtFOSE-M	*63*		*10 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
M2-4:2 FTS	*115*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
M2-6:2 FTS	*107*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
M2-8:2 FTS	*91*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C3 HFPO-DA	*79*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*
13C2 10:2 FTS	*76*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:40*	*1*

Client Sample ID: MW3

Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-3
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**140**		89	43	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluoropentanoic acid (PFPeA)	**330**		36	8.7	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorohexanoic acid (PFHxA)	**1000**		36	10	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluoroheptanoic acid (PFHpA)	**550**		36	4.4	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorononanoic acid (PFNA)	**6.3**	**J**	36	4.8	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorodecanoic acid (PFDA)	<5.5		36	5.5	ng/L		09/30/22 05:20	10/09/22 08:18	20

Client Sample ID: MW3

Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-3

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<20		36	20	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorododecanoic acid (PFDoA)	<9.8		36	9.8	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorotridecanoic acid (PFTrDA)	<23		36	23	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorotetradecanoic acid (PFTeA)	<13		36	13	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorobutanesulfonic acid (PFBS)	**11**	**J**	36	3.6	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluoropentanesulfonic acid (PFPeS)	**32**	**J**	36	5.3	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorohexanesulfonic acid (PFHxS)	**120**		36	10	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluoroheptanesulfonic acid (PFHpS)	**25**	**J**	36	3.4	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorooctanesulfonic acid (PFOS)	**760**		36	9.6	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorononanesulfonic acid (PFNS)	<6.6		36	6.6	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorodecanesulfonic acid (PFDS)	<5.7		36	5.7	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorododecanesulfonic acid (PFDoS)	<17		36	17	ng/L		09/30/22 05:20	10/09/22 08:18	20
Perfluorooctanesulfonamide (FOSA)	<17		36	17	ng/L		09/30/22 05:20	10/09/22 08:18	20
NEtFOSA	<15		36	15	ng/L		09/30/22 05:20	10/09/22 08:18	20
NMeFOSA	<7.6		36	7.6	ng/L		09/30/22 05:20	10/09/22 08:18	20
NMeFOSAA	<21		89	21	ng/L		09/30/22 05:20	10/09/22 08:18	20
NEtFOSAA	**290**		89	23	ng/L		09/30/22 05:20	10/09/22 08:18	20
NMeFOSE	<25		71	25	ng/L		09/30/22 05:20	10/09/22 08:18	20
NEtFOSE	<15		36	15	ng/L		09/30/22 05:20	10/09/22 08:18	20
4:2 FTS	<4.3		36	4.3	ng/L		09/30/22 05:20	10/09/22 08:18	20
6:2 FTS	<44		89	44	ng/L		09/30/22 05:20	10/09/22 08:18	20
8:2 FTS	<8.2		36	8.2	ng/L		09/30/22 05:20	10/09/22 08:18	20
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<7.1		36	7.1	ng/L		09/30/22 05:20	10/09/22 08:18	20
HFPO-DA (GenX)	<27		71	27	ng/L		09/30/22 05:20	10/09/22 08:18	20
9Cl-PF3ONS	<4.3		36	4.3	ng/L		09/30/22 05:20	10/09/22 08:18	20
11Cl-PF3OUdS	<5.7		36	5.7	ng/L		09/30/22 05:20	10/09/22 08:18	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*54*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C5 PFPeA	*59*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C2 PFHxA	*68*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C4 PFHpA	*56*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C5 PFNA	*54*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C2 PFDA	*64*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C2 PFUnA	*63*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C2 PFDoA	*56*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C2 PFTeDA	*38*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C3 PFBS	*68*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
18O2 PFHxS	*66*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C4 PFOS	*64*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
13C8 FOSA	*69*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
d3-NMeFOSAA	*69*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
d5-NEtFOSAA	*77*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
d-N-MeFOSA-M	*58*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*
d-N-EtFOSA-M	*59*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:18*	*20*

Client Sample ID: MW3

Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-3
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d7-N-MeFOSE-M	54		10 - 150	09/30/22 05:20	10/09/22 08:18	20
d9-N-EtFOSE-M	40		10 - 150	09/30/22 05:20	10/09/22 08:18	20
M2-4:2 FTS	81		25 - 150	09/30/22 05:20	10/09/22 08:18	20
M2-6:2 FTS	65		25 - 150	09/30/22 05:20	10/09/22 08:18	20
M2-8:2 FTS	60		25 - 150	09/30/22 05:20	10/09/22 08:18	20
13C3 HFPO-DA	57		25 - 150	09/30/22 05:20	10/09/22 08:18	20
13C2 10:2 FTS	51		25 - 150	09/30/22 05:20	10/09/22 08:18	20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**35000**		180	76	ng/L		09/30/22 05:20	10/11/22 13:37	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	55		25 - 150	09/30/22 05:20	10/11/22 13:37	100

Client Sample ID: MW4

Date Collected: 09/20/22 12:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-4
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**34**	**J**	49	24	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluoropentanoic acid (PFPeA)	**100**		20	4.8	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorohexanoic acid (PFHxA)	**83**		20	5.7	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluoroheptanoic acid (PFHpA)	**41**		20	2.5	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorooctanoic acid (PFOA)	**1500**		20	8.4	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorononanoic acid (PFNA)	<2.7		20	2.7	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorodecanoic acid (PFDA)	<3.1		20	3.1	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluoroundecanoic acid (PFUnA)	<11		20	11	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorododecanoic acid (PFDoA)	<5.4		20	5.4	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorotridecanoic acid (PFTrDA)	<13		20	13	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorotetradecanoic acid (PFTeA)	<7.2		20	7.2	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorobutanesulfonic acid (PFBS)	**8.3**	**J**	20	2.0	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluoropentanesulfonic acid (PFPeS)	<3.0		20	3.0	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorohexanesulfonic acid (PFHxS)	**30**		20	5.6	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		20	1.9	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorooctanesulfonic acid (PFOS)	**170**		20	5.3	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorononanesulfonic acid (PFNS)	<3.6		20	3.6	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorodecanesulfonic acid (PFDS)	<3.2		20	3.2	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorododecanesulfonic acid (PFDoS)	<9.6		20	9.6	ng/L		09/30/22 05:20	10/09/22 08:28	10
Perfluorooctanesulfonamide (FOSA)	<9.7		20	9.7	ng/L		09/30/22 05:20	10/09/22 08:28	10
NEtFOSA	<8.6		20	8.6	ng/L		09/30/22 05:20	10/09/22 08:28	10
NMeFOSA	<4.2		20	4.2	ng/L		09/30/22 05:20	10/09/22 08:28	10
NMeFOSAA	<12		49	12	ng/L		09/30/22 05:20	10/09/22 08:28	10
NEtFOSAA	**14**	**J**	49	13	ng/L		09/30/22 05:20	10/09/22 08:28	10
NMeFOSE	<14		39	14	ng/L		09/30/22 05:20	10/09/22 08:28	10

Client Sample ID: MW4

Date Collected: 09/20/22 12:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-4
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSE	<8.4		20	8.4	ng/L		09/30/22 05:20	10/09/22 08:28	10
4:2 FTS	<2.4		20	2.4	ng/L		09/30/22 05:20	10/09/22 08:28	10
6:2 FTS	<25		49	25	ng/L		09/30/22 05:20	10/09/22 08:28	10
8:2 FTS	<4.5		20	4.5	ng/L		09/30/22 05:20	10/09/22 08:28	10
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<3.9		20	3.9	ng/L		09/30/22 05:20	10/09/22 08:28	10
HFPO-DA (GenX)	<15		39	15	ng/L		09/30/22 05:20	10/09/22 08:28	10
9Cl-PF3ONS	<2.4		20	2.4	ng/L		09/30/22 05:20	10/09/22 08:28	10
11Cl-PF3OUdS	<3.2		20	3.2	ng/L		09/30/22 05:20	10/09/22 08:28	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*100*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C5 PFPeA	*86*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 PFHxA	*96*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C4 PFHpA	*87*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C4 PFOA	*97*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C5 PFNA	*84*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 PFDA	*99*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 PFUnA	*86*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 PFDoA	*81*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 PFTeDA	*85*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C3 PFBS	*101*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
18O2 PFHxS	*102*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C4 PFOS	*91*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C8 FOSA	*90*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d3-NMeFOSAA	*88*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d5-NEtFOSAA	*97*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d-N-MeFOSA-M	*74*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d-N-EtFOSA-M	*72*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d7-N-MeFOSE-M	*74*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
d9-N-EtFOSE-M	*63*		*10 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
M2-4:2 FTS	*125*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
M2-6:2 FTS	*104*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
M2-8:2 FTS	*86*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C3 HFPO-DA	*75*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*
13C2 10:2 FTS	*79*		*25 - 150*	*09/30/22 05:20*	*10/09/22 08:28*	*10*

Client Sample ID: MW5

Date Collected: 09/19/22 16:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-5
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**56**		4.4	2.1	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluoropentanoic acid (PFPeA)	**140**		1.8	0.43	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorohexanoic acid (PFHxA)	**200**		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluoroheptanoic acid (PFHpA)	**120**		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorononanoic acid (PFNA)	**9.1**		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorodecanoic acid (PFDA)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluoroundecanoic acid (PFUnA)	**12**	**I**	1.8	0.97	ng/L		09/30/22 05:20	10/04/22 07:10	1

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: MW5
Date Collected: 09/19/22 16:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-5
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorobutanesulfonic acid (PFBS)	**2.1**		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluoropentanesulfonic acid (PFPeS)	**4.3**		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorohexanesulfonic acid (PFHxS)	**34**		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluoroheptanesulfonic acid (PFHpS)	**2.8**		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorooctanesulfonic acid (PFOS)	**160**		1.8	0.48	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorododecanesulfonic acid (PFDoS)	<0.86		1.8	0.86	ng/L		09/30/22 05:20	10/04/22 07:10	1
Perfluorooctanesulfonamide (FOSA)	**2.6**		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 07:10	1
NEtFOSA	<0.77		1.8	0.77	ng/L		09/30/22 05:20	10/04/22 07:10	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 07:10	1
NMeFOSAA	**2.3**	**J**	4.4	1.1	ng/L		09/30/22 05:20	10/04/22 07:10	1
NEtFOSAA	**36**		4.4	1.2	ng/L		09/30/22 05:20	10/04/22 07:10	1
NMeFOSE	<1.2		3.5	1.2	ng/L		09/30/22 05:20	10/04/22 07:10	1
NEtFOSE	<0.75		1.8	0.75	ng/L		09/30/22 05:20	10/04/22 07:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.35		1.8	0.35	ng/L		09/30/22 05:20	10/04/22 07:10	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		09/30/22 05:20	10/04/22 07:10	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 07:10	1
11Cl-PF3OUdS	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*32*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C5 PFPeA	*53*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C2 PFHxA	*72*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C4 PFHpA	*82*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C5 PFNA	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C2 PFDA	*107*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C2 PFUnA	*106*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C2 PFDoA	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C2 PFTeDA	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C3 PFBS	*75*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
18O2 PFHxS	*102*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C4 PFOS	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C8 FOSA	*91*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d3-NMeFOSAA	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d5-NEtFOSAA	*106*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d-N-MeFOSA-M	*85*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d-N-EtFOSA-M	*85*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d7-N-MeFOSE-M	*89*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
d9-N-EtFOSE-M	*87*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*
13C3 HFPO-DA	*73*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*

Client Sample ID: MW5

Date Collected: 09/19/22 16:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-5
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 10:2 FTS	*128*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:10*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**3500**		35	15	ng/L		09/30/22 05:20	10/09/22 09:09	20
4:2 FTS	<4.3		35	4.3	ng/L		09/30/22 05:20	10/09/22 09:09	20
6:2 FTS	<44		89	44	ng/L		09/30/22 05:20	10/09/22 09:09	20
8:2 FTS	<8.1		35	8.1	ng/L		09/30/22 05:20	10/09/22 09:09	20

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	*80*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:09*	*20*
M2-4:2 FTS	*71*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:09*	*20*
M2-6:2 FTS	*57*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:09*	*20*
M2-8:2 FTS	*57*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:09*	*20*

Client Sample ID: MW6

Date Collected: 09/21/22 08:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-6
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**150**		4.4	2.1	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorohexanoic acid (PFHxA)	**320**		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluoroheptanoic acid (PFHpA)	**210**		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorononanoic acid (PFNA)	**4.3**		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorodecanoic acid (PFDA)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluoroundecanoic acid (PFUnA)	<0.96		1.8	0.96	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorododecanoic acid (PFDoA)	<0.48		1.8	0.48	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorotridecanoic acid (PFTrDA)	<1.1		1.8	1.1	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorotetradecanoic acid (PFTeA)	<0.64		1.8	0.64	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorobutanesulfonic acid (PFBS)	**1.7**	**J**	1.8	0.18	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluoropentanesulfonic acid (PFPeS)	**3.7**		1.8	0.26	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorohexanesulfonic acid (PFHxS)	**19**		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluoroheptanesulfonic acid (PFHpS)	**1.5**	**J**	1.8	0.17	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorooctanesulfonic acid (PFOS)	**56**		1.8	0.47	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorononanesulfonic acid (PFNS)	<0.32		1.8	0.32	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.85		1.8	0.85	ng/L		09/30/22 05:20	10/04/22 07:21	1
Perfluorooctanesulfonamide (FOSA)	<0.86		1.8	0.86	ng/L		09/30/22 05:20	10/04/22 07:21	1
NEtFOSA	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 07:21	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 07:21	1
NMeFOSAA	**1.1**	**J**	4.4	1.1	ng/L		09/30/22 05:20	10/04/22 07:21	1
NEtFOSAA	**16**		4.4	1.1	ng/L		09/30/22 05:20	10/04/22 07:21	1
NMeFOSE	<1.2		3.5	1.2	ng/L		09/30/22 05:20	10/04/22 07:21	1
NEtFOSE	**1.5**	**J**	1.8	0.74	ng/L		09/30/22 05:20	10/04/22 07:21	1
4:2 FTS	**1.7**	**J**	1.8	0.21	ng/L		09/30/22 05:20	10/04/22 07:21	1

Client Sample ID: MW6

Date Collected: 09/21/22 08:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-6
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	**20**		4.4	2.2	ng/L		09/30/22 05:20	10/04/22 07:21	1
8:2 FTS	<0.40		1.8	0.40	ng/L		09/30/22 05:20	10/04/22 07:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.35		1.8	0.35	ng/L		09/30/22 05:20	10/04/22 07:21	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		09/30/22 05:20	10/04/22 07:21	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 07:21	1
11Cl-PF3OUdS	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*36*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C5 PFPeA	*53*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 PFHxA	*69*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C4 PFHpA	*83*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C4 PFOA	*77*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C5 PFNA	*91*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 PFDA	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 PFUnA	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 PFDoA	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C3 PFBS	*72*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
18O2 PFHxS	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C4 PFOS	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C8 FOSA	*83*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d3-NMeFOSAA	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d5-NEtFOSAA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d-N-MeFOSA-M	*73*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d-N-EtFOSA-M	*69*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d7-N-MeFOSE-M	*78*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
d9-N-EtFOSE-M	*72*		*10 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
M2-4:2 FTS	*148*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
M2-6:2 FTS	*149*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
M2-8:2 FTS	*149*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C3 HFPO-DA	*69*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*
13C2 10:2 FTS	*104*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:21*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	**350**		18	4.3	ng/L		09/30/22 05:20	10/09/22 09:19	10
Perfluorooctanoic acid (PFOA)	**1500**		18	7.4	ng/L		09/30/22 05:20	10/09/22 09:19	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C5 PFPeA	*79*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:19*	*10*
13C4 PFOA	*83*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:19*	*10*

Client Sample ID: MW7

Date Collected: 09/21/22 12:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-7
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**93**		4.4	2.1	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluoropentanoic acid (PFPeA)	**260**		1.8	0.43	ng/L		09/30/22 05:20	10/04/22 07:31	1

Client Sample ID: MW7
Date Collected: 09/21/22 12:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-7
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**240**		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluoroheptanoic acid (PFHpA)	**87**		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorononanoic acid (PFNA)	**3.3**		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorobutanesulfonic acid (PFBS)	**2.2**		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluoropentanesulfonic acid (PFPeS)	**5.1**		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorohexanesulfonic acid (PFHxS)	**21**		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluoroheptanesulfonic acid (PFHpS)	**4.3**		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorooctanesulfonic acid (PFOS)	**240**		1.8	0.48	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorododecanesulfonic acid (PFDoS)	<0.86		1.8	0.86	ng/L		09/30/22 05:20	10/04/22 07:31	1
Perfluorooctanesulfonamide (FOSA)	**14**		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 07:31	1
NEtFOSA	<0.77		1.8	0.77	ng/L		09/30/22 05:20	10/04/22 07:31	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 07:31	1
NMeFOSAA	<1.1		4.4	1.1	ng/L		09/30/22 05:20	10/04/22 07:31	1
NEtFOSAA	**2.6**	**J**	4.4	1.2	ng/L		09/30/22 05:20	10/04/22 07:31	1
NMeFOSE	<1.2		3.5	1.2	ng/L		09/30/22 05:20	10/04/22 07:31	1
NEtFOSE	<0.75		1.8	0.75	ng/L		09/30/22 05:20	10/04/22 07:31	1
4:2 FTS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 07:31	1
6:2 FTS	**7.6**		4.4	2.2	ng/L		09/30/22 05:20	10/04/22 07:31	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/04/22 07:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.35		1.8	0.35	ng/L		09/30/22 05:20	10/04/22 07:31	1
HFPO-DA (GenX)	<1.3		3.5	1.3	ng/L		09/30/22 05:20	10/04/22 07:31	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 07:31	1
11Cl-PF3OUdS	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 07:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*32*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C5 PFPeA	*52*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C2 PFHxA	*65*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C4 PFHpA	*80*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C4 PFOA	*70*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C5 PFNA	*83*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C2 PFDA	*90*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C2 PFUnA	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C2 PFDoA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C2 PFTeDA	*76*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
13C3 PFBS	*68*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*
18O2 PFHxS	*81*		*25 - 150*	*09/30/22 05:20*	*10/04/22 07:31*	*1*

Client Sample ID: MW7

Date Collected: 09/21/22 12:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-7
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	79		25 - 150	09/30/22 05:20	10/04/22 07:31	1
13C8 FOSA	80		10 - 150	09/30/22 05:20	10/04/22 07:31	1
d3-NMeFOSAA	81		25 - 150	09/30/22 05:20	10/04/22 07:31	1
d5-NEtFOSAA	83		25 - 150	09/30/22 05:20	10/04/22 07:31	1
d-N-MeFOSA-M	74		10 - 150	09/30/22 05:20	10/04/22 07:31	1
d-N-EtFOSA-M	67		10 - 150	09/30/22 05:20	10/04/22 07:31	1
d7-N-MeFOSE-M	77		10 - 150	09/30/22 05:20	10/04/22 07:31	1
d9-N-EtFOSE-M	70		10 - 150	09/30/22 05:20	10/04/22 07:31	1
M2-4:2 FTS	105		25 - 150	09/30/22 05:20	10/04/22 07:31	1
M2-6:2 FTS	103		25 - 150	09/30/22 05:20	10/04/22 07:31	1
M2-8:2 FTS	129		25 - 150	09/30/22 05:20	10/04/22 07:31	1
13C3 HFPO-DA	65		25 - 150	09/30/22 05:20	10/04/22 07:31	1
13C2 10:2 FTS	90		25 - 150	09/30/22 05:20	10/04/22 07:31	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	4100		35	15	ng/L		09/30/22 05:20	10/09/22 07:38	20

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	69		25 - 150	09/30/22 05:20	10/09/22 07:38	20

Client Sample ID: PZ4

Date Collected: 09/20/22 11:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-8
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	37		4.8	2.3	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluoropentanoic acid (PFPeA)	84		1.9	0.47	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorohexanoic acid (PFHxA)	110		1.9	0.56	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluoroheptanoic acid (PFHpA)	66		1.9	0.24	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorononanoic acid (PFNA)	<0.26		1.9	0.26	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorodecanoic acid (PFDA)	<0.30		1.9	0.30	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluoroundecanoic acid (PFUnA)	<1.1		1.9	1.1	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorododecanoic acid (PFDoA)	<0.53		1.9	0.53	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		1.9	1.3	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorotetradecanoic acid (PFTeA)	<0.70		1.9	0.70	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorobutanesulfonic acid (PFBS)	3.7		1.9	0.19	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluoropentanesulfonic acid (PFPeS)	3.2		1.9	0.29	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorohexanesulfonic acid (PFHxS)	13		1.9	0.55	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.18		1.9	0.18	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorooctanesulfonic acid (PFOS)	4.4	I	1.9	0.52	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorononanesulfonic acid (PFNS)	<0.36		1.9	0.36	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorodecanesulfonic acid (PFDS)	<0.31		1.9	0.31	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorododecanesulfonic acid (PFDoS)	<0.94		1.9	0.94	ng/L		09/30/22 05:20	10/04/22 08:11	1
Perfluorooctanesulfonamide (FOSA)	<0.95		1.9	0.95	ng/L		09/30/22 05:20	10/04/22 08:11	1

Client Sample ID: PZ4
Date Collected: 09/20/22 11:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-8
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSA	<0.84		1.9	0.84	ng/L		09/30/22 05:20	10/04/22 08:11	1
NMeFOSA	<0.41		1.9	0.41	ng/L		09/30/22 05:20	10/04/22 08:11	1
NMeFOSAA	<1.2		4.8	1.2	ng/L		09/30/22 05:20	10/04/22 08:11	1
NEtFOSAA	<1.3		4.8	1.3	ng/L		09/30/22 05:20	10/04/22 08:11	1
NMeFOSE	<1.4		3.9	1.4	ng/L		09/30/22 05:20	10/04/22 08:11	1
NEtFOSE	<0.82		1.9	0.82	ng/L		09/30/22 05:20	10/04/22 08:11	1
4:2 FTS	**0.68**	**J**	1.9	0.23	ng/L		09/30/22 05:20	10/04/22 08:11	1
6:2 FTS	**5.9**		4.8	2.4	ng/L		09/30/22 05:20	10/04/22 08:11	1
8:2 FTS	<0.44		1.9	0.44	ng/L		09/30/22 05:20	10/04/22 08:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.39		1.9	0.39	ng/L		09/30/22 05:20	10/04/22 08:11	1
HFPO-DA (GenX)	<1.4		3.9	1.4	ng/L		09/30/22 05:20	10/04/22 08:11	1
9Cl-PF3ONS	<0.23		1.9	0.23	ng/L		09/30/22 05:20	10/04/22 08:11	1
11Cl-PF3OUdS	<0.31		1.9	0.31	ng/L		09/30/22 05:20	10/04/22 08:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*39*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C5 PFPeA	*66*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 PFHxA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C4 PFHpA	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C4 PFOA	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C5 PFNA	*116*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 PFDA	*112*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 PFUnA	*105*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 PFDoA	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 PFTeDA	*106*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C3 PFBS	*93*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
18O2 PFHxS	*115*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C4 PFOS	*108*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C8 FOSA	*104*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d3-NMeFOSAA	*98*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d5-NEtFOSAA	*94*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d-N-MeFOSA-M	*91*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d-N-EtFOSA-M	*87*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d7-N-MeFOSE-M	*97*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
d9-N-EtFOSE-M	*91*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
M2-4:2 FTS	*149*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
M2-6:2 FTS	*114*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
M2-8:2 FTS	*105*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C3 HFPO-DA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*
13C2 10:2 FTS	*90*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:11*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	**5300**		39	16	ng/L		09/30/22 05:20	10/09/22 07:48	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*94*		*25 - 150*	*09/30/22 05:20*	*10/09/22 07:48*	*20*

Client Sample ID: PZ3

Date Collected: 09/20/22 10:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-9

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**150**		4.5	2.2	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorononanoic acid (PFNA)	**11**		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluoroundecanoic acid (PFUnA)	<0.99		1.8	0.99	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorobutanesulfonic acid (PFBS)	**9.0**		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluoropentanesulfonic acid (PFPeS)	**37**		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorohexanesulfonic acid (PFHxS)	**89**		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluoroheptanesulfonic acid (PFHpS)	**6.3**		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorooctanesulfonic acid (PFOS)	**79**		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 08:21	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		09/30/22 05:20	10/04/22 08:21	1
NEtFOSA	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 08:21	1
NMeFOSA	<0.39		1.8	0.39	ng/L		09/30/22 05:20	10/04/22 08:21	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/04/22 08:21	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		09/30/22 05:20	10/04/22 08:21	1
NMeFOSE	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 08:21	1
NEtFOSE	<0.77		1.8	0.77	ng/L		09/30/22 05:20	10/04/22 08:21	1
4:2 FTS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 08:21	1
6:2 FTS	**14**		4.5	2.3	ng/L		09/30/22 05:20	10/04/22 08:21	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/04/22 08:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/04/22 08:21	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		09/30/22 05:20	10/04/22 08:21	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 08:21	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:21	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*23*	*5-	*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C2 PFDA	*112*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C2 PFUnA	*104*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C2 PFDoA	*103*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C2 PFTeDA	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C3 PFBS	*67*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
18O2 PFHxS	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C4 PFOS	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
13C8 FOSA	*94*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
d3-NMeFOSAA	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
d5-NEtFOSAA	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
d-N-MeFOSA-M	*90*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*
d-N-EtFOSA-M	*86*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:21*	*1*

Client Sample ID: PZ3

Date Collected: 09/20/22 10:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-9
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d7-N-MeFOSE-M	92		10 - 150	09/30/22 05:20	10/04/22 08:21	1
d9-N-EtFOSE-M	86		10 - 150	09/30/22 05:20	10/04/22 08:21	1
M2-4:2 FTS	130		25 - 150	09/30/22 05:20	10/04/22 08:21	1
M2-6:2 FTS	55		25 - 150	09/30/22 05:20	10/04/22 08:21	1
M2-8:2 FTS	145		25 - 150	09/30/22 05:20	10/04/22 08:21	1
13C3 HFPO-DA	69		25 - 150	09/30/22 05:20	10/04/22 08:21	1
13C2 10:2 FTS	105		25 - 150	09/30/22 05:20	10/04/22 08:21	1

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	490		90	22	ng/L		09/30/22 05:20	10/09/22 09:29	50
Perfluorohexanoic acid (PFHxA)	2700		90	26	ng/L		09/30/22 05:20	10/09/22 09:29	50
Perfluoroheptanoic acid (PFHpA)	1100		90	11	ng/L		09/30/22 05:20	10/09/22 09:29	50

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	55		25 - 150	09/30/22 05:20	10/09/22 09:29	50
13C2 PFHxA	44		25 - 150	09/30/22 05:20	10/09/22 09:29	50
13C4 PFHpA	48		25 - 150	09/30/22 05:20	10/09/22 09:29	50

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	58000		450	190	ng/L		09/30/22 05:20	10/21/22 12:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	101		25 - 150	09/30/22 05:20	10/21/22 12:44	1

Client Sample ID: PZ5

Date Collected: 09/19/22 17:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-10
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	63		4.5	2.1	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluoropentanoic acid (PFPeA)	240		1.8	0.44	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluoroheptanoic acid (PFHpA)	190		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorononanoic acid (PFNA)	2.6		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorobutanesulfonic acid (PFBS)	3.8		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluoropentanesulfonic acid (PFPeS)	9.9		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorohexanesulfonic acid (PFHxS)	78		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluoroheptanesulfonic acid (PFHpS)	0.34	J	1.8	0.17	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:31	1

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: PZ5
Date Collected: 09/19/22 17:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-10
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	<0.86		1.8	0.86	ng/L		09/30/22 05:20	10/04/22 08:31	1
Perfluorooctanesulfonamide (FOSA)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 08:31	1
NEtFOSA	<0.77		1.8	0.77	ng/L		09/30/22 05:20	10/04/22 08:31	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 08:31	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/04/22 08:31	1
NEtFOSAA	**1.3**	**J**	4.5	1.2	ng/L		09/30/22 05:20	10/04/22 08:31	1
NMeFOSE	<1.2		3.6	1.2	ng/L		09/30/22 05:20	10/04/22 08:31	1
NEtFOSE	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 08:31	1
4:2 FTS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 08:31	1
6:2 FTS	**61**		4.5	2.2	ng/L		09/30/22 05:20	10/04/22 08:31	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/04/22 08:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/04/22 08:31	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 08:31	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 08:31	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*27*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C5 PFPeA	*48*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C4 PFHpA	*97*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C5 PFNA	*118*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C2 PFDA	*123*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C2 PFUnA	*124*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C2 PFDoA	*119*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C2 PFTeDA	*110*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C3 PFBS	*79*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
18O2 PFHxS	*112*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C4 PFOS	*115*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C8 FOSA	*110*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d3-NMeFOSAA	*108*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d5-NEtFOSAA	*109*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d-N-MeFOSA-M	*96*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d-N-EtFOSA-M	*92*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d7-N-MeFOSE-M	*101*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
d9-N-EtFOSE-M	*96*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
M2-4:2 FTS	*151*	**5+*	*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
M2-6:2 FTS	*152*	**5+*	*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
M2-8:2 FTS	*148*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C3 HFPO-DA	*83*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*
13C2 10:2 FTS	*110*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:31*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**470**		36	10	ng/L		09/30/22 05:20	10/09/22 09:39	20
Perfluorooctanoic acid (PFOA)	**6700**		36	15	ng/L		09/30/22 05:20	10/09/22 09:39	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*86*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:39*	*20*
13C4 PFOA	*83*		*25 - 150*	*09/30/22 05:20*	*10/09/22 09:39*	*20*

Client Sample ID: 092022DUP
Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-11
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**160**	**H**	90	43	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluoropentanoic acid (PFPeA)	**320**	**H**	36	8.8	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorohexanoic acid (PFHxA)	**1100**	**H**	36	10	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluoroheptanoic acid (PFHpA)	**540**	**H**	36	4.5	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorononanoic acid (PFNA)	**5.6**	**J H**	36	4.9	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorodecanoic acid (PFDA)	<5.6	H	36	5.6	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluoroundecanoic acid (PFUnA)	<20	H	36	20	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorododecanoic acid (PFDoA)	<9.9	H	36	9.9	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorotridecanoic acid (PFTrDA)	<23	H	36	23	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorotetradecanoic acid (PFTeA)	<13	H	36	13	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorobutanesulfonic acid (PFBS)	**10**	**J H**	36	3.6	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluoropentanesulfonic acid (PFPeS)	**31**	**J H**	36	5.4	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorohexanesulfonic acid (PFHxS)	**130**	**H**	36	10	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluoroheptanesulfonic acid (PFHpS)	**25**	**J H**	36	3.4	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorooctanesulfonic acid (PFOS)	**760**	**H**	36	9.7	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorononanesulfonic acid (PFNS)	<6.7	H	36	6.7	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorodecanesulfonic acid (PFDS)	<5.8	H	36	5.8	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorododecanesulfonic acid (PFDoS)	<17	H	36	17	ng/L		09/30/22 05:20	11/02/22 11:09	20
Perfluorooctanesulfonamide (FOSA)	<18	H	36	18	ng/L		09/30/22 05:20	11/02/22 11:09	20
NEtFOSA	<16	H	36	16	ng/L		09/30/22 05:20	11/02/22 11:09	20
NMeFOSA	<7.7	H	36	7.7	ng/L		09/30/22 05:20	11/02/22 11:09	20
NMeFOSAA	<22	H	90	22	ng/L		09/30/22 05:20	11/02/22 11:09	20
NEtFOSAA	**260**	**H**	90	23	ng/L		09/30/22 05:20	11/02/22 11:09	20
NMeFOSE	<25	H	72	25	ng/L		09/30/22 05:20	11/02/22 11:09	20
NEtFOSE	<15	H	36	15	ng/L		09/30/22 05:20	11/02/22 11:09	20
4:2 FTS	<4.3	H	36	4.3	ng/L		09/30/22 05:20	11/02/22 11:09	20
6:2 FTS	<45	H	90	45	ng/L		09/30/22 05:20	11/02/22 11:09	20
8:2 FTS	<8.3	H	36	8.3	ng/L		09/30/22 05:20	11/02/22 11:09	20
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<7.2	H	36	7.2	ng/L		09/30/22 05:20	11/02/22 11:09	20
HFPO-DA (GenX)	<27	H	72	27	ng/L		09/30/22 05:20	11/02/22 11:09	20
9Cl-PF3ONS	<4.3	H	36	4.3	ng/L		09/30/22 05:20	11/02/22 11:09	20
11Cl-PF3OUdS	<5.8	H	36	5.8	ng/L		09/30/22 05:20	11/02/22 11:09	20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*40*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C5 PFPeA	*54*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C2 PFHxA	*56*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C4 PFHpA	*60*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C5 PFNA	*60*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C2 PFDA	*64*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C2 PFUnA	*59*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C2 PFDoA	*53*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C2 PFTeDA	*36*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
13C3 PFBS	*56*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*
18O2 PFHxS	*60*		*25 - 150*	*09/30/22 05:20*	*11/02/22 11:09*	*20*

Client Sample ID: 092022DUP

Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-11

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	66		25 - 150	09/30/22 05:20	11/02/22 11:09	20
13C8 FOSA	60		10 - 150	09/30/22 05:20	11/02/22 11:09	20
d3-NMeFOSAA	56		25 - 150	09/30/22 05:20	11/02/22 11:09	20
d5-NEtFOSAA	64		25 - 150	09/30/22 05:20	11/02/22 11:09	20
d-N-MeFOSA-M	47		10 - 150	09/30/22 05:20	11/02/22 11:09	20
d-N-EtFOSA-M	44		10 - 150	09/30/22 05:20	11/02/22 11:09	20
d7-N-MeFOSE-M	42		10 - 150	09/30/22 05:20	11/02/22 11:09	20
d9-N-EtFOSE-M	42		10 - 150	09/30/22 05:20	11/02/22 11:09	20
M2-4:2 FTS	114		25 - 150	09/30/22 05:20	11/02/22 11:09	20
M2-6:2 FTS	91		25 - 150	09/30/22 05:20	11/02/22 11:09	20
M2-8:2 FTS	95		25 - 150	09/30/22 05:20	11/02/22 11:09	20
13C3 HFPO-DA	51		25 - 150	09/30/22 05:20	11/02/22 11:09	20
13C2 10:2 FTS	76		25 - 150	09/30/22 05:20	11/02/22 11:09	20

Method: EPA 537 (modified) - Fluorinated Alkyl Substances - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	34000		180	76	ng/L		09/30/22 05:20	10/11/22 14:08	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	72		25 - 150	09/30/22 05:20	10/11/22 14:08	100

Client Sample ID: 092022FB

Date Collected: 09/20/22 10:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-12

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.1		4.5	2.1	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluoropentanoic acid (PFPeA)	<0.44		1.8	0.44	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorohexanoic acid (PFHxA)	<0.52		1.8	0.52	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluoroheptanoic acid (PFHpA)	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorooctanoic acid (PFOA)	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorononanoic acid (PFNA)	<0.24		1.8	0.24	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluoroundecanoic acid (PFUnA)	<0.98		1.8	0.98	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorododecanoic acid (PFDoA)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorotetradecanoic acid (PFTeA)	<0.65		1.8	0.65	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorohexanesulfonic acid (PFHxS)	<0.51		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.48		1.8	0.48	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorononanesulfonic acid (PFNS)	<0.33		1.8	0.33	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorododecanesulfonic acid (PFDoS)	<0.87		1.8	0.87	ng/L		09/30/22 05:20	10/04/22 08:52	1
Perfluorooctanesulfonamide (FOSA)	<0.88		1.8	0.88	ng/L		09/30/22 05:20	10/04/22 08:52	1
NEtFOSA	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 08:52	1
NMeFOSA	<0.38		1.8	0.38	ng/L		09/30/22 05:20	10/04/22 08:52	1

Client Sample ID: 092022FB

Date Collected: 09/20/22 10:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-12

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/04/22 08:52	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		09/30/22 05:20	10/04/22 08:52	1
NMeFOSE	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 08:52	1
NEtFOSE	<0.76		1.8	0.76	ng/L		09/30/22 05:20	10/04/22 08:52	1
4:2 FTS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 08:52	1
6:2 FTS	<2.2		4.5	2.2	ng/L		09/30/22 05:20	10/04/22 08:52	1
8:2 FTS	<0.41		1.8	0.41	ng/L		09/30/22 05:20	10/04/22 08:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/04/22 08:52	1
HFPO-DA (GenX)	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 08:52	1
9Cl-PF3ONS	<0.21		1.8	0.21	ng/L		09/30/22 05:20	10/04/22 08:52	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 08:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*77*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C5 PFPeA	*93*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 PFHxA	*98*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C4 PFHpA	*103*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C4 PFOA	*95*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C5 PFNA	*98*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 PFDA	*94*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 PFUnA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 PFDoA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 PFTeDA	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C3 PFBS	*99*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
18O2 PFHxS	*103*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C4 PFOS	*94*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C8 FOSA	*88*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d3-NMeFOSAA	*84*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d5-NEtFOSAA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d-N-MeFOSA-M	*83*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d-N-EtFOSA-M	*83*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d7-N-MeFOSE-M	*96*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
d9-N-EtFOSE-M	*90*		*10 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
M2-4:2 FTS	*102*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
M2-6:2 FTS	*142*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
M2-8:2 FTS	*90*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C3 HFPO-DA	*95*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*
13C2 10:2 FTS	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 08:52*	*1*

Client Sample ID: SW1

Date Collected: 09/19/22 17:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-13

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.2**	**J**	4.5	2.2	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluoropentanoic acid (PFPeA)	**0.84**	**J**	1.8	0.44	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorohexanoic acid (PFHxA)	**1.0**	**J**	1.8	0.53	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluoroheptanoic acid (PFHpA)	**0.80**	**J**	1.8	0.23	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorooctanoic acid (PFOA)	**1.1**	**J**	1.8	0.77	ng/L		09/30/22 05:20	10/04/22 09:02	1

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: SW1
Date Collected: 09/19/22 17:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-13
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<0.25		1.8	0.25	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorotetradecanoic acid (PFTeA)	<0.66		1.8	0.66	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorohexanesulfonic acid (PFHxS)	<0.52		1.8	0.52	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorododecanesulfonic acid (PFDoS)	<0.88		1.8	0.88	ng/L		09/30/22 05:20	10/04/22 09:02	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		09/30/22 05:20	10/04/22 09:02	1
NEtFOSA	<0.79		1.8	0.79	ng/L		09/30/22 05:20	10/04/22 09:02	1
NMeFOSA	<0.39		1.8	0.39	ng/L		09/30/22 05:20	10/04/22 09:02	1
NMeFOSAA	<1.1		4.5	1.1	ng/L		09/30/22 05:20	10/04/22 09:02	1
NEtFOSAA	<1.2		4.5	1.2	ng/L		09/30/22 05:20	10/04/22 09:02	1
NMeFOSE	<1.3		3.6	1.3	ng/L		09/30/22 05:20	10/04/22 09:02	1
NEtFOSE	<0.77		1.8	0.77	ng/L		09/30/22 05:20	10/04/22 09:02	1
4:2 FTS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:02	1
6:2 FTS	**2.5**	**J**	4.5	2.3	ng/L		09/30/22 05:20	10/04/22 09:02	1
8:2 FTS	<0.42		1.8	0.42	ng/L		09/30/22 05:20	10/04/22 09:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.36		1.8	0.36	ng/L		09/30/22 05:20	10/04/22 09:02	1
HFPO-DA (GenX)	<1.4		3.6	1.4	ng/L		09/30/22 05:20	10/04/22 09:02	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:02	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*58*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C5 PFPeA	*77*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 PFHxA	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C4 PFHpA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C4 PFOA	*93*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C5 PFNA	*93*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 PFDA	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 PFUnA	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 PFDoA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 PFTeDA	*72*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C3 PFBS	*79*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
18O2 PFHxS	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C4 PFOS	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C8 FOSA	*85*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
d3-NMeFOSAA	*83*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
d5-NEtFOSAA	*81*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
d-N-MeFOSA-M	*79*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*

Client Sample ID: SW1

Date Collected: 09/19/22 17:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-13
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d-N-EtFOSA-M	*73*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
d7-N-MeFOSE-M	*78*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
d9-N-EtFOSE-M	*74*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
M2-4:2 FTS	*119*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
M2-6:2 FTS	*101*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
M2-8:2 FTS	*88*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C3 HFPO-DA	*82*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*
13C2 10:2 FTS	*80*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:02*	*1*

Client Sample ID: SW2

Date Collected: 09/19/22 17:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-14
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.7**		4.6	2.2	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluoropentanoic acid (PFPeA)	**10**		1.8	0.45	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorohexanoic acid (PFHxA)	**9.5**		1.8	0.53	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluoroheptanoic acid (PFHpA)	**7.8**		1.8	0.23	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorooctanoic acid (PFOA)	**68**		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorononanoic acid (PFNA)	**0.99**	**J**	1.8	0.25	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorodecanoic acid (PFDA)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorododecanoic acid (PFDoA)	<0.51		1.8	0.51	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorotetradecanoic acid (PFTeA)	<0.67		1.8	0.67	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorobutanesulfonic acid (PFBS)	**0.41**	**J**	1.8	0.18	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorohexanesulfonic acid (PFHxS)	**0.63**	**J**	1.8	0.52	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorooctanesulfonic acid (PFOS)	**2.2**		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorododecanesulfonic acid (PFDoS)	<0.89		1.8	0.89	ng/L		09/30/22 05:20	10/04/22 09:12	1
Perfluorooctanesulfonamide (FOSA)	<0.90		1.8	0.90	ng/L		09/30/22 05:20	10/04/22 09:12	1
NEtFOSA	<0.80		1.8	0.80	ng/L		09/30/22 05:20	10/04/22 09:12	1
NMeFOSA	<0.40		1.8	0.40	ng/L		09/30/22 05:20	10/04/22 09:12	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		09/30/22 05:20	10/04/22 09:12	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		09/30/22 05:20	10/04/22 09:12	1
NMeFOSE	<1.3		3.7	1.3	ng/L		09/30/22 05:20	10/04/22 09:12	1
NEtFOSE	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 09:12	1
4:2 FTS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:12	1
6:2 FTS	<2.3		4.6	2.3	ng/L		09/30/22 05:20	10/04/22 09:12	1
8:2 FTS	<0.42		1.8	0.42	ng/L		09/30/22 05:20	10/04/22 09:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.8	0.37	ng/L		09/30/22 05:20	10/04/22 09:12	1

Client Sample ID: SW2

Date Collected: 09/19/22 17:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-14
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		09/30/22 05:20	10/04/22 09:12	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:12	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*54*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C5 PFPeA	*73*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 PFHxA	*84*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C4 PFHpA	*93*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C4 PFOA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C5 PFNA	*91*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 PFDA	*91*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 PFUnA	*90*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 PFDoA	*83*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 PFTeDA	*68*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C3 PFBS	*81*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
18O2 PFHxS	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C4 PFOS	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C8 FOSA	*86*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d3-NMeFOSAA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d5-NEtFOSAA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d-N-MeFOSA-M	*81*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d-N-EtFOSA-M	*78*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d7-N-MeFOSE-M	*81*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
d9-N-EtFOSE-M	*75*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
M2-4:2 FTS	*118*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
M2-6:2 FTS	*103*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
M2-8:2 FTS	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C3 HFPO-DA	*84*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*
13C2 10:2 FTS	*80*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:12*	*1*

Client Sample ID: SW3

Date Collected: 09/19/22 17:10
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-15
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.4**	**J**	4.6	2.2	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluoropentanoic acid (PFPeA)	**1.0**	**J**	1.8	0.45	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorohexanoic acid (PFHxA)	**1.3**	**J**	1.8	0.53	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluoroheptanoic acid (PFHpA)	**0.91**	**J**	1.8	0.23	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorooctanoic acid (PFOA)	**3.1**		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorononanoic acid (PFNA)	**0.44**	**J**	1.8	0.25	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorodecanoic acid (PFDA)	<0.28		1.8	0.28	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluoroundecanoic acid (PFUnA)	<1.0		1.8	1.0	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorododecanoic acid (PFDoA)	<0.50		1.8	0.50	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorotridecanoic acid (PFTrDA)	<1.2		1.8	1.2	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorotetradecanoic acid (PFTeA)	<0.67		1.8	0.67	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.18		1.8	0.18	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.27		1.8	0.27	ng/L		09/30/22 05:20	10/04/22 09:22	1

Client Sample ID: SW3
Date Collected: 09/19/22 17:10
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-15
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<0.52		1.8	0.52	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.17		1.8	0.17	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.49		1.8	0.49	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorononanesulfonic acid (PFNS)	<0.34		1.8	0.34	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorodecanesulfonic acid (PFDS)	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorododecanesulfonic acid (PFDoS)	<0.89		1.8	0.89	ng/L		09/30/22 05:20	10/04/22 09:22	1
Perfluorooctanesulfonamide (FOSA)	<0.89		1.8	0.89	ng/L		09/30/22 05:20	10/04/22 09:22	1
NEtFOSA	<0.79		1.8	0.79	ng/L		09/30/22 05:20	10/04/22 09:22	1
NMeFOSA	<0.39		1.8	0.39	ng/L		09/30/22 05:20	10/04/22 09:22	1
NMeFOSAA	<1.1		4.6	1.1	ng/L		09/30/22 05:20	10/04/22 09:22	1
NEtFOSAA	<1.2		4.6	1.2	ng/L		09/30/22 05:20	10/04/22 09:22	1
NMeFOSE	<1.3		3.7	1.3	ng/L		09/30/22 05:20	10/04/22 09:22	1
NEtFOSE	<0.78		1.8	0.78	ng/L		09/30/22 05:20	10/04/22 09:22	1
4:2 FTS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:22	1
6:2 FTS	**3.4**	**J**	4.6	2.3	ng/L		09/30/22 05:20	10/04/22 09:22	1
8:2 FTS	<0.42		1.8	0.42	ng/L		09/30/22 05:20	10/04/22 09:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.37		1.8	0.37	ng/L		09/30/22 05:20	10/04/22 09:22	1
HFPO-DA (GenX)	<1.4		3.7	1.4	ng/L		09/30/22 05:20	10/04/22 09:22	1
9Cl-PF3ONS	<0.22		1.8	0.22	ng/L		09/30/22 05:20	10/04/22 09:22	1
11Cl-PF3OUdS	<0.29		1.8	0.29	ng/L		09/30/22 05:20	10/04/22 09:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*61*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C5 PFPeA	*81*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 PFHxA	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C4 PFHpA	*98*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C4 PFOA	*95*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C5 PFNA	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 PFDA	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 PFUnA	*90*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 PFDoA	*86*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 PFTeDA	*66*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C3 PFBS	*87*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
18O2 PFHxS	*96*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C4 PFOS	*94*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C8 FOSA	*88*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d3-NMeFOSAA	*86*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d5-NEtFOSAA	*89*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d-N-MeFOSA-M	*85*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d-N-EtFOSA-M	*82*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d7-N-MeFOSE-M	*82*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
d9-N-EtFOSE-M	*77*		*10 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
M2-4:2 FTS	*119*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
M2-6:2 FTS	*104*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
M2-8:2 FTS	*92*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C3 HFPO-DA	*85*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*
13C2 10:2 FTS	*82*		*25 - 150*	*09/30/22 05:20*	*10/04/22 09:22*	*1*

Isotope Dilution Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-92441-1	MW1	54	47	85	67	98	83	105	98
320-92441-2	MW2	50	68	78	87	87	87	86	80
320-92441-3	MW3	54	59	68	56		54	64	63
320-92441-3 - DL	MW3					55			
320-92441-4	MW4	100	86	96	87	97	84	99	86
320-92441-5	MW5	32	53	72	82		101	107	106
320-92441-5 - DL	MW5					80			
320-92441-6	MW6	36	53	69	83	77	91	100	96
320-92441-6 - DL	MW6		79			83			
320-92441-7	MW7	32	52	65	80	70	83	90	89
320-92441-7 - DL	MW7					69			
320-92441-8	PZ4	39	66	87	101	88	116	112	105
320-92441-8 - DL	PZ4					94			
320-92441-9	PZ3	23 *5-					102	112	104
320-92441-9 - DL	PZ3		55	44	48				
320-92441-9 - DL2	PZ3					101			
320-92441-10	PZ5	27	48		97		118	123	124
320-92441-10 - DL	PZ5			86		83			
320-92441-11 - DL	092022DUP					72			
320-92441-11	092022DUP	40	54	56	60		60	64	59
320-92441-12	092022FB	77	93	98	103	95	98	94	92
320-92441-13	SW1	58	77	88	92	93	93	89	87
320-92441-14	SW2	54	73	84	93	92	91	91	90
320-92441-15	SW3	61	81	89	98	95	96	92	90
LCS 320-621213/2-A	Lab Control Sample	95	97	99	98	99	99	100	94
LCSD 320-621213/3-A	Lab Control Sample Dup	92	99	97	101	102	100	99	99
MB 320-621213/1-A	Method Blank	98	105	100	104	102	102	104	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-92441-1	MW1	94	105	62	94	97	101	100	99
320-92441-2	MW2	75	69	77	89	86	79	77	75
320-92441-3	MW3	56	38	68	66	64	69	69	77
320-92441-3 - DL	MW3								
320-92441-4	MW4	81	85	101	102	91	90	88	97
320-92441-5	MW5	100	96	75	102	100	91	100	106
320-92441-5 - DL	MW5								
320-92441-6	MW6	88	80	72	88	88	83	96	92
320-92441-6 - DL	MW6								
320-92441-7	MW7	85	76	68	81	79	80	81	83
320-92441-7 - DL	MW7								
320-92441-8	PZ4	100	106	93	115	108	104	98	94
320-92441-8 - DL	PZ4								
320-92441-9	PZ3	103	101	67	96	96	94	101	101
320-92441-9 - DL	PZ3								
320-92441-9 - DL2	PZ3								
320-92441-10	PZ5	119	110	79	112	115	110	108	109
320-92441-10 - DL	PZ5								
320-92441-11 - DL	092022DUP								

Isotope Dilution Summary

Client: AECOM
Job ID: 320-92441-1
Project/Site: PFAS, Wisconsin

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (10-150)	d3NMFOS (25-150)	d5NEFOS (25-150)
320-92441-11	092022DUP	53	36	56	60	66	60	56	64
320-92441-12	092022FB	92	96	99	103	94	88	84	87
320-92441-13	SW1	85	72	79	92	87	85	83	81
320-92441-14	SW2	83	68	81	92	89	86	85	85
320-92441-15	SW3	86	66	87	96	94	88	86	89
LCS 320-621213/2-A	Lab Control Sample	94	94	99	99	96	88	98	94
LCSD 320-621213/3-A	Lab Control Sample Dup	97	97	97	98	96	88	101	94
MB 320-621213/1-A	Method Blank	95	97	104	104	98	93	93	95

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	dMeFOSA (10-150)	dEtFOSA (10-150)	NMFM (10-150)	NEFM (10-150)	M242FTS (25-150)	M262FTS (25-150)	M282FTS (25-150)	HFPODA (25-150)
320-92441-1	MW1	96	88	76	82	116	112	113	77
320-92441-2	MW2	66	60	70	63	115	107	91	79
320-92441-3	MW3	58	59	54	40	81	65	60	57
320-92441-3 - DL	MW3								
320-92441-4	MW4	74	72	74	63	125	104	86	75
320-92441-5	MW5	85	85	89	87				73
320-92441-5 - DL	MW5					71	57	57	
320-92441-6	MW6	73	69	78	72	148	149	149	69
320-92441-6 - DL	MW6								
320-92441-7	MW7	74	67	77	70	105	103	129	65
320-92441-7 - DL	MW7								
320-92441-8	PZ4	91	87	97	91	149	114	105	85
320-92441-8 - DL	PZ4								
320-92441-9	PZ3	90	86	92	86	130	55	145	69
320-92441-9 - DL	PZ3								
320-92441-9 - DL2	PZ3								
320-92441-10	PZ5	96	92	101	96	151 *5+	152 *5+	148	83
320-92441-10 - DL	PZ5								
320-92441-11 - DL	092022DUP								
320-92441-11	092022DUP	47	44	42	42	114	91	95	51
320-92441-12	092022FB	83	83	96	90	102	142	90	95
320-92441-13	SW1	79	73	78	74	119	101	88	82
320-92441-14	SW2	81	78	81	75	118	103	89	84
320-92441-15	SW3	85	82	82	77	119	104	92	85
LCS 320-621213/2-A	Lab Control Sample	75	79	93	87	100	100	96	99
LCSD 320-621213/3-A	Lab Control Sample Dup	73	73	89	86	98	98	100	98
MB 320-621213/1-A	Method Blank	77	77	91	88	103	106	105	99

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M102FTS (25-150)							
320-92441-1	MW1	94							
320-92441-2	MW2	76							
320-92441-3	MW3	51							
320-92441-3 - DL	MW3								
320-92441-4	MW4	79							
320-92441-5	MW5	128							
320-92441-5 - DL	MW5								
320-92441-6	MW6	104							

Isotope Dilution Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	M102FTS (25-150)						
320-92441-6 - DL	MW6							
320-92441-7	MW7	90						
320-92441-7 - DL	MW7							
320-92441-8	PZ4	90						
320-92441-8 - DL	PZ4							
320-92441-9	PZ3	105						
320-92441-9 - DL	PZ3							
320-92441-9 - DL2	PZ3							
320-92441-10	PZ5	110						
320-92441-10 - DL	PZ5							
320-92441-11 - DL	092022DUP							
320-92441-11	092022DUP	76						
320-92441-12	092022FB	88						
320-92441-13	SW1	80						
320-92441-14	SW2	80						
320-92441-15	SW3	82						
LCS 320-621213/2-A	Lab Control Sample	91						
LCSD 320-621213/3-A	Lab Control Sample Dup	92						
MB 320-621213/1-A	Method Blank	91						

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
dMeFOSA = d-N-MeFOSA-M
dEtFOSA = d-N-EtFOSA-M
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
HFPODA = 13C3 HFPO-DA
M102FTS = 13C2 10:2 FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-621213/1-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 621213

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.4		5.0	2.4	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluoropentanoic acid (PFPeA)	<0.49		2.0	0.49	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorohexanoic acid (PFHxA)	<0.58		2.0	0.58	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluoroheptanoic acid (PFHpA)	<0.25		2.0	0.25	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorooctanoic acid (PFOA)	<0.85		2.0	0.85	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorononanoic acid (PFNA)	<0.27		2.0	0.27	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	0.31	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluoroundecanoic acid (PFUnA)	<1.1		2.0	1.1	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	0.55	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorotridecanoic acid (PFTrDA)	<1.3		2.0	1.3	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorotetradecanoic acid (PFTeA)	<0.73		2.0	0.73	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.20		2.0	0.20	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.30		2.0	0.30	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.57		2.0	0.57	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.19		2.0	0.19	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.54		2.0	0.54	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorononanesulfonic acid (PFNS)	<0.37		2.0	0.37	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorodecanesulfonic acid (PFDS)	<0.32		2.0	0.32	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorododecanesulfonic acid (PFDoS)	<0.97		2.0	0.97	ng/L		09/30/22 05:20	10/04/22 06:00	1
Perfluorooctanesulfonamide (FOSA)	<0.98		2.0	0.98	ng/L		09/30/22 05:20	10/04/22 06:00	1
NEtFOSA	<0.87		2.0	0.87	ng/L		09/30/22 05:20	10/04/22 06:00	1
NMeFOSA	<0.43		2.0	0.43	ng/L		09/30/22 05:20	10/04/22 06:00	1
NMeFOSAA	<1.2		5.0	1.2	ng/L		09/30/22 05:20	10/04/22 06:00	1
NEtFOSAA	<1.3		5.0	1.3	ng/L		09/30/22 05:20	10/04/22 06:00	1
NMeFOSE	<1.4		4.0	1.4	ng/L		09/30/22 05:20	10/04/22 06:00	1
NEtFOSE	<0.85		2.0	0.85	ng/L		09/30/22 05:20	10/04/22 06:00	1
4:2 FTS	<0.24		2.0	0.24	ng/L		09/30/22 05:20	10/04/22 06:00	1
6:2 FTS	<2.5		5.0	2.5	ng/L		09/30/22 05:20	10/04/22 06:00	1
8:2 FTS	<0.46		2.0	0.46	ng/L		09/30/22 05:20	10/04/22 06:00	1
HFPO-DA (GenX)	<1.5		4.0	1.5	ng/L		09/30/22 05:20	10/04/22 06:00	1
9Cl-PF3ONS	<0.24		2.0	0.24	ng/L		09/30/22 05:20	10/04/22 06:00	1
11Cl-PF3OUdS	<0.32		2.0	0.32	ng/L		09/30/22 05:20	10/04/22 06:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0	0.40	ng/L		09/30/22 05:20	10/04/22 06:00	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*98*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C5 PFPeA	*105*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C2 PFHxA	*100*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C4 PFHpA	*104*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C4 PFOA	*102*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C5 PFNA	*102*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C2 PFDA	*104*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C2 PFUnA	*97*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C2 PFDoA	*95*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*
13C2 PFTeDA	*97*		*25 - 150*	*09/30/22 05:20*	*10/04/22 06:00*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-621213/1-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 621213

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	104		25 - 150	09/30/22 05:20	10/04/22 06:00	1
18O2 PFHxS	104		25 - 150	09/30/22 05:20	10/04/22 06:00	1
13C4 PFOS	98		25 - 150	09/30/22 05:20	10/04/22 06:00	1
13C8 FOSA	93		10 - 150	09/30/22 05:20	10/04/22 06:00	1
d3-NMeFOSAA	93		25 - 150	09/30/22 05:20	10/04/22 06:00	1
d5-NEtFOSAA	95		25 - 150	09/30/22 05:20	10/04/22 06:00	1
M2-4:2 FTS	103		25 - 150	09/30/22 05:20	10/04/22 06:00	1
d-N-MeFOSA-M	77		10 - 150	09/30/22 05:20	10/04/22 06:00	1
M2-6:2 FTS	106		25 - 150	09/30/22 05:20	10/04/22 06:00	1
d-N-EtFOSA-M	77		10 - 150	09/30/22 05:20	10/04/22 06:00	1
M2-8:2 FTS	105		25 - 150	09/30/22 05:20	10/04/22 06:00	1
13C3 HFPO-DA	99		25 - 150	09/30/22 05:20	10/04/22 06:00	1
d7-N-MeFOSE-M	91		10 - 150	09/30/22 05:20	10/04/22 06:00	1
13C2 10:2 FTS	91		25 - 150	09/30/22 05:20	10/04/22 06:00	1
d9-N-EtFOSE-M	88		10 - 150	09/30/22 05:20	10/04/22 06:00	1

Lab Sample ID: LCS 320-621213/2-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	44.5		ng/L		111	60 - 135
Perfluoropentanoic acid (PFPeA)	40.0	43.6		ng/L		109	60 - 135
Perfluorohexanoic acid (PFHxA)	40.0	42.1		ng/L		105	60 - 135
Perfluoroheptanoic acid (PFHpA)	40.0	43.1		ng/L		108	60 - 135
Perfluorooctanoic acid (PFOA)	40.0	43.1		ng/L		108	60 - 135
Perfluorononanoic acid (PFNA)	40.0	40.7		ng/L		102	60 - 135
Perfluorodecanoic acid (PFDA)	40.0	40.8		ng/L		102	60 - 135
Perfluoroundecanoic acid (PFUnA)	40.0	43.1		ng/L		108	60 - 135
Perfluorododecanoic acid (PFDoA)	40.0	40.5		ng/L		101	60 - 135
Perfluorotridecanoic acid (PFTrDA)	40.0	41.1		ng/L		103	60 - 135
Perfluorotetradecanoic acid (PFTeA)	40.0	39.4		ng/L		98	60 - 135
Perfluorobutanesulfonic acid (PFBS)	35.5	36.9		ng/L		104	60 - 135
Perfluoropentanesulfonic acid (PFPeS)	37.5	39.4		ng/L		105	60 - 135
Perfluorohexanesulfonic acid (PFHxS)	36.5	36.0		ng/L		99	60 - 135
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.5		ng/L		109	60 - 135
Perfluorooctanesulfonic acid (PFOS)	37.2	37.8		ng/L		102	60 - 135
Perfluorononanesulfonic acid (PFNS)	38.5	41.0		ng/L		107	60 - 135
Perfluorodecanesulfonic acid (PFDS)	38.6	40.1		ng/L		104	60 - 135
Perfluorododecanesulfonic acid (PFDoS)	38.8	39.8		ng/L		103	60 - 135

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-621213/2-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 621213

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonamide (FOSA)	40.0	43.7		ng/L		109	60 - 135
NEtFOSA	40.0	41.5		ng/L		104	60 - 135
NMeFOSA	40.0	45.5		ng/L		114	60 - 135
NMeFOSAA	40.0	39.0		ng/L		98	60 - 135
NEtFOSAA	40.0	44.2		ng/L		111	60 - 135
NMeFOSE	40.0	40.8		ng/L		102	60 - 135
NEtFOSE	40.0	43.8		ng/L		110	60 - 135
4:2 FTS	37.5	38.0		ng/L		101	60 - 135
6:2 FTS	38.1	39.2		ng/L		103	60 - 135
8:2 FTS	38.4	41.1		ng/L		107	60 - 135
HFPO-DA (GenX)	40.0	41.6		ng/L		104	60 - 135
9Cl-PF3ONS	37.4	39.7		ng/L		106	60 - 135
11Cl-PF3OUdS	37.8	37.2		ng/L		99	60 - 135
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	43.9		ng/L		116	60 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*95*		*25 - 150*
13C5 PFPeA	*97*		*25 - 150*
13C2 PFHxA	*99*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*99*		*25 - 150*
13C5 PFNA	*99*		*25 - 150*
13C2 PFDA	*100*		*25 - 150*
13C2 PFUnA	*94*		*25 - 150*
13C2 PFDoA	*94*		*25 - 150*
13C2 PFTeDA	*94*		*25 - 150*
13C3 PFBS	*99*		*25 - 150*
18O2 PFHxS	*99*		*25 - 150*
13C4 PFOS	*96*		*25 - 150*
13C8 FOSA	*88*		*10 - 150*
d3-NMeFOSAA	*98*		*25 - 150*
d5-NEtFOSAA	*94*		*25 - 150*
M2-4:2 FTS	*100*		*25 - 150*
d-N-MeFOSA-M	*75*		*10 - 150*
M2-6:2 FTS	*100*		*25 - 150*
d-N-EtFOSA-M	*79*		*10 - 150*
M2-8:2 FTS	*96*		*25 - 150*
13C3 HFPO-DA	*99*		*25 - 150*
d7-N-MeFOSE-M	*93*		*10 - 150*
13C2 10:2 FTS	*91*		*25 - 150*
d9-N-EtFOSE-M	*87*		*10 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-621213/3-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 621213

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)			40.0	46.4		ng/L		116	60 - 135	4	30
Perfluoropentanoic acid (PFPeA)			40.0	41.6		ng/L		104	60 - 135	5	30
Perfluorohexanoic acid (PFHxA)			40.0	42.1		ng/L		105	60 - 135	0	30
Perfluoroheptanoic acid (PFHpA)			40.0	42.8		ng/L		107	60 - 135	1	30
Perfluorooctanoic acid (PFOA)			40.0	42.8		ng/L		107	60 - 135	1	30
Perfluorononanoic acid (PFNA)			40.0	41.8		ng/L		104	60 - 135	2	30
Perfluorodecanoic acid (PFDA)			40.0	40.0		ng/L		100	60 - 135	2	30
Perfluoroundecanoic acid (PFUnA)			40.0	43.7		ng/L		109	60 - 135	1	30
Perfluorododecanoic acid (PFDoA)			40.0	41.5		ng/L		104	60 - 135	3	30
Perfluorotridecanoic acid (PFTrDA)			40.0	41.1		ng/L		103	60 - 135	0	30
Perfluorotetradecanoic acid (PFTeA)			40.0	41.8		ng/L		105	60 - 135	6	30
Perfluorobutanesulfonic acid (PFBS)			35.5	37.5		ng/L		106	60 - 135	2	30
Perfluoropentanesulfonic acid (PFPeS)			37.5	40.8		ng/L		109	60 - 135	3	30
Perfluorohexanesulfonic acid (PFHxS)			36.5	37.2		ng/L		102	60 - 135	3	30
Perfluoroheptanesulfonic acid (PFHpS)			38.2	43.3		ng/L		114	60 - 135	4	30
Perfluorooctanesulfonic acid (PFOS)			37.2	38.9		ng/L		105	60 - 135	3	30
Perfluorononanesulfonic acid (PFNS)			38.5	42.7		ng/L		111	60 - 135	4	30
Perfluorodecanesulfonic acid (PFDS)			38.6	39.2		ng/L		102	60 - 135	2	30
Perfluorododecanesulfonic acid (PFDoS)			38.8	39.4		ng/L		102	60 - 135	1	30
Perfluorooctanesulfonamide (FOSA)			40.0	44.5		ng/L		111	60 - 135	2	30
NEtFOSA			40.0	42.5		ng/L		106	60 - 135	2	30
NMeFOSA			40.0	41.6		ng/L		104	60 - 135	9	30
NMeFOSAA			40.0	39.8		ng/L		100	60 - 135	2	30
NEtFOSAA			40.0	43.5		ng/L		109	60 - 135	2	30
NMeFOSE			40.0	41.9		ng/L		105	60 - 135	3	30
NEtFOSE			40.0	41.6		ng/L		104	60 - 135	5	30
4:2 FTS			37.5	37.3		ng/L		99	60 - 135	2	30
6:2 FTS			38.1	39.5		ng/L		104	60 - 135	1	30
8:2 FTS			38.4	39.7		ng/L		103	60 - 135	4	30
HFPO-DA (GenX)			40.0	40.2		ng/L		100	60 - 135	3	30
9Cl-PF3ONS			37.4	41.6		ng/L		111	60 - 135	5	30
11Cl-PF3OUdS			37.8	39.3		ng/L		104	60 - 135	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			37.8	44.1		ng/L		117	60 - 135	0	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C4 PFBA	*92*		*25 - 150*
13C5 PFPeA	*99*		*25 - 150*
13C2 PFHxA	*97*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-621213/3-A
Matrix: Water
Analysis Batch: 622366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 621213

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFHpA	101		25 - 150
13C4 PFOA	102		25 - 150
13C5 PFNA	100		25 - 150
13C2 PFDA	99		25 - 150
13C2 PFUnA	99		25 - 150
13C2 PFDoA	97		25 - 150
13C2 PFTeDA	97		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	98		25 - 150
13C4 PFOS	96		25 - 150
13C8 FOSA	88		10 - 150
d3-NMeFOSAA	101		25 - 150
d5-NEtFOSAA	94		25 - 150
M2-4:2 FTS	98		25 - 150
d-N-MeFOSA-M	73		10 - 150
M2-6:2 FTS	98		25 - 150
d-N-EtFOSA-M	73		10 - 150
M2-8:2 FTS	100		25 - 150
13C3 HFPO-DA	98		25 - 150
d7-N-MeFOSE-M	89		10 - 150
13C2 10:2 FTS	92		25 - 150
d9-N-EtFOSE-M	86		10 - 150

LCMS

Prep Batch: 621213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-1	MW1	Total/NA	Water	3535	
320-92441-2	MW2	Total/NA	Water	3535	
320-92441-3 - DL	MW3	Total/NA	Water	3535	
320-92441-3	MW3	Total/NA	Water	3535	
320-92441-4	MW4	Total/NA	Water	3535	
320-92441-5 - DL	MW5	Total/NA	Water	3535	
320-92441-5	MW5	Total/NA	Water	3535	
320-92441-6 - DL	MW6	Total/NA	Water	3535	
320-92441-6	MW6	Total/NA	Water	3535	
320-92441-7 - DL	MW7	Total/NA	Water	3535	
320-92441-7	MW7	Total/NA	Water	3535	
320-92441-8 - DL	PZ4	Total/NA	Water	3535	
320-92441-8	PZ4	Total/NA	Water	3535	
320-92441-9 - DL	PZ3	Total/NA	Water	3535	
320-92441-9	PZ3	Total/NA	Water	3535	
320-92441-9 - DL2	PZ3	Total/NA	Water	3535	
320-92441-10 - DL	PZ5	Total/NA	Water	3535	
320-92441-10	PZ5	Total/NA	Water	3535	
320-92441-11 - DL	092022DUP	Total/NA	Water	3535	
320-92441-11	092022DUP	Total/NA	Water	3535	
320-92441-12	092022FB	Total/NA	Water	3535	
320-92441-13	SW1	Total/NA	Water	3535	
320-92441-14	SW2	Total/NA	Water	3535	
320-92441-15	SW3	Total/NA	Water	3535	
MB 320-621213/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-621213/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-621213/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 622366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-2	MW2	Total/NA	Water	537 (modified)	621213
320-92441-5	MW5	Total/NA	Water	537 (modified)	621213
320-92441-6	MW6	Total/NA	Water	537 (modified)	621213
320-92441-7	MW7	Total/NA	Water	537 (modified)	621213
320-92441-8	PZ4	Total/NA	Water	537 (modified)	621213
320-92441-9	PZ3	Total/NA	Water	537 (modified)	621213
320-92441-10	PZ5	Total/NA	Water	537 (modified)	621213
320-92441-12	092022FB	Total/NA	Water	537 (modified)	621213
320-92441-13	SW1	Total/NA	Water	537 (modified)	621213
320-92441-14	SW2	Total/NA	Water	537 (modified)	621213
320-92441-15	SW3	Total/NA	Water	537 (modified)	621213
MB 320-621213/1-A	Method Blank	Total/NA	Water	537 (modified)	621213
LCS 320-621213/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	621213
LCSD 320-621213/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	621213

Analysis Batch: 623480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-1	MW1	Total/NA	Water	537 (modified)	621213
320-92441-3	MW3	Total/NA	Water	537 (modified)	621213
320-92441-4	MW4	Total/NA	Water	537 (modified)	621213
320-92441-5 - DL	MW5	Total/NA	Water	537 (modified)	621213

LCMS (Continued)

Analysis Batch: 623480 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-6 - DL	MW6	Total/NA	Water	537 (modified)	621213
320-92441-7 - DL	MW7	Total/NA	Water	537 (modified)	621213
320-92441-8 - DL	PZ4	Total/NA	Water	537 (modified)	621213
320-92441-9 - DL	PZ3	Total/NA	Water	537 (modified)	621213
320-92441-10 - DL	PZ5	Total/NA	Water	537 (modified)	621213

Analysis Batch: 624023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-3 - DL	MW3	Total/NA	Water	537 (modified)	621213
320-92441-11 - DL	092022DUP	Total/NA	Water	537 (modified)	621213

Cleanup Batch: 626265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-9 - DL2	PZ3	Total/NA	Water	Dilution	621213

Analysis Batch: 626525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-9 - DL2	PZ3	Total/NA	Water	537 (modified)	626265

Analysis Batch: 629784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92441-11	092022DUP	Total/NA	Water	537 (modified)	621213

Lab Chronicle

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Client Sample ID: MW1
Date Collected: 09/20/22 14:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			279.5 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	623480	10/09/22 07:28	RS1	EET SAC

Client Sample ID: MW2
Date Collected: 09/20/22 13:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.2 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 06:40	K1S	EET SAC

Client Sample ID: MW3
Date Collected: 09/20/22 09:40
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			281.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	623480	10/09/22 08:18	RS1	EET SAC
Total/NA	Prep	3535	DL		281.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	100	1 mL	1 mL	624023	10/11/22 13:37	K1S	EET SAC

Client Sample ID: MW4
Date Collected: 09/20/22 12:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			253.5 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		10	1 mL	1 mL	623480	10/09/22 08:28	RS1	EET SAC

Client Sample ID: MW5
Date Collected: 09/19/22 16:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		282.3 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	20	1 mL	1 mL	623480	10/09/22 09:09	RS1	EET SAC
Total/NA	Prep	3535			282.3 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 07:10	K1S	EET SAC

Client Sample ID: MW6
Date Collected: 09/21/22 08:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		285.3 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	10	1 mL	1 mL	623480	10/09/22 09:19	RS1	EET SAC

Client Sample ID: MW6

Date Collected: 09/21/22 08:30
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			285.3 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 07:21	K1S	EET SAC

Client Sample ID: MW7

Date Collected: 09/21/22 12:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		281.8 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	20	1 mL	1 mL	623480	10/09/22 07:38	RS1	EET SAC
Total/NA	Prep	3535			281.8 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 07:31	K1S	EET SAC

Client Sample ID: PZ4

Date Collected: 09/20/22 11:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		259.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	20	1 mL	1 mL	623480	10/09/22 07:48	RS1	EET SAC
Total/NA	Prep	3535			259.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 08:11	K1S	EET SAC

Client Sample ID: PZ3

Date Collected: 09/20/22 10:20
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		277.7 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	50	1 mL	1 mL	623480	10/09/22 09:29	RS1	EET SAC
Total/NA	Prep	3535			277.7 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 08:21	K1S	EET SAC
Total/NA	Prep	3535	DL2		277.7 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Cleanup	Dilution	DL2		6 uL	1500 uL	626265	10/20/22 13:26	MTH	EET SAC
Total/NA	Analysis	537 (modified)	DL2	1	1 mL	1 mL	626525	10/21/22 12:44	D1R	EET SAC

Client Sample ID: PZ5

Date Collected: 09/19/22 17:00
Date Received: 09/22/22 09:15

Lab Sample ID: 320-92441-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		280.7 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	20	1 mL	1 mL	623480	10/09/22 09:39	RS1	EET SAC
Total/NA	Prep	3535			280.7 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 08:31	K1S	EET SAC

Client Sample ID: 092022DUP

Lab Sample ID: 320-92441-11

Date Collected: 09/20/22 09:40

Matrix: Water

Date Received: 09/22/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		278.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)	DL	100	1 mL	1 mL	624023	10/11/22 14:08	K1S	EET SAC
Total/NA	Prep	3535			278.1 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		20	1 mL	1 mL	629784	11/02/22 11:09	S1M	EET SAC

Client Sample ID: 092022FB

Lab Sample ID: 320-92441-12

Date Collected: 09/20/22 10:30

Matrix: Water

Date Received: 09/22/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			279.5 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 08:52	K1S	EET SAC

Client Sample ID: SW1

Lab Sample ID: 320-92441-13

Date Collected: 09/19/22 17:20

Matrix: Water

Date Received: 09/22/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			275.3 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 09:02	K1S	EET SAC

Client Sample ID: SW2

Lab Sample ID: 320-92441-14

Date Collected: 09/19/22 17:30

Matrix: Water

Date Received: 09/22/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			271.9 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 09:12	K1S	EET SAC

Client Sample ID: SW3

Lab Sample ID: 320-92441-15

Date Collected: 09/19/22 17:10

Matrix: Water

Date Received: 09/22/22 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			273.8 mL	10.0 mL	621213	09/30/22 05:20	EFG	EET SAC
Total/NA	Analysis	537 (modified)		1	1 mL	1 mL	622366	10/04/22 09:22	K1S	EET SAC

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: AECOM
Job ID: 320-92441-1
Project/Site: PFAS, Wisconsin

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	998204680	08-31-23

Method Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC
Dilution	Dilution and Re-fortification of Standards	None	EET SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: PFAS, Wisconsin

Job ID: 320-92441-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-92441-1	MW1	Water	09/20/22 14:20	09/22/22 09:15
320-92441-2	MW2	Water	09/20/22 13:00	09/22/22 09:15
320-92441-3	MW3	Water	09/20/22 09:40	09/22/22 09:15
320-92441-4	MW4	Water	09/20/22 12:00	09/22/22 09:15
320-92441-5	MW5	Water	09/19/22 16:00	09/22/22 09:15
320-92441-6	MW6	Water	09/21/22 08:30	09/22/22 09:15
320-92441-7	MW7	Water	09/21/22 12:20	09/22/22 09:15
320-92441-8	PZ4	Water	09/20/22 11:20	09/22/22 09:15
320-92441-9	PZ3	Water	09/20/22 10:20	09/22/22 09:15
320-92441-10	PZ5	Water	09/19/22 17:00	09/22/22 09:15
320-92441-11	092022DUP	Water	09/20/22 09:40	09/22/22 09:15
320-92441-12	092022FB	Water	09/20/22 10:30	09/22/22 09:15
320-92441-13	SW1	Water	09/19/22 17:20	09/22/22 09:15
320-92441-14	SW2	Water	09/19/22 17:30	09/22/22 09:15
320-92441-15	SW3	Water	09/19/22 17:10	09/22/22 09:15

Chain of Custody Record

606871

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TAL-8210

Address: WFI
805 Ogden
Marinette, WI 54143

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Andrew Mott	Site Contact: R. Weselak	Date: 9/21/22	COC No:
Company Name: Aecom	Tel/Email:	Lab Contact: Debbie Wilson	Carrier:	1 of 2 COCs
Address:	Analysis Turnaround Time			Sampler:
City/State/Zip:	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 920-379-6024	TAT if different from Below			Walk-in Client:
email: andrew.mott@aecom.com	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: WFI				Job / SDG No.:
Site: Waupaca Foundry Investigation				
PO # 60662758				

320-92441 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PFAS (WI List 33)	Sample Specific Notes:
~~MW01~~ MW1	9/20/22	14:20	G	~~GW~~	2			X	
~~MW02~~ MW2		13:00		GW	2			X	
~~MW03~~ MW3		9:40		GW	2			X	
~~MW~~ MW4		12:00		GW	2			X	
MW5	9/19/22	16:00		GW	2			X	
MW6	9/21/22	8:30		GW	2			X	
MW7	9/21/22	12:20		GW	2			X	
PZ1	9/20/22	11:20		GW	2			X	
PZ2	9/20/22	10:20		GW	2			X	
PZ3	9/19/22	17:00		GW	2			X	
092022 Dup	9/20/22	9:40		GW	2			X	
092022 FB	9/20/22	10:30		—	2			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months ?

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.8 Corr'd: 3.8 | Therm ID No.: 200

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Andrew Mott	Aecom	9/21/22 14:00	Sanch Navabpour	EETSac	9/22/22 9:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Chain of Custody Record

606872 eurofins | Environment Testing TestAmerica

TAL-8210

Address: WFI
805 Ogden
Marinette, WI 54143

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Andrew Mott	Site Contact: R. Wesel Tdk	Date: 9/21/22	COC No:
Company Name: Aecom	Tel/Email:	Lab Contact: Debbie W.	Carrier:	2 of 2 COCs
Address:	Analysis Turnaround Time			Sampler:
City/State/Zip:	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 920-379-6024	TAT if different from Below			Walk-in Client:
Email: andrew.mott@aecom.com	☐ 2 weeks			Lab Sampling:
Project Name: WFI	☐ 1 week			
Site: Wapaca Foundry Investigation	☐ 2 days			Job / SDG No.:
PO # 60662758	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PFAS	Sample Specific Notes:
~~Site~~ SW1	9/A/22	17:20	G	SW	2			X	
SW2		17:30	G	SW	2			X	
SW3	↓	17:10	G	SW	2			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.8 Corr'd: 3.8 | Therm ID No.: 10

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Aecom	9/21/22 17:00	Sarieh Navabpour	EETSac	9/22/22 9:15
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: AECOM

Job Number: 320-92441-1

Login Number: 92441
List Number: 1
Creator: Oropeza, Salvador

List Source: Eurofins Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Sacramento

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

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Authorization

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