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ANALYTICAL REPORT

PREPARED FOR

Attn: Mike Chicoine
USACE WAD
5900 Mac Arthur Boulevard
Washington, Washington, DC 20016

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JOB DESCRIPTION

USACE-WAD

JOB NUMBER

380-49009-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Job Notes

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

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW,Water matrices)

Authorization

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Authorized for release by
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Table of Contents

Client: USACE WAD
Job ID: 380-49009-1
Project/Site: USACE-WAD

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

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

Job ID: 380-49009-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-49009-1

Receipt
The samples were received on 5/26/2023 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

PFAS
Method 533: Internal standard 13C3-PFBA(48%) failed low compared to ICAL. Re-run and got similar results. Past hold time for re-extract. JS (380-49009-3)

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

Detection Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Client Sample ID: 18-Dalcarlia WTP — Lab Sample ID: 380-49009-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.7		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.9		2.0		ng/L	1		533	Total/NA

Client Sample ID: Field Reagent Blank18-Dalcarlia WTP — Lab Sample ID: 380-49009-2

No Detections.

Client Sample ID: JS — Lab Sample ID: 380-49009-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.0		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.0		2.0		ng/L	1		533	Total/NA

Client Sample ID: Field Reagent Blank JS — Lab Sample ID: 380-49009-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Client Sample ID: 18-Dalcarlia WTP
Date Collected: 05/24/23 06:30
Date Received: 05/26/23 09:25

Lab Sample ID: 380-49009-1
Matrix: Drinking Water

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorobutanoic acid (PFBA)	**2.7**		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoropentanoic acid (PFPeA)	**2.9**		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*82*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C2-4:2-FTS	*120*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C2-6:2-FTS	*116*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C2-8:2-FTS	*80*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C3 HFPO-DA	*76*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C3 PFBS	*88*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C3 PFHxS	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C4 PFBA	*102*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C4 PFHpA	*92*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C5 PFHxA	*82*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C5 PFPeA	*171*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C6 PFDA	*87*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C7 PFUnA	*85*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-49009-1

Date Collected: 05/24/23 06:30

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 PFOA	*97*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C8 PFOS	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*
13C9 PFNA	*98*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:00*	*1*

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*91*		*70 - 130*	*06/06/23 14:28*	*06/08/23 00:18*	*1*
13C2 PFHxA	*99*		*70 - 130*	*06/06/23 14:28*	*06/08/23 00:18*	*1*
13C3-GenX	*71*		*70 - 130*	*06/06/23 14:28*	*06/08/23 00:18*	*1*
d5-NEtFOSAA	*80*		*70 - 130*	*06/06/23 14:28*	*06/08/23 00:18*	*1*

Client Sample ID: Field Reagent Blank18-Dalcarlia WTP

Lab Sample ID: 380-49009-2

Date Collected: 05/24/23 06:30

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1

Client Sample ID: Field Reagent Blank18-Dalcarlia WTP
Date Collected: 05/24/23 06:30
Date Received: 05/26/23 09:25

Lab Sample ID: 380-49009-2
Matrix: Drinking Water

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorobutanoic acid (PFBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*99*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C2-4:2-FTS	*87*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C2-6:2-FTS	*85*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C2-8:2-FTS	*76*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C3 HFPO-DA	*83*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C3 PFBS	*96*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C3 PFHxS	*92*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C4 PFBA	*104*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C4 PFHpA	*103*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C5 PFHxA	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C5 PFPeA	*105*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C6 PFDA	*99*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C7 PFUnA	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C8 PFOA	*103*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C8 PFOS	*101*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*
13C9 PFNA	*105*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:29*	*1*

Client Sample ID: JS
Date Collected: 05/24/23 07:45
Date Received: 05/26/23 09:25

Lab Sample ID: 380-49009-3
Matrix: Drinking Water

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorobutanoic acid (PFBA)	**2.0**		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoropentanoic acid (PFPeA)	**2.0**		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*87*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C2-4:2-FTS	*113*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C2-6:2-FTS	*108*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C2-8:2-FTS	*85*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C3 HFPO-DA	*78*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C3 PFBS	*83*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C3 PFHxS	*91*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C4 PFBA	*100*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C4 PFHpA	*97*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C5 PFHxA	*83*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C5 PFPeA	*173*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C6 PFDA	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*
13C7 PFUnA	*89*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:39*	*1*

Client Sample ID: JS

Lab Sample ID: 380-49009-3

Date Collected: 05/24/23 07:45

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	100		50 - 200	06/21/23 17:46	06/22/23 22:39	1
13C8 PFOS	95		50 - 200	06/21/23 17:46	06/22/23 22:39	1
13C9 PFNA	104		50 - 200	06/21/23 17:46	06/22/23 22:39	1

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	F1	2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/06/23 14:28	06/08/23 10:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	89		70 - 130	06/06/23 14:28	06/08/23 10:58	1
13C2 PFHxA	95		70 - 130	06/06/23 14:28	06/08/23 10:58	1
13C3-GenX	71		70 - 130	06/06/23 14:28	06/08/23 10:58	1
d5-NEtFOSAA	86		70 - 130	06/06/23 14:28	06/08/23 10:58	1

Client Sample ID: Field Reagent Blank JS

Lab Sample ID: 380-49009-4

Date Collected: 05/24/23 07:45

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1

Client Sample ID: Field Reagent Blank JS
Date Collected: 05/24/23 07:45
Date Received: 05/26/23 09:25

Lab Sample ID: 380-49009-4
Matrix: Drinking Water

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorobutanoic acid (PFBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 22:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*97*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C2-4:2-FTS	*90*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C2-6:2-FTS	*91*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C2-8:2-FTS	*73*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C3 HFPO-DA	*89*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C3 PFBS	*92*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C3 PFHxS	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C4 PFBA	*104*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C4 PFHpA	*96*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C5 PFHxA	*98*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C5 PFPeA	*100*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C6 PFDA	*97*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C7 PFUnA	*92*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C8 PFOA	*103*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C8 PFOS	*99*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*
13C9 PFNA	*103*		*50 - 200*	*06/21/23 17:46*	*06/22/23 22:48*	*1*

Surrogate Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		PFDA	PFHxA	GenX	d5NEFOS
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-49009-1	18-Dalcarlia WTP	91	99	71	80
380-49009-3	JS	89	95	71	86
380-49009-3 MS	JS	98	97	68 S1-	80
380-49009-3 MSD	JS	99	100	74	78
LCS 380-42865/23-A	Lab Control Sample	104	100	88	89
LCSD 380-42865/24-A	Lab Control Sample Dup	107	100	88	91
MBL 380-42865/21-A	Method Blank	101	105	86	98
MRL 380-42865/22-A	Lab Control Sample	107	98	82	95

Surrogate Legend

PFDA = 13C2 PFDA
PFHxA = 13C2 PFHxA
GenX = 13C3-GenX
d5NEFOS = d5-NEtFOSAA

Isotope Dilution Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)	HFPODA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	PFBA (50-200)
380-48928-B-1-A MS	Matrix Spike	98	96	93	75	91	97	92	100
380-49009-1	18-Dalcarlia WTP	82	120	116	80	76	88	95	102
380-49009-1 DU	18-Dalcarlia WTP	84	121	108	75	77	82	86	98
380-49009-2	Field Reagent Blank18-Dalcarlia WTP	99	87	85	76	83	96	92	104
380-49009-3	JS	87	113	108	85	78	83	91	100
380-49009-4	Field Reagent Blank JS	97	90	91	73	89	92	95	104
LCS 380-44934/23-A	Lab Control Sample	97	91	86	75	93	96	96	104
LCSD 380-44934/24-A	Lab Control Sample Dup	99	90	87	71	95	91	92	102
MBL 380-44934/21-A	Method Blank	100	100	94	85	90	95	96	107
MRL 380-44934/22-A	Lab Control Sample	93	88	86	76	92	89	95	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C4PFHA (50-200)	13C5PHA (50-200)	PFPeA (50-200)	C6PFDA (50-200)	13C7PUA (50-200)	C8PFOA (50-200)	C8PFOS (50-200)	C9PFNA (50-200)
380-48928-B-1-A MS	Matrix Spike	96	94	111	98	95	96	99	100
380-49009-1	18-Dalcarlia WTP	92	82	171	87	85	97	95	98
380-49009-1 DU	18-Dalcarlia WTP	90	87	162	90	82	96	92	101
380-49009-2	Field Reagent Blank18-Dalcarlia WTP	103	95	105	99	95	103	101	105
380-49009-3	JS	97	83	173	95	89	100	95	104
380-49009-4	Field Reagent Blank JS	96	98	100	97	92	103	99	103
LCS 380-44934/23-A	Lab Control Sample	97	94	100	104	100	97	102	107
LCSD 380-44934/24-A	Lab Control Sample Dup	98	98	100	100	99	101	100	104
MBL 380-44934/21-A	Method Blank	100	104	107	103	103	104	109	108
MRL 380-44934/22-A	Lab Control Sample	101	95	99	95	96	100	103	102

Surrogate Legend

PFDoA = 13C2 PFDoA
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS
HFPODA = 13C3 HFPO-DA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
PFBA = 13C4 PFBA
C4PFHA = 13C4 PFHpA
13C5PHA = 13C5 PFHxA
PFPeA = 13C5 PFPeA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
C9PFNA = 13C9 PFNA

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 380-44934/21-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44934

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorobutanoic acid (PFBA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/21/23 17:46	06/22/23 21:03	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*100*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C2-4:2-FTS	*100*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C2-6:2-FTS	*94*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C2-8:2-FTS	*85*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C3 HFPO-DA	*90*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C3 PFBS	*95*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C3 PFHxS	*96*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C4 PFBA	*107*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C4 PFHpA	*100*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C5 PFHxA	*104*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C5 PFPeA	*107*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*
13C6 PFDA	*103*		*50 - 200*	*06/21/23 17:46*	*06/22/23 21:03*	*1*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 380-44934/21-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 44934

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFUnA	103		50 - 200	06/21/23 17:46	06/22/23 21:03	1
13C8 PFOA	104		50 - 200	06/21/23 17:46	06/22/23 21:03	1
13C8 PFOS	109		50 - 200	06/21/23 17:46	06/22/23 21:03	1
13C9 PFNA	108		50 - 200	06/21/23 17:46	06/22/23 21:03	1

Lab Sample ID: LCS 380-44934/23-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44934

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	56.5	49.5		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	56.5	60.5		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	56.5	60.7		ng/L		108	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	56.5	57.4		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	56.5	61.8		ng/L		109	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	56.5	51.7		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	56.5	55.4		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	56.5	53.6		ng/L		95	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	56.5	53.3		ng/L		94	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	56.5	52.6		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	56.5	55.5		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	56.5	56.3		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	56.5	54.3		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	56.5	57.4		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	56.5	58.4		ng/L		103	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	56.5	55.0		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	56.5	59.5		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	56.5	57.8		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	56.5	58.9		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	56.5	55.2		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	56.5	55.1		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	56.5	59.8		ng/L		106	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	56.5	59.5		ng/L		105	70 - 130
Perfluoropentanoic acid (PFPeA)	56.5	58.3		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	56.5	56.8		ng/L		101	70 - 130

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C2 PFDoA	97		50 - 200
13C2-4:2-FTS	91		50 - 200
13C2-6:2-FTS	86		50 - 200
13C2-8:2-FTS	75		50 - 200
13C3 HFPO-DA	93		50 - 200
13C3 PFBS	96		50 - 200
13C3 PFHxS	96		50 - 200
13C4 PFBA	104		50 - 200
13C4 PFHpA	97		50 - 200
13C5 PFHxA	94		50 - 200
13C5 PFPeA	100		50 - 200
13C6 PFDA	104		50 - 200
13C7 PFUnA	100		50 - 200
13C8 PFOA	97		50 - 200
13C8 PFOS	102		50 - 200
13C9 PFNA	107		50 - 200

Lab Sample ID: LCSD 380-44934/24-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44934

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			56.5	50.9		ng/L		90	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			56.5	61.8		ng/L		110	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			56.5	58.9		ng/L		104	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			56.5	54.8		ng/L		97	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			56.5	59.5		ng/L		105	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid			56.5	53.0		ng/L		94	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			56.5	52.4		ng/L		93	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			56.5	49.8		ng/L		88	70 - 130	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			56.5	51.8		ng/L		92	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			56.5	54.7		ng/L		97	70 - 130	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			56.5	55.5		ng/L		98	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)			56.5	57.5		ng/L		102	70 - 130	2	30
Perfluorobutanoic acid (PFBA)			56.5	55.1		ng/L		98	70 - 130	2	30
Perfluorodecanoic acid (PFDA)			56.5	56.3		ng/L		100	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)			56.5	60.0		ng/L		106	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)			56.5	54.7		ng/L		97	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)			56.5	57.3		ng/L		101	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)			56.5	56.6		ng/L		100	70 - 130	2	30

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LCSD 380-44934/24-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44934

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)			56.5	56.1		ng/L		99	70 - 130	5	30
Perfluorononanoic acid (PFNA)			56.5	55.6		ng/L		98	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)			56.5	54.1		ng/L		96	70 - 130	2	30
Perfluorooctanoic acid (PFOA)			56.5	57.3		ng/L		101	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)			56.5	61.4		ng/L		109	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)			56.5	60.6		ng/L		107	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)			56.5	59.6		ng/L		106	70 - 130	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C2 PFDoA	*99*		*50 - 200*
13C2-4:2-FTS	*90*		*50 - 200*
13C2-6:2-FTS	*87*		*50 - 200*
13C2-8:2-FTS	*71*		*50 - 200*
13C3 HFPO-DA	*95*		*50 - 200*
13C3 PFBS	*91*		*50 - 200*
13C3 PFHxS	*92*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C4 PFHpA	*98*		*50 - 200*
13C5 PFHxA	*98*		*50 - 200*
13C5 PFPeA	*100*		*50 - 200*
13C6 PFDA	*100*		*50 - 200*
13C7 PFUnA	*99*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C8 PFOS	*100*		*50 - 200*
13C9 PFNA	*104*		*50 - 200*

Lab Sample ID: MRL 380-44934/22-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44934

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.00	1.59	J	ng/L		79	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			2.00	2.08		ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			2.00	1.90	J	ng/L		95	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			2.00	2.10		ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.00	1.93	J	ng/L		96	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid			2.00	1.72	J	ng/L		86	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.00	1.80	J	ng/L		90	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			2.00	1.76	J	ng/L		88	50 - 150

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MRL 380-44934/22-A
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44934

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.82	J	ng/L		91	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.08		ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.08		ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.76	J	ng/L		88	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.83	J	ng/L		91	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.00		ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.70	J	ng/L		85	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.02		ng/L		101	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.89	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.05		ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.05		ng/L		102	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C2 PFDoA	*93*		*50 - 200*
13C2-4:2-FTS	*88*		*50 - 200*
13C2-6:2-FTS	*86*		*50 - 200*
13C2-8:2-FTS	*76*		*50 - 200*
13C3 HFPO-DA	*92*		*50 - 200*
13C3 PFBS	*89*		*50 - 200*
13C3 PFHxS	*95*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C5 PFHxA	*95*		*50 - 200*
13C5 PFPeA	*99*		*50 - 200*
13C6 PFDA	*95*		*50 - 200*
13C7 PFUnA	*96*		*50 - 200*
13C8 PFOA	*100*		*50 - 200*
13C8 PFOS	*103*		*50 - 200*
13C9 PFNA	*102*		*50 - 200*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-48928-B-1-A MS
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44934

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		113	97.6		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		113	120		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		113	123		ng/L		109	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		113	110		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		113	114		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		113	104		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		113	117		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		113	100		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		113	93.7		ng/L		83	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		113	116		ng/L		102	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		113	115		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	ND		113	112		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	ND		113	114		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	ND		113	115		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	ND		113	113		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	ND		113	111		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	ND		113	113		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	ND		113	119		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	ND		113	111		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	ND		113	110		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	7.3		113	115		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	ND		113	118		ng/L		103	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	ND		113	120		ng/L		106	70 - 130
Perfluoropentanoic acid (PFPeA)	ND		113	116		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	ND		113	117		ng/L		103	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C2 PFDoA	*98*		*50 - 200*
13C2-4:2-FTS	*96*		*50 - 200*
13C2-6:2-FTS	*93*		*50 - 200*
13C2-8:2-FTS	*75*		*50 - 200*
13C3 HFPO-DA	*91*		*50 - 200*
13C3 PFBS	*97*		*50 - 200*
13C3 PFHxS	*92*		*50 - 200*

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-48928-B-1-A MS
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44934

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*100*		*50 - 200*
13C4 PFHpA	*96*		*50 - 200*
13C5 PFHxA	*94*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C6 PFDA	*98*		*50 - 200*
13C7 PFUnA	*95*		*50 - 200*
13C8 PFOA	*96*		*50 - 200*
13C8 PFOS	*99*		*50 - 200*
13C9 PFNA	*100*		*50 - 200*

Lab Sample ID: 380-49009-1 DU
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: 18-Dalcarlia WTP
Prep Type: Total/NA
Prep Batch: 44934

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND			ND		ng/L				NC	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND			ND		ng/L				NC	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND			ND		ng/L				NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND			ND		ng/L				NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND			ND		ng/L				NC	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND			ND		ng/L				NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND			ND		ng/L				NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND			ND		ng/L				NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND			ND		ng/L				NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND			ND		ng/L				NC	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND			ND		ng/L				NC	30
Perfluorobutanesulfonic acid (PFBS)	ND			ND		ng/L				NC	30
Perfluorobutanoic acid (PFBA)	2.7			2.53		ng/L				7	30
Perfluorodecanoic acid (PFDA)	ND			ND		ng/L				NC	30
Perfluorododecanoic acid (PFDoA)	ND			ND		ng/L				NC	30
Perfluoroheptanesulfonic acid (PFHpS)	ND			ND		ng/L				NC	30
Perfluoroheptanoic acid (PFHpA)	ND			ND		ng/L				NC	30
Perfluorohexanesulfonic acid (PFHxS)	ND			ND		ng/L				NC	30
Perfluorohexanoic acid (PFHxA)	ND			ND		ng/L				NC	30
Perfluorononanoic acid (PFNA)	ND			ND		ng/L				NC	30
Perfluorooctanesulfonic acid (PFOS)	ND			ND		ng/L				NC	30

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-49009-1 DU
Matrix: Drinking Water
Analysis Batch: 45078

Client Sample ID: 18-Dalcarlia WTP
Prep Type: Total/NA
Prep Batch: 44934

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Perfluorooctanoic acid (PFOA)	ND			ND		ng/L				NC	30
Perfluoropentanesulfonic acid (PFPeS)	ND			ND		ng/L				NC	30
Perfluoropentanoic acid (PFPeA)	2.9			2.64		ng/L				9	30
Perfluoroundecanoic acid (PFUnA)	ND			ND		ng/L				NC	30

Isotope Dilution	*DU %Recovery*	*DU Qualifier*	*Limits*
13C2 PFDoA	*84*		*50 - 200*
13C2-4:2-FTS	*121*		*50 - 200*
13C2-6:2-FTS	*108*		*50 - 200*
13C2-8:2-FTS	*75*		*50 - 200*
13C3 HFPO-DA	*77*		*50 - 200*
13C3 PFBS	*82*		*50 - 200*
13C3 PFHxS	*86*		*50 - 200*
13C4 PFBA	*98*		*50 - 200*
13C4 PFHpA	*90*		*50 - 200*
13C5 PFHxA	*87*		*50 - 200*
13C5 PFPeA	*162*		*50 - 200*
13C6 PFDA	*90*		*50 - 200*
13C7 PFUnA	*82*		*50 - 200*
13C8 PFOA	*96*		*50 - 200*
13C8 PFOS	*92*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 380-42865/21-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42865

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MBL 380-42865/21-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 42865

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		06/06/23 14:28	06/07/23 22:02	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDA	*101*		*70 - 130*	*06/06/23 14:28*	*06/07/23 22:02*	*1*
13C2 PFHxA	*105*		*70 - 130*	*06/06/23 14:28*	*06/07/23 22:02*	*1*
13C3-GenX	*86*		*70 - 130*	*06/06/23 14:28*	*06/07/23 22:02*	*1*
d5-NEtFOSAA	*98*		*70 - 130*	*06/06/23 14:28*	*06/07/23 22:02*	*1*

Lab Sample ID: LCS 380-42865/23-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42865

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47.3	43.2		ng/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.3	42.2		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	46.8	41.6		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	40.7		ng/L		81	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	46.0		ng/L		92	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	48.1		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	44.3	43.5		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	51.5		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	45.2		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	45.9		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	45.7	47.0		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	43.8		ng/L		87	70 - 130
Perfluorononanoic acid (PFNA)	50.1	51.9		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	46.4	44.2		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	51.4		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	44.5		ng/L		89	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	42.5		ng/L		85	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	40.3		ng/L		80	70 - 130

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 380-42865/23-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42865

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFDA	104		70 - 130
13C2 PFHxA	100		70 - 130
13C3-GenX	88		70 - 130
d5-NEtFOSAA	89		70 - 130

Lab Sample ID: LCSD 380-42865/24-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42865

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			47.3	43.6		ng/L		92	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			47.3	42.1		ng/L		89	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			46.8	42.1		ng/L		90	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			50.1	42.0		ng/L		84	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			50.1	45.8		ng/L		91	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			50.1	48.2		ng/L		96	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)			44.3	42.9		ng/L		97	70 - 130	1	30
Perfluorodecanoic acid (PFDA)			50.1	54.8		ng/L		109	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)			50.1	46.8		ng/L		93	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)			50.1	44.6		ng/L		89	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)			45.7	46.2		ng/L		101	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)			50.1	43.6		ng/L		87	70 - 130	1	30
Perfluorononanoic acid (PFNA)			50.1	51.1		ng/L		102	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)			46.4	44.7		ng/L		96	70 - 130	1	30
Perfluorooctanoic acid (PFOA)			50.1	50.7		ng/L		101	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)			50.1	46.6		ng/L		93	70 - 130	5	30
Perfluorotridecanoic acid (PFTrDA)			50.1	44.1		ng/L		88	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)			50.1	41.9		ng/L		84	70 - 130	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
13C2 PFDA	107		70 - 130
13C2 PFHxA	100		70 - 130
13C3-GenX	88		70 - 130
d5-NEtFOSAA	91		70 - 130

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MRL 380-42865/22-A
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 42865

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.89	1.71	J	ng/L		90	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.89	1.78	J	ng/L		94	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			1.87	1.68	J	ng/L		90	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.00	1.73	J	ng/L		86	50 - 150		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			2.00	2.20		ng/L		110	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			2.00	2.24		ng/L		112	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.77	1.67	J	ng/L		94	50 - 150		
Perfluorodecanoic acid (PFDA)			2.00	2.29		ng/L		115	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.00	2.03		ng/L		102	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.00	2.17		ng/L		108	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.83	1.87	J	ng/L		102	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.00	1.81	J	ng/L		91	50 - 150		
Perfluorononanoic acid (PFNA)			2.00	2.21		ng/L		110	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.85	1.77	J	ng/L		96	50 - 150		
Perfluorooctanoic acid (PFOA)			2.00	2.26		ng/L		113	50 - 150		
Perfluorotetradecanoic acid (PFTA)			2.00	2.11		ng/L		106	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			2.00	1.78	J	ng/L		89	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.00	1.73	J	ng/L		87	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C2 PFDA	*107*		*70 - 130*
13C2 PFHxA	*98*		*70 - 130*
13C3-GenX	*82*		*70 - 130*
d5-NEtFOSAA	*95*		*70 - 130*

Lab Sample ID: 380-49009-3 MS
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: JS
Prep Type: Total/NA
Prep Batch: 42865

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		47.4	42.6		ng/L		90	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		47.4	42.4		ng/L		89	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		46.9	40.6		ng/L		87	70 - 130		

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-49009-3 MS
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: JS
Prep Type: Total/NA
Prep Batch: 42865

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	F1	50.2	32.9	F1	ng/L		65	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		50.2	43.8		ng/L		87	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		50.2	46.5		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	ND		44.4	41.3		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	ND		50.2	51.1		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	ND		50.2	44.2		ng/L		88	70 - 130
Perfluoroheptanoic acid (PFHpA)	ND		50.2	47.5		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	ND		45.8	47.6		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	ND		50.2	42.5		ng/L		82	70 - 130
Perfluorononanoic acid (PFNA)	ND		50.2	51.9		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	ND		46.5	45.7		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	ND		50.2	52.0		ng/L		100	70 - 130
Perfluorotetradecanoic acid (PFTA)	ND		50.2	46.4		ng/L		92	70 - 130
Perfluorotridecanoic acid (PFTrDA)	ND		50.2	43.1		ng/L		86	70 - 130
Perfluoroundecanoic acid (PFUnA)	ND		50.2	40.7		ng/L		81	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
13C2 PFDA	*98*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C3-GenX	*68*	*S1-*	*70 - 130*
d5-NEtFOSAA	*80*		*70 - 130*

Lab Sample ID: 380-49009-3 MSD
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: JS
Prep Type: Total/NA
Prep Batch: 42865

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		47.4	37.4		ng/L		79	70 - 130	13	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		47.4	45.4		ng/L		96	70 - 130	7	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	ND		46.9	36.0		ng/L		77	70 - 130	12	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND	F1	50.2	32.5	F1	ng/L		65	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		50.2	37.1		ng/L		74	70 - 130	17	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		50.2	40.7		ng/L		81	70 - 130	13	30
Perfluorobutanesulfonic acid (PFBS)	ND		44.4	42.6		ng/L		93	70 - 130	3	30

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-49009-3 MSD
Matrix: Drinking Water
Analysis Batch: 43133

Client Sample ID: JS
Prep Type: Total/NA
Prep Batch: 42865

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorodecanoic acid (PFDA)	ND		50.2	47.1		ng/L		94	70 - 130	8	30
Perfluorododecanoic acid (PFDoA)	ND		50.2	40.1		ng/L		80	70 - 130	10	30
Perfluoroheptanoic acid (PFHpA)	ND		50.2	47.2		ng/L		92	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	ND		45.8	43.4		ng/L		92	70 - 130	9	30
Perfluorohexanoic acid (PFHxA)	ND		50.2	43.1		ng/L		83	70 - 130	1	30
Perfluorononanoic acid (PFNA)	ND		50.2	49.2		ng/L		98	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	ND		46.5	41.1		ng/L		85	70 - 130	11	30
Perfluorooctanoic acid (PFOA)	ND		50.2	52.3		ng/L		101	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	ND		50.2	44.8		ng/L		89	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	ND		50.2	40.1		ng/L		80	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	ND		50.2	36.8		ng/L		73	70 - 130	10	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C2 PFDA	*99*		*70 - 130*
13C2 PFHxA	*100*		*70 - 130*
13C3-GenX	*74*		*70 - 130*
d5-NEtFOSAA	*78*		*70 - 130*

LCMS

Prep Batch: 42865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-49009-1	18-Dalcarlia WTP	Total/NA	Drinking Water	537.1 DW	
380-49009-3	JS	Total/NA	Drinking Water	537.1 DW	
MBL 380-42865/21-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-42865/23-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
LCSD 380-42865/24-A	Lab Control Sample Dup	Total/NA	Drinking Water	537.1 DW	
MRL 380-42865/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
380-49009-3 MS	JS	Total/NA	Drinking Water	537.1 DW	
380-49009-3 MSD	JS	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 43133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-49009-1	18-Dalcarlia WTP	Total/NA	Drinking Water	537.1	42865
380-49009-3	JS	Total/NA	Drinking Water	537.1	42865
MBL 380-42865/21-A	Method Blank	Total/NA	Drinking Water	537.1	42865
LCS 380-42865/23-A	Lab Control Sample	Total/NA	Drinking Water	537.1	42865
LCSD 380-42865/24-A	Lab Control Sample Dup	Total/NA	Drinking Water	537.1	42865
MRL 380-42865/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1	42865
380-49009-3 MS	JS	Total/NA	Drinking Water	537.1	42865
380-49009-3 MSD	JS	Total/NA	Drinking Water	537.1	42865

Prep Batch: 44934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-49009-1	18-Dalcarlia WTP	Total/NA	Drinking Water	533	
380-49009-2	Field Reagent Blank18-Dalcarlia WTP	Total/NA	Drinking Water	533	
380-49009-3	JS	Total/NA	Drinking Water	533	
380-49009-4	Field Reagent Blank JS	Total/NA	Drinking Water	533	
MBL 380-44934/21-A	Method Blank	Total/NA	Drinking Water	533	
LCS 380-44934/23-A	Lab Control Sample	Total/NA	Drinking Water	533	
LCSD 380-44934/24-A	Lab Control Sample Dup	Total/NA	Drinking Water	533	
MRL 380-44934/22-A	Lab Control Sample	Total/NA	Drinking Water	533	
380-48928-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	533	
380-49009-1 DU	18-Dalcarlia WTP	Total/NA	Drinking Water	533	

Analysis Batch: 45078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-49009-1	18-Dalcarlia WTP	Total/NA	Drinking Water	533	44934
380-49009-2	Field Reagent Blank18-Dalcarlia WTP	Total/NA	Drinking Water	533	44934
380-49009-3	JS	Total/NA	Drinking Water	533	44934
380-49009-4	Field Reagent Blank JS	Total/NA	Drinking Water	533	44934
MBL 380-44934/21-A	Method Blank	Total/NA	Drinking Water	533	44934
LCS 380-44934/23-A	Lab Control Sample	Total/NA	Drinking Water	533	44934
LCSD 380-44934/24-A	Lab Control Sample Dup	Total/NA	Drinking Water	533	44934
MRL 380-44934/22-A	Lab Control Sample	Total/NA	Drinking Water	533	44934
380-48928-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	533	44934
380-49009-1 DU	18-Dalcarlia WTP	Total/NA	Drinking Water	533	44934

Lab Chronicle

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-49009-1

Date Collected: 05/24/23 06:30

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			44934	EE6W	EA POM	06/21/23 17:46
Total/NA	Analysis	533		1	45078	UKDT	EA POM	06/22/23 22:00
Total/NA	Prep	537.1 DW			42865	U7RS	EA POM	06/06/23 14:28
Total/NA	Analysis	537.1		1	43133	UKYM	EA POM	06/08/23 00:18

Client Sample ID: Field Reagent Blank18-Dalcarlia WTP

Lab Sample ID: 380-49009-2

Date Collected: 05/24/23 06:30

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			44934	EE6W	EA POM	06/21/23 17:46
Total/NA	Analysis	533		1	45078	UKDT	EA POM	06/22/23 22:29

Client Sample ID: JS

Lab Sample ID: 380-49009-3

Date Collected: 05/24/23 07:45

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			44934	EE6W	EA POM	06/21/23 17:46
Total/NA	Analysis	533		1	45078	UKDT	EA POM	06/22/23 22:39
Total/NA	Prep	537.1 DW			42865	U7RS	EA POM	06/06/23 14:28
Total/NA	Analysis	537.1		1	43133	UKYM	EA POM	06/08/23 10:58

Client Sample ID: Field Reagent Blank JS

Lab Sample ID: 380-49009-4

Date Collected: 05/24/23 07:45

Matrix: Drinking Water

Date Received: 05/26/23 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			44934	EE6W	EA POM	06/21/23 17:46
Total/NA	Analysis	533		1	45078	UKDT	EA POM	06/22/23 22:48

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Accreditation/Certification Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Maryland	State	224	03-31-24

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

Analysis Method	Prep Method	Matrix	Analyte
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Drinking Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
537.1	537.1 DW	Drinking Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorobutanesulfonic acid (PFBS)
537.1	537.1 DW	Drinking Water	Perfluorodecanoic acid (PFDA)

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date

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

Analysis Method	Prep Method	Matrix	Analyte
537.1	537.1 DW	Drinking Water	Perfluorododecanoic acid (PFDoA)
537.1	537.1 DW	Drinking Water	Perfluoroheptanoic acid (PFHpA)
537.1	537.1 DW	Drinking Water	Perfluorohexanesulfonic acid (PFHxS)
537.1	537.1 DW	Drinking Water	Perfluorohexanoic acid (PFHxA)
537.1	537.1 DW	Drinking Water	Perfluorononanoic acid (PFNA)
537.1	537.1 DW	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
537.1	537.1 DW	Drinking Water	Perfluorooctanoic acid (PFOA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
537.1	537.1 DW	Drinking Water	Perfluoroundecanoic acid (PFUnA)

Utah	NELAP	CA00006	02-29-24

Method Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Sample Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-49009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-49009-1	18-Dalcarlia WTP	Drinking Water	05/24/23 06:30	05/26/23 09:25
380-49009-2	Field Reagent Blank18-Dalcarlia WTP	Drinking Water	05/24/23 06:30	05/26/23 09:25
380-49009-3	JS	Drinking Water	05/24/23 07:45	05/26/23 09:25
380-49009-4	Field Reagent Blank JS	Drinking Water	05/24/23 07:45	05/26/23 09:25

(Suite 100)
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016
Phone (626) 386-1100

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: R. Hoffa	Lab PM: French, Thomas D	Carrier Tracking No(s):	COC No: 380-21598-6090.1
Client Contact: Robert Hoffa	Phone: 202-345-5928	E-Mail: Tom.French@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: USACE WAD	PWSID:			Job #:
Address: 5900 Mac Arthur Boulevard	Due Date Requested:			
City: Washington	TAT Requested (days):			
State, Zip: DC, 20016	Compliance Project: Δ Yes Δ No			
Phone: 202-587-9139(Tel)	PO #: W912DR21F0303			
Email: robert.p.hoffa@usace.army.mil	WO #:			
Project Name: USACE-WAD	Project #: 38002019			
Site: Washington, DC	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	537.1_DW_PREC - EPA 537.1 Short List	533 - All Analytes			Total Number of containers	Special Instructions/Note:
			Preservation Code:				Y	N	N	Y		
18	5/24/23	0630	G	Drinking Water	N	N	X	X				
JS	5/24/23	0745	G	Drinking Water	N	N	X	X				
Field Reagent Blank - 18	5/24/23	0630	G	Drinking Water	N	N	X	X				
Field Reagent Blank - JS	5/24/23	0745	G	Drinking Water	N	N	X	X				

380-49009 COC

Possible Hazard Identification

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

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

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FEDEX # 6186 8938 4581			
Relinquished by: R. Hoffa	Date/Time: 5/24/23 1500	Company: USACE-WAD	Received by: Diane Tower	Date/Time: 5/26/23 9:25	Company: EEA	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: (75) 5.2 −0.2 = 5.0 Real Ice frozen

Bottle Order Information

Bottle Order: USACE-WAD PFAS Quarterly
Bottle Order #: 6090
Request From Client: 4/12/2023
Date Order Posted: 12/19/2022 9:48:43AM
Order Status: Ready To Process
Prepared By: Thomas French
Deliver By Date: ***4/27/2023 11:59:00PM***
Lab Project Number: 38002019
PWSID:

Order Completion Information

Creator: Thomas French
Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
2	3	6	Plastic 250ml - Trizma	Trizma	537.1_DW_PREC - EPA 537.1 Short List	Drinking W	Normal		
2	3	6	Plastic 250ml – Ammonium Acetate	Ammonium Acetate	533 - All Analytes	Drinking W	Normal		
2	1	2	Plastic 250ml - Reagent Water	None	537.1_DW_PREC - EPA 537.1 Short List	Drinking W	Field Reagent B		
2	1	2	Plastic 250ml - Trizma	Trizma	537.1_DW_PREC - EPA 537.1 Short List	Drinking W	Field Reagent B		
2	1	2	Plastic 250ml - Reagent Water	None	533 - All Analytes	Drinking W	Field Reagent B		
2	1	2	Plastic 250ml – Ammonium Acetate	Ammonium Acetate	533 - All Analytes	Drinking W	Field Reagent B		

Total Bottle Summary

Bottle Type Description	Preservative	Bottle Count
Plastic 250ml - Reagent Water	None	4
Plastic 250ml - Trizma	Trizma	8
Plastic 250ml – Ammonium Acetate	Ammonium Acetate	8
	Total Bottles:	20

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative	Comment
Ammonium Acetate	Caution! May cause eye, skin, and respiratory tract irritation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Trizma	CAUTION! May cause eye, skin, and respiratory tract irritation

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

Login Sample Receipt Checklist

Client: USACE WAD

Job Number: 380-49009-1

Login Number: 49009

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Sanchez, Joseph G

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	