

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

USACE-WAD
PFAS 18 & JS Monthly 2024

JOB NUMBER

380-86681-1

Eurofins Eaton Analytical Pomona

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 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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Definitions/Glossary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Qualifiers

LCMS

Qualifier	Qualifier Description
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.
α	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: USACE WAD
Project: USACE-WAD

Job ID: 380-86681-1

Job ID: 380-86681-1

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Job Narrative 380-86681-1

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

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

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

Receipt

The samples were received on 3/12/2024 10:30 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 1.1°C.

PFAS

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: 380-86681-1

Client Sample ID: J-McMillan WTP

Lab Sample ID: 380-86681-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L	1		533	Total/NA

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-86681-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	ng/L	1		533	Total/NA

Client Sample ID: 18-Dalcarlia WTP FRB

Lab Sample ID: 380-86681-3

No Detections.

Client Sample ID: J-McMillan WTP FRB

Lab Sample ID: 380-86681-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: J-McMillan WTP

Lab Sample ID: 380-86681-1

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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 e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	80		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C2-4:2-FTS	143		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C2-6:2-FTS	151		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C2-8:2-FTS	117		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C3 HFPO-DA	73		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C3 PFBS	80		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C3 PFHxS	88		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C4 PFBA	85		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C4 PFHpA	79		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C5 PFHxA	78		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C5 PFPeA	127		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C6 PFDA	77		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C7 PFUnA	79		50 - 200	03/14/24 04:15	03/14/24 22:49	1

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Client Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: J-McMillan WTP

Lab Sample ID: 380-86681-1

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	76		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C8 PFOS	88		50 - 200	03/14/24 04:15	03/14/24 22:49	1
13C9 PFNA	78		50 - 200	03/14/24 04:15	03/14/24 22:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:44	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:44	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	123		70 - 130	03/14/24 06:53	03/14/24 19:44	1
13C2 PFHxA	118		70 - 130	03/14/24 06:53	03/14/24 19:44	1
13C3-GenX	109		70 - 130	03/14/24 06:53	03/14/24 19:44	1
d5-NETFOSAA	114		70 - 130	03/14/24 06:53	03/14/24 19:44	1

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-86681-2

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1

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Client Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-86681-2

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 22:59	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFDoA	75		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C2-4:2-FTS	151		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C2-6:2-FTS	158		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C2-8:2-FTS	120		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C3 HFPO-DA	75		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C3 PFBS	78		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C3 PFHxS	91		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C4 PFBA	86		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C4 PFHpA	81		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C5 PFHxA	76		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C5 PFPeA	125		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C6 PFDA	76		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C7 PFUnA	74		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C8 PFOA	81		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C8 PFOS	87		50 - 200			03/14/24 04:15	03/14/24 22:59	1
13C9 PFNA	77		50 - 200			03/14/24 04:15	03/14/24 22:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:54	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:54	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 19:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFDA	115		70 - 130			03/14/24 06:53	03/14/24 19:54	1
13C2 PFHxA	109		70 - 130			03/14/24 06:53	03/14/24 19:54	1
13C3-GenX	100		70 - 130			03/14/24 06:53	03/14/24 19:54	1
d5-NEtFOSAA	108		70 - 130			03/14/24 06:53	03/14/24 19:54	1

Client Sample ID: 18-Dalcarlia WTP FRB

Lab Sample ID: 380-86681-3

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1

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Client Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: 18-Dalcarlia WTP FRB

Lab Sample ID: 380-86681-3

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		03/14/24 04:15	03/16/24 12:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	87		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C2-4:2-FTS	116		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C2-6:2-FTS	126		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C2-8:2-FTS	101		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C3 HFPO-DA	79		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C3 PFBS	93		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C3 PFHxS	100		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C4 PFBA	87		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C4 PFHpA	91		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C5 PFHxA	83		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C5 PFPeA	88		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C6 PFDA	86		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C7 PFUnA	87		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C8 PFOA	88		50 - 200	03/14/24 04:15	03/16/24 12:26	1
13C8 PFOS	94		50 - 200	03/14/24 04:15	03/16/24 12:26	1

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Client Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: 18-Dalcarlia WTP FRB

Lab Sample ID: 380-86681-3

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C9 PFNA	85		50 - 200	03/14/24 04:15	03/16/24 12:26	1

Client Sample ID: J-McMillan WTP FRB

Lab Sample ID: 380-86681-4

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 23:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	86		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C2-4:2-FTS	122		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C2-6:2-FTS	132		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C2-8:2-FTS	99		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C3 HFPO-DA	84		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C3 PFBS	91		50 - 200	03/14/24 04:15	03/14/24 23:21	1

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Client Sample Results

Client: USACE WAD
 Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: J-McMillan WTP FRB

Lab Sample ID: 380-86681-4

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 PFHxS	93		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C4 PFBA	89		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C4 PFHpA	89		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C5 PFHxA	87		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C5 PFPeA	87		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C6 PFDA	87		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C7 PFUnA	85		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C8 PFOA	89		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C8 PFOS	89		50 - 200	03/14/24 04:15	03/14/24 23:21	1
13C9 PFNA	87		50 - 200	03/14/24 04:15	03/14/24 23:21	1



Surrogate Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		PFDA (70-130)	PFHxA (70-130)	GenX (70-130)	d5NEFOS (70-130)
380-86681-1	J-McMillan WTP	123	118	109	114
380-86681-2	18-Dalcarlia WTP	115	109	100	108
380-86842-E-1-B LMS	Matrix Spike	108	108	99	106
380-86842-F-1-B LMSD	Matrix Spike Duplicate	113	110	100	106
LCS 380-81459/23-A	Lab Control Sample	104	107	105	94
MBL 380-81459/21-A	Method Blank	103	89	79	100
MRL 380-81459/22-A	Lab Control Sample	109	98	90	104

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: 380-86681-1

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)
380-86623-E-1-A MS	Matrix Spike	79	158	151	116	81	89	93	87
380-86623-F-1-A MSD	Matrix Spike Duplicate	75	145	150	113	78	88	91	87
380-86681-1	J-McMillan WTP	80	143	151	117	73	80	88	85
380-86681-2	18-Dalcarlia WTP	75	151	158	120	75	78	91	86
380-86681-3	18-Dalcarlia WTP FRB	87	116	126	101	79	93	100	87
380-86681-4	J-McMillan WTP FRB	86	122	132	99	84	91	93	89
LCS 380-81456/21-A	Lab Control Sample	92	125	131	108	94	102	101	95
MBL 380-81456/19-A	Method Blank	90	138	141	109	89	98	100	94
MRL 380-81456/20-A	Lab Control Sample	88	137	145	107	84	101	99	95

		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)
380-86623-E-1-A MS	Matrix Spike	84	80	130	79	77	82	93	80
380-86623-F-1-A MSD	Matrix Spike Duplicate	83	80	130	75	74	78	90	75
380-86681-1	J-McMillan WTP	79	78	127	77	79	76	88	78
380-86681-2	18-Dalcarlia WTP	81	76	125	76	74	81	87	77
380-86681-3	18-Dalcarlia WTP FRB	91	83	88	86	87	88	94	85
380-86681-4	J-McMillan WTP FRB	89	87	87	87	85	89	89	87
LCS 380-81456/21-A	Lab Control Sample	98	93	93	95	93	95	97	91
MBL 380-81456/19-A	Method Blank	95	93	91	91	90	94	96	91
MRL 380-81456/20-A	Lab Control Sample	93	91	95	90	90	93	97	90

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

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: MBL 380-81456/19-A
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81456

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecane e-1-sulfonic acid (11Cl-PF3OUdS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
9-Chlorohexadecafluoro-3-oxanonane e-1-sulfonic acid	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorobutanoic acid (PFBA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorodecanoic acid (PFDA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorononanoic acid (PFNA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluorooctanoic acid (PFOA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	ng/L		03/14/24 04:15	03/14/24 19:58	1

Isotope Dilution	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDoA	90		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C2-4:2-FTS	138		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C2-6:2-FTS	141		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C2-8:2-FTS	109		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C3 HFPO-DA	89		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C3 PFBS	98		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C3 PFHxS	100		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C4 PFBA	94		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C4 PFHpA	95		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C5 PFHxA	93		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C5 PFPeA	91		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C6 PFDA	91		50 - 200	03/14/24 04:15	03/14/24 19:58	1

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QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: MBL 380-81456/19-A
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81456

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C7 PFUnA	90		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C8 PFOA	94		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C8 PFOS	96		50 - 200	03/14/24 04:15	03/14/24 19:58	1
13C9 PFNA	91		50 - 200	03/14/24 04:15	03/14/24 19:58	1

Lab Sample ID: LCS 380-81456/21-A
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81456

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	124		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	119		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	117		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	120	111		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	130		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	119		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	124		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	118		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	120	125		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	120	121		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	120	119		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	124		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	117		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	120		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	120	122		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	120	124		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	119		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	120	121		ng/L		101	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	120		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	120	124		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	117		ng/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C2 PFDoA	92		50 - 200
13C2-4:2-FTS	125		50 - 200
13C2-6:2-FTS	131		50 - 200
13C2-8:2-FTS	108		50 - 200
13C3 HFPO-DA	94		50 - 200
13C3 PFBS	102		50 - 200
13C3 PFHxS	101		50 - 200
13C4 PFBA	95		50 - 200
13C4 PFHpA	98		50 - 200
13C5 PFHxA	93		50 - 200
13C5 PFPeA	93		50 - 200
13C6 PFDA	95		50 - 200
13C7 PFUnA	93		50 - 200
13C8 PFOA	95		50 - 200
13C8 PFOS	97		50 - 200
13C9 PFNA	91		50 - 200

Lab Sample ID: MRL 380-81456/20-A
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81456

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.01		ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.27		ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.15		ng/L		107	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.15		ng/L		107	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.14		ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.01	1.88	J	ng/L		94	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.16		ng/L		108	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.15		ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	2.07		ng/L		103	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.10		ng/L		104	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.19		ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.08		ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.04		ng/L		102	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.32		ng/L		116	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.25		ng/L		112	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.34		ng/L		116	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.24		ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.12		ng/L		106	50 - 150

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QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: MRL 380-81456/20-A
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81456

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Perfluorohexanoic acid (PFHxA)	2.01	2.19		ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.34		ng/L		116	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.34		ng/L		116	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.19		ng/L		109	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.19		ng/L		109	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.39		ng/L		119	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.23		ng/L		111	50 - 150

Isotope Dilution	MRL MRL		Limits
	%Recovery	Qualifier	
13C2 PFDoA	88		50 - 200
13C2-4:2-FTS	137		50 - 200
13C2-6:2-FTS	145		50 - 200
13C2-8:2-FTS	107		50 - 200
13C3 HFPO-DA	84		50 - 200
13C3 PFBS	101		50 - 200
13C3 PFHxS	99		50 - 200
13C4 PFBA	95		50 - 200
13C4 PFHpA	93		50 - 200
13C5 PFHxA	91		50 - 200
13C5 PFPeA	95		50 - 200
13C6 PFDA	90		50 - 200
13C7 PFUnA	90		50 - 200
13C8 PFOA	93		50 - 200
13C8 PFOS	97		50 - 200
13C9 PFNA	90		50 - 200

Lab Sample ID: 380-86623-E-1-A MS
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 81456

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		122	111		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		122	123		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		122	119		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		122	119		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		122	115		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		122	114		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		122	120		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		122	132		ng/L		108	70 - 130

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: 380-86623-E-1-A MS

Client Sample ID: Matrix Spike

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 81576

Prep Batch: 81456

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		122	120		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		122	154		ng/L		126	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		122	124		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	ND		122	127		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	ND		122	131		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	ND		122	126		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	ND		122	120		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	ND		122	124		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	ND		122	123		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	ND		122	126		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	ND		122	128		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	ND		122	127		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	ND		122	119		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	ND		122	122		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	ND		122	123		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	ND		122	125		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	ND		122	123		ng/L		100	70 - 130

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C2 PFDoA	79		50 - 200
13C2-4:2-FTS	158		50 - 200
13C2-6:2-FTS	151		50 - 200
13C2-8:2-FTS	116		50 - 200
13C3 HFPO-DA	81		50 - 200
13C3 PFBS	89		50 - 200
13C3 PFHxS	93		50 - 200
13C4 PFBA	87		50 - 200
13C4 PFHpA	84		50 - 200
13C5 PFHxA	80		50 - 200
13C5 PFPeA	130		50 - 200
13C6 PFDA	79		50 - 200
13C7 PFUnA	77		50 - 200
13C8 PFOA	82		50 - 200
13C8 PFOS	93		50 - 200
13C9 PFNA	80		50 - 200

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: 380-86623-F-1-A MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 81576

Prep Batch: 81456

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	ND		123	117		ng/L		95	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		123	127		ng/L		103	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		123	128		ng/L		104	70 - 130	7	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		123	125		ng/L		101	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		123	119		ng/L		97	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	ND		123	118		ng/L		96	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	ND		123	124		ng/L		100	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		123	125		ng/L		101	70 - 130	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	ND		123	126		ng/L		102	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		123	156		ng/L		127	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		123	130		ng/L		105	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	ND		123	129		ng/L		104	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	ND		123	137		ng/L		109	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	ND		123	126		ng/L		102	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	ND		123	126		ng/L		102	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	ND		123	131		ng/L		106	70 - 130	6	30
Perfluoroheptanoic acid (PFHpA)	ND		123	122		ng/L		98	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	ND		123	124		ng/L		101	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	ND		123	126		ng/L		101	70 - 130	2	30
Perfluorononanoic acid (PFNA)	ND		123	129		ng/L		104	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	ND		123	127		ng/L		102	70 - 130	6	30
Perfluorooctanoic acid (PFOA)	ND		123	125		ng/L		101	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	ND		123	125		ng/L		101	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	ND		123	129		ng/L		104	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	ND		123	125		ng/L		101	70 - 130	2	30

Isotope Dilution	MSD	MSD	Limits
	%Recovery	Qualifier	
13C2 PFDoA	75		50 - 200
13C2-4:2-FTS	145		50 - 200
13C2-6:2-FTS	150		50 - 200
13C2-8:2-FTS	113		50 - 200
13C3 HFPO-DA	78		50 - 200
13C3 PFBS	88		50 - 200
13C3 PFHxS	91		50 - 200

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: 380-86623-F-1-A MSD
Matrix: Drinking Water
Analysis Batch: 81576

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 81456

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	87		50 - 200
13C4 PFHpA	83		50 - 200
13C5 PFHxA	80		50 - 200
13C5 PFPeA	130		50 - 200
13C6 PFDA	75		50 - 200
13C7 PFUnA	74		50 - 200
13C8 PFOA	78		50 - 200
13C8 PFOS	90		50 - 200
13C9 PFNA	75		50 - 200

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

Lab Sample ID: MBL 380-81459/21-A
Matrix: Drinking Water
Analysis Batch: 81571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 81459

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 16:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 16:26	1
Perfluorotetradecanoic acid (PFTA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 16:26	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	ng/L		03/14/24 06:53	03/14/24 16:26	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDA	103		70 - 130	03/14/24 06:53	03/14/24 16:26	1
13C2 PFHxA	89		70 - 130	03/14/24 06:53	03/14/24 16:26	1
13C3-GenX	79		70 - 130	03/14/24 06:53	03/14/24 16:26	1
d5-NEtFOSAA	100		70 - 130	03/14/24 06:53	03/14/24 16:26	1

Lab Sample ID: LCS 380-81459/23-A
Matrix: Drinking Water
Analysis Batch: 81571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	52.8		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	53.0		ng/L		106	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	54.7		ng/L		109	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
13C2 PFDA	104		70 - 130
13C2 PFHxA	107		70 - 130
13C3-GenX	105		70 - 130
d5-NEtFOSAA	94		70 - 130

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: MRL 380-81459/22-A
Matrix: Drinking Water
Analysis Batch: 81571

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 81459

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	2.00	1.98	J	ng/L		99	50 - 150	
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	2.00	2.09		ng/L		104	50 - 150	
Perfluorotetradecanoic acid (PFTA)	2.00	1.98	J	ng/L		99	50 - 150	
Perfluorotridecanoic acid (PFTrDA)	2.00	2.02		ng/L		101	50 - 150	
MRL MRL								
Surrogate	%Recovery	Qualifier	Limits					
13C2 PFDA	109		70 - 130					
13C2 PFHxA	98		70 - 130					
13C3-GenX	90		70 - 130					
d5-NEtFOSAA	104		70 - 130					

Lab Sample ID: 380-86842-E-1-B LMS
Matrix: Drinking Water
Analysis Batch: 81571

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 81459

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits	
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	ND		2.01	2.07		ng/L		103	50 - 150	
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	ND		2.01	2.08		ng/L		103	50 - 150	
Perfluorotetradecanoic acid (PFTA)	ND		2.01	2.03		ng/L		101	50 - 150	
Perfluorotridecanoic acid (PFTrDA)	ND		2.01	2.06		ng/L		102	50 - 150	
LMS LMS										
Surrogate	%Recovery	Qualifier	Limits							
13C2 PFDA	108		70 - 130							
13C2 PFHxA	108		70 - 130							
13C3-GenX	99		70 - 130							
d5-NEtFOSAA	106		70 - 130							

Lab Sample ID: 380-86842-F-1-B LMSD
Matrix: Drinking Water
Analysis Batch: 81571

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 81459

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	
											RPD	Limit
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	ND		2.01	2.24		ng/L		111	50 - 150	8	50	
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	ND		2.01	2.15		ng/L		107	50 - 150	3	50	
Perfluorotetradecanoic acid (PFTA)	ND		2.01	2.26		ng/L		112	50 - 150	10	50	
Perfluorotridecanoic acid (PFTrDA)	ND		2.01	2.46		ng/L		122	50 - 150	18	50	

QC Sample Results

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

Lab Sample ID: 380-86842-F-1-B LMSD

Matrix: Drinking Water

Analysis Batch: 81571

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 81459

Surrogate	LMSD		Limits
	%Recovery	Qualifier	
13C2 PFDA	113		70 - 130
13C2 PFHxA	110		70 - 130
13C3-GenX	100		70 - 130
d5-NEtFOSAA	106		70 - 130

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QC Association Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

LCMS

Prep Batch: 81456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-86681-1	J-McMillan WTP	Total/NA	Drinking Water	533	
380-86681-2	18-Dalcarlia WTP	Total/NA	Drinking Water	533	
380-86681-3	18-Dalcarlia WTP FRB	Total/NA	Drinking Water	533	
380-86681-4	J-McMillan WTP FRB	Total/NA	Drinking Water	533	
MBL 380-81456/19-A	Method Blank	Total/NA	Drinking Water	533	
LCS 380-81456/21-A	Lab Control Sample	Total/NA	Drinking Water	533	
MRL 380-81456/20-A	Lab Control Sample	Total/NA	Drinking Water	533	
380-86623-E-1-A MS	Matrix Spike	Total/NA	Drinking Water	533	
380-86623-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533	

Prep Batch: 81459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-86681-1	J-McMillan WTP	Total/NA	Drinking Water	537.1 DW	
380-86681-2	18-Dalcarlia WTP	Total/NA	Drinking Water	537.1 DW	
MBL 380-81459/21-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-81459/23-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-81459/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
380-86842-E-1-B LMS	Matrix Spike	Total/NA	Drinking Water	537.1 DW	
380-86842-F-1-B LMSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 81571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-86681-1	J-McMillan WTP	Total/NA	Drinking Water	537.1	81459
380-86681-2	18-Dalcarlia WTP	Total/NA	Drinking Water	537.1	81459
MBL 380-81459/21-A	Method Blank	Total/NA	Drinking Water	537.1	81459
LCS 380-81459/23-A	Lab Control Sample	Total/NA	Drinking Water	537.1	81459
MRL 380-81459/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1	81459
380-86842-E-1-B LMS	Matrix Spike	Total/NA	Drinking Water	537.1	81459
380-86842-F-1-B LMSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1	81459

Analysis Batch: 81576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-86681-1	J-McMillan WTP	Total/NA	Drinking Water	533	81456
380-86681-2	18-Dalcarlia WTP	Total/NA	Drinking Water	533	81456
380-86681-4	J-McMillan WTP FRB	Total/NA	Drinking Water	533	81456
MBL 380-81456/19-A	Method Blank	Total/NA	Drinking Water	533	81456
LCS 380-81456/21-A	Lab Control Sample	Total/NA	Drinking Water	533	81456
MRL 380-81456/20-A	Lab Control Sample	Total/NA	Drinking Water	533	81456
380-86623-E-1-A MS	Matrix Spike	Total/NA	Drinking Water	533	81456
380-86623-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533	81456

Analysis Batch: 81880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-86681-3	18-Dalcarlia WTP FRB	Total/NA	Drinking Water	533	81456

Lab Chronicle

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

Client Sample ID: J-McMillan WTP

Lab Sample ID: 380-86681-1

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			81456	XTD8	EA POM	03/14/24 04:15
Total/NA	Analysis	533		1	81576	Y5FM	EA POM	03/14/24 22:49
Total/NA	Prep	537.1 DW			81459	SL5Q	EA POM	03/14/24 06:53
Total/NA	Analysis	537.1		1	81571	R6YA	EA POM	03/14/24 19:44

Client Sample ID: 18-Dalcarlia WTP

Lab Sample ID: 380-86681-2

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			81456	XTD8	EA POM	03/14/24 04:15
Total/NA	Analysis	533		1	81576	Y5FM	EA POM	03/14/24 22:59
Total/NA	Prep	537.1 DW			81459	SL5Q	EA POM	03/14/24 06:53
Total/NA	Analysis	537.1		1	81571	R6YA	EA POM	03/14/24 19:54

Client Sample ID: 18-Dalcarlia WTP FRB

Lab Sample ID: 380-86681-3

Date Collected: 03/11/24 08:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			81456	XTD8	EA POM	03/14/24 04:15
Total/NA	Analysis	533		1	81880	Y5FM	EA POM	03/16/24 12:26

Client Sample ID: J-McMillan WTP FRB

Lab Sample ID: 380-86681-4

Date Collected: 03/11/24 10:20

Matrix: Drinking Water

Date Received: 03/12/24 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			81456	XTD8	EA POM	03/14/24 04:15
Total/NA	Analysis	533		1	81576	Y5FM	EA POM	03/14/24 23:21

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: 380-86681-1

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
<p>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.</p>			
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 (PFEEESA)
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	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1	537.1 DW	Drinking Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	537.1 DW	Drinking Water	Perfluorotetradecanoic acid (PFTA)
537.1	537.1 DW	Drinking Water	Perfluorotridecanoic acid (PFTrDA)
Utah	NELAP	CA00006	01-31-25

Method Summary

Client: USACE WAD
Project/Site: USACE-WAD

Job ID: 380-86681-1

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

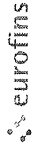
Job ID: 380-86681-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-86681-1	J-McMillan WTP	Drinking Water	03/11/24 10:20	03/12/24 10:30
380-86681-2	18-Dalcarlia WTP	Drinking Water	03/11/24 08:20	03/12/24 10:30
380-86681-3	18-Dalcarlia WTP FRB	Drinking Water	03/11/24 08:20	03/12/24 10:30
380-86681-4	J-McMillan WTP FRB	Drinking Water	03/11/24 10:20	03/12/24 10:30

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Eurofins Eaton Analytical Pomona
 941 Corporate Center Drive
 Pomona, CA 91768-2642
 Phone (626) 386-1100

Chain of Custody Record



Client Information		Lab PM French, Thomas D		Carrier Tracking No(s)		COC No 380-52209-14991 1	
Client Contact: Robert Hoffa		E-Mail Tom.French@eurofins.com		State of Origin D.C.		Page Page 1 of 1	
Company USACE WAD		pWSID		Analysis Requested		Job #	
Address 5900 Mac Arthur Boulevard		Due Date Requested:		 380-86681 COC Total Number of Containers: <input checked="" type="checkbox"/>		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:	
City Washington		TAT Requested (days):					
State, Zip DC, 20016		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Phone 202-587-9139(Tel)		PO # W912DR24D0003					
Email robert.p.hoffa@usace.army.mil		WO #					
Project Name USACE-WAD/ Event Desc: PFAS 18 & JS Quarterly 2024		Project # 38002019		Perform MS/MSD (Yes or No)		533 - All Analytes	
Site Washington, DC		SSOV#		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	537.1, DW, PREC - EPA 537.1 Short List	533 - All Analytes
J-McMillan WTP	3/11/24	1020	G		Drinking Water	X	X
18-Daicarlia WTP	3/11/24	0820	G		Drinking Water	X	X
18-Daicarlia WTP FRB	3/11/24	0820	G		Drinking Water	X	X
J-McMillan WTP FRB	3/11/24	1020	G		Drinking Water	X	X
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)							
Empty Kit Relinquished by: Relinquished by: R. Hoffa Date/Time: 3/11/24 1230 Relinquished by: R. Hoffa Date/Time: 3/11/24 1230							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements							
Method of Shipment: FedEx 2177998285394 Date/Time: 3/14/2024 0900 Company: USACE				Received by: R. Hoffa Date/Time: 3-12-24 10:30 Company: FEAP			
Cooler Temperature(s) °C and Other Remarks 1.3-0.2-1.1 (630A) WPT 550-260							

Login Sample Receipt Checklist

Client: USACE WAD

Job Number: 380-86681-1

Login Number: 86681

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Sanchez Velasquez, Gustavo

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	

