eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 11/3/2026 9:03:48 AM

JOB DESCRIPTION

RED-HILL
PFAS: Moanalua Wells

JOB NUMBER

380-244883-1

Eurofins Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

my EOL

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 Drinking Water and Wastewater West, 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



Generated
11/3/2026 9:03:48 AM

Authorized for release by
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1145

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Action Limit Summary 11
Surrogate Summary 12
Isotope Dilution Summary 13
QC Sample Results 15
QC Association Summary 32
Lab Chronicle 34
Certification Summary 35
Method Summary 36
Sample Summary 37
Chain of Custody 38
Receipt Checklists 39

Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

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.
☼	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 Narrative
380-244883-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt
The samples were received on 10/28/2026 10:00 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 0.6°C.

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

Detection Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-244883-1

No Detections.

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-244883-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 10/26/26 10:46
Date Received: 10/28/26 10:00

Lab Sample ID: 380-244883-1
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)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/29/26 07:59	10/30/26 13:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C6 PFDA	*105*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C5 PFHxA	*105*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C4 PFHpA	*106*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C8 PFOA	*104*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C9 PFNA	*107*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C7 PFUnA	*109*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C2 PFDoA	*103*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C4 PFBA	*107*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C5 PFPeA	*108*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C3 PFBS	*104*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C3 PFHxS	*109*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*
13C8 PFOS	*108*		*50 - 200*	*10/29/26 07:59*	*10/30/26 13:27*	*1*

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-244883-1

Date Collected: 10/26/26 10:46

Matrix: Drinking Water

Date Received: 10/28/26 10:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	113		50 - 200	10/29/26 07:59	10/30/26 13:27	1
13C2-6:2-FTS	103		50 - 200	10/29/26 07:59	10/30/26 13:27	1
13C2-8:2-FTS	104		50 - 200	10/29/26 07:59	10/30/26 13:27	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	10/29/26 18:10	10/30/26 23:18	1
13C2 PFHxA	109		70 - 130	10/29/26 18:10	10/30/26 23:18	1
13C2 PFDA	106		70 - 130	10/29/26 18:10	10/30/26 23:18	1
13C3-GenX	102		70 - 130	10/29/26 18:10	10/30/26 23:18	1

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-244883-2

Date Collected: 10/26/26 10:46

Matrix: Water

Date Received: 10/28/26 10:00

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)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202)
Date Collected: 10/26/26 10:46
Date Received: 10/28/26 10:00

Lab Sample ID: 380-244883-2
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/29/26 08:10	10/30/26 15:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C5 PFHxA	*106*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C4 PFHpA	*102*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C8 PFOA	*107*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C7 PFUnA	*102*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C2 PFDoA	*93*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C4 PFBA	*108*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C5 PFPeA	*111*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C3 PFBS	*105*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C3 PFHxS	*112*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C8 PFOS	*113*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C2-4:2-FTS	*109*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*
13C2-8:2-FTS	*101*		*50 - 200*	*10/29/26 08:10*	*10/30/26 15:31*	*1*

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202)
Date Collected: 10/26/26 10:46
Date Received: 10/28/26 10:00

Lab Sample ID: 380-244883-2
Matrix: Water

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/26 18:10	10/30/26 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*104*		*70 - 130*	*10/29/26 18:10*	*10/30/26 23:28*	*1*
13C2 PFHxA	*113*		*70 - 130*	*10/29/26 18:10*	*10/30/26 23:28*	*1*
13C2 PFDA	*110*		*70 - 130*	*10/29/26 18:10*	*10/30/26 23:28*	*1*
13C3-GenX	*105*		*70 - 130*	*10/29/26 18:10*	*10/30/26 23:28*	*1*

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-244883-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-244883-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-244883-1	MOANALUA WELLS (331-223-TP2(	102	109	106	102

Surrogate Legend

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

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-244816-E-2-A MS	Matrix Spike	103	106	100	104
380-244816-F-2-A MSD	Matrix Spike Duplicate	100	111	108	104
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	104	113	110	105
LCS 380-262301/22-A	Lab Control Sample	99	109	111	105
MBL 380-262301/20-A	Method Blank	104	107	112	106
MRL 380-262301/21-A	Lab Control Sample	94	96	102	88

Surrogate Legend

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

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	C6PFDA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	13C7PUA	PFDoA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
380-244883-1	MOANALUA WELLS (331-223-TP2(	100	105	105	106	104	107	109	103

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	C3PFBS	C3PFHS	C8PFOS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
380-244883-1	MOANALUA WELLS (331-223-TP2(	107	108	104	109	108	113	103	104

Surrogate Legend

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

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA	C6PFDA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	13C7PUA	PFDoA
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
380-244807-B-7-A MS	Matrix Spike	125	115	116	112	119	119	122	114
380-244807-C-7-A MSD	Matrix Spike Duplicate	114	106	109	103	117	110	123	124
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	99	101	106	102	107	104	102	93
380-244988-B-2-A MS	Matrix Spike	103	103	103	104	105	101	110	108
380-244988-C-2-A MSD	Matrix Spike Duplicate	116	108	112	112	115	110	116	117
LCS 380-262132/22-A	Lab Control Sample	109	121	110	108	110	111	123	121
LCS 380-262133/22-A	Lab Control Sample	98	102	97	94	97	92	101	102
MBL 380-262132/20-A	Method Blank	106	113	109	107	114	114	119	105
MBL 380-262133/20-A	Method Blank	91	105	98	102	103	104	106	100
MRL 380-262132/21-A	Lab Control Sample	97	110	102	101	103	107	108	110
MRL 380-262133/21-A	Lab Control Sample	92	106	99	98	103	101	111	107

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	C3PFBS	C3PFHS	C8PFOS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
380-244807-B-7-A MS	Matrix Spike	109	119	101	109	107	100	98	97
380-244807-C-7-A MSD	Matrix Spike Duplicate	108	116	106	112	113	108	103	103
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	108	111	105	112	113	109	104	101
380-244988-B-2-A MS	Matrix Spike	105	109	104	113	112	107	100	102

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-244883-1
Project/Site: RED-HILL
SDG: PFAS: Moanalua Wells

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

Matrix: Water
Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	C3PFBS	C3PFHS	C8PFOS	42FTS	62FTS	82FTS
Lab Sample ID	Client Sample ID	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)	(50-200)
380-244988-C-2-A MSD	Matrix Spike Duplicate	108	111	106	111	111	107	105	105
LCS 380-262132/22-A	Lab Control Sample	104	105	104	115	111	102	100	101
LCS 380-262133/22-A	Lab Control Sample	102	105	105	112	112	109	104	102
MBL 380-262132/20-A	Method Blank	100	103	97	105	106	100	95	97
MBL 380-262133/20-A	Method Blank	95	95	106	113	109	105	104	105
MRL 380-262132/21-A	Lab Control Sample	92	93	98	106	107	100	98	104
MRL 380-262133/21-A	Lab Control Sample	95	96	106	114	112	113	105	103

Surrogate Legend

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

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

Lab Sample ID: MBL 380-262132/20-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262132

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0		ng/L		10/29/26 07:59	10/30/26 09:47	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*106*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C6 PFDA	*113*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C5 PFHxA	*109*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C4 PFHpA	*107*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C8 PFOA	*114*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C9 PFNA	*114*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C7 PFUnA	*119*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C2 PFDoA	*105*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C4 PFBA	*100*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C5 PFPeA	*103*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C3 PFBS	*97*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*
13C3 PFHxS	*105*		*50 - 200*	*10/29/26 07:59*	*10/30/26 09:47*	*1*

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

Lab Sample ID: MBL 380-262132/20-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262132

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	10/29/26 07:59	10/30/26 09:47	1
13C2-4:2-FTS	100		50 - 200	10/29/26 07:59	10/30/26 09:47	1
13C2-6:2-FTS	95		50 - 200	10/29/26 07:59	10/30/26 09:47	1
13C2-8:2-FTS	97		50 - 200	10/29/26 07:59	10/30/26 09:47	1

Lab Sample ID: LCS 380-262132/22-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	118	106		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	118	105		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	118	106		ng/L		90	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	118	101		ng/L		85	70 - 130
Perfluorobutanesulfonic acid (PFBS)	118	113		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	118	99.5		ng/L		84	70 - 130
Perfluorododecanoic acid (PFDoA)	118	104		ng/L		88	70 - 130
Perfluoroheptanoic acid (PFHpA)	118	103		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	118	102		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	118	102		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	118	93.7		ng/L		79	70 - 130
Perfluorooctanesulfonic acid (PFOS)	118	107		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	118	105		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	118	104		ng/L		88	70 - 130
Perfluorobutanoic acid (PFBA)	118	107		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	102		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	107		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	106		ng/L		89	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	113		ng/L		96	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	118	105		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	106		ng/L		89	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	118	105		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	118	104		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	118	103		ng/L		87	70 - 130

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

Lab Sample ID: LCS 380-262132/22-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262132

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			118	101		ng/L		85	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*109*		*50 - 200*
13C6 PFDA	*121*		*50 - 200*
13C5 PFHxA	*110*		*50 - 200*
13C4 PFHpA	*108*		*50 - 200*
13C8 PFOA	*110*		*50 - 200*
13C9 PFNA	*111*		*50 - 200*
13C7 PFUnA	*123*		*50 - 200*
13C2 PFDoA	*121*		*50 - 200*
13C4 PFBA	*104*		*50 - 200*
13C5 PFPeA	*105*		*50 - 200*
13C3 PFBS	*104*		*50 - 200*
13C3 PFHxS	*115*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*102*		*50 - 200*
13C2-6:2-FTS	*100*		*50 - 200*
13C2-8:2-FTS	*101*		*50 - 200*

Lab Sample ID: MRL 380-262132/21-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262132

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.97	1.87	J	ng/L		95	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			1.97	1.87	J	ng/L		95	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.97	1.96	J	ng/L		99	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			1.97	1.84	J	ng/L		94	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.97	2.02	J	ng/L		102	50 - 150		
Perfluorodecanoic acid (PFDA)			1.97	1.97	J	ng/L		100	50 - 150		
Perfluorododecanoic acid (PFDoA)			1.97	1.91	J	ng/L		97	50 - 150		
Perfluoroheptanoic acid (PFHpA)			1.97	1.85	J	ng/L		94	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.97	1.93	J	ng/L		98	50 - 150		
Perfluorohexanoic acid (PFHxA)			1.97	1.86	J	ng/L		94	50 - 150		
Perfluorononanoic acid (PFNA)			1.97	1.71	J	ng/L		87	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.97	1.98	J	ng/L		101	50 - 150		
Perfluorooctanoic acid (PFOA)			1.97	1.94	J	ng/L		98	50 - 150		
Perfluoroundecanoic acid (PFUnA)			1.97	2.24	J	ng/L		114	50 - 150		
Perfluorobutanoic acid (PFBA)			1.97	2.17	J	ng/L		110	50 - 150		

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

Lab Sample ID: MRL 380-262132/21-A
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262132

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.97	2.01	J	ng/L		102	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.97	2.05	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.97	1.87	J	ng/L		95	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.97	2.06	J	ng/L		105	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.97	2.06	J	ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.97	1.90	J	ng/L		96	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.97	1.90	J	ng/L		96	50 - 150
Perfluoropentanoic acid (PFPeA)	1.97	2.01	J	ng/L		102	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.97	1.93	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.97	1.82	J	ng/L		92	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*97*		*50 - 200*
13C6 PFDA	*110*		*50 - 200*
13C5 PFHxA	*102*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*103*		*50 - 200*
13C9 PFNA	*107*		*50 - 200*
13C7 PFUnA	*108*		*50 - 200*
13C2 PFDoA	*110*		*50 - 200*
13C4 PFBA	*92*		*50 - 200*
13C5 PFPeA	*93*		*50 - 200*
13C3 PFBS	*98*		*50 - 200*
13C3 PFHxS	*106*		*50 - 200*
13C8 PFOS	*107*		*50 - 200*
13C2-4:2-FTS	*100*		*50 - 200*
13C2-6:2-FTS	*98*		*50 - 200*
13C2-8:2-FTS	*104*		*50 - 200*

Lab Sample ID: 380-244807-B-7-A MS
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262132

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)	<2.0		118	108		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	112		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	111		ng/L		94	70 - 130

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

Lab Sample ID: 380-244807-B-7-A MS
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262132

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	99.8		ng/L		84	70 - 130
Perfluorobutanesulfonic acid (PFBS)	5.5		118	120		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		118	111		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		118	126		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		118	106		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	5.8		118	112		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		118	106		ng/L		90	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		118	100		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	3.3		118	114		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		118	102		ng/L		87	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		118	112		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		118	113		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	108		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	111		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	113		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	131		ng/L		111	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		118	105		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	109		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	110		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		118	108		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	108		ng/L		92	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	109		ng/L		91	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*125*		*50 - 200*
13C6 PFDA	*115*		*50 - 200*
13C5 PFHxA	*116*		*50 - 200*
13C4 PFHpA	*112*		*50 - 200*
13C8 PFOA	*119*		*50 - 200*
13C9 PFNA	*119*		*50 - 200*
13C7 PFUnA	*122*		*50 - 200*
13C2 PFDoA	*114*		*50 - 200*
13C4 PFBA	*109*		*50 - 200*
13C5 PFPeA	*119*		*50 - 200*
13C3 PFBS	*101*		*50 - 200*
13C3 PFHxS	*109*		*50 - 200*
13C8 PFOS	*107*		*50 - 200*

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

Lab Sample ID: 380-244807-B-7-A MS
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262132

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	*100*		*50 - 200*
13C2-6:2-FTS	*98*		*50 - 200*
13C2-8:2-FTS	*97*		*50 - 200*

Lab Sample ID: 380-244807-C-7-A MSD
Matrix: Water
Analysis Batch: 262460

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262132

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)	<2.0		118	108		ng/L		91	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	109		ng/L		92	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	118		ng/L		100	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	104		ng/L		88	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	5.5		118	123		ng/L		99	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		118	122		ng/L		103	70 - 130	9	30
Perfluorododecanoic acid (PFDoA)	<2.0		118	97.1		ng/L		82	70 - 130	26	30
Perfluoroheptanoic acid (PFHpA)	<2.0		118	116		ng/L		98	70 - 130	9	30
Perfluorohexanesulfonic acid (PFHxS)	5.8		118	115		ng/L		92	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		118	112		ng/L		95	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		118	102		ng/L		86	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	3.3		118	112		ng/L		92	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		118	101		ng/L		86	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		118	109		ng/L		92	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		118	112		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	109		ng/L		92	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	108		ng/L		91	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	108		ng/L		91	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	101		ng/L		85	70 - 130	26	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		118	107		ng/L		90	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	107		ng/L		91	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	114		ng/L		96	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	<2.0		118	109		ng/L		91	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	106		ng/L		90	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	111		ng/L		93	70 - 130	2	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	114		50 - 200
13C6 PFDA	106		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	117		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	123		50 - 200
13C2 PFDoA	124		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	116		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	108		50 - 200
13C2-6:2-FTS	103		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: MBL 380-262133/20-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262133

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.37		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1

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

Lab Sample ID: MBL 380-262133/20-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262133

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.37		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0		ng/L		10/29/26 08:10	10/30/26 14:15	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C6 PFDA	*105*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C5 PFHxA	*98*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C4 PFHpA	*102*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C8 PFOA	*103*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C7 PFUnA	*106*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C2 PFDoA	*100*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C4 PFBA	*95*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C5 PFPeA	*95*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C3 PFBS	*106*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C3 PFHxS	*113*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C8 PFOS	*109*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C2-4:2-FTS	*105*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*
13C2-8:2-FTS	*105*		*50 - 200*	*10/29/26 08:10*	*10/30/26 14:15*	*1*

Lab Sample ID: LCS 380-262133/22-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262133

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			59.1	57.2		ng/L		97	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			59.1	57.8		ng/L		98	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			59.1	57.8		ng/L		98	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			59.1	53.7		ng/L		91	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			59.1	60.6		ng/L		103	70 - 130		
Perfluorodecanoic acid (PFDA)			59.1	54.7		ng/L		93	70 - 130		
Perfluorododecanoic acid (PFDoA)			59.1	56.1		ng/L		95	70 - 130		
Perfluoroheptanoic acid (PFHpA)			59.1	59.0		ng/L		100	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			59.1	57.6		ng/L		98	70 - 130		
Perfluorohexanoic acid (PFHxA)			59.1	57.6		ng/L		98	70 - 130		
Perfluorononanoic acid (PFNA)			59.1	62.0		ng/L		105	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			59.1	57.5		ng/L		97	70 - 130		
Perfluorooctanoic acid (PFOA)			59.1	56.1		ng/L		95	70 - 130		

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

Lab Sample ID: LCS 380-262133/22-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262133

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	59.1	58.7		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	59.1	59.9		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	59.1	58.3		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	59.1	55.1		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	59.1	55.8		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	59.1	57.0		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	59.1	58.0		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	59.1	57.6		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	59.1	55.9		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	59.1	59.2		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	59.1	58.9		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	59.1	56.9		ng/L		96	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*98*		*50 - 200*
13C6 PFDA	*102*		*50 - 200*
13C5 PFHxA	*97*		*50 - 200*
13C4 PFHpA	*94*		*50 - 200*
13C8 PFOA	*97*		*50 - 200*
13C9 PFNA	*92*		*50 - 200*
13C7 PFUnA	*101*		*50 - 200*
13C2 PFDoA	*102*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C5 PFPeA	*105*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*112*		*50 - 200*
13C8 PFOS	*112*		*50 - 200*
13C2-4:2-FTS	*109*		*50 - 200*
13C2-6:2-FTS	*104*		*50 - 200*
13C2-8:2-FTS	*102*		*50 - 200*

Lab Sample ID: MRL 380-262133/21-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262133

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	2.01	J	ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.97	1.90	J	ng/L		96	50 - 150

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

Lab Sample ID: MRL 380-262133/21-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262133

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.97	1.91	J	ng/L		97	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			1.97	1.79	J	ng/L		91	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.97	2.04	J	ng/L		104	50 - 150		
Perfluorodecanoic acid (PFDA)			1.97	2.07	J	ng/L		105	50 - 150		
Perfluorododecanoic acid (PFDoA)			1.97	2.10	J	ng/L		107	50 - 150		
Perfluoroheptanoic acid (PFHpA)			1.97	2.07	J	ng/L		105	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.97	1.86	J	ng/L		94	50 - 150		
Perfluorohexanoic acid (PFHxA)			1.97	1.97	J	ng/L		100	50 - 150		
Perfluorononanoic acid (PFNA)			1.97	2.09	J	ng/L		106	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.97	1.98	J	ng/L		101	50 - 150		
Perfluorooctanoic acid (PFOA)			1.97	1.81	J	ng/L		92	50 - 150		
Perfluoroundecanoic acid (PFUnA)			1.97	2.04	J	ng/L		103	50 - 150		
Perfluorobutanoic acid (PFBA)			1.97	2.17	J	ng/L		110	50 - 150		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			1.97	2.02	J	ng/L		103	50 - 150		
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			1.97	1.96	J	ng/L		99	50 - 150		
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			1.97	1.98	J	ng/L		101	50 - 150		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			1.97	1.98	J	ng/L		101	50 - 150		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			1.97	2.14	J	ng/L		109	50 - 150		
Perfluoro-3-methoxypropanoic acid (PFMPA)			1.97	1.98	J	ng/L		100	50 - 150		
Perfluoro-4-methoxybutanoic acid (PFMBA)			1.97	1.78	J	ng/L		90	50 - 150		
Perfluoropentanoic acid (PFPeA)			1.97	2.16	J	ng/L		110	50 - 150		
Perfluoroheptanesulfonic acid (PFHpS)			1.97	1.99	J	ng/L		101	50 - 150		
Perfluoropentanesulfonic acid (PFPeS)			1.97	1.81	J	ng/L		92	50 - 150		

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*92*		*50 - 200*
13C6 PFDA	*106*		*50 - 200*
13C5 PFHxA	*99*		*50 - 200*
13C4 PFHpA	*98*		*50 - 200*
13C8 PFOA	*103*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*
13C7 PFUnA	*111*		*50 - 200*
13C2 PFDoA	*107*		*50 - 200*
13C4 PFBA	*95*		*50 - 200*
13C5 PFPeA	*96*		*50 - 200*
13C3 PFBS	*106*		*50 - 200*
13C3 PFHxS	*114*		*50 - 200*

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

Lab Sample ID: MRL 380-262133/21-A
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262133

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-244988-B-2-A MS
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262133

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)	<2.0		59.3	56.2		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.3	57.2		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.3	56.4		ng/L		95	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.3	56.1		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	2.7		59.3	62.6		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		59.3	57.3		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		59.3	55.2		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		59.3	58.0		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.4		59.3	59.0		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	7.9		59.3	63.6		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		59.3	59.4		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.3	56.6		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	2.5		59.3	60.1		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		59.3	58.3		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	2.5		59.3	61.7		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.3	56.4		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.3	55.9		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.3	58.2		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.3	70.8		ng/L		119	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		59.3	59.0		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.3	56.8		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.3	59.4		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	7.2		59.3	65.9		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.3	56.8		ng/L		96	70 - 130

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

Lab Sample ID: 380-244988-B-2-A MS
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262133

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.3	56.9		ng/L		94	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*103*		*50 - 200*
13C6 PFDA	*103*		*50 - 200*
13C5 PFHxA	*103*		*50 - 200*
13C4 PFHpA	*104*		*50 - 200*
13C8 PFOA	*105*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*
13C7 PFUnA	*110*		*50 - 200*
13C2 PFDoA	*108*		*50 - 200*
13C4 PFBA	*105*		*50 - 200*
13C5 PFPeA	*109*		*50 - 200*
13C3 PFBS	*104*		*50 - 200*
13C3 PFHxS	*113*		*50 - 200*
13C8 PFOS	*112*		*50 - 200*
13C2-4:2-FTS	*107*		*50 - 200*
13C2-6:2-FTS	*100*		*50 - 200*
13C2-8:2-FTS	*102*		*50 - 200*

Lab Sample ID: 380-244988-C-2-A MSD
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262133

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)	<2.0		59.2	55.9		ng/L		95	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.2	56.5		ng/L		95	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.2	58.4		ng/L		99	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.2	53.5		ng/L		90	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	2.7		59.2	63.1		ng/L		102	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		59.2	60.2		ng/L		102	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		59.2	57.7		ng/L		98	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		59.2	57.5		ng/L		95	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	2.4		59.2	60.6		ng/L		98	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	7.9		59.2	65.4		ng/L		97	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		59.2	51.2		ng/L		86	70 - 130	15	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.2	56.2		ng/L		95	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	2.5		59.2	56.5		ng/L		91	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)	<2.0		59.2	59.4		ng/L		100	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	2.5		59.2	60.1		ng/L		97	70 - 130	3	30

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

Lab Sample ID: 380-244988-C-2-A MSD
Matrix: Water
Analysis Batch: 262461

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262133

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.2	56.0		ng/L		95	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.2	54.0		ng/L		91	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.2	55.6		ng/L		94	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.2	59.6		ng/L		101	70 - 130	17	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		59.2	58.6		ng/L		99	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.2	57.6		ng/L		97	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.2	58.0		ng/L		98	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	7.2		59.2	64.6		ng/L		97	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.2	55.7		ng/L		94	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.2	58.1		ng/L		96	70 - 130	2	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*
13C6 PFDA	*108*		*50 - 200*
13C5 PFHxA	*112*		*50 - 200*
13C4 PFHpA	*112*		*50 - 200*
13C8 PFOA	*115*		*50 - 200*
13C9 PFNA	*110*		*50 - 200*
13C7 PFUnA	*116*		*50 - 200*
13C2 PFDoA	*117*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*106*		*50 - 200*
13C3 PFHxS	*111*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*107*		*50 - 200*
13C2-6:2-FTS	*105*		*50 - 200*
13C2-8:2-FTS	*105*		*50 - 200*

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Lab Sample ID: MBL 380-262301/20-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262301

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MBL 380-262301/20-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 262301

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.41		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
Perfluorotridecanoic acid (PFTrDA)	<0.35		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		10/29/26 18:10	10/30/26 21:21	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*104*		*70 - 130*	*10/29/26 18:10*	*10/30/26 21:21*	*1*
13C2 PFHxA	*107*		*70 - 130*	*10/29/26 18:10*	*10/30/26 21:21*	*1*
13C2 PFDA	*112*		*70 - 130*	*10/29/26 18:10*	*10/30/26 21:21*	*1*
13C3-GenX	*106*		*70 - 130*	*10/29/26 18:10*	*10/30/26 21:21*	*1*

Lab Sample ID: LCS 380-262301/22-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	24.6	24.5		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	24.6	24.0		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	24.6	24.6		ng/L		100	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.6	23.9		ng/L		97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	24.6	23.0		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	24.6	24.5		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	24.6	24.6		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	24.6	24.5		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	24.6	26.1		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	24.6	24.9		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	24.6	24.1		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	24.6	25.8		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	24.6	25.0		ng/L		102	70 - 130

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: LCS 380-262301/22-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262301

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorotetradecanoic acid (PFTA)			24.6	18.4		ng/L		75	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			24.6	27.1		ng/L		110	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			24.6	24.6		ng/L		100	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			24.6	22.7		ng/L		92	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.6	24.8		ng/L		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*99*		*70 - 130*
13C2 PFHxA	*109*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
13C3-GenX	*105*		*70 - 130*

Lab Sample ID: MRL 380-262301/21-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262301

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			1.96	1.58	J	ng/L		80	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.96	1.93	J	ng/L		98	50 - 150		
Perfluoroundecanoic acid (PFUnA)			1.96	1.93	J	ng/L		98	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			1.96	1.65	J	ng/L		84	50 - 150		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			1.96	1.73	J	ng/L		88	50 - 150		
Perfluorohexanoic acid (PFHxA)			1.96	1.77	J	ng/L		90	50 - 150		
Perfluorododecanoic acid (PFDoA)			1.96	1.97	J	ng/L		100	50 - 150		
Perfluorooctanoic acid (PFOA)			1.96	1.80	J	ng/L		92	50 - 150		
Perfluorodecanoic acid (PFDA)			1.96	1.85	J	ng/L		94	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.96	1.88	J	ng/L		96	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.96	1.88	J	ng/L		96	50 - 150		
Perfluoroheptanoic acid (PFHpA)			1.96	1.76	J	ng/L		90	50 - 150		
Perfluorononanoic acid (PFNA)			1.96	1.89	J	ng/L		96	50 - 150		
Perfluorotetradecanoic acid (PFTA)			1.96	1.63	J	ng/L		83	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			1.96	1.98	J	ng/L		101	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			1.96	1.82	J	ng/L		93	50 - 150		

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-262301/21-A
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 262301

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.96	1.75	J	ng/L		89	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.96	1.75	J	ng/L		89	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*94*		*70 - 130*
13C2 PFHxA	*96*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3-GenX	*88*		*70 - 130*

Lab Sample ID: 380-244816-E-2-A MS
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262301

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		24.6	23.5		ng/L		96	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	24.8		ng/L		101	70 - 130		
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	24.4		ng/L		99	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	23.8		ng/L		97	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	24.3		ng/L		99	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	23.4		ng/L		95	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	24.6		ng/L		100	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		24.6	22.8		ng/L		93	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		24.6	24.1		ng/L		98	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	25.6		ng/L		104	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	24.2		ng/L		99	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	24.0		ng/L		97	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		24.6	24.1		ng/L		98	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	18.9		ng/L		77	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.6	26.1		ng/L		106	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	24.5		ng/L		99	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	23.9		ng/L		97	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	24.1		ng/L		98	70 - 130		

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: 380-244816-E-2-A MS
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 262301

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	103		70 - 130
13C2 PFHxA	106		70 - 130
13C2 PFDA	100		70 - 130
13C3-GenX	104		70 - 130

Lab Sample ID: 380-244816-F-2-A MSD
Matrix: Water
Analysis Batch: 262538

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 262301

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		24.6	25.2		ng/L		102	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	24.5		ng/L		99	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	25.6		ng/L		104	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	24.4		ng/L		99	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	24.0		ng/L		97	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	25.5		ng/L		104	70 - 130	9	30
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	25.4		ng/L		103	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		24.6	25.6		ng/L		104	70 - 130	12	30
Perfluorodecanoic acid (PFDA)	<2.0		24.6	25.9		ng/L		105	70 - 130	7	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	24.5		ng/L		99	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	25.9		ng/L		105	70 - 130	7	30
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	25.4		ng/L		103	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		24.6	25.2		ng/L		102	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	18.3		ng/L		74	70 - 130	3	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.6	26.6		ng/L		108	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	24.3		ng/L		99	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	23.4		ng/L		95	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	25.6		ng/L		104	70 - 130	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	104		70 - 130

LCMS

Prep Batch: 262132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
MBL 380-262132/20-A	Method Blank	Total/NA	Water	533	
LCS 380-262132/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-262132/21-A	Lab Control Sample	Total/NA	Water	533	
380-244807-B-7-A MS	Matrix Spike	Total/NA	Water	533	
380-244807-C-7-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 262133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	
MBL 380-262133/20-A	Method Blank	Total/NA	Water	533	
LCS 380-262133/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-262133/21-A	Lab Control Sample	Total/NA	Water	533	
380-244988-B-2-A MS	Matrix Spike	Total/NA	Water	533	
380-244988-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 262301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1 DW	
MBL 380-262301/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-262301/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-262301/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-244816-E-2-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-244816-F-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 262460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	262132
MBL 380-262132/20-A	Method Blank	Total/NA	Water	533	262132
LCS 380-262132/22-A	Lab Control Sample	Total/NA	Water	533	262132
MRL 380-262132/21-A	Lab Control Sample	Total/NA	Water	533	262132
380-244807-B-7-A MS	Matrix Spike	Total/NA	Water	533	262132
380-244807-C-7-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	262132

Analysis Batch: 262461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	262133
MBL 380-262133/20-A	Method Blank	Total/NA	Water	533	262133
LCS 380-262133/22-A	Lab Control Sample	Total/NA	Water	533	262133
MRL 380-262133/21-A	Lab Control Sample	Total/NA	Water	533	262133
380-244988-B-2-A MS	Matrix Spike	Total/NA	Water	533	262133
380-244988-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	262133

Analysis Batch: 262538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244883-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	EPA 537.1 V2	262301
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	EPA 537.1 V2	262301
MBL 380-262301/20-A	Method Blank	Total/NA	Water	EPA 537.1 V2	262301
LCS 380-262301/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	262301
MRL 380-262301/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	262301

LCMS (Continued)

Analysis Batch: 262538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-244816-E-2-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	262301
380-244816-F-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	262301

Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-244883-1

Date Collected: 10/26/26 10:46
Matrix: Drinking Water
Date Received: 10/28/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			262132	XTD8	EA POM	10/29/26 07:59
Total/NA	Analysis	533		1	262460	Y5FM	EA POM	10/30/26 13:27
Total/NA	Prep	537.1 DW			262301	E2HD	EA POM	10/29/26 18:10
Total/NA	Analysis	EPA 537.1 V2		1	262538	M7ML	EA POM	10/30/26 23:18

Client Sample ID: FB: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-244883-2

Date Collected: 10/26/26 10:46
Matrix: Water
Date Received: 10/28/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			262133	XTD8	EA POM	10/29/26 08:10
Total/NA	Analysis	533		1	262461	Y5FM	EA POM	10/30/26 15:31
Total/NA	Prep	537.1 DW			262301	E2HD	EA POM	10/29/26 18:10
Total/NA	Analysis	EPA 537.1 V2		1	262538	M7ML	EA POM	10/30/26 23:28

Laboratory References:

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

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-27

Method Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	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 Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Sample Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-244883-1
SDG: PFAS: Moanalua Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-244883-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	10/26/26 10:46	10/28/26 10:00	Hawaii
380-244883-2	FB: MOANALUA WELLS (331-223-TP202)	Water	10/26/26 10:46	10/28/26 10:00	Hawaii

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

Chain of Custody Record

eurofins

380-244883 COC

Client Information	Sampler: bailey	Lab PM: Lopez, Maria	Carrier Tracking No(s):	COC No: 380-244883 COC
Client Contact: kirk Iwamoto	Phone: +1 808 748 5840	E-Mail: Maria.Lopez@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5840 (tel)	PO #: C20525101 exp 05312023			
Email: kiwamoto@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	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)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	8015B_GRO_LL - (MOD) GRO	8015B_DRO_LL_C8 - HNL Ranges: C10-C24/C24-C36/C8-C18	625.2_PREC - (MOD) 525plus PLUS TICs	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	A	Q	QA	Y	I		
Moanalua Wells (331-223-TP202)	26-Oct-2026	1046	G	Water							3	3		chlorinated
FB: Moanalua Wells (331-223-TP202)	26-Oct-2026	1046									1	1		

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: FED EX
[redacted]	Date/Time: 27 October 2026 1400	Company: HBWS	Received by:	Date/Time: 10/28/26 10:00	Company: EEAP
	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: (751A) 0.8 - 0.2 : 0.6 GEL-FROZEN	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-244883-1
SDG Number: PFAS: Moanalua Wells

Login Number: 244883
List Number: 1
Creator: Edrosa, Rey

List Source: Eurofins Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is 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").	N/A	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	