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 11/18/2026 12:21:40 PM

JOB DESCRIPTION

RED-HILL
PFAS: Halawa Wells P1

JOB NUMBER

380-247644-1

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
11/18/2026 12:21:40 PM

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
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
380-247644-1

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 11/11/2026 10:04 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 3.5°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: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065) — Lab Sample ID: 380-247644-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.0		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.1		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0		ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065) — Lab Sample ID: 380-247644-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Pomona

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

Job ID: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)
Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Lab Sample ID: 380-247644-1
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		11/16/26 16:25	11/17/26 21:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorohexanesulfonic acid (PFHxS)	**3.1**		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorohexanoic acid (PFHxA)	**3.0**		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorooctanesulfonic acid (PFOS)	**2.9**		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorooctanoic acid (PFOA)	**2.0**		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoropentanoic acid (PFPeA)	**3.7**		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/16/26 16:25	11/17/26 21:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C6 PFDA	*106*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C5 PFHxA	*96*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C4 PFHpA	*100*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C8 PFOA	*105*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C9 PFNA	*98*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C7 PFUnA	*95*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C2 PFDoA	*103*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C4 PFBA	*114*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C5 PFPeA	*103*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C3 PFBS	*117*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*
13C3 PFHxS	*99*		*50 - 200*	*11/16/26 16:25*	*11/17/26 21:57*	*1*

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-247644-1

Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Matrix: Drinking Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	102		50 - 200	11/16/26 16:25	11/17/26 21:57	1
13C2-4:2-FTS	122		50 - 200	11/16/26 16:25	11/17/26 21:57	1
13C2-6:2-FTS	119		50 - 200	11/16/26 16:25	11/17/26 21:57	1
13C2-8:2-FTS	112		50 - 200	11/16/26 16:25	11/17/26 21:57	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		11/12/26 03:17	11/12/26 22:07	1
Perfluorooctanesulfonic acid (PFOS)	**3.0**		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorohexanoic acid (PFHxA)	**3.1**		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorooctanoic acid (PFOA)	**2.1**		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorohexanesulfonic acid (PFHxS)	**3.2**		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130	11/12/26 03:17	11/12/26 22:07	1
13C2 PFHxA	101		70 - 130	11/12/26 03:17	11/12/26 22:07	1
13C2 PFDA	101		70 - 130	11/12/26 03:17	11/12/26 22:07	1
13C3-GenX	99		70 - 130	11/12/26 03:17	11/12/26 22:07	1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-247644-2

Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Matrix: 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		11/12/26 16:55	11/13/26 19:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1

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

Job ID: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)
Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Lab Sample ID: 380-247644-2
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/12/26 16:55	11/13/26 19:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C6 PFDA	*109*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C5 PFHxA	*109*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C4 PFHpA	*114*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C8 PFOA	*119*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C9 PFNA	*113*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C7 PFUnA	*117*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C2 PFDoA	*109*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C4 PFBA	*109*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C5 PFPeA	*107*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C3 PFBS	*113*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C3 PFHxS	*112*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C8 PFOS	*111*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C2-4:2-FTS	*109*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C2-6:2-FTS	*115*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*
13C2-8:2-FTS	*115*		*50 - 200*	*11/12/26 16:55*	*11/13/26 19:10*	*1*

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

Job ID: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)
Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Lab Sample ID: 380-247644-2
Matrix: Water

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		11/12/26 03:17	11/12/26 22:16	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/12/26 03:17	11/12/26 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*100*		*70 - 130*	*11/12/26 03:17*	*11/12/26 22:16*	*1*
13C2 PFHxA	*105*		*70 - 130*	*11/12/26 03:17*	*11/12/26 22:16*	*1*
13C2 PFDA	*103*		*70 - 130*	*11/12/26 03:17*	*11/12/26 22:16*	*1*
13C3-GenX	*101*		*70 - 130*	*11/12/26 03:17*	*11/12/26 22:16*	*1*

Action Limit Summary

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

Job ID: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065) — Lab Sample ID: 380-247644-1

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)	3.1		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		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)	3.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.1		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		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: HALAWA WELLS P1 (331-023-WL065) — Lab Sample ID: 380-247644-2

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

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)
380-247644-1	HALAWA WELLS P1 (331-023-WL0	105	101	101	99

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)
380-247644-2	FB: HALAWA WELLS P1 (331-023-\	100	105	103	101
380-247677-B-1-A MS	Matrix Spike	103	103	104	100
380-247677-C-1-A MSD	Matrix Spike Duplicate	97	101	97	96
LCS 380-265215/30-A	Lab Control Sample	102	97	102	96
MBL 380-265215/28-A	Method Blank	108	105	105	105
MRL 380-265215/29-A	Lab Control Sample	103	111	106	101

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

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)
380-247644-1	HALAWA WELLS P1 (331-023-WL0	91	106	96	100	105	98	95	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)
380-247644-1	HALAWA WELLS P1 (331-023-WL0	114	103	117	99	102	122	119	112

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)
380-247332-B-2-A MS	Matrix Spike	113	109	110	113	108	113	120	115
380-247332-C-2-A MSD	Matrix Spike Duplicate	106	107	109	102	106	101	116	99
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	105	109	109	114	119	113	117	109
380-248147-C-1-A MS	Matrix Spike	93	110	95	98	98	98	103	115
380-248253-B-1-B DU	Duplicate	97	110	100	107	109	102	99	107
LCS 380-265371/22-A	Lab Control Sample	105	107	109	106	103	103	114	107
LCS 380-265973/22-A	Lab Control Sample	104	116	107	105	109	105	107	119
MBL 380-265371/20-A	Method Blank	98	112	111	113	113	112	106	112
MBL 380-265973/20-A	Method Blank	91	111	103	100	103	101	101	110
MRL 380-265371/21-A	Lab Control Sample	100	112	108	108	109	106	113	104
MRL 380-265973/21-A	Lab Control Sample	94	108	104	102	104	102	98	104

		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)
380-247332-B-2-A MS	Matrix Spike	114	114	120	115	112	107	111	114
380-247332-C-2-A MSD	Matrix Spike Duplicate	114	113	115	112	111	110	114	111
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	109	107	113	112	111	109	115	115
380-248147-C-1-A MS	Matrix Spike	99	98	106	98	103	108	105	109

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-247644-1
Project/Site: RED-HILL
SDG: PFAS: Halawa Wells P1

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-248253-B-1-B DU	Duplicate	112	108	116	103	104	137	261 *5+	118
LCS 380-265371/22-A	Lab Control Sample	115	115	119	115	115	114	116	116
LCS 380-265973/22-A	Lab Control Sample	111	107	115	100	103	109	110	112
MBL 380-265371/20-A	Method Blank	112	114	115	113	113	113	114	113
MBL 380-265973/20-A	Method Blank	104	102	109	103	104	117	117	112
MRL 380-265371/21-A	Lab Control Sample	110	108	112	113	111	114	117	116
MRL 380-265973/21-A	Lab Control Sample	109	105	110	100	104	123	120	114

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 380-265371/20-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265371

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		11/12/26 16:55	11/13/26 15:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.37		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0		ng/L		11/12/26 16:55	11/13/26 15:20	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C6 PFDA	*112*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C5 PFHxA	*111*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C4 PFHpA	*113*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C8 PFOA	*113*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C9 PFNA	*112*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C7 PFUnA	*106*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C2 PFDoA	*112*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C4 PFBA	*112*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C5 PFPeA	*114*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C3 PFBS	*115*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*
13C3 PFHxS	*113*		*50 - 200*	*11/12/26 16:55*	*11/13/26 15:20*	*1*

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

Lab Sample ID: MBL 380-265371/20-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265371

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	113		50 - 200	11/12/26 16:55	11/13/26 15:20	1
13C2-4:2-FTS	113		50 - 200	11/12/26 16:55	11/13/26 15:20	1
13C2-6:2-FTS	114		50 - 200	11/12/26 16:55	11/13/26 15:20	1
13C2-8:2-FTS	113		50 - 200	11/12/26 16:55	11/13/26 15:20	1

Lab Sample ID: LCS 380-265371/22-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	118	104		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	118	103		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	118	107		ng/L		91	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	118	107		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	118	105		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	118	114		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	118	96.1		ng/L		82	70 - 130
Perfluoroheptanoic acid (PFHpA)	118	107		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	118	105		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	118	105		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	118	111		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	118	107		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	118	116		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	118	106		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	118	104		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	106		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	104		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	105		ng/L		89	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	97.8		ng/L		83	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	118	100		ng/L		85	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	105		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	105		ng/L		89	70 - 130

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

Lab Sample ID: LCS 380-265371/22-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265371

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			118	110		ng/L		93	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*105*		*50 - 200*
13C6 PFDA	*107*		*50 - 200*
13C5 PFHxA	*109*		*50 - 200*
13C4 PFHpA	*106*		*50 - 200*
13C8 PFOA	*103*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*114*		*50 - 200*
13C2 PFDoA	*107*		*50 - 200*
13C4 PFBA	*115*		*50 - 200*
13C5 PFPeA	*115*		*50 - 200*
13C3 PFBS	*119*		*50 - 200*
13C3 PFHxS	*115*		*50 - 200*
13C8 PFOS	*115*		*50 - 200*
13C2-4:2-FTS	*114*		*50 - 200*
13C2-6:2-FTS	*116*		*50 - 200*
13C2-8:2-FTS	*116*		*50 - 200*

Lab Sample ID: MRL 380-265371/21-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265371

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.96	1.79	J	ng/L		91	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			1.96	1.81	J	ng/L		92	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.96	1.85	J	ng/L		94	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			1.96	1.73	J	ng/L		88	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.96	1.86	J	ng/L		95	50 - 150		
Perfluorodecanoic acid (PFDA)			1.96	1.92	J	ng/L		98	50 - 150		
Perfluorododecanoic acid (PFDoA)			1.96	1.98	J	ng/L		101	50 - 150		
Perfluoroheptanoic acid (PFHpA)			1.96	1.94	J	ng/L		99	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.96	1.89	J	ng/L		96	50 - 150		
Perfluorohexanoic acid (PFHxA)			1.96	1.76	J	ng/L		90	50 - 150		
Perfluorononanoic acid (PFNA)			1.96	2.04	J	ng/L		104	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.96	1.96	J	ng/L		100	50 - 150		
Perfluorooctanoic acid (PFOA)			1.96	1.90	J	ng/L		97	50 - 150		
Perfluoroundecanoic acid (PFUnA)			1.96	1.91	J	ng/L		97	50 - 150		
Perfluorobutanoic acid (PFBA)			1.96	2.01	J	ng/L		102	50 - 150		

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

Lab Sample ID: MRL 380-265371/21-A
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265371

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.96	1.83	J	ng/L		93	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.96	1.88	J	ng/L		96	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.96	1.82	J	ng/L		93	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.96	1.46	J	ng/L		74	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.96	1.81	J	ng/L		92	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.96	1.97	J	ng/L		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.96	1.88	J	ng/L		96	50 - 150
Perfluoropentanoic acid (PFPeA)	1.96	2.00	J	ng/L		102	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.96	1.93	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.96	1.78	J	ng/L		91	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*100*		*50 - 200*
13C6 PFDA	*112*		*50 - 200*
13C5 PFHxA	*108*		*50 - 200*
13C4 PFHpA	*108*		*50 - 200*
13C8 PFOA	*109*		*50 - 200*
13C9 PFNA	*106*		*50 - 200*
13C7 PFUnA	*113*		*50 - 200*
13C2 PFDoA	*104*		*50 - 200*
13C4 PFBA	*110*		*50 - 200*
13C5 PFPeA	*108*		*50 - 200*
13C3 PFBS	*112*		*50 - 200*
13C3 PFHxS	*113*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*114*		*50 - 200*
13C2-6:2-FTS	*117*		*50 - 200*
13C2-8:2-FTS	*116*		*50 - 200*

Lab Sample ID: 380-247332-B-2-A MS
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265371

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	107		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	108		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	104		ng/L		88	70 - 130

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

Lab Sample ID: 380-247332-B-2-A MS
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265371

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	105		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	105		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		118	108		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		118	97.9		ng/L		83	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		118	102		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	106		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		118	110		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		118	100		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	109		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		118	114		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		118	106		ng/L		89	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		118	107		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	109		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	112		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	110		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	98.3		ng/L		83	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		118	106		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	113		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	105		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		118	108		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	107		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	108		ng/L		92	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*113*		*50 - 200*
13C6 PFDA	*109*		*50 - 200*
13C5 PFHxA	*110*		*50 - 200*
13C4 PFHpA	*113*		*50 - 200*
13C8 PFOA	*108*		*50 - 200*
13C9 PFNA	*113*		*50 - 200*
13C7 PFUnA	*120*		*50 - 200*
13C2 PFDoA	*115*		*50 - 200*
13C4 PFBA	*114*		*50 - 200*
13C5 PFPeA	*114*		*50 - 200*
13C3 PFBS	*120*		*50 - 200*
13C3 PFHxS	*115*		*50 - 200*
13C8 PFOS	*112*		*50 - 200*

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

Lab Sample ID: 380-247332-B-2-A MS
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265371

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	*107*		*50 - 200*
13C2-6:2-FTS	*111*		*50 - 200*
13C2-8:2-FTS	*114*		*50 - 200*

Lab Sample ID: 380-247332-C-2-A MSD
Matrix: Water
Analysis Batch: 265537

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 265371

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	104		ng/L		89	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	106		ng/L		90	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	111		ng/L		94	70 - 130	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	108		ng/L		91	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	108		ng/L		92	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		118	104		ng/L		88	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		118	104		ng/L		88	70 - 130	6	30
Perfluoroheptanoic acid (PFHpA)	<2.0		118	109		ng/L		93	70 - 130	7	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	107		ng/L		91	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		118	102		ng/L		87	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		118	112		ng/L		95	70 - 130	11	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	109		ng/L		92	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		118	118		ng/L		100	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		118	107		ng/L		91	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		118	106		ng/L		90	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	107		ng/L		90	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	104		ng/L		88	70 - 130	7	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	104		ng/L		88	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	103		ng/L		88	70 - 130	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		118	106		ng/L		90	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	108		ng/L		91	70 - 130	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	108		ng/L		91	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		118	108		ng/L		92	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	108		ng/L		91	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	110		ng/L		94	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	106		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	101		50 - 200
13C7 PFUnA	116		50 - 200
13C2 PFDoA	99		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	111		50 - 200

Lab Sample ID: MBL 380-265973/20-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265973

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		11/16/26 16:25	11/17/26 19:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.37		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1

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

Lab Sample ID: MBL 380-265973/20-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265973

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.37		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0		ng/L		11/16/26 16:25	11/17/26 19:43	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C6 PFDA	*111*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C5 PFHxA	*103*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C4 PFHpA	*100*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C8 PFOA	*103*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C9 PFNA	*101*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C7 PFUnA	*101*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C2 PFDoA	*110*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C4 PFBA	*104*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C5 PFPeA	*102*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C3 PFBS	*109*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C3 PFHxS	*103*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C8 PFOS	*104*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C2-4:2-FTS	*117*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C2-6:2-FTS	*117*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*
13C2-8:2-FTS	*112*		*50 - 200*	*11/16/26 16:25*	*11/17/26 19:43*	*1*

Lab Sample ID: LCS 380-265973/22-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265973

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			118	110		ng/L		93	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			118	107		ng/L		91	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			118	103		ng/L		87	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			118	119		ng/L		101	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			118	104		ng/L		88	70 - 130		
Perfluorodecanoic acid (PFDA)			118	113		ng/L		96	70 - 130		
Perfluorododecanoic acid (PFDoA)			118	109		ng/L		92	70 - 130		
Perfluoroheptanoic acid (PFHpA)			118	113		ng/L		96	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			118	124		ng/L		105	70 - 130		
Perfluorohexanoic acid (PFHxA)			118	120		ng/L		101	70 - 130		
Perfluorononanoic acid (PFNA)			118	121		ng/L		102	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			118	112		ng/L		95	70 - 130		
Perfluorooctanoic acid (PFOA)			118	106		ng/L		90	70 - 130		

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

Lab Sample ID: LCS 380-265973/22-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	118	120		ng/L		101	70 - 130
Perfluorobutanoic acid (PFBA)	118	107		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	109		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	112		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	113		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	114		ng/L		96	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	118	96.7		ng/L		82	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	110		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	118	118		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	118	113		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	118	115		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	118	123		ng/L		104	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*116*		*50 - 200*
13C5 PFHxA	*107*		*50 - 200*
13C4 PFHpA	*105*		*50 - 200*
13C8 PFOA	*109*		*50 - 200*
13C9 PFNA	*105*		*50 - 200*
13C7 PFUnA	*107*		*50 - 200*
13C2 PFDoA	*119*		*50 - 200*
13C4 PFBA	*111*		*50 - 200*
13C5 PFPeA	*107*		*50 - 200*
13C3 PFBS	*115*		*50 - 200*
13C3 PFHxS	*100*		*50 - 200*
13C8 PFOS	*103*		*50 - 200*
13C2-4:2-FTS	*109*		*50 - 200*
13C2-6:2-FTS	*110*		*50 - 200*
13C2-8:2-FTS	*112*		*50 - 200*

Lab Sample ID: MRL 380-265973/21-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.96	2.03	J	ng/L		103	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.96	1.90	J	ng/L		97	50 - 150

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

Lab Sample ID: MRL 380-265973/21-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.96	1.74	J	ng/L		88	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.96	2.04	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.96	1.69	J	ng/L		86	50 - 150
Perfluorodecanoic acid (PFDA)	1.96	1.82	J	ng/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	1.96	1.90	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.96	1.87	J	ng/L		95	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.96	2.10	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	1.96	2.18	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	1.96	1.91	J	ng/L		97	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.96	2.02	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	1.96	2.03	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.96	1.85	J	ng/L		94	50 - 150
Perfluorobutanoic acid (PFBA)	1.96	1.86	J	ng/L		95	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.96	1.85	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.96	1.98	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.96	1.76	J	ng/L		90	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.96	1.81	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.96	1.77	J	ng/L		90	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.96	1.92	J	ng/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.96	2.05	J	ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	1.96	1.96	J	ng/L		100	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.96	1.82	J	ng/L		93	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.96	2.39	J	ng/L		122	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*50 - 200*
13C6 PFDA	*108*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*102*		*50 - 200*
13C8 PFOA	*104*		*50 - 200*
13C9 PFNA	*102*		*50 - 200*
13C7 PFUnA	*98*		*50 - 200*
13C2 PFDoA	*104*		*50 - 200*
13C4 PFBA	*109*		*50 - 200*
13C5 PFPeA	*105*		*50 - 200*
13C3 PFBS	*110*		*50 - 200*
13C3 PFHxS	*100*		*50 - 200*

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

Lab Sample ID: MRL 380-265973/21-A
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265973

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	123		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	114		50 - 200

Lab Sample ID: 380-248147-C-1-A MS
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265973

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	110		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	107		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	110		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	122		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	115		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		118	112		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		118	110		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		118	115		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	126		ng/L		107	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		118	132		ng/L		112	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		118	122		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	114		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		118	111		ng/L		94	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		118	120		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		118	111		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	113		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	112		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	122		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	114		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		118	106		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	108		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	115		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		118	118		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	121		ng/L		103	70 - 130

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

Lab Sample ID: 380-248147-C-1-A MS
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	124		ng/L		105	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*50 - 200*
13C6 PFDA	*110*		*50 - 200*
13C5 PFHxA	*95*		*50 - 200*
13C4 PFHpA	*98*		*50 - 200*
13C8 PFOA	*98*		*50 - 200*
13C9 PFNA	*98*		*50 - 200*
13C7 PFUnA	*103*		*50 - 200*
13C2 PFDoA	*115*		*50 - 200*
13C4 PFBA	*99*		*50 - 200*
13C5 PFPeA	*98*		*50 - 200*
13C3 PFBS	*106*		*50 - 200*
13C3 PFHxS	*98*		*50 - 200*
13C8 PFOS	*103*		*50 - 200*
13C2-4:2-FTS	*108*		*50 - 200*
13C2-6:2-FTS	*105*		*50 - 200*
13C2-8:2-FTS	*109*		*50 - 200*

Lab Sample ID: 380-248253-B-1-B DU
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		<2.0		ng/L		NC	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		<2.0		ng/L		NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		<2.0		ng/L		NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		<2.0		ng/L		NC	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		<2.0		ng/L		NC	30
Perfluorodecanoic acid (PFDA)	<2.0		<2.0		ng/L		NC	30
Perfluorododecanoic acid (PFDoA)	<2.0		<2.0		ng/L		NC	30
Perfluoroheptanoic acid (PFHpA)	<2.0		<2.0		ng/L		NC	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		<2.0		ng/L		NC	30
Perfluorohexanoic acid (PFHxA)	3.7		3.94		ng/L		5	30
Perfluorononanoic acid (PFNA)	<2.0		<2.0		ng/L		NC	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		<2.0		ng/L		NC	30
Perfluorooctanoic acid (PFOA)	<2.0		<2.0		ng/L		NC	30
Perfluoroundecanoic acid (PFUnA)	<2.0		<2.0		ng/L		NC	30
Perfluorobutanoic acid (PFBA)	<2.0		<2.0		ng/L		NC	30

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

Lab Sample ID: 380-248253-B-1-B DU
Matrix: Water
Analysis Batch: 266235

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 265973

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0			<2.0		ng/L				NC	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0			<2.0		ng/L				NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0	*5+		<2.0	*5+	ng/L				NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0			<2.0		ng/L				NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0			<2.0		ng/L				NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0			<2.0		ng/L				NC	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0			<2.0		ng/L				NC	30
Perfluoropentanoic acid (PFPeA)	4.7			4.54		ng/L				3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0			<2.0		ng/L				NC	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0			<2.0		ng/L				NC	30

Isotope Dilution	*DU %Recovery*	*DU Qualifier*	*Limits*
13C3 HFPO-DA	*97*		*50 - 200*
13C6 PFDA	*110*		*50 - 200*
13C5 PFHxA	*100*		*50 - 200*
13C4 PFHpA	*107*		*50 - 200*
13C8 PFOA	*109*		*50 - 200*
13C9 PFNA	*102*		*50 - 200*
13C7 PFUnA	*99*		*50 - 200*
13C2 PFDoA	*107*		*50 - 200*
13C4 PFBA	*112*		*50 - 200*
13C5 PFPeA	*108*		*50 - 200*
13C3 PFBS	*116*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*104*		*50 - 200*
13C2-4:2-FTS	*137*		*50 - 200*
13C2-6:2-FTS	*261*	*5+	*50 - 200*
13C2-8:2-FTS	*118*		*50 - 200*

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

Lab Sample ID: MBL 380-265215/28-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265215

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		11/12/26 03:17	11/12/26 19:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1

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

Lab Sample ID: MBL 380-265215/28-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 265215

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.41		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorononanoic acid (PFNA)	<0.39		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
Perfluorotridecanoic acid (PFTrDA)	<0.35		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0		ng/L		11/12/26 03:17	11/12/26 19:30	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*108*		*70 - 130*	*11/12/26 03:17*	*11/12/26 19:30*	*1*
13C2 PFHxA	*105*		*70 - 130*	*11/12/26 03:17*	*11/12/26 19:30*	*1*
13C2 PFDA	*105*		*70 - 130*	*11/12/26 03:17*	*11/12/26 19:30*	*1*
13C3-GenX	*105*		*70 - 130*	*11/12/26 03:17*	*11/12/26 19:30*	*1*

Lab Sample ID: LCS 380-265215/30-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265215

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	24.6	23.3		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	24.6	24.2		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	24.6	23.4		ng/L		95	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.6	24.0		ng/L		98	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	24.6	24.0		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	24.6	23.5		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	24.6	22.7		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	24.6	24.3		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	24.6	24.7		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	24.6	25.6		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	24.6	25.0		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	24.6	23.8		ng/L		97	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 380-265215/30-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265215

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorotetradecanoic acid (PFTA)			24.6	18.8		ng/L		76	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			24.6	24.1		ng/L		98	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			24.6	25.2		ng/L		102	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			24.6	24.2		ng/L		99	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			24.6	23.9		ng/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*102*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3-GenX	*96*		*70 - 130*

Lab Sample ID: MRL 380-265215/29-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265215

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			1.96	1.93	J	ng/L		98	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			1.96	2.04	J	ng/L		104	50 - 150		
Perfluoroundecanoic acid (PFUnA)			1.96	1.89	J	ng/L		96	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			1.96	1.90	J	ng/L		97	50 - 150		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			1.96	1.87	J	ng/L		95	50 - 150		
Perfluorohexanoic acid (PFHxA)			1.96	2.00	J	ng/L		102	50 - 150		
Perfluorododecanoic acid (PFDoA)			1.96	1.86	J	ng/L		95	50 - 150		
Perfluorooctanoic acid (PFOA)			1.96	1.94	J	ng/L		99	50 - 150		
Perfluorodecanoic acid (PFDA)			1.96	1.97	J	ng/L		100	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			1.96	2.19	J	ng/L		112	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			1.96	2.18	J	ng/L		111	50 - 150		
Perfluoroheptanoic acid (PFHpA)			1.96	1.95	J	ng/L		99	50 - 150		
Perfluorononanoic acid (PFNA)			1.96	2.01	J	ng/L		102	50 - 150		
Perfluorotetradecanoic acid (PFTA)			1.96	1.36	J	ng/L		69	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	2.02	J	ng/L		103	50 - 150		

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

Lab Sample ID: MRL 380-265215/29-A
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 265215

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			1.96	2.00	J	ng/L		102	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			1.96	1.95	J	ng/L		99	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*103*		*70 - 130*
13C2 PFHxA	*111*		*70 - 130*
13C2 PFDA	*106*		*70 - 130*
13C3-GenX	*101*		*70 - 130*

Lab Sample ID: 380-247677-B-1-A MS
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265215

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	25.2		ng/L		102	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	26.8		ng/L		107	70 - 130		
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	24.1		ng/L		98	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	25.4		ng/L		103	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	25.3		ng/L		103	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	25.9		ng/L		98	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	24.6		ng/L		100	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		24.6	26.5		ng/L		104	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		24.6	26.0		ng/L		106	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	29.6		ng/L		114	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	30.0		ng/L		117	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	25.4		ng/L		101	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		24.6	25.4		ng/L		103	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	18.1		ng/L		74	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.6	25.6		ng/L		104	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	28.1		ng/L		114	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	26.0		ng/L		106	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	25.4		ng/L		103	70 - 130		

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

Lab Sample ID: 380-247677-B-1-A MS
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 265215

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

Lab Sample ID: 380-247677-C-1-A MSD
Matrix: Water
Analysis Batch: 265349

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 265215

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	26.9		ng/L		109	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	26.1		ng/L		103	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	24.7		ng/L		100	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	25.6		ng/L		104	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	25.4		ng/L		103	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	27.2		ng/L		103	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	24.9		ng/L		101	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		24.6	25.5		ng/L		100	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		24.6	25.4		ng/L		103	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	28.9		ng/L		112	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	27.9		ng/L		109	70 - 130	7	30
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	26.0		ng/L		103	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		24.6	26.1		ng/L		106	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	17.2		ng/L		70	70 - 130	5	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.6	25.9		ng/L		105	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	26.8		ng/L		109	70 - 130	5	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	25.8		ng/L		105	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	24.8		ng/L		101	70 - 130	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	97		70 - 130
13C3-GenX	96		70 - 130

LCMS

Prep Batch: 265215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	537.1 DW	
MBL 380-265215/28-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-265215/30-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-265215/29-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-247677-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-247677-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 265349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	265215
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	EPA 537.1 V2	265215
MBL 380-265215/28-A	Method Blank	Total/NA	Water	EPA 537.1 V2	265215
LCS 380-265215/30-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	265215
MRL 380-265215/29-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	265215
380-247677-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	265215
380-247677-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	265215

Prep Batch: 265371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	
MBL 380-265371/20-A	Method Blank	Total/NA	Water	533	
LCS 380-265371/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-265371/21-A	Lab Control Sample	Total/NA	Water	533	
380-247332-B-2-A MS	Matrix Spike	Total/NA	Water	533	
380-247332-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 265537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	265371
MBL 380-265371/20-A	Method Blank	Total/NA	Water	533	265371
LCS 380-265371/22-A	Lab Control Sample	Total/NA	Water	533	265371
MRL 380-265371/21-A	Lab Control Sample	Total/NA	Water	533	265371
380-247332-B-2-A MS	Matrix Spike	Total/NA	Water	533	265371
380-247332-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	265371

Prep Batch: 265973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	
MBL 380-265973/20-A	Method Blank	Total/NA	Water	533	
LCS 380-265973/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-265973/21-A	Lab Control Sample	Total/NA	Water	533	
380-248147-C-1-A MS	Matrix Spike	Total/NA	Water	533	
380-248253-B-1-B DU	Duplicate	Total/NA	Water	533	

Analysis Batch: 266235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-247644-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	265973
MBL 380-265973/20-A	Method Blank	Total/NA	Water	533	265973
LCS 380-265973/22-A	Lab Control Sample	Total/NA	Water	533	265973
MRL 380-265973/21-A	Lab Control Sample	Total/NA	Water	533	265973

LCMS (Continued)

Analysis Batch: 266235 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-248147-C-1-A MS	Matrix Spike	Total/NA	Water	533	265973
380-248253-B-1-B DU	Duplicate	Total/NA	Water	533	265973

Lab Chronicle

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

Job ID: 380-247644-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-247644-1

Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			265973	E2HD	EA POM	11/16/26 16:25
Total/NA	Analysis	533		1	266235	UKDT	EA POM	11/17/26 21:57
Total/NA	Prep	537.1 DW			265215	G9MN	EA POM	11/12/26 03:17
Total/NA	Analysis	EPA 537.1 V2		1	265349	UKDT	EA POM	11/12/26 22:07

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-247644-2

Date Collected: 11/09/26 10:27
Date Received: 11/11/26 10:04

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			265371	E2HD	EA POM	11/12/26 16:55
Total/NA	Analysis	533		1	265537	Y5FM	EA POM	11/13/26 19:10
Total/NA	Prep	537.1 DW			265215	G9MN	EA POM	11/12/26 03:17
Total/NA	Analysis	EPA 537.1 V2		1	265349	UKDT	EA POM	11/12/26 22:16

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

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: 380-247644-1
SDG: PFAS: Halawa Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-247644-1	HALAWA WELLS P1 (331-023-WL065)	Drinking Water	11/09/26 10:27	11/11/26 10:04	Hawaii
380-247644-2	FB: HALAWA WELLS P1 (331-023-WL065)	Water	11/09/26 10:27	11/11/26 10:04	Hawaii

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: bailey	Lab PM: Lopez, Maria	Carrier Tracking No(s):	COC No:
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 #: 380-247644 COC
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-C38/C8-C18	625.2_PREC - (MOD) 625plus 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		
Halawa Wells P1 (331-023-WL065)	9-Nov-2026	1027	G	Water							3	3		
FB: Halawa Wells P1 (331-023-WL065)	9-Nov-2026	1027									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:
[redacted]	Date/Time: 11/10/26 1400	Company: HBWS	Received by: [illegible] Date/Time: 11/11/26 1004 Company: FDM
	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: 3.4 +0.1 = 3.5 4-1 (C91A)

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-247644-1
SDG Number: PFAS: Halawa Wells P1

Login Number: 247644
List Number: 1
Creator: Abaya, Ashton

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").	True	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	