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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 3/9/2026 5:44:37 PM

JOB DESCRIPTION

RED-HILL
PFAS: Ka'amilo Wells P2

JOB NUMBER

380-201239-1

Eurofins Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Job Notes

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

The test results in this report relate only to the samples as received by the laboratory and 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

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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

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
380-201239-1

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 3/4/2026 10:01 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 2.0°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: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 — Lab Sample ID: 380-201239-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0		ng/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	4.0		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.4		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.9		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.7		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.6		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.5		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		2.0		ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.3		2.0		ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB Ka'amilo Wells P2 — Lab Sample ID: 380-201239-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2
Date Collected: 03/02/26 13:10
Date Received: 03/04/26 10:01

Lab Sample ID: 380-201239-1
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		03/07/26 05:29	03/08/26 18:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorobutanesulfonic acid (PFBS)	**2.9**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoroheptanoic acid (PFHpA)	**2.0**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorohexanesulfonic acid (PFHxS)	**3.5**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorohexanoic acid (PFHxA)	**4.0**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorooctanesulfonic acid (PFOS)	**4.4**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorooctanoic acid (PFOA)	**3.8**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoropentanoic acid (PFPeA)	**3.9**		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		03/07/26 05:29	03/08/26 18:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*75*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C6 PFDA	*81*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C5 PFHxA	*80*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C4 PFHpA	*85*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C8 PFOA	*87*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C9 PFNA	*86*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C7 PFUnA	*89*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C2 PFDoA	*94*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C4 PFBA	*94*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C5 PFPeA	*89*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C3 PFBS	*119*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-201239-1

Date Collected: 03/02/26 13:10

Matrix: Water

Date Received: 03/04/26 10:01

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 PFHxS	*119*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C8 PFOS	*116*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C2-4:2-FTS	*119*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C2-6:2-FTS	*119*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*1*
13C2-8:2-FTS	*120*		*50 - 200*	*03/07/26 05:29*	*03/08/26 18:09*	*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		03/05/26 01:31	03/05/26 19:30	1
Perfluorooctanesulfonic acid (PFOS)	**5.7**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorohexanoic acid (PFHxA)	**4.4**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorooctanoic acid (PFOA)	**4.6**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorohexanesulfonic acid (PFHxS)	**4.5**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorobutanesulfonic acid (PFBS)	**3.5**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluoroheptanoic acid (PFHpA)	**2.3**		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*115*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:30*	*1*
13C2 PFHxA	*100*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:30*	*1*
13C2 PFDA	*109*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:30*	*1*
13C3-GenX	*97*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:30*	*1*

Client Sample ID: FB Ka'amilo Wells P2

Lab Sample ID: 380-201239-2

Date Collected: 03/02/26 13:10

Matrix: Water

Date Received: 03/04/26 10:01

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		03/07/26 05:21	03/08/26 15:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/26 05:21	03/08/26 15:41	1

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: FB Ka'amilo Wells P2
Date Collected: 03/02/26 13:10
Date Received: 03/04/26 10:01

Lab Sample ID: 380-201239-2
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		03/07/26 05:21	03/08/26 15:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*99*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C6 PFDA	*114*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C5 PFHxA	*111*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C4 PFHpA	*116*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C8 PFOA	*113*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C9 PFNA	*114*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C7 PFUnA	*117*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C2 PFDoA	*109*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C4 PFBA	*113*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C5 PFPeA	*111*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C3 PFBS	*116*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C3 PFHxS	*120*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C8 PFOS	*118*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C2-4:2-FTS	*130*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C2-6:2-FTS	*124*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*
13C2-8:2-FTS	*116*		*50 - 200*	*03/07/26 05:21*	*03/08/26 15:41*	*1*

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: FB Ka'amilo Wells P2
Date Collected: 03/02/26 13:10
Date Received: 03/04/26 10:01

Lab Sample ID: 380-201239-2
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		03/05/26 01:31	03/05/26 19:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		03/05/26 01:31	03/05/26 19:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*104*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:39*	*1*
13C2 PFHxA	*101*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:39*	*1*
13C2 PFDA	*115*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:39*	*1*
13C3-GenX	*90*		*70 - 130*	*03/05/26 01:31*	*03/05/26 19:39*	*1*

Action Limit Summary

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 — Lab Sample ID: 380-201239-1

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)	3.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	**4.4**		ng/L	**4**	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		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)	**5.7**		ng/L	**4**	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	**4.6**		ng/L	**4**	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.5		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 Ka'amilo Wells P2 — Lab Sample ID: 380-201239-2

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: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

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)
380-200428-B-1-A MS	Matrix Spike	110	109	114	104
380-200428-B-1-B MSD	Matrix Spike Duplicate	104	104	109	95
380-201239-1	Ka'amilo Wells P2	115	100	109	97
380-201239-2	FB Ka'amilo Wells P2	104	101	115	90
LCS 380-210869/21-A	Lab Control Sample	100	100	108	91
MBL 380-210869/19-A	Method Blank	90	84	92	72
MRL 380-210869/20-A	Lab Control Sample	96	89	102	77

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: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

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)
380-201239-1	Ka'amilo Wells P2	75	81	80	85	87	86	89	94
380-201239-2	FB Ka'amilo Wells P2	99	114	111	116	113	114	117	109
380-201381-B-1-A MS	Matrix Spike	109	116	108	110	114	121	122	121
380-201381-C-1-A MSD	Matrix Spike Duplicate	106	116	107	109	117	115	119	123
380-201393-C-1-B MS	Matrix Spike	113	113	118	115	110	113	123	120
380-201393-C-1-C MSD	Matrix Spike Duplicate	118	116	122	122	115	116	124	120
LCS 380-211526/22-A	Lab Control Sample	116	119	128	122	113	122	126	123
LCS 380-211527/22-A	Lab Control Sample	95	117	110	111	112	116	121	122
MBL 380-211526/20-A	Method Blank	90	93	105	97	95	96	93	97
MBL 380-211527/20-A	Method Blank	94	116	107	109	121	122	118	125
MRL 380-211526/21-A	Lab Control Sample	93	103	115	109	110	106	104	108
MRL 380-211527/21-A	Lab Control Sample	98	116	109	105	116	116	113	115

		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)
380-201239-1	Ka'amilo Wells P2	94	89	119	119	116	119	119	120
380-201239-2	FB Ka'amilo Wells P2	113	111	116	120	118	130	124	116
380-201381-B-1-A MS	Matrix Spike	114	129	113	112	115	120	121	121
380-201381-C-1-A MSD	Matrix Spike Duplicate	114	132	110	117	116	134	135	124
380-201393-C-1-B MS	Matrix Spike	114	118	119	113	111	119	112	111
380-201393-C-1-C MSD	Matrix Spike Duplicate	122	123	124	122	116	126	122	114
LCS 380-211526/22-A	Lab Control Sample	118	119	116	113	116	121	118	110
LCS 380-211527/22-A	Lab Control Sample	111	107	111	115	113	106	109	112
MBL 380-211526/20-A	Method Blank	96	96	96	95	96	107	102	101
MBL 380-211527/20-A	Method Blank	117	110	121	117	121	118	118	117
MRL 380-211526/21-A	Lab Control Sample	108	110	108	107	106	117	112	108
MRL 380-211527/21-A	Lab Control Sample	112	111	117	113	116	116	111	117

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 380-211526/20-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211526

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		03/07/26 05:21	03/08/26 12:53	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C6 PFDA	*93*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C5 PFHxA	*105*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C4 PFHpA	*97*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C8 PFOA	*95*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C9 PFNA	*96*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C7 PFUnA	*93*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C2 PFDoA	*97*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C4 PFBA	*96*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C5 PFPeA	*96*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C3 PFBS	*96*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*
13C3 PFHxS	*95*		*50 - 200*	*03/07/26 05:21*	*03/08/26 12:53*	*1*

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

Lab Sample ID: MBL 380-211526/20-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211526

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	96		50 - 200	03/07/26 05:21	03/08/26 12:53	1
13C2-4:2-FTS	107		50 - 200	03/07/26 05:21	03/08/26 12:53	1
13C2-6:2-FTS	102		50 - 200	03/07/26 05:21	03/08/26 12:53	1
13C2-8:2-FTS	101		50 - 200	03/07/26 05:21	03/08/26 12:53	1

Lab Sample ID: LCS 380-211526/22-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	106		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	104		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	113		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	107		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	110		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	120	107		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	120	109		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	106		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	110		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	120	107		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	120	110		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	111		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	120	112		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	110		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	109		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	110		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	115		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	103		ng/L		86	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	111		ng/L		92	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	105		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	109		ng/L		90	70 - 130
Perfluoropentanoic acid (PFPeA)	120	106		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	106		ng/L		88	70 - 130

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

Lab Sample ID: LCS 380-211526/22-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211526

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			120	110		ng/L		92	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*
13C6 PFDA	*119*		*50 - 200*
13C5 PFHxA	*128*		*50 - 200*
13C4 PFHpA	*122*		*50 - 200*
13C8 PFOA	*113*		*50 - 200*
13C9 PFNA	*122*		*50 - 200*
13C7 PFUnA	*126*		*50 - 200*
13C2 PFDoA	*123*		*50 - 200*
13C4 PFBA	*118*		*50 - 200*
13C5 PFPeA	*119*		*50 - 200*
13C3 PFBS	*116*		*50 - 200*
13C3 PFHxS	*113*		*50 - 200*
13C8 PFOS	*116*		*50 - 200*
13C2-4:2-FTS	*121*		*50 - 200*
13C2-6:2-FTS	*118*		*50 - 200*
13C2-8:2-FTS	*110*		*50 - 200*

Lab Sample ID: MRL 380-211526/21-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211526

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	2.20	J	ng/L		110	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	2.17	J	ng/L		108	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	2.27	J	ng/L		113	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	2.19	J	ng/L		109	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	2.12	J	ng/L		106	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.10	J	ng/L		104	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.22	J	ng/L		111	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.16	J	ng/L		108	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.20	J	ng/L		110	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	2.14	J	ng/L		106	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.23	J	ng/L		111	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.19	J	ng/L		109	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.15	J	ng/L		107	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.24	J	ng/L		111	50 - 150		
Perfluorobutanoic acid (PFBA)			2.01	2.13	J	ng/L		106	50 - 150		

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

Lab Sample ID: MRL 380-211526/21-A
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211526

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.39	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.28	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.70	J	ng/L		134	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.20	J	ng/L		109	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.22	J	ng/L		110	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.14	J	ng/L		107	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.27	J	ng/L		113	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*50 - 200*
13C6 PFDA	*103*		*50 - 200*
13C5 PFHxA	*115*		*50 - 200*
13C4 PFHpA	*109*		*50 - 200*
13C8 PFOA	*110*		*50 - 200*
13C9 PFNA	*106*		*50 - 200*
13C7 PFUnA	*104*		*50 - 200*
13C2 PFDoA	*108*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*110*		*50 - 200*
13C3 PFBS	*108*		*50 - 200*
13C3 PFHxS	*107*		*50 - 200*
13C8 PFOS	*106*		*50 - 200*
13C2-4:2-FTS	*117*		*50 - 200*
13C2-6:2-FTS	*112*		*50 - 200*
13C2-8:2-FTS	*108*		*50 - 200*

Lab Sample ID: 380-201393-C-1-B MS
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211526

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		120	116		ng/L		96	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	116		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	110		ng/L		91	70 - 130

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

Lab Sample ID: 380-201393-C-1-B MS
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211526

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		120	111		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	3.1		120	109		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	108		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	108		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	107		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.0		120	114		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	3.9		120	113		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	114		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.5		120	117		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	2.6		120	117		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	106		ng/L		88	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	116		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	112		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	105		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	120		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	101		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		120	110		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	115		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	4.7		120	118		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	114		ng/L		94	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	118		ng/L		98	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*113*		*50 - 200*
13C6 PFDA	*113*		*50 - 200*
13C5 PFHxA	*118*		*50 - 200*
13C4 PFHpA	*115*		*50 - 200*
13C8 PFOA	*110*		*50 - 200*
13C9 PFNA	*113*		*50 - 200*
13C7 PFUnA	*123*		*50 - 200*
13C2 PFDoA	*120*		*50 - 200*
13C4 PFBA	*114*		*50 - 200*
13C5 PFPeA	*118*		*50 - 200*
13C3 PFBS	*119*		*50 - 200*
13C3 PFHxS	*113*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*

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

Lab Sample ID: 380-201393-C-1-B MS
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211526

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	111		50 - 200

Lab Sample ID: 380-201393-C-1-C MSD
Matrix: Water
Analysis Batch: 211566

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 211526

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		120	108		ng/L		90	70 - 130	7	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	111		ng/L		92	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	110		ng/L		91	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	110		ng/L		91	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	3.1		120	105		ng/L		85	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		120	104		ng/L		86	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	107		ng/L		89	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	106		ng/L		87	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	3.0		120	111		ng/L		90	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	3.9		120	112		ng/L		90	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		120	113		ng/L		94	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	2.5		120	112		ng/L		91	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	2.6		120	109		ng/L		88	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	106		ng/L		89	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	106		ng/L		86	70 - 130	9	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	111		ng/L		93	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	108		ng/L		90	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	115		ng/L		96	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	112		ng/L		93	70 - 130	11	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		120	107		ng/L		89	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	104		ng/L		86	70 - 130	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	104		ng/L		86	70 - 130	8	30
Perfluoropentanoic acid (PFPeA)	4.7		120	106		ng/L		84	70 - 130	11	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	110		ng/L		91	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	107		ng/L		89	70 - 130	10	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	118		50 - 200
13C6 PFDA	116		50 - 200
13C5 PFHxA	122		50 - 200
13C4 PFHpA	122		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	116		50 - 200
13C7 PFUnA	124		50 - 200
13C2 PFDoA	120		50 - 200
13C4 PFBA	122		50 - 200
13C5 PFPeA	123		50 - 200
13C3 PFBS	124		50 - 200
13C3 PFHxS	122		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	126		50 - 200
13C2-6:2-FTS	122		50 - 200
13C2-8:2-FTS	114		50 - 200

Lab Sample ID: MBL 380-211527/20-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211527

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1

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

Lab Sample ID: MBL 380-211527/20-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211527

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		03/07/26 05:29	03/08/26 14:22	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C6 PFDA	*116*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C5 PFHxA	*107*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C4 PFHpA	*109*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C8 PFOA	*121*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C9 PFNA	*122*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C7 PFUnA	*118*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C2 PFDoA	*125*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C4 PFBA	*117*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C5 PFPeA	*110*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C3 PFBS	*121*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C3 PFHxS	*117*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C8 PFOS	*121*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C2-4:2-FTS	*118*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C2-6:2-FTS	*118*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*
13C2-8:2-FTS	*117*		*50 - 200*	*03/07/26 05:29*	*03/08/26 14:22*	*1*

Lab Sample ID: LCS 380-211527/22-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			60.0	51.6		ng/L		86	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			60.0	58.4		ng/L		97	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			60.0	56.2		ng/L		94	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			60.0	57.6		ng/L		96	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			60.0	60.2		ng/L		100	70 - 130		
Perfluorodecanoic acid (PFDA)			60.0	58.6		ng/L		98	70 - 130		
Perfluorododecanoic acid (PFDoA)			60.0	58.2		ng/L		97	70 - 130		
Perfluoroheptanoic acid (PFHpA)			60.0	57.5		ng/L		96	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			60.0	56.2		ng/L		94	70 - 130		
Perfluorohexanoic acid (PFHxA)			60.0	55.3		ng/L		92	70 - 130		
Perfluorononanoic acid (PFNA)			60.0	56.3		ng/L		94	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			60.0	57.3		ng/L		95	70 - 130		
Perfluorooctanoic acid (PFOA)			60.0	57.4		ng/L		96	70 - 130		

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

Lab Sample ID: LCS 380-211527/22-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	60.0	57.4		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	60.0	58.5		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.0	62.3		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.0	60.0		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.0	60.1		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.0	64.7		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.0	60.3		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.0	61.9		ng/L		103	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.0	57.1		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.0	56.8		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.0	57.5		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.0	56.1		ng/L		94	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*50 - 200*
13C6 PFDA	*117*		*50 - 200*
13C5 PFHxA	*110*		*50 - 200*
13C4 PFHpA	*111*		*50 - 200*
13C8 PFOA	*112*		*50 - 200*
13C9 PFNA	*116*		*50 - 200*
13C7 PFUnA	*121*		*50 - 200*
13C2 PFDoA	*122*		*50 - 200*
13C4 PFBA	*111*		*50 - 200*
13C5 PFPeA	*107*		*50 - 200*
13C3 PFBS	*111*		*50 - 200*
13C3 PFHxS	*115*		*50 - 200*
13C8 PFOS	*113*		*50 - 200*
13C2-4:2-FTS	*106*		*50 - 200*
13C2-6:2-FTS	*109*		*50 - 200*
13C2-8:2-FTS	*112*		*50 - 200*

Lab Sample ID: MRL 380-211527/21-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.83	J	ng/L		91	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.99	J	ng/L		99	50 - 150

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

Lab Sample ID: MRL 380-211527/21-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.21	J	ng/L		110	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.19	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.36	J	ng/L		118	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.39	J	ng/L		119	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.15	J	ng/L		107	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*98*		*50 - 200*
13C6 PFDA	*116*		*50 - 200*
13C5 PFHxA	*109*		*50 - 200*
13C4 PFHpA	*105*		*50 - 200*
13C8 PFOA	*116*		*50 - 200*
13C9 PFNA	*116*		*50 - 200*
13C7 PFUnA	*113*		*50 - 200*
13C2 PFDoA	*115*		*50 - 200*
13C4 PFBA	*112*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*117*		*50 - 200*
13C3 PFHxS	*113*		*50 - 200*

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

Lab Sample ID: MRL 380-211527/21-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C8 PFOS	*116*		*50 - 200*
13C2-4:2-FTS	*116*		*50 - 200*
13C2-6:2-FTS	*111*		*50 - 200*
13C2-8:2-FTS	*117*		*50 - 200*

Lab Sample ID: 380-201381-B-1-A MS
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211527

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		60.1	52.9		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	58.6		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	56.8		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	56.4		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	2.4		60.1	60.8		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.1	58.0		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	59.4		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	61.2		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	59.4		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	3.2		60.1	59.2		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.1	55.7		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	58.2		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	3.5		60.1	59.9		ng/L		94	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	56.8		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	2.0		60.1	58.6		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	61.5		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	60.4		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	60.9		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	61.7		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.1	62.4		ng/L		104	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	70.4		ng/L		117	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	57.4		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	2.2		60.1	57.1		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	57.7		ng/L		96	70 - 130

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

Lab Sample ID: 380-201381-B-1-A MS
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	57.5		ng/L		96	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*109*		*50 - 200*
13C6 PFDA	*116*		*50 - 200*
13C5 PFHxA	*108*		*50 - 200*
13C4 PFHpA	*110*		*50 - 200*
13C8 PFOA	*114*		*50 - 200*
13C9 PFNA	*121*		*50 - 200*
13C7 PFUnA	*122*		*50 - 200*
13C2 PFDoA	*121*		*50 - 200*
13C4 PFBA	*114*		*50 - 200*
13C5 PFPeA	*129*		*50 - 200*
13C3 PFBS	*113*		*50 - 200*
13C3 PFHxS	*112*		*50 - 200*
13C8 PFOS	*115*		*50 - 200*
13C2-4:2-FTS	*120*		*50 - 200*
13C2-6:2-FTS	*121*		*50 - 200*
13C2-8:2-FTS	*121*		*50 - 200*

Lab Sample ID: 380-201381-C-1-A MSD
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 211527

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		60.1	54.4		ng/L		90	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	58.7		ng/L		98	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	60.2		ng/L		100	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	61.3		ng/L		102	70 - 130	8	30
Perfluorobutanesulfonic acid (PFBS)	2.4		60.1	65.1		ng/L		104	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<2.0		60.1	58.9		ng/L		98	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	60.3		ng/L		100	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	61.9		ng/L		100	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	58.8		ng/L		95	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	3.2		60.1	60.9		ng/L		96	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.1	58.6		ng/L		97	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	58.9		ng/L		96	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	3.5		60.1	60.7		ng/L		95	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	58.9		ng/L		98	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	2.0		60.1	61.8		ng/L		99	70 - 130	5	30

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

Lab Sample ID: 380-201381-C-1-A MSD
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 211527

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		60.1	62.0		ng/L		103	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	58.9		ng/L		98	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	61.3		ng/L		102	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	63.0		ng/L		105	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.1	65.9		ng/L		110	70 - 130	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	69.8		ng/L		116	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	59.5		ng/L		99	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	2.2		60.1	59.3		ng/L		95	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	59.5		ng/L		99	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	59.0		ng/L		98	70 - 130	2	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*106*		*50 - 200*
13C6 PFDA	*116*		*50 - 200*
13C5 PFHxA	*107*		*50 - 200*
13C4 PFHpA	*109*		*50 - 200*
13C8 PFOA	*117*		*50 - 200*
13C9 PFNA	*115*		*50 - 200*
13C7 PFUnA	*119*		*50 - 200*
13C2 PFDoA	*123*		*50 - 200*
13C4 PFBA	*114*		*50 - 200*
13C5 PFPeA	*132*		*50 - 200*
13C3 PFBS	*110*		*50 - 200*
13C3 PFHxS	*117*		*50 - 200*
13C8 PFOS	*116*		*50 - 200*
13C2-4:2-FTS	*134*		*50 - 200*
13C2-6:2-FTS	*135*		*50 - 200*
13C2-8:2-FTS	*124*		*50 - 200*

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

Lab Sample ID: MBL 380-210869/19-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210869

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1

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

Lab Sample ID: MBL 380-210869/19-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210869

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		03/05/26 01:31	03/05/26 16:12	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*90*		*70 - 130*	*03/05/26 01:31*	*03/05/26 16:12*	*1*
13C2 PFHxA	*84*		*70 - 130*	*03/05/26 01:31*	*03/05/26 16:12*	*1*
13C2 PFDA	*92*		*70 - 130*	*03/05/26 01:31*	*03/05/26 16:12*	*1*
13C3-GenX	*72*		*70 - 130*	*03/05/26 01:31*	*03/05/26 16:12*	*1*

Lab Sample ID: LCS 380-210869/21-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	21.4		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	25.0		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	26.1		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	24.3		ng/L		97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	25.2		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	23.5		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	25.7		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	25.2		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	26.0		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	25.5		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	24.1		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.8		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	25.1	25.8		ng/L		103	70 - 130

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

Lab Sample ID: LCS 380-210869/21-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorotetradecanoic acid (PFTA)			25.1	21.6		ng/L		86	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			25.1	26.8		ng/L		107	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			25.1	23.8		ng/L		95	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			25.1	24.0		ng/L		96	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			25.1	21.4		ng/L		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*100*		*70 - 130*
13C2 PFHxA	*100*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*91*		*70 - 130*

Lab Sample ID: MRL 380-210869/20-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	1.55	J	ng/L		77	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.20	J	ng/L		110	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.00	J	ng/L		99	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			2.01	1.97	J	ng/L		98	50 - 150		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			2.01	1.97	J	ng/L		98	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	1.85	J	ng/L		92	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	1.97	J	ng/L		98	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	1.94	J	ng/L		97	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.10	J	ng/L		104	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.22	J	ng/L		110	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	2.06	J	ng/L		102	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	1.99	J	ng/L		99	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.21	J	ng/L		110	50 - 150		
Perfluorotetradecanoic acid (PFTA)			2.01	1.80	J	ng/L		90	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			2.01	2.03	J	ng/L		101	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	1.96	J	ng/L		98	50 - 150		

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

Lab Sample ID: MRL 380-210869/20-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	1.90	J	ng/L		95	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	1.67	J	ng/L		83	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*96*		*70 - 130*
13C2 PFHxA	*89*		*70 - 130*
13C2 PFDA	*102*		*70 - 130*
13C3-GenX	*77*		*70 - 130*

Lab Sample ID: 380-200428-B-1-A MS
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 210869

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		25.1	23.6		ng/L		94	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	2.9		25.1	28.6		ng/L		103	70 - 130		
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.0		ng/L		108	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.5		ng/L		102	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.0		ng/L		101	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.5		ng/L		106	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		25.1	25.3		ng/L		99	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.6		ng/L		102	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.8		ng/L		108	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.0		ng/L		105	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.4		ng/L		109	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.5		ng/L		106	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	21.5		ng/L		85	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.0		ng/L		107	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.4		ng/L		101	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.3		ng/L		101	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	23.4		ng/L		93	70 - 130		

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

Lab Sample ID: 380-200428-B-1-A MS
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 210869

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	*110*		*70 - 130*
13C2 PFHxA	*109*		*70 - 130*
13C2 PFDA	*114*		*70 - 130*
13C3-GenX	*104*		*70 - 130*

Lab Sample ID: 380-200428-B-1-B MSD
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 210869

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		25.1	21.2		ng/L		84	70 - 130	11	30
Perfluorooctanesulfonic acid (PFOS)	2.9		25.1	28.5		ng/L		102	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.8		ng/L		103	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.7		ng/L		98	70 - 130	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	24.9		ng/L		99	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	24.0		ng/L		93	70 - 130	8	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.7		ng/L		98	70 - 130	7	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	24.4		ng/L		96	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.5		ng/L		98	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.4		ng/L		106	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.9		ng/L		105	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	25.5		ng/L		101	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.9		ng/L		103	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.6		ng/L		90	70 - 130	5	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	26.2		ng/L		104	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.1		ng/L		100	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	24.3		ng/L		97	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	22.8		ng/L		91	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	*104*		*70 - 130*
13C2 PFHxA	*104*		*70 - 130*
13C2 PFDA	*109*		*70 - 130*
13C3-GenX	*95*		*70 - 130*

LCMS

Prep Batch: 210869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-1	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-201239-2	FB Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-210869/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-210869/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-210869/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-200428-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-200428-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 210999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-1	Ka'amilo Wells P2	Total/NA	Water	EPA 537.1 V2	210869
380-201239-2	FB Ka'amilo Wells P2	Total/NA	Water	EPA 537.1 V2	210869
MBL 380-210869/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	210869
LCS 380-210869/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	210869
MRL 380-210869/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	210869
380-200428-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	210869
380-200428-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	210869

Prep Batch: 211526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-2	FB Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-211526/20-A	Method Blank	Total/NA	Water	533	
LCS 380-211526/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-211526/21-A	Lab Control Sample	Total/NA	Water	533	
380-201393-C-1-B MS	Matrix Spike	Total/NA	Water	533	
380-201393-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 211527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-1	Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-211527/20-A	Method Blank	Total/NA	Water	533	
LCS 380-211527/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-211527/21-A	Lab Control Sample	Total/NA	Water	533	
380-201381-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-201381-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 211566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-2	FB Ka'amilo Wells P2	Total/NA	Water	533	211526
MBL 380-211526/20-A	Method Blank	Total/NA	Water	533	211526
LCS 380-211526/22-A	Lab Control Sample	Total/NA	Water	533	211526
MRL 380-211526/21-A	Lab Control Sample	Total/NA	Water	533	211526
380-201393-C-1-B MS	Matrix Spike	Total/NA	Water	533	211526
380-201393-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	533	211526

Analysis Batch: 211576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201239-1	Ka'amilo Wells P2	Total/NA	Water	533	211527
MBL 380-211527/20-A	Method Blank	Total/NA	Water	533	211527
LCS 380-211527/22-A	Lab Control Sample	Total/NA	Water	533	211527
MRL 380-211527/21-A	Lab Control Sample	Total/NA	Water	533	211527

LCMS (Continued)

Analysis Batch: 211576 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201381-B-1-A MS	Matrix Spike	Total/NA	Water	533	211527
380-201381-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	211527

Lab Chronicle

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-201239-1

Date Collected: 03/02/26 13:10

Matrix: Water

Date Received: 03/04/26 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			211527	XTD8	EA POM	03/07/26 05:29
Total/NA	Analysis	533		1	211576	SZ9R	EA POM	03/08/26 18:09
Total/NA	Prep	537.1 DW			210869	G9MN	EA POM	03/05/26 01:31
Total/NA	Analysis	EPA 537.1 V2		1	210999	Y5FM	EA POM	03/05/26 19:30

Client Sample ID: FB Ka'amilo Wells P2

Lab Sample ID: 380-201239-2

Date Collected: 03/02/26 13:10

Matrix: Water

Date Received: 03/04/26 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			211526	XTD8	EA POM	03/07/26 05:21
Total/NA	Analysis	533		1	211566	M7ML	EA POM	03/08/26 15:41
Total/NA	Prep	537.1 DW			210869	G9MN	EA POM	03/05/26 01:31
Total/NA	Analysis	EPA 537.1 V2		1	210999	Y5FM	EA POM	03/05/26 19:39

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: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

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

Job ID: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

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: 380-201239-1
SDG: PFAS: Ka'amilo Wells P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-201239-1	Ka'amilo Wells P2	Water	03/02/26 13:10	03/04/26 10:01	Hawaii
380-201239-2	FB Ka'amilo Wells P2	Water	03/02/26 13:10	03/04/26 10:01	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:
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days): RUSH			
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	525.2_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		
Ka'amilo Wells P2	2-Mar-2026	1310	G	Water							3	3		
FB: Ka'amilo Wells P2	2-Mar-2026	1310		Water							1	1		380-201239 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Fed X.	
[redacted]	Date/Time: 03March2026 1400	Company: HBWS	Received by: [signature] Mare Ururutia	Date/Time: 3/4/26 1001	Company: ETLP
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: (63/A) 1.8+0.2=2.0 761 - [illegible]	

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-201239-1
SDG Number: PFAS: Ka'amilo Wells P2

Login Number: 201239
List Number: 1
Creator: Ngo, Theodore

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).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	