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

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JOB DESCRIPTION

RED-HILL
PFAS: Ka'amilo Wells P1/P2

JOB NUMBER

380-177070-1

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

See page two for job notes and contact information.

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Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization

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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/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
380-177070-1

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

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

Receipt
The samples were received on 10/15/2025 10:27 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 2.8°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: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1 — Lab Sample ID: 380-177070-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	4.0		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.7		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0		ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		2.0		ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1 — Lab Sample ID: 380-177070-2

No Detections.

Client Sample ID: Ka'amilo Wells P2 — Lab Sample ID: 380-177070-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0		ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0		ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P2 — Lab Sample ID: 380-177070-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample ID: Ka'amilo Wells P1

Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-1

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		10/17/25 16:13	10/19/25 20:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorobutanesulfonic acid (PFBS)	**2.9**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorohexanoic acid (PFHxA)	**3.7**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorooctanesulfonic acid (PFOS)	**4.5**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorooctanoic acid (PFOA)	**3.9**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoropentanoic acid (PFPeA)	**4.0**		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 20:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*69*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C6 PFDA	*50*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C5 PFHxA	*71*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C4 PFHpA	*68*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C8 PFOA	*61*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C9 PFNA	*56*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C7 PFUnA	*52*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C2 PFDoA	*61*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C4 PFBA	*79*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C5 PFPeA	*75*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*
13C3 PFBS	*111*		*50 - 200*	*10/17/25 16:13*	*10/19/25 20:45*	*1*

Client Sample ID: Ka'amilo Wells P1

Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-1

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	108		50 - 200	10/17/25 16:13	10/19/25 20:45	1
13C8 PFOS	110		50 - 200	10/17/25 16:13	10/19/25 20:45	1
13C2-4:2-FTS	112		50 - 200	10/17/25 16:13	10/19/25 20:45	1
13C2-6:2-FTS	111		50 - 200	10/17/25 16:13	10/19/25 20:45	1
13C2-8:2-FTS	105		50 - 200	10/17/25 16:13	10/19/25 20:45	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorooctanesulfonic acid (PFOS)	**4.7**		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorohexanoic acid (PFHxA)	**3.6**		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorooctanoic acid (PFOA)	**3.9**		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorohexanesulfonic acid (PFHxS)	**3.9**		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorobutanesulfonic acid (PFBS)	**3.1**		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130	10/17/25 10:56	10/18/25 19:20	1
13C2 PFHxA	112		70 - 130	10/17/25 10:56	10/18/25 19:20	1
13C2 PFDA	114		70 - 130	10/17/25 10:56	10/18/25 19:20	1
13C3-GenX	106		70 - 130	10/17/25 10:56	10/18/25 19:20	1

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-2

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		10/17/25 16:13	10/19/25 13:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-2

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		10/17/25 16:13	10/19/25 13:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*102*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C6 PFDA	*104*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C5 PFHxA	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C4 PFHpA	*111*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C8 PFOA	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C9 PFNA	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C7 PFUnA	*101*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C2 PFDoA	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C4 PFBA	*118*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C3 PFBS	*103*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C3 PFHxS	*113*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C8 PFOS	*111*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C2-4:2-FTS	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C2-6:2-FTS	*106*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*
13C2-8:2-FTS	*101*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:37*	*1*

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-177070-2

Date Collected: 10/13/25 12:00
Matrix: Water
Date Received: 10/15/25 10:27

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:30*	*1*
13C2 PFHxA	*109*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:30*	*1*
13C2 PFDA	*113*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:30*	*1*
13C3-GenX	*103*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:30*	*1*

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-177070-3

Date Collected: 10/13/25 12:42
Matrix: Water
Date Received: 10/15/25 10:27

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorobutanesulfonic acid (PFBS)	**3.0**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorohexanesulfonic acid (PFHxS)	**3.3**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorohexanoic acid (PFHxA)	**3.6**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1

Client Sample ID: Ka'amilo Wells P2

Date Collected: 10/13/25 12:42
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-3

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorooctanesulfonic acid (PFOS)	**3.7**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorooctanoic acid (PFOA)	**3.6**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoropentanoic acid (PFPeA)	**3.7**		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:46	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C6 PFDA	*98*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C5 PFHxA	*93*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C4 PFHpA	*98*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C8 PFOA	*101*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C9 PFNA	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C7 PFUnA	*96*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C2 PFDoA	*110*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C4 PFBA	*102*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C5 PFPeA	*96*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C3 PFBS	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C3 PFHxS	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C8 PFOS	*111*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C2-4:2-FTS	*108*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*
13C2-8:2-FTS	*100*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:46*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorooctanesulfonic acid (PFOS)	**4.2**		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-177070-3
Date Collected: 10/13/25 12:42
Matrix: Water
Date Received: 10/15/25 10:27

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorohexanoic acid (PFHxA)	**3.2**		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorooctanoic acid (PFOA)	**3.6**		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorobutanesulfonic acid (PFBS)	**2.9**		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*105*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:40*	*1*
13C2 PFHxA	*108*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:40*	*1*
13C2 PFDA	*111*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:40*	*1*
13C3-GenX	*102*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:40*	*1*

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-177070-4
Date Collected: 10/13/25 12:42
Matrix: Water
Date Received: 10/15/25 10:27

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1

Client Sample ID: FB: Ka'amilo Wells P2

Date Collected: 10/13/25 12:42
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-4

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/17/25 16:13	10/19/25 13:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C5 PFHxA	*101*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C4 PFHpA	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C8 PFOA	*104*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C9 PFNA	*110*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C7 PFUnA	*95*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C2 PFDoA	*106*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C4 PFBA	*116*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C5 PFPeA	*110*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C3 PFBS	*108*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C3 PFHxS	*108*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C8 PFOS	*111*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C2-4:2-FTS	*112*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C2-6:2-FTS	*107*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*
13C2-8:2-FTS	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 13:56*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Date Collected: 10/13/25 12:42
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-4

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/17/25 10:56	10/18/25 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*108*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:49*	*1*
13C2 PFHxA	*107*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:49*	*1*
13C2 PFDA	*112*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:49*	*1*
13C3-GenX	*101*		*70 - 130*	*10/17/25 10:56*	*10/18/25 19:49*	*1*

Action Limit Summary

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1 — Lab Sample ID: 380-177070-1

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)	3.4		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	**4.5**		ng/L	**4**	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	**4.7**		ng/L	**4**	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1 — Lab Sample ID: 380-177070-2

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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2 — Lab Sample ID: 380-177070-3

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)	3.3		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2 (Continued) — Lab Sample ID: 380-177070-3

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
Perfluorooctanesulfonic acid (PFOS)	**4.2**		ng/L	**4**	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P2 — Lab Sample ID: 380-177070-4

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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Surrogate Summary

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

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)
380-177016-J-1-A MS	Matrix Spike	106	110	109	104
380-177016-K-1-A MSD	Matrix Spike Duplicate	110	111	115	108
380-177070-1	Ka'amilo Wells P1	107	112	114	106
380-177070-2	FB: Ka'amilo Wells P1	107	109	113	103
380-177070-3	Ka'amilo Wells P2	105	108	111	102
380-177070-4	FB: Ka'amilo Wells P2	108	107	112	101
LCS 380-180534/24-A	Lab Control Sample	105	107	112	101
MBL 380-180534/22-A	Method Blank	114	110	115	108
MRL 380-180534/23-A	Lab Control Sample	112	115	119	112

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: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-177070-1	Ka'amilo Wells P1	69	50	71	68	61	56	52	61
380-177070-2	FB: Ka'amilo Wells P1	102	104	107	111	107	107	101	107
380-177070-3	Ka'amilo Wells P2	96	98	93	98	101	105	96	110
380-177070-4	FB: Ka'amilo Wells P2	97	101	101	107	104	110	95	106
380-177293-B-3-A MS	Matrix Spike	79	66	76	75	73	71	70	84
380-177293-C-3-A MSD	Matrix Spike Duplicate	89	91	89	89	91	94	89	96
LCS 380-180586/22-A	Lab Control Sample	113	104	104	104	107	110	102	113
MBL 380-180586/20-A	Method Blank	97	98	100	105	100	104	91	105
MRL 380-180586/21-A	Lab Control Sample	96	104	104	104	102	110	94	107

		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)
380-177070-1	Ka'amilo Wells P1	79	75	111	108	110	112	111	105
380-177070-2	FB: Ka'amilo Wells P1	118	104	103	113	111	105	106	101
380-177070-3	Ka'amilo Wells P2	102	96	105	105	111	108	104	100
380-177070-4	FB: Ka'amilo Wells P2	116	110	108	108	111	112	107	105
380-177293-B-3-A MS	Matrix Spike	86	83	108	110	110	106	104	99
380-177293-C-3-A MSD	Matrix Spike Duplicate	93	87	109	108	108	112	102	102
LCS 380-180586/22-A	Lab Control Sample	112	103	110	109	112	107	103	100
MBL 380-180586/20-A	Method Blank	108	106	102	103	106	104	95	95
MRL 380-180586/21-A	Lab Control Sample	102	97	107	103	110	102	97	93

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 380-180586/20-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180586

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		10/17/25 16:13	10/19/25 11:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		10/17/25 16:13	10/19/25 11:42	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C6 PFDA	*98*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C5 PFHxA	*100*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C4 PFHpA	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C8 PFOA	*100*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C7 PFUnA	*91*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C2 PFDoA	*105*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C4 PFBA	*108*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C5 PFPeA	*106*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C3 PFBS	*102*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*
13C3 PFHxS	*103*		*50 - 200*	*10/17/25 16:13*	*10/19/25 11:42*	*1*

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

Lab Sample ID: MBL 380-180586/20-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180586

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	10/17/25 16:13	10/19/25 11:42	1
13C2-4:2-FTS	104		50 - 200	10/17/25 16:13	10/19/25 11:42	1
13C2-6:2-FTS	95		50 - 200	10/17/25 16:13	10/19/25 11:42	1
13C2-8:2-FTS	95		50 - 200	10/17/25 16:13	10/19/25 11:42	1

Lab Sample ID: LCS 380-180586/22-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180586

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	117		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	115		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	118		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	108		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	115		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	120	122		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	120	124		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	121		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	118		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	120	121		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	120	119		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	111		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	120	117		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	127		ng/L		106	70 - 130
Perfluorobutanoic acid (PFBA)	120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	123		ng/L		102	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	130		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	118		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	111		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	126		ng/L		105	70 - 130
Perfluoropentanoic acid (PFPeA)	120	119		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	113		ng/L		94	70 - 130

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

Lab Sample ID: LCS 380-180586/22-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180586

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			120	110		ng/L		91	70 - 130		

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

Lab Sample ID: MRL 380-180586/21-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180586

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	2.06	J	ng/L		103	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	2.18	J	ng/L		109	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	2.18	J	ng/L		108	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	2.18	J	ng/L		109	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	2.20	J	ng/L		109	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.13	J	ng/L		106	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.44	J	ng/L		122	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.40	J	ng/L		120	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.33	J	ng/L		116	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	2.19	J	ng/L		109	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.14	J	ng/L		106	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.28	J	ng/L		114	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.33	J	ng/L		116	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.50	J	ng/L		124	50 - 150		
Perfluorobutanoic acid (PFBA)			2.01	2.20	J	ng/L		110	50 - 150		

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

Lab Sample ID: MRL 380-180586/21-A
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180586

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.57	J	ng/L		128	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.54	J	ng/L		126	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.40	J	ng/L		119	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.40	J	ng/L		119	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.24	J	ng/L		112	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.32	J	ng/L		115	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.30	J	ng/L		115	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.32	J	ng/L		116	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.20	J	ng/L		109	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.14	J	ng/L		106	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*50 - 200*
13C6 PFDA	*104*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*104*		*50 - 200*
13C8 PFOA	*102*		*50 - 200*
13C9 PFNA	*110*		*50 - 200*
13C7 PFUnA	*94*		*50 - 200*
13C2 PFDoA	*107*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C5 PFPeA	*97*		*50 - 200*
13C3 PFBS	*107*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*110*		*50 - 200*
13C2-4:2-FTS	*102*		*50 - 200*
13C2-6:2-FTS	*97*		*50 - 200*
13C2-8:2-FTS	*93*		*50 - 200*

Lab Sample ID: 380-177293-B-3-A MS
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 180586

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		60.4	63.2		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	61.6		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	60.1		ng/L		100	70 - 130

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

Lab Sample ID: 380-177293-B-3-A MS
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 180586

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		60.4	59.2		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.1		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	66.0		ng/L		109	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	64.1		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	63.4		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.3		60.4	64.1		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	64.6		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	64.1		ng/L		106	70 - 130
Perfluorooctanesulfonic acid (PFOS)	3.1		60.4	61.4		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	2.5		60.4	65.0		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	66.7		ng/L		110	70 - 130
Perfluorobutanoic acid (PFBA)	2.1		60.4	62.6		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	67.7		ng/L		112	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	61.8		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	63.6		ng/L		105	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	64.1		ng/L		106	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	64.6		ng/L		107	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	58.0		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	60.5		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	62.6		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.6		ng/L		104	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	58.8		ng/L		97	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*79*		*50 - 200*
13C6 PFDA	*66*		*50 - 200*
13C5 PFHxA	*76*		*50 - 200*
13C4 PFHpA	*75*		*50 - 200*
13C8 PFOA	*73*		*50 - 200*
13C9 PFNA	*71*		*50 - 200*
13C7 PFUnA	*70*		*50 - 200*
13C2 PFDoA	*84*		*50 - 200*
13C4 PFBA	*86*		*50 - 200*
13C5 PFPeA	*83*		*50 - 200*
13C3 PFBS	*108*		*50 - 200*
13C3 PFHxS	*110*		*50 - 200*
13C8 PFOS	*110*		*50 - 200*

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

Lab Sample ID: 380-177293-B-3-A MS
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 180586

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	99		50 - 200

Lab Sample ID: 380-177293-C-3-A MSD
Matrix: Water
Analysis Batch: 180702

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 180586

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		60.4	63.6		ng/L		105	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	62.1		ng/L		103	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	61.0		ng/L		101	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	59.7		ng/L		99	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	64.0		ng/L		104	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	60.5		ng/L		100	70 - 130	9	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	65.4		ng/L		108	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	63.7		ng/L		105	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	2.3		60.4	64.1		ng/L		102	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	61.5		ng/L		99	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	61.6		ng/L		102	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	3.1		60.4	62.2		ng/L		98	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	2.5		60.4	66.5		ng/L		106	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	66.7		ng/L		110	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	2.1		60.4	64.5		ng/L		103	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	67.0		ng/L		111	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	58.2		ng/L		96	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	64.2		ng/L		106	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	59.9		ng/L		99	70 - 130	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	64.9		ng/L		107	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	58.4		ng/L		97	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	63.7		ng/L		105	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	63.2		ng/L		103	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.7		ng/L		104	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	59.8		ng/L		99	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	89		50 - 200
13C6 PFDA	91		50 - 200
13C5 PFHxA	89		50 - 200
13C4 PFHpA	89		50 - 200
13C8 PFOA	91		50 - 200
13C9 PFNA	94		50 - 200
13C7 PFUnA	89		50 - 200
13C2 PFDoA	96		50 - 200
13C4 PFBA	93		50 - 200
13C5 PFPeA	87		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	102		50 - 200
13C2-8:2-FTS	102		50 - 200

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

Lab Sample ID: MBL 380-180534/22-A
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180534

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		10/17/25 10:56	10/18/25 17:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/17/25 10:56	10/18/25 17:42	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130	10/17/25 10:56	10/18/25 17:42	1
13C2 PFHxA	110		70 - 130	10/17/25 10:56	10/18/25 17:42	1
13C2 PFDA	115		70 - 130	10/17/25 10:56	10/18/25 17:42	1

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

Lab Sample ID: MBL 380-180534/22-A
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 180534

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	108		70 - 130	10/17/25 10:56	10/18/25 17:42	1

Lab Sample ID: LCS 380-180534/24-A
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180534

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	23.7		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	26.5		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.0		ng/L		108	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	25.4		ng/L		101	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	25.4		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.0		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	27.0		ng/L		108	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	26.3		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	27.1		ng/L		108	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.0		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	25.6		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.7		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.0		ng/L		104	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	25.9		ng/L		104	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	26.6		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.6		ng/L		106	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.6		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	24.6		ng/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	107		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	101		70 - 130

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

Lab Sample ID: MRL 380-180534/23-A
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 180534

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.32	J	ng/L		116	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.24	J	ng/L		111	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.17	J	ng/L		108	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.14	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.11	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.30	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.35	J	ng/L		117	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.29	J	ng/L		114	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.33	J	ng/L		116	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.23	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.11	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.14	J	ng/L		106	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.25	J	ng/L		112	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.24	J	ng/L		111	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.20	J	ng/L		109	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.17	J	ng/L		108	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.05	J	ng/L		102	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*112*		*70 - 130*
13C2 PFHxA	*115*		*70 - 130*
13C2 PFDA	*119*		*70 - 130*
13C3-GenX	*112*		*70 - 130*

Lab Sample ID: 380-177016-J-1-A MS
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 180534

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	24.2		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.1		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.9		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.7		ng/L		103	70 - 130

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

Lab Sample ID: 380-177016-J-1-A MS
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 180534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.0		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	24.6		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.4		ng/L		105	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.4		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.2		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.7		ng/L		107	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	25.5		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.9		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.3		ng/L		101	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	25.9		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.8		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.7		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.6		ng/L		98	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*106*		*70 - 130*
13C2 PFHxA	*110*		*70 - 130*
13C2 PFDA	*109*		*70 - 130*
13C3-GenX	*104*		*70 - 130*

Lab Sample ID: 380-177016-K-1-A MSD
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 180534

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	25.0		ng/L		100	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.5		ng/L		110	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.7		ng/L		106	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	24.6		ng/L		98	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.6		ng/L		106	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.3		ng/L		105	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	27.1		ng/L		108	70 - 130	3	30

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

Lab Sample ID: 380-177016-K-1-A MSD
Matrix: Water
Analysis Batch: 180688

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 180534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.5		ng/L		106	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	25.7		ng/L		102	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	25.7		ng/L		103	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.9		ng/L		103	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.9		ng/L		104	70 - 130	3	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	26.5		ng/L		106	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.7		ng/L		106	70 - 130	0	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.2		ng/L		101	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.5		ng/L		98	70 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*110*		*70 - 130*
13C2 PFHxA	*111*		*70 - 130*
13C2 PFDA	*115*		*70 - 130*
13C3-GenX	*108*		*70 - 130*

LCMS

Prep Batch: 180534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-177070-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-177070-2	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-177070-3	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-177070-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-180534/22-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-180534/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-180534/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-177016-J-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-177016-K-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 180586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-177070-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-177070-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	
380-177070-3	Ka'amilo Wells P2	Total/NA	Water	533	
380-177070-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-180586/20-A	Method Blank	Total/NA	Water	533	
LCS 380-180586/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-180586/21-A	Lab Control Sample	Total/NA	Water	533	
380-177293-B-3-A MS	Matrix Spike	Total/NA	Water	533	
380-177293-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 180688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-177070-1	Ka'amilo Wells P1	Total/NA	Water	537.1	180534
380-177070-2	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	180534
380-177070-3	Ka'amilo Wells P2	Total/NA	Water	537.1	180534
380-177070-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	180534
MBL 380-180534/22-A	Method Blank	Total/NA	Water	537.1	180534
LCS 380-180534/24-A	Lab Control Sample	Total/NA	Water	537.1	180534
MRL 380-180534/23-A	Lab Control Sample	Total/NA	Water	537.1	180534
380-177016-J-1-A MS	Matrix Spike	Total/NA	Water	537.1	180534
380-177016-K-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	180534

Analysis Batch: 180702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-177070-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	180586
380-177070-3	Ka'amilo Wells P2	Total/NA	Water	533	180586
380-177070-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	180586
MBL 380-180586/20-A	Method Blank	Total/NA	Water	533	180586
LCS 380-180586/22-A	Lab Control Sample	Total/NA	Water	533	180586
MRL 380-180586/21-A	Lab Control Sample	Total/NA	Water	533	180586
380-177293-B-3-A MS	Matrix Spike	Total/NA	Water	533	180586
380-177293-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	180586

Analysis Batch: 180710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-177070-1	Ka'amilo Wells P1	Total/NA	Water	533	180586

Lab Chronicle

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1
Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			180586	N8NE	EA POM	10/17/25 16:13
Total/NA	Analysis	533		1	180710	M7ML	EA POM	10/19/25 20:45
Total/NA	Prep	537.1 DW			180534	E9PK	EA POM	10/17/25 10:56
Total/NA	Analysis	537.1		1	180688	M7ML	EA POM	10/18/25 19:20

Client Sample ID: FB: Ka'amilo Wells P1
Date Collected: 10/13/25 12:00
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			180586	N8NE	EA POM	10/17/25 16:13
Total/NA	Analysis	533		1	180702	M7ML	EA POM	10/19/25 13:37
Total/NA	Prep	537.1 DW			180534	E9PK	EA POM	10/17/25 10:56
Total/NA	Analysis	537.1		1	180688	M7ML	EA POM	10/18/25 19:30

Client Sample ID: Ka'amilo Wells P2
Date Collected: 10/13/25 12:42
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			180586	N8NE	EA POM	10/17/25 16:13
Total/NA	Analysis	533		1	180702	M7ML	EA POM	10/19/25 13:46
Total/NA	Prep	537.1 DW			180534	E9PK	EA POM	10/17/25 10:56
Total/NA	Analysis	537.1		1	180688	M7ML	EA POM	10/18/25 19:40

Client Sample ID: FB: Ka'amilo Wells P2
Date Collected: 10/13/25 12:42
Date Received: 10/15/25 10:27

Lab Sample ID: 380-177070-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			180586	N8NE	EA POM	10/17/25 16:13
Total/NA	Analysis	533		1	180702	M7ML	EA POM	10/19/25 13:56
Total/NA	Prep	537.1 DW			180534	E9PK	EA POM	10/17/25 10:56
Total/NA	Analysis	537.1		1	180688	M7ML	EA POM	10/18/25 19:49

Laboratory References:
EA POM = Eurofins Eaton Analytical 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: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Laboratory: Eurofins Eaton Analytical Pomona

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

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

Method Summary

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

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

Job ID: 380-177070-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-177070-1	Ka'amilo Wells P1	Water	10/13/25 12:00	10/15/25 10:27	Hawaii
380-177070-2	FB: Ka'amilo Wells P1	Water	10/13/25 12:00	10/15/25 10:27	Hawaii
380-177070-3	Ka'amilo Wells P2	Water	10/13/25 12:42	10/15/25 10:27	Hawaii
380-177070-4	FB: Ka'amilo Wells P2	Water	10/13/25 12:42	10/15/25 10:27	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: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: kirk Iwamoto	Phone: +1 808 748 5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
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

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_CS - HNL Ranges C10-C24/C24-C36/C8-C18	525.2_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			
Ka'amilo Wells P1	13-Oct-2025	1200	G	Water							3	3		
Ka'amilo Wells P2	13-Oct-2025	1242	G	Water							3	3		
FB: Ka'amilo Wells P1	13-Oct-2025	1200		Water							1	1		
FB: Ka'amilo Wells P2	13-Oct-2025	242		Water							1	1		

380-177070 COC

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:

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: 0657/0662/0673

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: 7851 7910 0629/0630/0640

	Date/Time:	Company	Received by:	Date/Time:	Company
[redacted]	14 October 2025 1400	HBWS		10/15/25 1027	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4.3 3.8 / 4.3 3.3	Company

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

Cooler Temperature(s) °C and Other Remarks: 6 out 4.3 3.8 59 = 4.3 3.3 59 BOZ

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler:	Lab PM: Lopez, Maria	Carrier Tracking No(s):	COC No: 380-66150-6868 1
Client Contact: Kirk Iwamoto	Phone: 808-748-5840	E-Mail: Maria.Lopez@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			Preservation Codes: I - NH4 Acetate; Y Trizma; Other:
City: Honolulu	TAT Requested (days): Standard			
State Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: kiwamoto@hbws.org	WO #:			
Project Name: SPECIAL	Project #: 38000519			
Site:	SSOW#:			

Analysis Requested

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)	533-E533 PFAS	537 1_DW_PREC-537 1 PFAS	Total Number of containers	Special Instructions/Note:
				Preservation Code:			N	Y		
Pearl City Shaft	10/13/25	1045	G	Drinking Water			3	3		
FB Pearl City Shaft	10/13/25	1045		Drinking Water			1	1		

380-177068 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: 0651/0662/0673 0629/0630/0640

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 8851 7410			
Relinquished by: ey	Date/Time: 10/14/25 1200	Company:	Received by: 4101	Date/Time: 10/15/25 1027	Company: EEA	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Custody Seals Intact: Δ Yes Δ No	Custody Seal No:		Cooler Temperature(s) °C and Other Remarks: 60m/ 2.2 2.3 CoR			

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-177070-1
SDG Number: PFAS: Ka'amilo Wells P1/P2

Login Number: 177070
List Number: 1
Creator: Sanchez, Joseph G

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	