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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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Honolulu, Hawaii 96843

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JOB DESCRIPTION

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

JOB NUMBER

380-176291-1

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

See page two for job notes and contact information.

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: 380-176291-1
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
380-176291-1

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 10/9/2025 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.5°C and 3.8°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: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1 — Lab Sample ID: 380-176291-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.3		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.4		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.3		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.4		2.0		ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		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)	2.8		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Well P2 — Lab Sample ID: 380-176291-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.6		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0		ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0		ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Well P1 — Lab Sample ID: 380-176291-3

No Detections.

Client Sample ID: FB: Ka'amilo Well P2 — Lab Sample ID: 380-176291-4

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Date Collected: 10/07/25 11:25
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-1

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		10/13/25 16:00	10/14/25 09:22	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorobutanesulfonic acid (PFBS)	**2.7**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorohexanesulfonic acid (PFHxS)	**3.2**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorohexanoic acid (PFHxA)	**3.7**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorooctanesulfonic acid (PFOS)	**4.3**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorooctanoic acid (PFOA)	**3.6**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoropentanoic acid (PFPeA)	**3.4**		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 09:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C6 PFDA	*97*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C5 PFHxA	*86*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C4 PFHpA	*94*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C8 PFOA	*95*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C9 PFNA	*98*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C7 PFUnA	*98*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C2 PFDoA	*106*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C4 PFBA	*97*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C5 PFPeA	*99*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*
13C3 PFBS	*123*		*50 - 200*	*10/13/25 16:00*	*10/14/25 09:22*	*1*

Client Sample ID: Ka'amilo Well P1

Date Collected: 10/07/25 11:25
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-1

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	121		50 - 200	10/13/25 16:00	10/14/25 09:22	1
13C8 PFOS	117		50 - 200	10/13/25 16:00	10/14/25 09:22	1
13C2-4:2-FTS	151		50 - 200	10/13/25 16:00	10/14/25 09:22	1
13C2-6:2-FTS	134		50 - 200	10/13/25 16:00	10/14/25 09:22	1
13C2-8:2-FTS	131		50 - 200	10/13/25 16:00	10/14/25 09:22	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		10/13/25 03:34	10/14/25 03:19	1
Perfluorooctanesulfonic acid (PFOS)	**4.3**		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorohexanoic acid (PFHxA)	**3.4**		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorooctanoic acid (PFOA)	**3.4**		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorobutanesulfonic acid (PFBS)	**2.8**		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130	10/13/25 03:34	10/14/25 03:19	1
13C2 PFHxA	106		70 - 130	10/13/25 03:34	10/14/25 03:19	1
13C2 PFDA	115		70 - 130	10/13/25 03:34	10/14/25 03:19	1
13C3-GenX	109		70 - 130	10/13/25 03:34	10/14/25 03:19	1

Client Sample ID: Ka'amilo Well P2

Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-2

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		10/13/25 16:00	10/14/25 11:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1

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

Job ID: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P2

Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-2

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		10/13/25 16:00	10/14/25 11:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorobutanesulfonic acid (PFBS)	**2.6**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorohexanesulfonic acid (PFHxS)	**3.2**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorohexanoic acid (PFHxA)	**3.2**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorooctanesulfonic acid (PFOS)	**3.4**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorooctanoic acid (PFOA)	**3.2**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoropentanoic acid (PFPeA)	**3.1**		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*107*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C6 PFDA	*112*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C5 PFHxA	*102*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C4 PFHpA	*106*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C8 PFOA	*110*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C9 PFNA	*119*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C7 PFUnA	*114*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C2 PFDoA	*115*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C4 PFBA	*105*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C5 PFPeA	*110*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C3 PFBS	*118*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C3 PFHxS	*115*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C8 PFOS	*119*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C2-4:2-FTS	*146*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*
13C2-6:2-FTS	*140*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:08*	*1*

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-176291-2
Date Collected: 10/07/25 12:00
Matrix: Water
Date Received: 10/09/25 10:20

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	132		50 - 200	10/13/25 16:00	10/14/25 11:08	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		10/13/25 03:34	10/14/25 03:29	1
Perfluorooctanesulfonic acid (PFOS)	**3.7**		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorohexanoic acid (PFHxA)	**3.0**		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorooctanoic acid (PFOA)	**3.2**		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorohexanesulfonic acid (PFHxS)	**3.2**		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorobutanesulfonic acid (PFBS)	**2.5**		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/13/25 03:34	10/14/25 03:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130	10/13/25 03:34	10/14/25 03:29	1
13C2 PFHxA	99		70 - 130	10/13/25 03:34	10/14/25 03:29	1
13C2 PFDA	108		70 - 130	10/13/25 03:34	10/14/25 03:29	1
13C3-GenX	100		70 - 130	10/13/25 03:34	10/14/25 03:29	1

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-176291-3
Date Collected: 10/07/25 11:25
Matrix: Water
Date Received: 10/09/25 10:20

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		10/13/25 16:00	10/14/25 11:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/13/25 16:00	10/14/25 11:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/13/25 16:00	10/14/25 11:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/13/25 16:00	10/14/25 11:27	1

Client Sample ID: FB: Ka'amilo Well P1

Date Collected: 10/07/25 11:25
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-3

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C6 PFDA	*110*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C5 PFHxA	*103*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C4 PFHpA	*106*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C8 PFOA	*106*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C9 PFNA	*113*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C7 PFUnA	*109*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C2 PFDoA	*110*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C4 PFBA	*107*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C5 PFPeA	*116*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C3 PFBS	*118*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C3 PFHxS	*118*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C8 PFOS	*116*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C2-4:2-FTS	*148*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C2-6:2-FTS	*134*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*1*
13C2-8:2-FTS	*127*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:27*	*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		10/13/25 03:34	10/14/25 03:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-176291-3

Date Collected: 10/07/25 11:25
Matrix: Water
Date Received: 10/09/25 10:20

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*110*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:48*	*1*
13C2 PFHxA	*111*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:48*	*1*
13C2 PFDA	*121*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:48*	*1*
13C3-GenX	*111*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:48*	*1*

Client Sample ID: FB: Ka'amilo Well P2

Lab Sample ID: 380-176291-4

Date Collected: 10/07/25 12:00
Matrix: Water
Date Received: 10/09/25 10:20

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		10/13/25 16:00	10/14/25 11:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1

Client Sample ID: FB: Ka'amilo Well P2

Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-4

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		10/13/25 16:00	10/14/25 11:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/13/25 16:00	10/14/25 11:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*126*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C6 PFDA	*118*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C5 PFHxA	*129*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C4 PFHpA	*131*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C8 PFOA	*127*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C9 PFNA	*127*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C7 PFUnA	*117*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C2 PFDoA	*122*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C4 PFBA	*135*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C5 PFPeA	*137*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C3 PFBS	*143*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C3 PFHxS	*139*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C8 PFOS	*120*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C2-4:2-FTS	*172*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C2-6:2-FTS	*146*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*1*
13C2-8:2-FTS	*135*		*50 - 200*	*10/13/25 16:00*	*10/14/25 11:36*	*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		10/13/25 03:34	10/14/25 03:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1

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

Job ID: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Well P2
Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-4
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		10/13/25 03:34	10/14/25 03:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/13/25 03:34	10/14/25 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*111*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:58*	*1*
13C2 PFHxA	*106*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:58*	*1*
13C2 PFDA	*122*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:58*	*1*
13C3-GenX	*109*		*70 - 130*	*10/13/25 03:34*	*10/14/25 03:58*	*1*

Action Limit Summary

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

Job ID: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1 — Lab Sample ID: 380-176291-1

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)	3.2		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	**4.3**		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
Perfluorooctanesulfonic acid (PFOS)	**4.3**		ng/L	**4**	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		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: Ka'amilo Well P2 — Lab Sample ID: 380-176291-2

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)	3.2		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		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)	3.7		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		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 Well P1 — Lab Sample ID: 380-176291-3

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)	<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

Client Sample ID: FB: Ka'amilo Well P1 (Continued) — Lab Sample ID: 380-176291-3

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)	<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: FB: Ka'amilo Well P2 — Lab Sample ID: 380-176291-4

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: 380-176291-1
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)
380-176167-B-1-A MS	Matrix Spike	114	113	124	118
380-176167-C-1-A MSD	Matrix Spike Duplicate	99	100	111	107
380-176291-1	Ka'amilo Well P1	105	106	115	109
380-176291-2	Ka'amilo Well P2	101	99	108	100
380-176291-3	FB: Ka'amilo Well P1	110	111	121	111
380-176291-4	FB: Ka'amilo Well P2	111	106	122	109
LCS 380-179293/30-A	Lab Control Sample	103	101	110	100
MBL 380-179293/28-A	Method Blank	90	88	100	84
MRL 380-179293/29-A	Lab Control Sample	91	96	103	82

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: 380-176291-1
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)
380-176291-1	Ka'amilo Well P1	91	97	86	94	95	98	98	106
380-176291-1 MS	Ka'amilo Well P1	100	111	91	97	101	112	114	115
380-176291-1 MSD	Ka'amilo Well P1	131	120	108	113	118	123	117	121
380-176291-2	Ka'amilo Well P2	107	112	102	106	110	119	114	115
380-176291-3	FB: Ka'amilo Well P1	108	110	103	106	106	113	109	110
380-176291-4	FB: Ka'amilo Well P2	126	118	129	131	127	127	117	122
LCS 380-179431/22-A	Lab Control Sample	127	121	115	119	124	125	122	121
MBL 380-179431/20-A	Method Blank	103	117	98	103	108	121	115	117
MRL 380-179431/21-A	Lab Control Sample	128	124	132	128	130	132	117	118

		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)
380-176291-1	Ka'amilo Well P1	97	99	123	121	117	151	134	131
380-176291-1 MS	Ka'amilo Well P1	97	98	120	118	119	143	134	130
380-176291-1 MSD	Ka'amilo Well P1	113	122	128	125	121	155	143	140
380-176291-2	Ka'amilo Well P2	105	110	118	115	119	146	140	132
380-176291-3	FB: Ka'amilo Well P1	107	116	118	118	116	148	134	127
380-176291-4	FB: Ka'amilo Well P2	135	137	143	139	120	172	146	135
LCS 380-179431/22-A	Lab Control Sample	119	123	122	123	118	150	136	130
MBL 380-179431/20-A	Method Blank	103	104	112	109	115	131	123	132
MRL 380-179431/21-A	Lab Control Sample	128	139	140	137	124	171	146	134

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 380-179431/20-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179431

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		10/13/25 16:00	10/14/25 12:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		10/13/25 16:00	10/14/25 12:14	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C6 PFDA	*117*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C5 PFHxA	*98*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C4 PFHpA	*103*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C8 PFOA	*108*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C9 PFNA	*121*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C7 PFUnA	*115*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C2 PFDoA	*117*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C4 PFBA	*103*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C3 PFBS	*112*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*
13C3 PFHxS	*109*		*50 - 200*	*10/13/25 16:00*	*10/14/25 12:14*	*1*

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

Lab Sample ID: MBL 380-179431/20-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179431

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	115		50 - 200	10/13/25 16:00	10/14/25 12:14	1
13C2-4:2-FTS	131		50 - 200	10/13/25 16:00	10/14/25 12:14	1
13C2-6:2-FTS	123		50 - 200	10/13/25 16:00	10/14/25 12:14	1
13C2-8:2-FTS	132		50 - 200	10/13/25 16:00	10/14/25 12:14	1

Lab Sample ID: LCS 380-179431/22-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179431

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	95.2		ng/L		79	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	105		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	115		ng/L		96	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	103		ng/L		85	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	113		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	120	116		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	120	116		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	112		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	109		ng/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	120	117		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	111		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	116		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	120	111		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	118		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	111		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	112		ng/L		93	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	116		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	120	109		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	114		ng/L		94	70 - 130

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

Lab Sample ID: LCS 380-179431/22-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179431

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	*127*		*50 - 200*
13C6 PFDA	*121*		*50 - 200*
13C5 PFHxA	*115*		*50 - 200*
13C4 PFHpA	*119*		*50 - 200*
13C8 PFOA	*124*		*50 - 200*
13C9 PFNA	*125*		*50 - 200*
13C7 PFUnA	*122*		*50 - 200*
13C2 PFDoA	*121*		*50 - 200*
13C4 PFBA	*119*		*50 - 200*
13C5 PFPeA	*123*		*50 - 200*
13C3 PFBS	*122*		*50 - 200*
13C3 PFHxS	*123*		*50 - 200*
13C8 PFOS	*118*		*50 - 200*
13C2-4:2-FTS	*150*		*50 - 200*
13C2-6:2-FTS	*136*		*50 - 200*
13C2-8:2-FTS	*130*		*50 - 200*

Lab Sample ID: MRL 380-179431/21-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179431

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	1.60	J	ng/L		80	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	1.96	J	ng/L		98	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	2.03	J	ng/L		101	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	1.88	J	ng/L		93	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	1.97	J	ng/L		98	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.06	J	ng/L		102	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.10	J	ng/L		105	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.07	J	ng/L		103	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.00	J	ng/L		99	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	1.98	J	ng/L		99	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	1.90	J	ng/L		94	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.02	J	ng/L		101	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.11	J	ng/L		105	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.10	J	ng/L		105	50 - 150		
Perfluorobutanoic acid (PFBA)			2.01	2.08	J	ng/L		104	50 - 150		

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

Lab Sample ID: MRL 380-179431/21-A
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179431

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.10	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.26	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.21	J	ng/L		110	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.93	J	ng/L		96	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.88	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.98	J	ng/L		98	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.10	J	ng/L		105	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.92	J	ng/L		95	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*128*		*50 - 200*
13C6 PFDA	*124*		*50 - 200*
13C5 PFHxA	*132*		*50 - 200*
13C4 PFHpA	*128*		*50 - 200*
13C8 PFOA	*130*		*50 - 200*
13C9 PFNA	*132*		*50 - 200*
13C7 PFUnA	*117*		*50 - 200*
13C2 PFDoA	*118*		*50 - 200*
13C4 PFBA	*128*		*50 - 200*
13C5 PFPeA	*139*		*50 - 200*
13C3 PFBS	*140*		*50 - 200*
13C3 PFHxS	*137*		*50 - 200*
13C8 PFOS	*124*		*50 - 200*
13C2-4:2-FTS	*171*		*50 - 200*
13C2-6:2-FTS	*146*		*50 - 200*
13C2-8:2-FTS	*134*		*50 - 200*

Lab Sample ID: 380-176291-1 MS
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Ka'amilo Well P1
Prep Type: Total/NA
Prep Batch: 179431

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		121	97.5		ng/L		81	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	105		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	107		ng/L		89	70 - 130

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

Lab Sample ID: 380-176291-1 MS
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Ka'amilo Well P1
Prep Type: Total/NA
Prep Batch: 179431

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		121	108		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	2.7		121	112		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	119		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	116		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.2		121	115		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	3.7		121	122		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	109		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	4.3		121	116		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	3.6		121	123		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	115		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	116		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	115		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	112		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	115		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	107		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	3.4		121	115		ng/L		92	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	112		ng/L		93	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	114		ng/L		94	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*100*		*50 - 200*
13C6 PFDA	*111*		*50 - 200*
13C5 PFHxA	*91*		*50 - 200*
13C4 PFHpA	*97*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*112*		*50 - 200*
13C7 PFUnA	*114*		*50 - 200*
13C2 PFDoA	*115*		*50 - 200*
13C4 PFBA	*97*		*50 - 200*
13C5 PFPeA	*98*		*50 - 200*
13C3 PFBS	*120*		*50 - 200*
13C3 PFHxS	*118*		*50 - 200*
13C8 PFOS	*119*		*50 - 200*

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

Lab Sample ID: 380-176291-1 MS
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Ka'amilo Well P1
Prep Type: Total/NA
Prep Batch: 179431

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	143		50 - 200
13C2-6:2-FTS	134		50 - 200
13C2-8:2-FTS	130		50 - 200

Lab Sample ID: 380-176291-1 MSD
Matrix: Water
Analysis Batch: 179580

Client Sample ID: Ka'amilo Well P1
Prep Type: Total/NA
Prep Batch: 179431

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		121	98.6		ng/L		82	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	108		ng/L		90	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	114		ng/L		95	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	102		ng/L		84	70 - 130	6	30
Perfluorobutanesulfonic acid (PFBS)	2.7		121	110		ng/L		89	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		121	119		ng/L		98	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	117		ng/L		97	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	113		ng/L		93	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	3.2		121	112		ng/L		90	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	3.7		121	121		ng/L		97	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		121	114		ng/L		94	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	4.3		121	116		ng/L		93	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	3.6		121	119		ng/L		96	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	117		ng/L		97	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		121	114		ng/L		94	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	115		ng/L		95	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	114		ng/L		95	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	116		ng/L		96	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	115		ng/L		95	70 - 130	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		121	109		ng/L		90	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	118		ng/L		98	70 - 130	6	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	114		ng/L		94	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	3.4		121	110		ng/L		88	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	112		ng/L		93	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	114		ng/L		94	70 - 130	0	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	131		50 - 200
13C6 PFDA	120		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	118		50 - 200
13C9 PFNA	123		50 - 200
13C7 PFUnA	117		50 - 200
13C2 PFDoA	121		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	122		50 - 200
13C3 PFBS	128		50 - 200
13C3 PFHxS	125		50 - 200
13C8 PFOS	121		50 - 200
13C2-4:2-FTS	155		50 - 200
13C2-6:2-FTS	143		50 - 200
13C2-8:2-FTS	140		50 - 200

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

Lab Sample ID: MBL 380-179293/28-A
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179293

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		10/13/25 03:34	10/14/25 00:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/13/25 03:34	10/14/25 00:46	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	90		70 - 130	10/13/25 03:34	10/14/25 00:46	1
13C2 PFHxA	88		70 - 130	10/13/25 03:34	10/14/25 00:46	1
13C2 PFDA	100		70 - 130	10/13/25 03:34	10/14/25 00:46	1

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

Lab Sample ID: MBL 380-179293/28-A
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 179293

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	84		70 - 130	10/13/25 03:34	10/14/25 00:46	1

Lab Sample ID: LCS 380-179293/30-A
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179293

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.2	22.1		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.2	25.3		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.2	25.5		ng/L		101	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.2	25.3		ng/L		101	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.2	24.0		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	25.2	23.4		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	25.2	24.4		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	25.2	25.1		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	25.2	25.4		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.2	26.0		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.2	25.1		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.2	23.6		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	25.2	25.4		ng/L		101	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.2	20.2		ng/L		80	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.2	25.3		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.2	23.7		ng/L		94	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.2	22.2		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.2	23.5		ng/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	103		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	100		70 - 130

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

Lab Sample ID: MRL 380-179293/29-A
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 179293

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.72	J	ng/L		85	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.06	J	ng/L		103	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.85	J	ng/L		92	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.76	J	ng/L		87	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.88	J	ng/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.14	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.14	J	ng/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.89	J	ng/L		94	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	1.94	J	ng/L		96	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.80	J	ng/L		90	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.76	J	ng/L		87	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*91*		*70 - 130*
13C2 PFHxA	*96*		*70 - 130*
13C2 PFDA	*103*		*70 - 130*
13C3-GenX	*82*		*70 - 130*

Lab Sample ID: 380-176167-B-1-A MS
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 179293

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		25.0	23.1		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.0	27.2		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.0	26.4		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.0	25.1		ng/L		101	70 - 130

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

Lab Sample ID: 380-176167-B-1-A MS
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 179293

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.0	23.7		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.0	24.8		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.0	25.2		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.0	26.6		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.0	26.4		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.0	26.9		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.0	25.6		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.0	24.4		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.0	26.1		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.0	21.8		ng/L		87	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.0	25.5		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.0	23.5		ng/L		94	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.0	22.3		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.0	24.0		ng/L		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*114*		*70 - 130*
13C2 PFHxA	*113*		*70 - 130*
13C2 PFDA	*124*		*70 - 130*
13C3-GenX	*118*		*70 - 130*

Lab Sample ID: 380-176167-C-1-A MSD
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 179293

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		25.0	21.6		ng/L		86	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.0	25.4		ng/L		95	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.0	25.0		ng/L		100	70 - 130	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.0	23.8		ng/L		95	70 - 130	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.0	22.3		ng/L		89	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.0	23.6		ng/L		90	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.0	23.6		ng/L		94	70 - 130	7	30
Perfluorooctanoic acid (PFOA)	<2.0		25.0	24.9		ng/L		96	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<2.0		25.0	24.8		ng/L		99	70 - 130	6	30

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

Lab Sample ID: 380-176167-C-1-A MSD
Matrix: Water
Analysis Batch: 179426

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 179293

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.0	25.8		ng/L		97	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.0	24.4		ng/L		95	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.0	23.7		ng/L		92	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		25.0	25.3		ng/L		101	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.0	19.8		ng/L		79	70 - 130	10	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.0	24.0		ng/L		96	70 - 130	6	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.0	22.4		ng/L		90	70 - 130	5	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.0	20.9		ng/L		84	70 - 130	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.0	23.4		ng/L		94	70 - 130	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*99*		*70 - 130*
13C2 PFHxA	*100*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
13C3-GenX	*107*		*70 - 130*

LCMS

Prep Batch: 179293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-176291-1	Ka'amilo Well P1	Total/NA	Water	537.1 DW	
380-176291-2	Ka'amilo Well P2	Total/NA	Water	537.1 DW	
380-176291-3	FB: Ka'amilo Well P1	Total/NA	Water	537.1 DW	
380-176291-4	FB: Ka'amilo Well P2	Total/NA	Water	537.1 DW	
MBL 380-179293/28-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-179293/30-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-179293/29-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-176167-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-176167-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 179426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-176291-1	Ka'amilo Well P1	Total/NA	Water	537.1	179293
380-176291-2	Ka'amilo Well P2	Total/NA	Water	537.1	179293
380-176291-3	FB: Ka'amilo Well P1	Total/NA	Water	537.1	179293
380-176291-4	FB: Ka'amilo Well P2	Total/NA	Water	537.1	179293
MBL 380-179293/28-A	Method Blank	Total/NA	Water	537.1	179293
LCS 380-179293/30-A	Lab Control Sample	Total/NA	Water	537.1	179293
MRL 380-179293/29-A	Lab Control Sample	Total/NA	Water	537.1	179293
380-176167-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	179293
380-176167-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	179293

Prep Batch: 179431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-176291-1	Ka'amilo Well P1	Total/NA	Water	533	
380-176291-2	Ka'amilo Well P2	Total/NA	Water	533	
380-176291-3	FB: Ka'amilo Well P1	Total/NA	Water	533	
380-176291-4	FB: Ka'amilo Well P2	Total/NA	Water	533	
MBL 380-179431/20-A	Method Blank	Total/NA	Water	533	
LCS 380-179431/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-179431/21-A	Lab Control Sample	Total/NA	Water	533	
380-176291-1 MS	Ka'amilo Well P1	Total/NA	Water	533	
380-176291-1 MSD	Ka'amilo Well P1	Total/NA	Water	533	

Analysis Batch: 179580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-176291-1	Ka'amilo Well P1	Total/NA	Water	533	179431
380-176291-2	Ka'amilo Well P2	Total/NA	Water	533	179431
380-176291-3	FB: Ka'amilo Well P1	Total/NA	Water	533	179431
380-176291-4	FB: Ka'amilo Well P2	Total/NA	Water	533	179431
MBL 380-179431/20-A	Method Blank	Total/NA	Water	533	179431
LCS 380-179431/22-A	Lab Control Sample	Total/NA	Water	533	179431
MRL 380-179431/21-A	Lab Control Sample	Total/NA	Water	533	179431
380-176291-1 MS	Ka'amilo Well P1	Total/NA	Water	533	179431
380-176291-1 MSD	Ka'amilo Well P1	Total/NA	Water	533	179431

Lab Chronicle

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

Job ID: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1
Date Collected: 10/07/25 11:25
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			179431	E2HD	EA POM	10/13/25 16:00
Total/NA	Analysis	533		1	179580	SZ9R	EA POM	10/14/25 09:22
Total/NA	Prep	537.1 DW			179293	G9MN	EA POM	10/13/25 03:34
Total/NA	Analysis	537.1		1	179426	M7ML	EA POM	10/14/25 03:19

Client Sample ID: Ka'amilo Well P2
Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			179431	E2HD	EA POM	10/13/25 16:00
Total/NA	Analysis	533		1	179580	SZ9R	EA POM	10/14/25 11:08
Total/NA	Prep	537.1 DW			179293	G9MN	EA POM	10/13/25 03:34
Total/NA	Analysis	537.1		1	179426	M7ML	EA POM	10/14/25 03:29

Client Sample ID: FB: Ka'amilo Well P1
Date Collected: 10/07/25 11:25
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			179431	E2HD	EA POM	10/13/25 16:00
Total/NA	Analysis	533		1	179580	SZ9R	EA POM	10/14/25 11:27
Total/NA	Prep	537.1 DW			179293	G9MN	EA POM	10/13/25 03:34
Total/NA	Analysis	537.1		1	179426	M7ML	EA POM	10/14/25 03:48

Client Sample ID: FB: Ka'amilo Well P2
Date Collected: 10/07/25 12:00
Date Received: 10/09/25 10:20

Lab Sample ID: 380-176291-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			179431	E2HD	EA POM	10/13/25 16:00
Total/NA	Analysis	533		1	179580	SZ9R	EA POM	10/14/25 11:36
Total/NA	Prep	537.1 DW			179293	G9MN	EA POM	10/13/25 03:34
Total/NA	Analysis	537.1		1	179426	M7ML	EA POM	10/14/25 03:58

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: 380-176291-1
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: 380-176291-1
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: 380-176291-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-176291-1	Ka'amilo Well P1	Water	10/07/25 11:25	10/09/25 10:20	Hawaii
380-176291-2	Ka'amilo Well P2	Water	10/07/25 12:00	10/09/25 10:20	Hawaii
380-176291-3	FB: Ka'amilo Well P1	Water	10/07/25 11:25	10/09/25 10:20	Hawaii
380-176291-4	FB: Ka'amilo Well P2	Water	10/07/25 12:00	10/09/25 10:20	Hawaii

1760291

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: Jason Rakofsky	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

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_CS - 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 P1	7-Oct-2025	1125	G	Water							3	3		
Ka'amilo Wells P2	7-Oct-2025	1200	G	Water							3	3		
FB: Ka'amilo Wells P1	7-Oct-2025	1125	G	Water							1	1		
FB: Ka'amilo Wells P2	7-Oct-2025	1200	G	Water							1	1		

380-176291 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: FEDEX 8850 1372 8595

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: [redacted]	10/8/25 1100	HBWS	Chad Brooks	10/9/25 1020	CCAP
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: 751A 3.8 - 0.0 = 3.8 GEL FROZEN

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-176291-1
SDG Number: PFAS: Ka'amilo Wells P1/P2

Login Number: 176291
List Number: 1
Creator: Gutierrez, Jeannette

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