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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

380-168244-1

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: 380-168244-1
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
380-168244-1

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 8/27/2025 10:04 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.1°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: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1 — Lab Sample ID: 380-168244-1

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)	3.0		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.5		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)	3.4		2.0		ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		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 Wells P2 — Lab Sample ID: 380-168244-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		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)	3.3		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0		ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.4		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1 — Lab Sample ID: 380-168244-3

No Detections.

Client Sample ID: FB: Ka'amilo Wells P2 — Lab Sample ID: 380-168244-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

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

Job ID: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-1

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		08/28/25 16:09	08/29/25 14:39	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorobutanesulfonic acid (PFBS)	**2.7**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	**3.0**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorohexanoic acid (PFHxA)	**3.2**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorooctanesulfonic acid (PFOS)	**4.1**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorooctanoic acid (PFOA)	**3.3**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoro (2-ethoxyethane) sulfonic aci (PFEESA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoropentanoic acid (PFPeA)	**3.5**		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C6 PFDA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C5 PFHxA	*115*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C4 PFHpA	*119*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C8 PFOA	*113*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C9 PFNA	*110*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C7 PFUnA	*109*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C2 PFDoA	*108*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C4 PFBA	*109*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C5 PFPeA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C3 PFBS	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C3 PFHxS	*114*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C8 PFOS	*109*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C2-4:2-FTS	*101*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*1*

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-168244-1
Matrix: Water
Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

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	*104*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:39*	*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		08/28/25 02:13	08/28/25 18:33	1
Perfluorooctanesulfonic acid (PFOS)	**4.2**		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
N-methylperfluorooctanesulfonamidoac etic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
N-ethylperfluorooctanesulfonamidoacet c acid (NEtFOSAA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorohexanoic acid (PFHxA)	**3.4**		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorooctanoic acid (PFOA)	**3.7**		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorobutanesulfonic acid (PFBS)	**2.8**		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/28/25 02:13	08/28/25 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*109*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:33*	*1*
13C2 PFHxA	*105*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:33*	*1*
13C2 PFDA	*109*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:33*	*1*
13C3-GenX	*108*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:33*	*1*

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-168244-2
Matrix: Water
Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

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		08/28/25 16:09	08/29/25 14:50	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorobutanesulfonic acid (PFBS)	**2.4**		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/28/25 16:09	08/29/25 14:50	1

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

Job ID: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorohexanesulfonic acid (PFHxS)	**3.0**		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorohexanoic acid (PFHxA)	**3.0**		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorooctanesulfonic acid (PFOS)	**3.5**		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorooctanoic acid (PFOA)	**3.1**		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoro (2-ethoxyethane) sulfonic aci (PFEESA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoropentanoic acid (PFPeA)	**3.1**		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 14:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*108*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C6 PFDA	*116*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C5 PFHxA	*114*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C4 PFHpA	*115*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C8 PFOA	*113*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C9 PFNA	*114*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C7 PFUnA	*115*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C2 PFDoA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C4 PFBA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C5 PFPeA	*115*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C3 PFBS	*113*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C3 PFHxS	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C8 PFOS	*109*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C2-4:2-FTS	*108*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C2-6:2-FTS	*99*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*1*
13C2-8:2-FTS	*109*		*50 - 200*	*08/28/25 16:09*	*08/29/25 14:50*	*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		08/28/25 02:13	08/28/25 18:42	1
Perfluorooctanesulfonic acid (PFOS)	**3.5**		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
N-methylperfluorooctanesulfonamidoac etic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1

Client Sample ID: Ka'amilo Wells P2

Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-2

Matrix: Water

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		08/28/25 02:13	08/28/25 18:42	1
Perfluorohexanoic acid (PFHxA)	**3.0**		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorooctanoic acid (PFOA)	**3.3**		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorohexanesulfonic acid (PFHxS)	**3.1**		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorobutanesulfonic acid (PFBS)	**2.4**		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*105*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:42*	*1*
13C2 PFHxA	*105*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:42*	*1*
13C2 PFDA	*106*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:42*	*1*
13C3-GenX	*107*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:42*	*1*

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-3

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		08/28/25 16:09	08/29/25 15:00	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-3

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoro (2-ethoxyethane) sulfonic aci (PFEESA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C6 PFDA	*117*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C5 PFHxA	*113*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C4 PFHpA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C8 PFOA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C9 PFNA	*108*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C7 PFUnA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C2 PFDoA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C4 PFBA	*110*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C5 PFPeA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C3 PFBS	*114*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C3 PFHxS	*115*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C8 PFOS	*110*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C2-4:2-FTS	*107*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C2-6:2-FTS	*101*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*1*
13C2-8:2-FTS	*110*		*50 - 200*	*08/28/25 16:09*	*08/29/25 15:00*	*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		08/28/25 02:13	08/28/25 18:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
N-methylperfluorooctanesulfonamidoac etic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
N-ethylperfluorooctanesulfonamidoacet c acid (NEtFOSAA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-168244-3
Date Collected: 08/25/25 12:40
Matrix: Water
Date Received: 08/27/25 10:04

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 18:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:52*	*1*
13C2 PFHxA	*109*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:52*	*1*
13C2 PFDA	*113*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:52*	*1*
13C3-GenX	*105*		*70 - 130*	*08/28/25 02:13*	*08/28/25 18:52*	*1*

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-168244-4
Date Collected: 08/25/25 13:41
Matrix: Water
Date Received: 08/27/25 10:04

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		08/28/25 16:09	08/29/25 15:09	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoro (2-ethoxyethane) sulfonic aci (PFEESA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/28/25 16:09	08/29/25 15:09	1

Client Sample ID: FB: Ka'amilo Wells P2

Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-4

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C6 PFDA	112		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C5 PFHxA	110		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C4 PFHpA	113		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C8 PFOA	115		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C9 PFNA	110		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C7 PFUnA	109		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C2 PFDoA	108		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C4 PFBA	112		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C5 PFPeA	119		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C3 PFBS	111		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C3 PFHxS	108		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C8 PFOS	113		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C2-4:2-FTS	103		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C2-6:2-FTS	100		50 - 200	08/28/25 16:09	08/29/25 15:09	1
13C2-8:2-FTS	106		50 - 200	08/28/25 16:09	08/29/25 15:09	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		08/28/25 02:13	08/28/25 19:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
N-methylperfluorooctanesulfonamidoac etic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
N-ethylperfluorooctanesulfonamidoacet c acid (NEtFOSAA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
9-Chlorohexadecafluoro-3-oxanonane- -sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
11-Chloroeicosafluoro-3-oxaundecane- 1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/25 02:13	08/28/25 19:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130	08/28/25 02:13	08/28/25 19:01	1
13C2 PFHxA	108		70 - 130	08/28/25 02:13	08/28/25 19:01	1
13C2 PFDA	110		70 - 130	08/28/25 02:13	08/28/25 19:01	1
13C3-GenX	100		70 - 130	08/28/25 02:13	08/28/25 19:01	1

Action Limit Summary

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

Job ID: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1 — Lab Sample ID: 380-168244-1

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)	3.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	**4.1**		ng/L	**4**	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		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)	**4.2**		ng/L	**4**	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		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 Wells P2 — Lab Sample ID: 380-168244-2

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)	3.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		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)	3.5		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		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: 380-168244-3

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
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

Client Sample ID: FB: Ka'amilo Wells P1 (Continued) — Lab Sample ID: 380-168244-3

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
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 Wells P2 — Lab Sample ID: 380-168244-4

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: 380-168244-1
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)
380-168244-1	Ka'amilo Wells P1	109	105	109	108
380-168244-2	Ka'amilo Wells P2	105	105	106	107
380-168244-3	FB: Ka'amilo Wells P1	107	109	113	105
380-168244-4	FB: Ka'amilo Wells P2	104	108	110	100
380-168256-A-1-B MS	Matrix Spike	102	108	110	104
380-168256-A-1-C MSD	Matrix Spike Duplicate	103	106	111	102
LCS 380-171060/22-A	Lab Control Sample	107	109	106	102
MBL 380-171060/20-A	Method Blank	102	104	106	102
MRL 380-171060/21-A	Lab Control Sample	99	103	114	96

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: 380-168244-1
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)
380-168224-E-1-A MS	Matrix Spike	99	102	104	102	107	105	103	100
380-168224-F-1-A MSD	Matrix Spike Duplicate	102	107	107	106	106	107	108	100
380-168244-1	Ka'amilo Wells P1	111	111	115	119	113	110	109	108
380-168244-2	Ka'amilo Wells P2	108	116	114	115	113	114	115	112
380-168244-3	FB: Ka'amilo Wells P1	111	117	113	112	111	108	112	112
380-168244-4	FB: Ka'amilo Wells P2	108	112	110	113	115	110	109	108
LCS 380-171197/22-A	Lab Control Sample	103	108	108	106	110	113	108	106
MBL 380-171197/20-A	Method Blank	105	111	110	107	116	112	105	106
MRL 380-171197/21-A	Lab Control Sample	104	110	115	107	112	112	110	106

		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)
380-168224-E-1-A MS	Matrix Spike	104	105	103	103	105	95	96	93
380-168224-F-1-A MSD	Matrix Spike Duplicate	109	111	105	106	105	99	96	102
380-168244-1	Ka'amilo Wells P1	109	112	112	114	109	101	104	104
380-168244-2	Ka'amilo Wells P2	111	115	113	112	109	108	99	109
380-168244-3	FB: Ka'amilo Wells P1	110	112	114	115	110	107	101	110
380-168244-4	FB: Ka'amilo Wells P2	112	119	111	108	113	103	100	106
LCS 380-171197/22-A	Lab Control Sample	108	111	105	103	104	101	97	97
MBL 380-171197/20-A	Method Blank	112	114	104	103	107	97	96	95
MRL 380-171197/21-A	Lab Control Sample	108	111	103	107	106	102	95	100

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 380-171197/20-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 171197

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		08/28/25 16:09	08/29/25 12:02	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoro (2-ethoxyethane) sulfonic aci (PFEESA)	<0.25		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		08/28/25 16:09	08/29/25 12:02	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C6 PFDA	*111*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C5 PFHxA	*110*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C4 PFHpA	*107*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C8 PFOA	*116*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C9 PFNA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C7 PFUnA	*105*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C2 PFDoA	*106*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C4 PFBA	*112*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C5 PFPeA	*114*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C3 PFBS	*104*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C3 PFHxS	*103*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C8 PFOS	*107*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C2-4:2-FTS	*97*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*
13C2-6:2-FTS	*96*		*50 - 200*	*08/28/25 16:09*	*08/29/25 12:02*	*1*

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

Lab Sample ID: MBL 380-171197/20-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 171197

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	95		50 - 200	08/28/25 16:09	08/29/25 12:02	1

Lab Sample ID: LCS 380-171197/22-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171197

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.4	57.0		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.4	58.7		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	60.7		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	61.3		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	58.6		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	57.5		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	60.4	59.7		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	59.9		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	62.1		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	58.3		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	60.4	56.4		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	61.6		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	58.4		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	57.9		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	58.2		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	62.1		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	60.5		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	60.9		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	56.4		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.4	59.6		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.4	60.6		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	59.1		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	58.4		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.4	63.3		ng/L		105	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.4	60.4		ng/L		100	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	103		50 - 200
13C6 PFDA	108		50 - 200
13C5 PFHxA	108		50 - 200

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

Lab Sample ID: LCS 380-171197/22-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171197

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFHpA	*106*		*50 - 200*
13C8 PFOA	*110*		*50 - 200*
13C9 PFNA	*113*		*50 - 200*
13C7 PFUnA	*108*		*50 - 200*
13C2 PFDoA	*106*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*104*		*50 - 200*
13C2-4:2-FTS	*101*		*50 - 200*
13C2-6:2-FTS	*97*		*50 - 200*
13C2-8:2-FTS	*97*		*50 - 200*

Lab Sample ID: MRL 380-171197/21-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171197

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2 00	1.86	J	ng/L		93	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.92	J	ng/L		96	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.07	J	ng/L		103	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.91	J	ng/L		95	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.18	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.19	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.10	J	ng/L		105	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.13	J	ng/L		106	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.14	J	ng/L		107	50 - 150

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

Lab Sample ID: MRL 380-171197/21-A
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171197

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoro-3-methoxypropanoic acid (PFMPA)			2.00	2.09	J	ng/L		104	50 - 150		
Perfluoro-4-methoxybutanoic acid (PFMBA)			2.00	2.00	J	ng/L		100	50 - 150		
Perfluoropentanoic acid (PFPeA)			2.00	2.14	J	ng/L		107	50 - 150		
Perfluoroheptanesulfonic acid (PFHpS)			2.00	2.03	J	ng/L		101	50 - 150		
Perfluoropentanesulfonic acid (PFPeS)			2.00	2.04	J	ng/L		102	50 - 150		

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*110*		*50 - 200*
13C5 PFHxA	*115*		*50 - 200*
13C4 PFHpA	*107*		*50 - 200*
13C8 PFOA	*112*		*50 - 200*
13C9 PFNA	*112*		*50 - 200*
13C7 PFUnA	*110*		*50 - 200*
13C2 PFDoA	*106*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*103*		*50 - 200*
13C3 PFHxS	*107*		*50 - 200*
13C8 PFOS	*106*		*50 - 200*
13C2-4:2-FTS	*102*		*50 - 200*
13C2-6:2-FTS	*95*		*50 - 200*
13C2-8:2-FTS	*100*		*50 - 200*

Lab Sample ID: 380-168224-E-1-A MS
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 171197

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	56.3		ng/L		93	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	56.6		ng/L		94	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	59.9		ng/L		99	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	59.6		ng/L		99	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	60.2		ng/L		100	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		60.4	58.3		ng/L		97	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	60.3		ng/L		100	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	61.6		ng/L		102	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.4		ng/L		102	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	57.6		ng/L		95	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		60.4	57.5		ng/L		95	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	<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: 380-168224-E-1-A MS
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 171197

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	<2.0		60.4	57.1		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	57.4		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	57.3		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	65.4		ng/L		108	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	62.5		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	59.5		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	55.7		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfoni acid (PFEESA)	<2.0		60.4	58.2		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	59.4		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	59.0		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	61.2		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	61.7		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	61.1		ng/L		101	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*99*		*50 - 200*
13C6 PFDA	*102*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*102*		*50 - 200*
13C8 PFOA	*107*		*50 - 200*
13C9 PFNA	*105*		*50 - 200*
13C7 PFUnA	*103*		*50 - 200*
13C2 PFDoA	*100*		*50 - 200*
13C4 PFBA	*104*		*50 - 200*
13C5 PFPeA	*105*		*50 - 200*
13C3 PFBS	*103*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*105*		*50 - 200*
13C2-4:2-FTS	*95*		*50 - 200*
13C2-6:2-FTS	*96*		*50 - 200*
13C2-8:2-FTS	*93*		*50 - 200*

Lab Sample ID: 380-168224-F-1-A MSD
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 171197

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundec ane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	56.4		ng/L		93	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanon ane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	58.4		ng/L		97	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	60.9		ng/L		101	70 - 130	2	30

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

Lab Sample ID: 380-168224-F-1-A MSD
Matrix: Water
Analysis Batch: 171450

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 171197

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		60.4	62.5		ng/L		103	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	60.8		ng/L		101	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	58.3		ng/L		97	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.1		ng/L		103	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	60.7		ng/L		101	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.6		ng/L		102	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	59.6		ng/L		99	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	58.0		ng/L		96	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	61.7		ng/L		102	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	57.3		ng/L		95	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	56.4		ng/L		93	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	59.4		ng/L		98	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	60.1		ng/L		100	70 - 130	8	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	60.9		ng/L		101	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	60.3		ng/L		100	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	56.5		ng/L		94	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfoni acid (PFEESA)	<2.0		60.4	60.2		ng/L		100	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	62.3		ng/L		103	70 - 130	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	60.0		ng/L		99	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	59.4		ng/L		98	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.9		ng/L		104	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	60.9		ng/L		101	70 - 130	0	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*50 - 200*
13C6 PFDA	*107*		*50 - 200*
13C5 PFHxA	*107*		*50 - 200*
13C4 PFHpA	*106*		*50 - 200*
13C8 PFOA	*106*		*50 - 200*
13C9 PFNA	*107*		*50 - 200*
13C7 PFUnA	*108*		*50 - 200*
13C2 PFDoA	*100*		*50 - 200*
13C4 PFBA	*109*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*106*		*50 - 200*
13C8 PFOS	*105*		*50 - 200*
13C2-4:2-FTS	*99*		*50 - 200*
13C2-6:2-FTS	*96*		*50 - 200*
13C2-8:2-FTS	*102*		*50 - 200*

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

Lab Sample ID: MBL 380-171060/20-A
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 171060

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		08/28/25 02:13	08/28/25 17:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
9-Chlorohexadecafluoro-3-oxanonane--sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/28/25 02:13	08/28/25 17:16	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*102*		*70 - 130*	*08/28/25 02:13*	*08/28/25 17:16*	*1*
13C2 PFHxA	*104*		*70 - 130*	*08/28/25 02:13*	*08/28/25 17:16*	*1*
13C2 PFDA	*106*		*70 - 130*	*08/28/25 02:13*	*08/28/25 17:16*	*1*
13C3-GenX	*102*		*70 - 130*	*08/28/25 02:13*	*08/28/25 17:16*	*1*

Lab Sample ID: LCS 380-171060/22-A
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171060

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			50.3	50.5		ng/L		100	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			50.3	51.6		ng/L		103	70 - 130		
Perfluoroundecanoic acid (PFUnA)			50.3	53.0		ng/L		105	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			50.3	49.2		ng/L		98	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			50.3	49.0		ng/L		97	70 - 130		
Perfluorohexanoic acid (PFHxA)			50.3	49.6		ng/L		99	70 - 130		
Perfluorododecanoic acid (PFDoA)			50.3	52.5		ng/L		104	70 - 130		
Perfluorooctanoic acid (PFOA)			50.3	52.0		ng/L		103	70 - 130		
Perfluorodecanoic acid (PFDA)			50.3	52.0		ng/L		103	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			50.3	50.6		ng/L		101	70 - 130		

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

Lab Sample ID: LCS 380-171060/22-A
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171060

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorobutanesulfonic acid (PFBS)			50.3	49.7		ng/L		99	70 - 130		
Perfluoroheptanoic acid (PFHpA)			50.3	50.7		ng/L		101	70 - 130		
Perfluorononanoic acid (PFNA)			50.3	53.0		ng/L		105	70 - 130		
Perfluorotetradecanoic acid (PFTA)			50.3	43.6		ng/L		87	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			50.3	53.6		ng/L		107	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			50.3	49.6		ng/L		99	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			50.3	49.1		ng/L		98	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			50.3	50.5		ng/L		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*107*		*70 - 130*
13C2 PFHxA	*109*		*70 - 130*
13C2 PFDA	*106*		*70 - 130*
13C3-GenX	*102*		*70 - 130*

Lab Sample ID: MRL 380-171060/21-A
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171060

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	1.83	J	ng/L		91	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.13	J	ng/L		106	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.13	J	ng/L		106	50 - 150		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			2.01	1.97	J	ng/L		98	50 - 150		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			2.01	1.79	J	ng/L		89	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	1.92	J	ng/L		95	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.10	J	ng/L		105	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.11	J	ng/L		105	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.24	J	ng/L		111	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.10	J	ng/L		104	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	2.17	J	ng/L		108	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.11	J	ng/L		105	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.15	J	ng/L		107	50 - 150		
Perfluorotetradecanoic acid (PFTA)			2.01	2.01	J	ng/L		100	50 - 150		
Perfluorotridecanoic acid (PFTrDA)			2.01	2.21	J	ng/L		110	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	2.04	J	ng/L		101	50 - 150		

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

Lab Sample ID: MRL 380-171060/21-A
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 171060

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.04	J	ng/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.93	J	ng/L		96	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*99*		*70 - 130*
13C2 PFHxA	*103*		*70 - 130*
13C2 PFDA	*114*		*70 130*
13C3-GenX	*96*		*70 - 130*

Lab Sample ID: 380-168256-A-1-B MS
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 171060

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		50.4	49.8		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.4	51.2		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.4	53.4		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.4	50.3		ng/L		100	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.4	49.4		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.4	50.2		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.4	51.2		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.4	53.5		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.4	52.7		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.4	50.7		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.4	50.9		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.4	51.6		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.4	53.3		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.4	44.1		ng/L		88	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.4	52.3		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.4	47.3		ng/L		94	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.4	47.9		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.4	51.6		ng/L		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*102*		*70 - 130*
13C2 PFHxA	*108*		*70 - 130*
13C2 PFDA	*110*		*70 - 130*

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

Lab Sample ID: 380-168256-A-1-B MS
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 171060

Surrogate	MS %Recovery	MS Qualifier	Limits
13C3-GenX	104		70 - 130

Lab Sample ID: 380-168256-A-1-C MSD
Matrix: Water
Analysis Batch: 171248

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 171060

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		50.4	49.1		ng/L		97	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.4	51.1		ng/L		101	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.4	52.1		ng/L		103	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.4	48.8		ng/L		97	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.4	49.3		ng/L		98	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.4	52.6		ng/L		103	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.4	52.9		ng/L		105	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		50.4	52.9		ng/L		104	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		50.4	52.9		ng/L		105	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.4	51.3		ng/L		99	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.4	51.4		ng/L		101	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	2 0		50 4	50 3		ng/L		100	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		50.4	52.1		ng/L		103	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.4	43.4		ng/L		86	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.4	52.3		ng/L		104	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.4	48.9		ng/L		97	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.4	47.7		ng/L		95	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.4	50.4		ng/L		100	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	103		70 - 130
13C2 PFHxA	106		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	102		70 - 130

QC Association Summary

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

Job ID: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 171060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-168244-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-168244-2	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-168244-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-168244-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-171060/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-171060/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-171060/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-168256-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-168256-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 171197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-168244-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-168244-2	Ka'amilo Wells P2	Total/NA	Water	533	
380-168244-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	
380-168244-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-171197/20-A	Method Blank	Total/NA	Water	533	
LCS 380-171197/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-171197/21-A	Lab Control Sample	Total/NA	Water	533	
380-168224-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-168224-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 171248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-168244-1	Ka'amilo Wells P1	Total/NA	Water	537.1	171060
380-168244-2	Ka'amilo Wells P2	Total/NA	Water	537.1	171060
380-168244-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	171060
380-168244-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	171060
MBL 380-171060/20-A	Method Blank	Total/NA	Water	537.1	171060
LCS 380-171060/22-A	Lab Control Sample	Total/NA	Water	537.1	171060
MRL 380-171060/21-A	Lab Control Sample	Total/NA	Water	537.1	171060
380-168256-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	171060
380-168256-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	171060

Analysis Batch: 171450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-168244-1	Ka'amilo Wells P1	Total/NA	Water	533	171197
380-168244-2	Ka'amilo Wells P2	Total/NA	Water	533	171197
380-168244-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	171197
380-168244-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	171197
MBL 380-171197/20-A	Method Blank	Total/NA	Water	533	171197
LCS 380-171197/22-A	Lab Control Sample	Total/NA	Water	533	171197
MRL 380-171197/21-A	Lab Control Sample	Total/NA	Water	533	171197
380-168224-E-1-A MS	Matrix Spike	Total/NA	Water	533	171197
380-168224-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	171197

Lab Chronicle

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

Job ID: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1
Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			171197	E2HD	EA POM	08/28/25 16:09
Total/NA	Analysis	533		1	171450	Y5FM	EA POM	08/29/25 14:39
Total/NA	Prep	537.1 DW			171060	G9MN	EA POM	08/28/25 02:13
Total/NA	Analysis	537.1		1	171248	SZ9R	EA POM	08/28/25 18:33

Client Sample ID: Ka'amilo Wells P2
Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			171197	E2HD	EA POM	08/28/25 16:09
Total/NA	Analysis	533		1	171450	Y5FM	EA POM	08/29/25 14:50
Total/NA	Prep	537.1 DW			171060	G9MN	EA POM	08/28/25 02:13
Total/NA	Analysis	537.1		1	171248	SZ9R	EA POM	08/28/25 18:42

Client Sample ID: FB: Ka'amilo Wells P1
Date Collected: 08/25/25 12:40
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			171197	E2HD	EA POM	08/28/25 16:09
Total/NA	Analysis	533		1	171450	Y5FM	EA POM	08/29/25 15:00
Total/NA	Prep	537.1 DW			171060	G9MN	EA POM	08/28/25 02:13
Total/NA	Analysis	537.1		1	171248	SZ9R	EA POM	08/28/25 18:52

Client Sample ID: FB: Ka'amilo Wells P2
Date Collected: 08/25/25 13:41
Date Received: 08/27/25 10:04

Lab Sample ID: 380-168244-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			171197	E2HD	EA POM	08/28/25 16:09
Total/NA	Analysis	533		1	171450	Y5FM	EA POM	08/29/25 15:09
Total/NA	Prep	537.1 DW			171060	G9MN	EA POM	08/28/25 02:13
Total/NA	Analysis	537.1		1	171248	SZ9R	EA POM	08/28/25 19:01

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: 380-168244-1
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: 380-168244-1
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: 380-168244-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-168244-1	Ka'amilo Wells P1	Water	08/25/25 12:40	08/27/25 10:04	Hawaii
380-168244-2	Ka'amilo Wells P2	Water	08/25/25 13:41	08/27/25 10:04	Hawaii
380-168244-3	FB: Ka'amilo Wells P1	Water	08/25/25 12:40	08/27/25 10:04	Hawaii
380-168244-4	FB: Ka'amilo Wells P2	Water	08/25/25 13:41	08/27/25 10:04	Hawaii

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: bailey	Lab PM: 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:	Analysis Requested		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#:			

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_GS 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:		X	X	R	A	Q	QA	Y	I	X	
Ka'amilo Wells P1	25-Aug-2025	1240	G	Water							3	3		
Ka'amilo Wells P2	25-Aug-2025	1341	G	Water							3	3		
FB: Ka'amilo Wells P1	25-Aug-2025	1240		Water							1	1		
FB: Ka'amilo Wells P2	25-Aug-2025	1341		Water							1	1		

380-168244 COC

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

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

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FED EX 8838 7784 1481			
[redacted]	Date/Time: 26 Aug 2025 1400	Company: HBWS	Received by:	Date/Time: 08/27/25 10:04	Company: EEA
	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: 757A 1.1°-0.0°=1.1° GEL-FROZEN

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-168244-1
SDG Number: PFAS: Ka'amilo Wells P1/P2

Login Number: 168244
List Number: 1
Creator: Segura, Ryan

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	