

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

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

JOB NUMBER

380-159470-1

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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Definitions/Glossary

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

Job ID: 380-159470-1
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

Case Narrative

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

Job ID: 380-159470-1

Job ID: 380-159470-1

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Job Narrative 380-159470-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/9/2025 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C.

PFAS

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-159470-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		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)	3.8		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-159470-2

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)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.8		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)	3.1		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)	2.9		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-159470-3

No Detections.

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-159470-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-159470-1

Date Collected: 07/07/25 11:39

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:12	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorohexanoic acid (PFHxA)	3.6		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorooctanoic acid (PFOA)	3.3		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoropentanoic acid (PFPeA)	3.7		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C6 PFDA	90		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C5 PFHxA	85		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C4 PFHpA	89		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C8 PFOA	91		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C9 PFNA	90		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C7 PFUnA	87		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C2 PFDoA	87		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C4 PFBA	92		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C5 PFPeA	97		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C3 PFBS	102		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C3 PFHxS	102		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C8 PFOS	102		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C2-4:2-FTS	118		50 - 200	07/10/25 14:55	07/11/25 14:12	1
13C2-6:2-FTS	107		50 - 200	07/10/25 14:55	07/11/25 14:12	1

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Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-159470-1

Date Collected: 07/07/25 11:39

Matrix: Water

Date Received: 07/09/25 09:30

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	98		50 - 200	07/10/25 14:55	07/11/25 14:12	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		07/11/25 03:25	07/11/25 20:31	1
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorohexanoic acid (PFHxA)	3.4		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130	07/11/25 03:25	07/11/25 20:31	1
13C2 PFHxA	111		70 - 130	07/11/25 03:25	07/11/25 20:31	1
13C2 PFDA	113		70 - 130	07/11/25 03:25	07/11/25 20:31	1
13C3-GenX	108		70 - 130	07/11/25 03:25	07/11/25 20:31	1

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-159470-2

Date Collected: 07/07/25 12:21

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:21	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorobutanesulfonic acid (PFBS)	2.4		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1

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Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-159470-2

Date Collected: 07/07/25 12:21

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:21	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorohexanoic acid (PFHxA)	2.9		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorooctanoic acid (PFOA)	2.8		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoropentanoic acid (PFPeA)	3.1		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	59		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C6 PFDA	67		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C5 PFHxA	63		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C4 PFHpA	65		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C8 PFOA	66		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C9 PFNA	66		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C7 PFUnA	71		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C2 PFDoA	78		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C4 PFBA	67		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C5 PFPeA	71		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C3 PFBS	107		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C3 PFHxS	106		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C8 PFOS	105		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C2-4:2-FTS	123		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C2-6:2-FTS	109		50 - 200	07/10/25 14:55	07/11/25 14:21	1
13C2-8:2-FTS	103		50 - 200	07/10/25 14:55	07/11/25 14:21	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		07/11/25 03:25	07/11/25 20:42	1
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-159470-2

Date Collected: 07/07/25 12:21

Matrix: Water

Date Received: 07/09/25 09:30

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		07/11/25 03:25	07/11/25 20:42	1
Perfluorohexanoic acid (PFHxA)	3.1		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorooctanoic acid (PFOA)	3.3		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			07/11/25 03:25	07/11/25 20:42	1
13C2 PFHxA	116		70 - 130			07/11/25 03:25	07/11/25 20:42	1
13C2 PFDA	116		70 - 130			07/11/25 03:25	07/11/25 20:42	1
13C3-GenX	112		70 - 130			07/11/25 03:25	07/11/25 20:42	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-159470-3

Date Collected: 07/07/25 11:39

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:31	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-159470-3

Date Collected: 07/07/25 11:39

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:31	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:31	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C6 PFDA	102		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C5 PFHxA	102		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C4 PFHpA	107		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C8 PFOA	107		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C9 PFNA	108		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C7 PFUnA	103		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C2 PFDoA	98		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C4 PFBA	104		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C5 PFPeA	110		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C3 PFBS	106		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C3 PFHxS	108		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C8 PFOS	105		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C2-4:2-FTS	125		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C2-6:2-FTS	108		50 - 200			07/10/25 14:55	07/11/25 14:31	1
13C2-8:2-FTS	105		50 - 200			07/10/25 14:55	07/11/25 14:31	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		07/11/25 03:25	07/11/25 20:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-159470-3

Date Collected: 07/07/25 11:39

Matrix: Water

Date Received: 07/09/25 09:30

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		07/11/25 03:25	07/11/25 20:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	118		70 - 130			07/11/25 03:25	07/11/25 20:53	1
13C2 PFHxA	121		70 - 130			07/11/25 03:25	07/11/25 20:53	1
13C2 PFDA	113		70 - 130			07/11/25 03:25	07/11/25 20:53	1
13C3-GenX	113		70 - 130			07/11/25 03:25	07/11/25 20:53	1

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-159470-4

Date Collected: 07/07/25 12:21

Matrix: Water

Date Received: 07/09/25 09:30

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		07/10/25 14:55	07/11/25 14:40	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-159470-4

Date Collected: 07/07/25 12:21

Matrix: Water

Date Received: 07/09/25 09:30

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C6 PFDA	102		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C5 PFHxA	100		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C4 PFHpA	105		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C8 PFOA	104		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C9 PFNA	106		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C7 PFUnA	102		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C2 PFDoA	99		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C4 PFBA	102		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C5 PFPeA	108		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C3 PFBS	98		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C3 PFHxS	103		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C8 PFOS	99		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C2-4:2-FTS	115		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C2-6:2-FTS	101		50 - 200	07/10/25 14:55	07/11/25 14:40	1
13C2-8:2-FTS	97		50 - 200	07/10/25 14:55	07/11/25 14:40	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		07/11/25 03:25	07/11/25 21:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 21:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	120		70 - 130	07/11/25 03:25	07/11/25 21:04	1
13C2 PFHxA	123		70 - 130	07/11/25 03:25	07/11/25 21:04	1
13C2 PFDA	120		70 - 130	07/11/25 03:25	07/11/25 21:04	1
13C3-GenX	118		70 - 130	07/11/25 03:25	07/11/25 21:04	1

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-159470-1

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)	3.3		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		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)	4.5		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		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: 380-159470-2

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)	2.8		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)	2.9		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-159470-3

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1 (Continued)

Lab Sample ID: 380-159470-3

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	RL	Method	Prep Type
				Limit			
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: 380-159470-4

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	RL	Method	Prep Type
				Limit			
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: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-159411-E-1-A MS	Matrix Spike	103	108	102	103
380-159411-F-1-A MSD	Matrix Spike Duplicate	112	112	105	105
380-159470-1	Ka'amilo Wells P1	115	111	113	108
380-159470-2	Ka'amilo Wells P2	113	116	116	112
380-159470-3	FB: Ka'amilo Wells P1	118	121	113	113
380-159470-4	FB: Ka'amilo Wells P2	120	123	120	118
LCS 380-162203/22-A	Lab Control Sample	106	113	109	108
MBL 380-162203/20-A	Method Blank	114	115	105	109
MRL 380-162203/21-A	Lab Control Sample	114	121	115	113

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: 380-159470-1
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)	PFDaA (50-200)
380-159465-B-2-A MS	Matrix Spike	80	97	87	92	94	97	101	103
380-159465-C-2-A MSD	Matrix Spike Duplicate	83	96	88	88	92	95	97	95
380-159470-1	Ka'amilo Wells P1	78	90	85	89	91	90	87	87
380-159470-2	Ka'amilo Wells P2	59	67	63	65	66	66	71	78
380-159470-3	FB: Ka'amilo Wells P1	98	102	102	107	107	108	103	98
380-159470-4	FB: Ka'amilo Wells P2	93	102	100	105	104	106	102	99
LCS 380-162024/22-A	Lab Control Sample	96	101	99	100	102	103	101	99
MBL 380-162024/20-A	Method Blank	102	113	113	117	114	114	111	109
MRL 380-162024/21-A	Lab Control Sample	97	105	103	107	107	107	105	104

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)
380-159465-B-2-A MS	Matrix Spike	94	104	100	103	102	124	115	100
380-159465-C-2-A MSD	Matrix Spike Duplicate	90	100	104	103	102	120	106	103
380-159470-1	Ka'amilo Wells P1	92	97	102	102	102	118	107	98
380-159470-2	Ka'amilo Wells P2	67	71	107	106	105	123	109	103
380-159470-3	FB: Ka'amilo Wells P1	104	110	106	108	105	125	108	105
380-159470-4	FB: Ka'amilo Wells P2	102	108	98	103	99	115	101	97
LCS 380-162024/22-A	Lab Control Sample	101	106	103	103	99	109	101	99
MBL 380-162024/20-A	Method Blank	112	114	113	113	110	125	108	103
MRL 380-162024/21-A	Lab Control Sample	106	108	108	109	107	121	110	103

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C6PFDA = 13C6 PFDA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
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

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-162024/20-A

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162024

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		07/10/25 14:55	07/11/25 12:27	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		07/10/25 14:55	07/11/25 12:27	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C6 PFDA	113		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C5 PFHxA	113		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C4 PFHpA	117		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C8 PFOA	114		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C9 PFNA	114		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C7 PFUnA	111		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C2 PFDoA	109		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C4 PFBA	112		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C5 PFPeA	114		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C3 PFBS	113		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C3 PFHxS	113		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C8 PFOS	110		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C2-4:2-FTS	125		50 - 200	07/10/25 14:55	07/11/25 12:27	1
13C2-6:2-FTS	108		50 - 200	07/10/25 14:55	07/11/25 12:27	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-162024/20-A
Matrix: Water
Analysis Batch: 162299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 162024

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	103		50 - 200	07/10/25 14:55	07/11/25 12:27	1

Lab Sample ID: LCS 380-162024/22-A
Matrix: Water
Analysis Batch: 162299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 162024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	120	122		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	120	125		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	121		ng/L		101	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	120		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	119		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	120	116		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	120	122		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	119		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	116		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	120	117		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	117		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	121		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	120	118		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	120		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	119		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	118		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	129		ng/L		107	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	123		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	115		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	120	118		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	117		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	116		ng/L		96	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	101		50 - 200
13C5 PFHxA	99		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-162024/22-A

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162024

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFHpA	100		50 - 200
13C8 PFOA	102		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	101		50 - 200
13C2 PFDoA	99		50 - 200
13C4 PFBA	101		50 - 200
13C5 PFPeA	106		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	99		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	101		50 - 200
13C2-8:2-FTS	99		50 - 200

Lab Sample ID: MRL 380-162024/21-A

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162024

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.08	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.00	J	ng/L		100	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.08	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.05	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.01	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.26	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.16	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.22	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.15	J	ng/L		107	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfoni acid (PFEEESA)	2.00	1.96	J	ng/L		98	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-162024/21-A

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162024

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.98	J	ng/L		99	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	97		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	106		50 - 200
13C5 PFPeA	108		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-159465-B-2-A MS

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 162024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	120		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	121		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	116		ng/L		96	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	123		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.7		121	132		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	118		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	120		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	2.0		121	121		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	26		121	145		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	13		121	134		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	120		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	122		ng/L		100	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-159465-B-2-A MS

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 162024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	3.0		121	121		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	122		ng/L		101	70 - 130
Perfluorobutanoic acid (PFBA)	5.9		121	127		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	123		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	118		ng/L		97	70 - 130
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	<2.0		121	107		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	126		ng/L		104	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	127		ng/L		105	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	6.6		121	128		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	116		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	5.5		121	123		ng/L		98	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	80		50 - 200
13C6 PFDA	97		50 - 200
13C5 PFHxA	87		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	97		50 - 200
13C7 PFUnA	101		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	94		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	100		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	124		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	100		50 - 200

Lab Sample ID: 380-159465-C-2-A MSD

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 162024

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	120		ng/L		100	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	121		ng/L		100	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	115		ng/L		96	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-159465-C-2-A MSD

Matrix: Water

Analysis Batch: 162299

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 162024

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		120	124		ng/L		103	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	8.7		120	131		ng/L		101	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		120	117		ng/L		97	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	122		ng/L		102	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	2.0		120	123		ng/L		101	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	26		120	146		ng/L		99	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	13		120	138		ng/L		103	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		120	118		ng/L		98	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	123		ng/L		101	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	3.0		120	121		ng/L		98	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	123		ng/L		102	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	5.9		120	127		ng/L		101	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	117		ng/L		97	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	119		ng/L		99	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	118		ng/L		97	70 - 130	0	30
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		120	107		ng/L		89	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	125		ng/L		104	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	120		ng/L		100	70 - 130	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	114		ng/L		95	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	6.6		120	123		ng/L		97	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	116		ng/L		96	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	5.5		120	124		ng/L		98	70 - 130	0	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	83		50 - 200
13C6 PFDA	96		50 - 200
13C5 PFHxA	88		50 - 200
13C4 PFHpA	88		50 - 200
13C8 PFOA	92		50 - 200
13C9 PFNA	95		50 - 200
13C7 PFUnA	97		50 - 200
13C2 PFDoA	95		50 - 200
13C4 PFBA	90		50 - 200
13C5 PFPeA	100		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	103		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-162203/20-A

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162203

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		07/11/25 03:25	07/11/25 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130	07/11/25 03:25	07/11/25 16:46	1
13C2 PFHxA	115		70 - 130	07/11/25 03:25	07/11/25 16:46	1
13C2 PFDA	105		70 - 130	07/11/25 03:25	07/11/25 16:46	1
13C3-GenX	109		70 - 130	07/11/25 03:25	07/11/25 16:46	1

Lab Sample ID: LCS 380-162203/22-A

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	25.2		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	27.0		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.5		ng/L		110	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	25.9		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	27.7		ng/L		111	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.5		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	25.4		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	27.2		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	26.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.1		ng/L		108	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-162203/22-A

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	25.1	26.4		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.7		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.7		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	22.9		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.1	27.0		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.2		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.3		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	26.2		ng/L		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	108		70 - 130

Lab Sample ID: MRL 380-162203/21-A

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.89	J	ng/L		94	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.11	J	ng/L		105	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.02	J	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.08	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.13	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.25	J	ng/L		112	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.01	2.20	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.08	J	ng/L		103	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-162203/21-A

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.10	J	ng/L		104	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.03	J	ng/L		101	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
d5-NEtFOSAA	114		70 - 130				
13C2 PFHxA	121		70 - 130				
13C2 PFDA	115		70 - 130				
13C3-GenX	113		70 - 130				

Lab Sample ID: 380-159411-E-1-A MS

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	24.2		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.9		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.3		ng/L		105	70 - 130
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		25.1	27.4		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.2		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.2		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.2		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.0		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.6		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.1		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.9		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.4		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	20.6		ng/L		82	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.0		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.3		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.7		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.3		ng/L		101	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-159411-E-1-A MS
Matrix: Water
Analysis Batch: 162319

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 162203

Surrogate	MS %Recovery	MS Qualifier	Limits
13C3-GenX	103		70 - 130

Lab Sample ID: 380-159411-F-1-A MSD
Matrix: Water
Analysis Batch: 162319

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 162203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.3		ng/L		93	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	28.7		ng/L		108	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.5		ng/L		102	70 - 130	3	30
N-methylperfluorooctanesulfonam doacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130	3	30
N-ethylperfluorooctanesulfonamid acetic acid (NEtFOSAA)	<2.0		25.1	27.7		ng/L		110	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.2		ng/L		98	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.7		ng/L		102	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.5		ng/L		105	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.1		ng/L		100	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	28.0		ng/L		109	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.9		ng/L		105	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	2.0		25.1	27.0		ng/L		108	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.6		ng/L		102	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	21.0		ng/L		84	70 - 130	2	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	27.4		ng/L		109	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanon ane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundec ane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.1		ng/L		104	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.6		ng/L		98	70 - 130	3	30

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

QC Association Summary

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 162024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159470-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-159470-2	Ka'amilo Wells P2	Total/NA	Water	533	
380-159470-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	
380-159470-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-162024/20-A	Method Blank	Total/NA	Water	533	
LCS 380-162024/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-162024/21-A	Lab Control Sample	Total/NA	Water	533	
380-159465-B-2-A MS	Matrix Spike	Total/NA	Water	533	
380-159465-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 162203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159470-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-159470-2	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-159470-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-159470-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-162203/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-162203/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-162203/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-159411-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-159411-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 162299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159470-1	Ka'amilo Wells P1	Total/NA	Water	533	162024
380-159470-2	Ka'amilo Wells P2	Total/NA	Water	533	162024
380-159470-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	162024
380-159470-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	162024
MBL 380-162024/20-A	Method Blank	Total/NA	Water	533	162024
LCS 380-162024/22-A	Lab Control Sample	Total/NA	Water	533	162024
MRL 380-162024/21-A	Lab Control Sample	Total/NA	Water	533	162024
380-159465-B-2-A MS	Matrix Spike	Total/NA	Water	533	162024
380-159465-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	162024

Analysis Batch: 162319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159470-1	Ka'amilo Wells P1	Total/NA	Water	537.1	162203
380-159470-2	Ka'amilo Wells P2	Total/NA	Water	537.1	162203
380-159470-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	162203
380-159470-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	162203
MBL 380-162203/20-A	Method Blank	Total/NA	Water	537.1	162203
LCS 380-162203/22-A	Lab Control Sample	Total/NA	Water	537.1	162203
MRL 380-162203/21-A	Lab Control Sample	Total/NA	Water	537.1	162203
380-159411-E-1-A MS	Matrix Spike	Total/NA	Water	537.1	162203
380-159411-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	162203

Lab Chronicle

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

Job ID: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Date Collected: 07/07/25 11:39

Date Received: 07/09/25 09:30

Lab Sample ID: 380-159470-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162024	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162299	Y5FM	EA POM	07/11/25 14:12
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 20:31

Client Sample ID: Ka'amilo Wells P2

Date Collected: 07/07/25 12:21

Date Received: 07/09/25 09:30

Lab Sample ID: 380-159470-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162024	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162299	Y5FM	EA POM	07/11/25 14:21
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 20:42

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 07/07/25 11:39

Date Received: 07/09/25 09:30

Lab Sample ID: 380-159470-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162024	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162299	Y5FM	EA POM	07/11/25 14:31
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 20:53

Client Sample ID: FB: Ka'amilo Wells P2

Date Collected: 07/07/25 12:21

Date Received: 07/09/25 09:30

Lab Sample ID: 380-159470-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162024	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162299	Y5FM	EA POM	07/11/25 14:40
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 21:04

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: 380-159470-1
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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Method Summary

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

Job ID: 380-159470-1
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: 380-159470-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-159470-1	Ka'amilo Wells P1	Water	07/07/25 11:39	07/09/25 09:30
380-159470-2	Ka'amilo Wells P2	Water	07/07/25 12:21	07/09/25 09:30
380-159470-3	FB: Ka'amilo Wells P1	Water	07/07/25 11:39	07/09/25 09:30
380-159470-4	FB: Ka'amilo Wells P2	Water	07/07/25 12:21	07/09/25 09:30



380-159470 COC

Client Information Client Contact: kirk iwamoto Phone: +1 808 748 5840 City & County of Honolulu		Lab PW: Arada Rachelle E-Mail: Rachelle.Arada@et.euronisus.com		Carrier Tracking No(s): 380-27941-2757 2 State of Origin: Page 2 of 2		COC No: 380-27941-2757 2 Job #:	
Due Date Requested: TAT Requested (days): RUSH Compliance Project: Δ No PO #: C20525101 exp 05312023 WO #: 38001111 Project #: SSOW#		Analysis Requested Field Filtered Sample (Yes or No) ☒ ☐ Perform MS/MSD (Yes or No) ☒ ☐ SUBCONTRACT - 826 PAH Physils LL (EAL) + TICs ☒ ☐ 8015B GRO LL - (MOD) GRO ☒ ☐ 8015B PRO LL CS HNL Ranges C10-C24/C24-C36/C8 ☒ ☐ C18 ☒ ☐ 625.2 PREC - (MOD) 625plus PLUS TICs ☒ ☐ 637 1 DW PREC - 637 1 Full List ☒ ☐ 633 - All Analytes ☒ ☐		Total Number of Containers: ☒ ☐		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 - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - BH 4-5 Y - Tizma Z - other (specify) Other:	
Sample Identification Ka'amilo Wells P1 Ka'amilo Wells P2		Sample Date: 7-Jul-2025 Sample Time: 1139 Sample Type (C=comp, G=grab): G Matrix (Water, Swallow, Overstabil, BT/Tesuh, AAR): Water		Special Instructions/Note:			
FB: Ka'amilo Wells P1 FB: Ka'amilo Wells P2		Sample Date: 7-Jul-2025 Sample Time: 1139 Sample Type (C=comp, G=grab): G Matrix (Water, Swallow, Overstabil, BT/Tesuh, AAR): Water		Special Instructions/Note:			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested I II III IV Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months		Special Instructions/QC Requirements			
Empty Kit Relinquished by Date: 08/04/2025 Company: HBWS		Date: 08/04/2025 Company: HBWS		Date: 08/04/2025 Company: HBWS		Date: 08/04/2025 Company: HBWS	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 3.0°-0.0°=3.0°		Date: 08/04/2025 Company: HBWS	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-159470-1

SDG Number: PFAS: Ka'amilo Wells P1/P2

Login Number: 159470

List Number: 1

Creator: Edrosa, Rey

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").	N/A	
CIO4 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	