

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 9/8/2025 4:48:25 PM

JOB DESCRIPTION

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

JOB NUMBER

380-169634-1

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



Authorized for release by
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

Generated
9/8/2025 4:48:25 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	14
Surrogate Summary	16
Isotope Dilution Summary	17
QC Sample Results	18
QC Association Summary	30
Lab Chronicle	31
Certification Summary	32
Method Summary	33
Sample Summary	34
Chain of Custody	35
Receipt Checklists	36



Definitions/Glossary

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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: 380-169634-1

Job ID: 380-169634-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-169634-1

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 9/4/2025 9:56 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.9°C, 2.1°C, 3.6°C, 4.4°C and 4.8°C.

PFAS

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

Eurofins Eaton Analytical Pomona

Detection Summary

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Lab Sample ID: 380-169634-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.5		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.6		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)	3.6		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-169634-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.6		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	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)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		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: FB: Ka'amilo Well P1

Lab Sample ID: 380-169634-3

No Detections.

Client Sample ID: FB: Ka'amilo Well P2

Lab Sample ID: 380-169634-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Lab Sample ID: 380-169634-1

Date Collected: 09/02/25 12:20

Matrix: Water

Date Received: 09/04/25 09:56

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		09/05/25 06:59	09/05/25 20:23	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorooctanoic acid (PFOA)	3.5		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoropentanoic acid (PFPeA)	3.6		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C6 PFDA	106		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C5 PFHxA	105		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C4 PFHpA	108		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C8 PFOA	110		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C9 PFNA	107		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C7 PFUnA	106		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C2 PFDoA	105		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C4 PFBA	112		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C5 PFPeA	111		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C3 PFBS	110		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C3 PFHxS	109		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C8 PFOS	109		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C2-4:2-FTS	136		50 - 200	09/05/25 06:59	09/05/25 20:23	1
13C2-6:2-FTS	133		50 - 200	09/05/25 06:59	09/05/25 20:23	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Lab Sample ID: 380-169634-1

Date Collected: 09/02/25 12:20

Matrix: Water

Date Received: 09/04/25 09:56

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	112		50 - 200	09/05/25 06:59	09/05/25 20:23	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		09/06/25 04:30	09/07/25 13:33	1
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorohexanoic acid (PFHxA)	3.4		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130	09/06/25 04:30	09/07/25 13:33	1
13C2 PFHxA	107		70 - 130	09/06/25 04:30	09/07/25 13:33	1
13C2 PFDA	106		70 - 130	09/06/25 04:30	09/07/25 13:33	1
13C3-GenX	106		70 - 130	09/06/25 04:30	09/07/25 13:33	1

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-169634-2

Date Collected: 09/02/25 13:00

Matrix: Water

Date Received: 09/04/25 09:56

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		09/05/25 06:59	09/05/25 20:33	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorobutanesulfonic acid (PFBS)	2.6		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-169634-2

Date Collected: 09/02/25 13:00

Matrix: Water

Date Received: 09/04/25 09:56

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		09/05/25 06:59	09/05/25 20:33	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorohexanoic acid (PFHxA)	3.2		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorooctanoic acid (PFOA)	3.1		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoropentanoic acid (PFPeA)	2.9		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C6 PFDA	109		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C5 PFHxA	107		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C4 PFHpA	111		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C8 PFOA	113		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C9 PFNA	109		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C7 PFUnA	103		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C2 PFDoA	104		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C4 PFBA	112		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C5 PFPeA	117		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C3 PFBS	114		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C3 PFHxS	110		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C8 PFOS	111		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C2-4:2-FTS	138		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C2-6:2-FTS	136		50 - 200	09/05/25 06:59	09/05/25 20:33	1
13C2-8:2-FTS	112		50 - 200	09/05/25 06:59	09/05/25 20:33	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		09/06/25 04:30	09/07/25 13:43	1
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-169634-2

Date Collected: 09/02/25 13:00

Matrix: Water

Date Received: 09/04/25 09:56

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		09/06/25 04:30	09/07/25 13:43	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorooctanoic acid (PFOA)	3.2		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			09/06/25 04:30	09/07/25 13:43	1
13C2 PFHxA	109		70 - 130			09/06/25 04:30	09/07/25 13:43	1
13C2 PFDA	108		70 - 130			09/06/25 04:30	09/07/25 13:43	1
13C3-GenX	110		70 - 130			09/06/25 04:30	09/07/25 13:43	1

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-169634-3

Date Collected: 09/02/25 12:20

Matrix: Water

Date Received: 09/04/25 09:56

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		09/05/25 06:59	09/05/25 20:44	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-169634-3

Date Collected: 09/02/25 12:20

Matrix: Water

Date Received: 09/04/25 09:56

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		09/05/25 06:59	09/05/25 20:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C6 PFDA	111		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C5 PFHxA	114		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C4 PFHpA	112		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C8 PFOA	114		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C9 PFNA	112		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C7 PFUnA	111		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C2 PFDoA	105		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C4 PFBA	118		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C5 PFPeA	116		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C3 PFBS	116		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C3 PFHxS	116		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C8 PFOS	113		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C2-4:2-FTS	134		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C2-6:2-FTS	123		50 - 200	09/05/25 06:59	09/05/25 20:44	1
13C2-8:2-FTS	109		50 - 200	09/05/25 06:59	09/05/25 20:44	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		09/06/25 04:30	09/07/25 13:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-169634-3

Date Collected: 09/02/25 12:20

Matrix: Water

Date Received: 09/04/25 09:56

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(9CI-PF3ONS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 13:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130			09/06/25 04:30	09/07/25 13:52	1
13C2 PFHxA	108		70 - 130			09/06/25 04:30	09/07/25 13:52	1
13C2 PFDA	109		70 - 130			09/06/25 04:30	09/07/25 13:52	1
13C3-GenX	105		70 - 130			09/06/25 04:30	09/07/25 13:52	1

Client Sample ID: FB: Ka'amilo Well P2

Lab Sample ID: 380-169634-4

Date Collected: 09/02/25 13:00

Matrix: Water

Date Received: 09/04/25 09:56

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/05/25 06:59	09/05/25 20:55	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Well P2

Lab Sample ID: 380-169634-4

Date Collected: 09/02/25 13:00

Matrix: Water

Date Received: 09/04/25 09:56

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C6 PFDA	114		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C5 PFHxA	116		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C4 PFHpA	117		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C8 PFOA	115		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C9 PFNA	119		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C7 PFUnA	111		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C2 PFDoA	109		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C4 PFBA	119		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C5 PFPeA	121		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C3 PFBS	117		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C3 PFHxS	116		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C8 PFOS	112		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C2-4:2-FTS	121		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C2-6:2-FTS	119		50 - 200	09/05/25 06:59	09/05/25 20:55	1
13C2-8:2-FTS	108		50 - 200	09/05/25 06:59	09/05/25 20:55	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		09/06/25 04:30	09/07/25 14:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 04:30	09/07/25 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130	09/06/25 04:30	09/07/25 14:02	1
13C2 PFHxA	111		70 - 130	09/06/25 04:30	09/07/25 14:02	1
13C2 PFDA	109		70 - 130	09/06/25 04:30	09/07/25 14:02	1
13C3-GenX	109		70 - 130	09/06/25 04:30	09/07/25 14:02	1

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Lab Sample ID: 380-169634-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.5		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)	3.6		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.6		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Well P2

Lab Sample ID: 380-169634-2

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)	3.7		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.2		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Well P1

Lab Sample ID: 380-169634-3

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: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169634-3

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 Well P2

Lab Sample ID: 380-169634-4

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: 380-169634-1
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)
380-169634-1	Ka'amilo Well P1	109	107	106	106
380-169634-2	Ka'amilo Well P2	109	109	108	110
380-169634-3	FB: Ka'amilo Well P1	106	108	109	105
380-169634-4	FB: Ka'amilo Well P2	104	111	109	109
380-169714-A-1-B MS	Matrix Spike	107	105	109	107
380-169714-A-1-C MSD	Matrix Spike Duplicate	98	103	108	104
LCS 380-172693/24-A	Lab Control Sample	101	109	108	101
MBL 380-172693/22-A	Method Blank	106	108	118	110
MRL 380-172693/23-A	Lab Control Sample	104	108	112	111

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: 380-169634-1
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)
380-169499-E-1-A MS	Matrix Spike	96	115	116	111	117	115	122	123
380-169499-F-1-A MSD	Matrix Spike Duplicate	90	104	101	106	108	105	104	101
380-169634-1	Ka'amilo Well P1	102	106	105	108	110	107	106	105
380-169634-2	Ka'amilo Well P2	104	109	107	111	113	109	103	104
380-169634-3	FB: Ka'amilo Well P1	108	111	114	112	114	112	111	105
380-169634-4	FB: Ka'amilo Well P2	108	114	116	117	115	119	111	109
LCS 380-172513/22-A	Lab Control Sample	110	112	114	113	115	112	114	111
LCS 380-172513/22-A	Lab Control Sample	106	119	116	113	117	115	123	121
MBL 380-172513/20-A	Method Blank	99	103	106	104	108	109	106	101
MRL 380-172513/21-A	Lab Control Sample	98	105	109	107	107	104	107	102

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)
380-169499-E-1-A MS	Matrix Spike	107	102	110	103	109	114	105	126
380-169499-F-1-A MSD	Matrix Spike Duplicate	100	185	102	107	109	141	154	133
380-169634-1	Ka'amilo Well P1	112	111	110	109	109	136	133	112
380-169634-2	Ka'amilo Well P2	112	117	114	110	111	138	136	112
380-169634-3	FB: Ka'amilo Well P1	118	116	116	116	113	134	123	109
380-169634-4	FB: Ka'amilo Well P2	119	121	117	116	112	121	119	108
LCS 380-172513/22-A	Lab Control Sample	109	115	120	117	112	131	122	112
LCS 380-172513/22-A	Lab Control Sample	108	110	107	111	107	104	96	112
MBL 380-172513/20-A	Method Blank	111	109	115	115	111	121	117	104
MRL 380-172513/21-A	Lab Control Sample	106	109	116	115	107	125	118	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: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-172513/20-A

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 172513

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		09/05/25 06:59	09/05/25 17:30	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/05/25 06:59	09/05/25 17:30	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C6 PFDA	103		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C5 PFHxA	106		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C4 PFHpA	104		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C8 PFOA	108		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C9 PFNA	109		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C7 PFUnA	106		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C2 PFDoA	101		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C4 PFBA	111		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C5 PFPeA	109		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C3 PFBS	115		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C3 PFHxS	115		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C8 PFOS	111		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C2-4:2-FTS	121		50 - 200	09/05/25 06:59	09/05/25 17:30	1
13C2-6:2-FTS	117		50 - 200	09/05/25 06:59	09/05/25 17:30	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-172513/20-A
Matrix: Water
Analysis Batch: 172663

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172513

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	104		50 - 200	09/05/25 06:59	09/05/25 17:30	1

Lab Sample ID: LCS 380-172513/22-A
Matrix: Water
Analysis Batch: 172663

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 172513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	120	109		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	120	111		ng/L		93	70 - 130
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	120	110		ng/L		91	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	111		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	109		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	120	110		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	120	114		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	113		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	111		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	120	112		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	120	110		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	117		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	120	107		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	108		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	120	112		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	106		ng/L		88	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	120	112		ng/L		93	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	107		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	116		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	120	109		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	109		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	110		ng/L		92	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	110		50 - 200
13C6 PFDA	112		50 - 200
13C5 PFHxA	114		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-172513/22-A

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172513

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFHpA	113		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	114		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	120		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	131		50 - 200
13C2-6:2-FTS	122		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: LCS 380-172513/22-A

Matrix: Water

Analysis Batch: 172732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	113		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	114		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	111		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	111		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	113		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	120	112		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	120	119		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	115		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	111		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	120	112		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	120	106		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	115		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	120	102		ng/L		85	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	110		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	108		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	111		ng/L		92	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	105		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfoni acid (PFEEESA)	120	117		ng/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-172513/22-A

Matrix: Water

Analysis Batch: 172732

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	110		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	120	113		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	113		ng/L		94	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	105		ng/L		88	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	106		50 - 200
13C6 PFDA	119		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	117		50 - 200
13C9 PFNA	115		50 - 200
13C7 PFUnA	123		50 - 200
13C2 PFDoA	121		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	107		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	104		50 - 200
13C2-6:2-FTS	96		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: MRL 380-172513/21-A

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.07	J	ng/L		103	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.91	J	ng/L		95	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.86	J	ng/L		92	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.89	J	ng/L		94	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.89	J	ng/L		94	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.06	J	ng/L		103	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-172513/21-A

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.10	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.08	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.09	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	1.82	J	ng/L		91	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.93	J	ng/L		96	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.82	J	ng/L		90	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	1.94	J	ng/L		97	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.79	J	ng/L		89	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.90	J	ng/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.04	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.98	J	ng/L		99	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	98		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	104		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	102		50 - 200
13C4 PFBA	106		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	116		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	125		50 - 200
13C2-6:2-FTS	118		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-169499-E-1-A MS

Matrix: Water

Analysis Batch: 172732

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	112		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	111		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	113		ng/L		93	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169499-E-1-A MS

Matrix: Water

Analysis Batch: 172732

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	111		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	106		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	115		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	115		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	116		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	127		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	102		ng/L		84	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	111		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	106		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	112		ng/L		93	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	110		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	107		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	108		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.9		121	121		ng/L		97	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	107		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	109		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F2 F1	121	89.5		ng/L		74	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	112		ng/L		92	70 - 130
Perfluoropentanoic acid (PFPeA)	2.2		121	110		ng/L		89	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	105		ng/L		87	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	113		ng/L		93	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	115		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	117		50 - 200
13C9 PFNA	115		50 - 200
13C7 PFUnA	122		50 - 200
13C2 PFDoA	123		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	102		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	114		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	126		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169499-F-1-A MSD

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172513

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		121	113		ng/L		94	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		121	113		ng/L		93	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	110		ng/L		91	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	118		ng/L		97	70 - 130	6	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	120		ng/L		100	70 - 130	12	30
Perfluorodecanoic acid (PFDA)	<2.0		121	110		ng/L		91	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	117		ng/L		97	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	118		ng/L		98	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	116		ng/L		96	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	120		ng/L		99	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		121	112		ng/L		93	70 - 130	9	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	114		ng/L		95	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		121	113		ng/L		93	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	114		ng/L		94	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		121	99.9		ng/L		83	70 - 130	10	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	116		ng/L		96	70 - 130	9	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	115		ng/L		95	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	3.9		121	117		ng/L		93	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	112		ng/L		93	70 - 130	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	115		ng/L		96	70 - 130	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F2 F1	121	158	F1 F2	ng/L		131	70 - 130	55	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	120		ng/L		100	70 - 130	8	30
Perfluoropentanoic acid (PFPeA)	2.2		121	117		ng/L		95	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	110		ng/L		91	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	115		ng/L		95	70 - 130	2	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	101		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	108		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	104		50 - 200
13C2 PFDoA	101		50 - 200
13C4 PFBA	100		50 - 200
13C5 PFPeA	185		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169499-F-1-A MSD

Matrix: Water

Analysis Batch: 172663

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172513

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
13C3 PFBS	102		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	141		50 - 200
13C2-6:2-FTS	154		50 - 200
13C2-8:2-FTS	133		50 - 200

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

Lab Sample ID: MBL 380-172693/22-A

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 172693

Analyte	MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/06/25 04:30	09/07/25 12:07	1
Surrogate	MBL		Limits					
	%Recovery	Qualifier						
d5-NEtFOSAA	106		70 - 130			09/06/25 04:30	09/07/25 12:07	1
13C2 PFHxA	108		70 - 130			09/06/25 04:30	09/07/25 12:07	1
13C2 PFDA	118		70 - 130			09/06/25 04:30	09/07/25 12:07	1
13C3-GenX	110		70 - 130			09/06/25 04:30	09/07/25 12:07	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-172693/24-A

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	23.8		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	26.6		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	25.8		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	23.9		ng/L		95	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	23.9		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.6		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	24.7		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	24.8		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	24.8		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	26.7		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	25.4		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.2		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	25.1	24.7		ng/L		98	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	25.6		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.1	27.3		ng/L		109	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	25.1	26.2		ng/L		104	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	25.1	27.1		ng/L		108	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	25.2		ng/L		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	109		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	101		70 - 130

Lab Sample ID: MRL 380-172693/23-A

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172693

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.90	J	ng/L		95	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.08	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.98	J	ng/L		99	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.13	J	ng/L		106	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-172693/23-A

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172693

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorotridecanoic acid (PFTDA)	2.00	2.31	J	ng/L		115	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	2.00	2.13	J	ng/L		106	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	2.00	2.19	J	ng/L		109	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.02	J	ng/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	104		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	111		70 - 130

Lab Sample ID: 380-169714-A-1-B MS

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172693

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	24.8		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.6		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.7		ng/L		102	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	27.2		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.6		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.2		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.4		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.6		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.8		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.0		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.4		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.8		ng/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169714-A-1-B MS

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172693

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.3		ng/L		101	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	27.3		ng/L		109	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.2		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.5		ng/L		106	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.0		ng/L		104	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
d5-NEtFOSAA	107		70 - 130						
13C2 PFHxA	105		70 - 130						
13C2 PFDA	109		70 - 130						
13C3-GenX	107		70 - 130						

Lab Sample ID: 380-169714-A-1-C MSD

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172693

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	24.6		ng/L		98	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.2		ng/L		107	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.0		ng/L		104	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.8		ng/L		99	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.5		ng/L		102	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.7		ng/L		104	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.4		ng/L		101	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.0		ng/L		100	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.1		ng/L		104	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	28.2		ng/L		111	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.0		ng/L		108	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.7		ng/L		105	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.9		ng/L		103	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	26.2		ng/L		105	70 - 130	4	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	28.1		ng/L		112	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.4		ng/L		105	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.5		ng/L		106	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.6		ng/L		106	70 - 130	2	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-169714-A-1-C MSD

Matrix: Water

Analysis Batch: 172742

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172693

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	103		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	104		70 - 130

QC Association Summary

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 172513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169634-1	Ka'amilo Well P1	Total/NA	Water	533	
380-169634-2	Ka'amilo Well P2	Total/NA	Water	533	
380-169634-3	FB: Ka'amilo Well P1	Total/NA	Water	533	
380-169634-4	FB: Ka'amilo Well P2	Total/NA	Water	533	
MBL 380-172513/20-A	Method Blank	Total/NA	Water	533	
LCS 380-172513/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-172513/21-A	Lab Control Sample	Total/NA	Water	533	
380-169499-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-169499-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 172663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169634-1	Ka'amilo Well P1	Total/NA	Water	533	172513
380-169634-2	Ka'amilo Well P2	Total/NA	Water	533	172513
380-169634-3	FB: Ka'amilo Well P1	Total/NA	Water	533	172513
380-169634-4	FB: Ka'amilo Well P2	Total/NA	Water	533	172513
MBL 380-172513/20-A	Method Blank	Total/NA	Water	533	172513
LCS 380-172513/22-A	Lab Control Sample	Total/NA	Water	533	172513
MRL 380-172513/21-A	Lab Control Sample	Total/NA	Water	533	172513
380-169499-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	172513

Prep Batch: 172693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169634-1	Ka'amilo Well P1	Total/NA	Water	537.1 DW	
380-169634-2	Ka'amilo Well P2	Total/NA	Water	537.1 DW	
380-169634-3	FB: Ka'amilo Well P1	Total/NA	Water	537.1 DW	
380-169634-4	FB: Ka'amilo Well P2	Total/NA	Water	537.1 DW	
MBL 380-172693/22-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-172693/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-172693/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-169714-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-169714-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 172732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 380-172513/22-A	Lab Control Sample	Total/NA	Water	533	172513
380-169499-E-1-A MS	Matrix Spike	Total/NA	Water	533	172513

Analysis Batch: 172742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169634-1	Ka'amilo Well P1	Total/NA	Water	537.1	172693
380-169634-2	Ka'amilo Well P2	Total/NA	Water	537.1	172693
380-169634-3	FB: Ka'amilo Well P1	Total/NA	Water	537.1	172693
380-169634-4	FB: Ka'amilo Well P2	Total/NA	Water	537.1	172693
MBL 380-172693/22-A	Method Blank	Total/NA	Water	537.1	172693
LCS 380-172693/24-A	Lab Control Sample	Total/NA	Water	537.1	172693
MRL 380-172693/23-A	Lab Control Sample	Total/NA	Water	537.1	172693
380-169714-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	172693
380-169714-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	172693

Lab Chronicle

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

Job ID: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Well P1

Date Collected: 09/02/25 12:20

Date Received: 09/04/25 09:56

Lab Sample ID: 380-169634-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172513	XTD8	EA POM	09/05/25 06:59
Total/NA	Analysis	533		1	172663	Y5FM	EA POM	09/05/25 20:23
Total/NA	Prep	537.1 DW			172693	E9PK	EA POM	09/06/25 04:30
Total/NA	Analysis	537.1		1	172742	M7ML	EA POM	09/07/25 13:33

Client Sample ID: Ka'amilo Well P2

Date Collected: 09/02/25 13:00

Date Received: 09/04/25 09:56

Lab Sample ID: 380-169634-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172513	XTD8	EA POM	09/05/25 06:59
Total/NA	Analysis	533		1	172663	Y5FM	EA POM	09/05/25 20:33
Total/NA	Prep	537.1 DW			172693	E9PK	EA POM	09/06/25 04:30
Total/NA	Analysis	537.1		1	172742	M7ML	EA POM	09/07/25 13:43

Client Sample ID: FB: Ka'amilo Well P1

Date Collected: 09/02/25 12:20

Date Received: 09/04/25 09:56

Lab Sample ID: 380-169634-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172513	XTD8	EA POM	09/05/25 06:59
Total/NA	Analysis	533		1	172663	Y5FM	EA POM	09/05/25 20:44
Total/NA	Prep	537.1 DW			172693	E9PK	EA POM	09/06/25 04:30
Total/NA	Analysis	537.1		1	172742	M7ML	EA POM	09/07/25 13:52

Client Sample ID: FB: Ka'amilo Well P2

Date Collected: 09/02/25 13:00

Date Received: 09/04/25 09:56

Lab Sample ID: 380-169634-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172513	XTD8	EA POM	09/05/25 06:59
Total/NA	Analysis	533		1	172663	Y5FM	EA POM	09/05/25 20:55
Total/NA	Prep	537.1 DW			172693	E9PK	EA POM	09/06/25 04:30
Total/NA	Analysis	537.1		1	172742	M7ML	EA POM	09/07/25 14:02

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: 380-169634-1
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: 380-169634-1
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: 380-169634-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-169634-1	Ka'amilo Well P1	Water	09/02/25 12:20	09/04/25 09:56	Hawaii
380-169634-2	Ka'amilo Well P2	Water	09/02/25 13:00	09/04/25 09:56	Hawaii
380-169634-3	FB: Ka'amilo Well P1	Water	09/02/25 12:20	09/04/25 09:56	Hawaii
380-169634-4	FB: Ka'amilo Well P2	Water	09/02/25 13:00	09/04/25 09:56	Hawaii

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Client Information Client Contact: kirk iwamoto Phone: +1 808 748 5840		Lab PM: Arada Rachelle E-Mail: Rachelle.Arada@et.eurofins.com	Camer Tracking No(s): State of Origin:	COC No: 380-27941-2757.2 Page: Page 2 of 2 Job #:
Company: City & County of Honolulu Address: 630 South Beretania Street, Chemistry Lab City: Honolulu State, Zip: HI 96843 Phone: 808-748-5840 (tel) Email: kiwamoto@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site:		PWID:		
Due Date Requested: TAT Requested (days): Compliance Project: ☐ No PO #: C20525101 exp 05312023 WO #: 38001111 Project #: 38001111 SOW#:		Analysis Requested		
Sample Identification Sample Date: 2-Sep-2025 Sample Time: 1220 Sample Type (C=Comp, G=grab): G Preservation Code: Water Matrix (Newwater, Seawater, Groundwater, Bore-Tissue, Aqueous):		Perform MS/MSD (Yes or No): Field Filtered Sample (Yes or No): SUBCONTRACT 625 PAH Phys (L) (EAL) + TICs 8015B_GRO_LL (MOD) GRO 8015B_ORO_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		
Ka'amilo Wells P1 Ka'amilo Wells P2		Total Number of containers:		
FB: Ka'amilo Wells P1 FB: Ka'amilo Wells P2		Special Instructions/Note: 380-169634 COC		
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested I II III IV Other (specify)				
Empty Kit Relinquished by:				
Date/Time: 03-Sep-2025 1400 Company: HBWS		Date/Time: 9/4/25 9:56 Company:		
Date/Time:		Date/Time:		
Date/Time:		Date/Time:		
Relinquished by:		Relinquished by:		
Custody Seals Intact: ☐ Yes ☐ No		Cooler Temperature(s) °C and Other Remarks: 6084/4.8 = 4.8 36		

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-169634-1

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

Login Number: 169634

List Number: 1

Creator: Hernandez, Orlando

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	