

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

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

JOB NUMBER

380-157187-1

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
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Definitions/Glossary

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
E	Result exceeded calibration range.
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: 380-157187-1

Job ID: 380-157187-1

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Job Narrative 380-157187-1

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 6/25/2025 9:19 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 4.0°C.

PFAS

Method 537.1_DW_PREC: The following QC issues in preparation batch 380-159952 and analytical batch 380-160070 were observed: Matrix spike duplicate possibly double spiked, causing MS/MSD RPD failure. LCS passed all QC requirements. MS/MSD failure does not invalidate a batch. Affected samples in this batch are: Ka'amilo Wells P1 (380-157187-1), Ka'amilo Wells P2 (380-157187-2), FB: Ka'amilo Wells P1 (380-157187-3) and FB: Ka'amilo Wells P2 (380-157187-4).

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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-157187-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.9	F1 F2	2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3	F1 F2	2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.4	F1 F2	2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0	F1 F2	2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.6	F1 F2	2.0	ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-157187-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-157187-3

No Detections.

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-157187-4

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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-157187-1

Date Collected: 06/23/25 11:52

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:07	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorooctanesulfonic acid (PFOS)	4.2		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoropentanoic acid (PFPeA)	3.5		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	70		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C6 PFDA	69		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C5 PFHxA	76		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C4 PFHpA	76		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C8 PFOA	78		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C9 PFNA	73		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C7 PFUnA	65		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C2 PFDoA	61		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C4 PFBA	80		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C5 PFPeA	80		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C3 PFBS	93		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C3 PFHxS	95		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C8 PFOS	89		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C2-4:2-FTS	109		50 - 200	06/26/25 16:32	06/27/25 14:07	1
13C2-6:2-FTS	103		50 - 200	06/26/25 16:32	06/27/25 14:07	1

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Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-157187-1

Date Collected: 06/23/25 11:52

Matrix: Water

Date Received: 06/25/25 09:19

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	95		50 - 200	06/26/25 16:32	06/27/25 14:07	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	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorooctanesulfonic acid (PFOS)	3.9	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorohexanoic acid (PFHxA)	3.3	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorododecanoic acid (PFDoA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorooctanoic acid (PFOA)	3.4	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorodecanoic acid (PFDA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorohexanesulfonic acid (PFHxS)	3.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorobutanesulfonic acid (PFBS)	2.6	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorononanoic acid (PFNA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorotetradecanoic acid (PFTA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Perfluorotridecanoic acid (PFTrDA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0	F1 F2	2.0	ng/L		06/26/25 11:53	06/27/25 06:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	95		70 - 130			06/26/25 11:53	06/27/25 06:54	1
13C2 PFHxA	97		70 - 130			06/26/25 11:53	06/27/25 06:54	1
13C2 PFDA	98		70 - 130			06/26/25 11:53	06/27/25 06:54	1
13C3-GenX	95		70 - 130			06/26/25 11:53	06/27/25 06:54	1

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-157187-2

Date Collected: 06/23/25 12:37

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:29	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-157187-2

Date Collected: 06/23/25 12:37

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:29	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorohexanoic acid (PFHxA)	2.8		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoropentanoic acid (PFPeA)	2.8		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C6 PFDA	73		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C5 PFHxA	78		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C4 PFHpA	74		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C8 PFOA	76		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C9 PFNA	71		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C7 PFUnA	69		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C2 PFDoA	74		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C4 PFBA	79		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C5 PFPeA	82		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C3 PFBS	107		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C3 PFHxS	109		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C8 PFOS	100		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C2-4:2-FTS	133		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C2-6:2-FTS	121		50 - 200	06/26/25 16:32	06/27/25 14:29	1
13C2-8:2-FTS	110		50 - 200	06/26/25 16:32	06/27/25 14:29	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		06/26/25 11:53	06/27/25 08:20	1
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-157187-2

Date Collected: 06/23/25 12:37

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 11:53	06/27/25 08:20	1
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorooctanoic acid (PFOA)	3.1		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			06/26/25 11:53	06/27/25 08:20	1
13C2 PFHxA	98		70 - 130			06/26/25 11:53	06/27/25 08:20	1
13C2 PFDA	98		70 - 130			06/26/25 11:53	06/27/25 08:20	1
13C3-GenX	101		70 - 130			06/26/25 11:53	06/27/25 08:20	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-157187-3

Date Collected: 06/23/25 11:52

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:40	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-157187-3

Date Collected: 06/23/25 11:52

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C6 PFDA	88		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C5 PFHxA	92		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C4 PFHpA	89		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C8 PFOA	97		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C9 PFNA	92		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C7 PFUnA	90		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C2 PFDoA	91		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C4 PFBA	94		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C5 PFPeA	96		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C3 PFBS	109		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C3 PFHxS	107		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C8 PFOS	102		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C2-4:2-FTS	129		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C2-6:2-FTS	118		50 - 200	06/26/25 16:32	06/27/25 14:40	1
13C2-8:2-FTS	106		50 - 200	06/26/25 16:32	06/27/25 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		06/26/25 11:53	06/27/25 08:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-157187-3

Date Collected: 06/23/25 11:52

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 11:53	06/27/25 08:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	92		70 - 130			06/26/25 11:53	06/27/25 08:29	1
13C2 PFHxA	91		70 - 130			06/26/25 11:53	06/27/25 08:29	1
13C2 PFDA	97		70 - 130			06/26/25 11:53	06/27/25 08:29	1
13C3-GenX	86		70 - 130			06/26/25 11:53	06/27/25 08:29	1

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-157187-4

Date Collected: 06/23/25 12:37

Matrix: Water

Date Received: 06/25/25 09:19

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		06/26/25 16:32	06/27/25 14:50	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/26/25 16:32	06/27/25 14:50	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-157187-4

Date Collected: 06/23/25 12:37

Matrix: Water

Date Received: 06/25/25 09:19

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C6 PFDA	104		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C5 PFHxA	111		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C4 PFHpA	108		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C8 PFOA	112		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C9 PFNA	105		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C7 PFUnA	103		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C2 PFDoA	104		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C4 PFBA	110		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C5 PFPeA	114		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C3 PFBS	108		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C3 PFHxS	109		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C8 PFOS	103		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C2-4:2-FTS	137		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C2-6:2-FTS	120		50 - 200	06/26/25 16:32	06/27/25 14:50	1
13C2-8:2-FTS	114		50 - 200	06/26/25 16:32	06/27/25 14:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 08:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	91		70 - 130	06/26/25 11:53	06/27/25 08:39	1
13C2 PFHxA	95		70 - 130	06/26/25 11:53	06/27/25 08:39	1
13C2 PFDA	95		70 - 130	06/26/25 11:53	06/27/25 08:39	1
13C3-GenX	84		70 - 130	06/26/25 11:53	06/27/25 08:39	1

Action Limit Summary

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-157187-1

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)	3.1		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)	3.4		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.0	F1 F2	ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.9	F1 F2	ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.4	F1 F2	ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0	F1 F2	ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0	F1 F2	ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-157187-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.1		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		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 P1

Lab Sample ID: 380-157187-3

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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-157187-3

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: 380-157187-4

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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-157187-1	Ka'amilo Wells P1	95	97	98	95
380-157187-1 MS	Ka'amilo Wells P1	98	99	101	99
380-157187-1 MSD	Ka'amilo Wells P1	94	97	97	96
380-157187-2	Ka'amilo Wells P2	102	98	98	101
380-157187-3	FB: Ka'amilo Wells P1	92	91	97	86
380-157187-4	FB: Ka'amilo Wells P2	91	95	95	84
LCS 380-159952/22-A	Lab Control Sample	97	96	100	90
MB 380-159952/20-A	Method Blank	85	86	90	82
MRL 380-159952/21-A	Lab Control Sample	95	101	99	98

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: 380-157187-1
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)
380-157187-1	Ka'amilo Wells P1	70	69	76	76	78	73	65	61
380-157187-2	Ka'amilo Wells P2	78	73	78	74	76	71	69	74
380-157187-3	FB: Ka'amilo Wells P1	80	88	92	89	97	92	90	91
380-157187-4	FB: Ka'amilo Wells P2	100	104	111	108	112	105	103	104
380-157196-E-1-A MS	Matrix Spike	85	91	89	88	93	89	90	90
380-157196-F-1-A MSD	Matrix Spike Duplicate	63	53	69	62	63	56	55	63
LCS 380-160011/22-A	Lab Control Sample	101	98	106	101	106	98	96	97
MBL 380-160011/20-A	Method Blank	104	100	109	103	108	100	97	97
MRL 380-160011/21-A	Lab Control Sample	100	96	103	103	106	98	96	95

		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)
380-157187-1	Ka'amilo Wells P1	80	80	93	95	89	109	103	95
380-157187-2	Ka'amilo Wells P2	79	82	107	109	100	133	121	110
380-157187-3	FB: Ka'amilo Wells P1	94	96	109	107	102	129	118	106
380-157187-4	FB: Ka'amilo Wells P2	110	114	108	109	103	137	120	114
380-157196-E-1-A MS	Matrix Spike	90	90	103	105	102	117	111	105
380-157196-F-1-A MSD	Matrix Spike Duplicate	73	70	104	104	100	119	117	110
LCS 380-160011/22-A	Lab Control Sample	103	105	109	108	102	119	116	108
MBL 380-160011/20-A	Method Blank	109	110	108	110	105	127	113	107
MRL 380-160011/21-A	Lab Control Sample	107	107	109	112	101	120	111	102

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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-160011/20-A

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 160011

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		06/26/25 16:32	06/27/25 11:51	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		06/26/25 16:32	06/27/25 11:51	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C6 PFDA	100		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C5 PFHxA	109		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C4 PFHpA	103		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C8 PFOA	108		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C9 PFNA	100		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C7 PFUnA	97		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C2 PFDoA	97		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C4 PFBA	109		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C5 PFPeA	110		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C3 PFBS	108		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C3 PFHxS	110		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C8 PFOS	105		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C2-4:2-FTS	127		50 - 200	06/26/25 16:32	06/27/25 11:51	1
13C2-6:2-FTS	113		50 - 200	06/26/25 16:32	06/27/25 11:51	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-160011/20-A
Matrix: Water
Analysis Batch: 160115

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 160011

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	107		50 - 200	06/26/25 16:32	06/27/25 11:51	1

Lab Sample ID: LCS 380-160011/22-A
Matrix: Water
Analysis Batch: 160115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 160011

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	121	125		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	121	121		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	121	122		ng/L		101	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	121	119		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	121	120		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	121	121		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	121	120		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	121	122		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	121	119		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	121	122		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	121	116		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	121	121		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	121	115		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	121	120		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	121	124		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	121	120		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	121	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	121	119		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	121	118		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	121	121		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	121	119		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	121	117		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	121	124		ng/L		103	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	121	121		ng/L		100	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	101		50 - 200
13C6 PFDA	98		50 - 200
13C5 PFHxA	106		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-160011/22-A

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 160011

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C4 PFHpA	101		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	98		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	97		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	116		50 - 200
13C2-8:2-FTS	108		50 - 200

Lab Sample ID: MRL 380-160011/21-A

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 160011

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.24	J	ng/L		111	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.16	J	ng/L		108	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.18	J	ng/L		109	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.22	J	ng/L		111	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.11	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.29	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.47	J	ng/L		123	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.26	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.29	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.34	J	ng/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfoni acid (PFEEESA)	2.01	2.03	J	ng/L		101	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-160011/21-A

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 160011

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.21	J	ng/L		110	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.10	J	ng/L		105	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	100		50 - 200
13C6 PFDA	96		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	98		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	95		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	107		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	101		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	102		50 - 200

Lab Sample ID: 380-157196-E-1-A MS

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 160011

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	117		ng/L		97	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	121		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	120		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	123		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	124		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	121		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	120		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	122		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	120		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	119		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-157196-E-1-A MS

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 160011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanoic acid (PFOA)	<2.0		121	115		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	123		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	123		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	119		ng/L		99	70 - 130
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	<2.0		121	112		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	115		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	114		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	120		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	123		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	125		ng/L		103	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	85		50 - 200
13C6 PFDA	91		50 - 200
13C5 PFHxA	89		50 - 200
13C4 PFHpA	88		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	89		50 - 200
13C7 PFUnA	90		50 - 200
13C2 PFDoA	90		50 - 200
13C4 PFBA	90		50 - 200
13C5 PFPeA	90		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-157196-F-1-A MSD

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 160011

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	127		ng/L		105	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	123		ng/L		102	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	119		ng/L		98	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-157196-F-1-A MSD

Matrix: Water

Analysis Batch: 160115

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 160011

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	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	121		ng/L		100	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		120	122		ng/L		101	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	120		ng/L		100	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	127		ng/L		105	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	123		ng/L		102	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	120		ng/L		99	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	119		ng/L		99	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	124		ng/L		103	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		120	117		ng/L		97	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	123		ng/L		102	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		120	122		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	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	124		ng/L		103	70 - 130	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	120		ng/L		100	70 - 130	1	30
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		120	115		ng/L		96	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	121		ng/L		100	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	113		ng/L		94	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	108		ng/L		90	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	119		ng/L		98	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	126		ng/L		105	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	123		ng/L		102	70 - 130	1	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	63		50 - 200
13C6 PFDA	53		50 - 200
13C5 PFHxA	69		50 - 200
13C4 PFHpA	62		50 - 200
13C8 PFOA	63		50 - 200
13C9 PFNA	56		50 - 200
13C7 PFUnA	55		50 - 200
13C2 PFDoA	63		50 - 200
13C4 PFBA	73		50 - 200
13C5 PFPeA	70		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	104		50 - 200
13C8 PFOS	100		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	117		50 - 200
13C2-8:2-FTS	110		50 - 200

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QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MB 380-159952/20-A

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 159952

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
9-Chlorohexadecafluoro-3-oxanonane-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/25 11:53	06/27/25 06:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	85		70 - 130	06/26/25 11:53	06/27/25 06:25	1
13C2 PFHxA	86		70 - 130	06/26/25 11:53	06/27/25 06:25	1
13C2 PFDA	90		70 - 130	06/26/25 11:53	06/27/25 06:25	1
13C3-GenX	82		70 - 130	06/26/25 11:53	06/27/25 06:25	1

Lab Sample ID: LCS 380-159952/22-A

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 159952

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.0	22.4		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	24.9		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	24.7		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	23.7		ng/L		95	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	23.1		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	24.5		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	24.9		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	25.1		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	25.6		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	24.7		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-159952/22-A

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 159952

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	25.0	24.6		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	24.7		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	25.0	26.4		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	24.1		ng/L		96	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.0	26.3		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	24.3		ng/L		97	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	24.3		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	25.0		ng/L		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	96		70 - 130
13C2 PFDA	100		70 - 130
13C3-GenX	90		70 - 130

Lab Sample ID: MRL 380-159952/21-A

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 159952

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.96	J	ng/L		98	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.94	J	ng/L		97	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.97	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.10	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.89	J	ng/L		94	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-159952/21-A

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 159952

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.87	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.06	J	ng/L		103	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
d5-NEtFOSAA	95		70 - 130				
13C2 PFHxA	101		70 - 130				
13C2 PFDA	99		70 - 130				
13C3-GenX	98		70 - 130				

Lab Sample ID: 380-157187-1 MS

Matrix: Water

Analysis Batch: 160070

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 159952

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier			Limits			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0	F1 F2	50.2	98.8	E F1	ng/L		197	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	3.9	F1 F2	50.2	106	E F1	ng/L		204	70 - 130		
Perfluoroundecanoic acid (PFUnA)	<2.0	F1 F2	50.2	104	E F1	ng/L		207	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0	F1 F2	50.2	99.5	E F1	ng/L		198	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0	F1 F2	50.2	96.7	E F1	ng/L		193	70 - 130		
Perfluorohexanoic acid (PFHxA)	3.3	F1 F2	50.2	108	E F1	ng/L		208	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0	F1 F2	50.2	98.8	E F1	ng/L		197	70 - 130		
Perfluorooctanoic acid (PFOA)	3.4	F1 F2	50.2	109	E F1	ng/L		211	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0	F1 F2	50.2	104	E F1	ng/L		208	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	3.0	F1 F2	50.2	104	E F1	ng/L		200	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	2.6	F1 F2	50.2	105	E F1	ng/L		204	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0	F1 F2	50.2	103	E F1	ng/L		203	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0	F1 F2	50.2	105	E F1	ng/L		209	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0	F1 F2	50.2	87.9	E F1	ng/L		175	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0	F1 F2	50.2	105	E F1	ng/L		210	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0	F1 F2	50.2	96.7	E F1	ng/L		193	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0	F1 F2	50.2	94.7	E F1	ng/L		189	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0	F1 F2	50.2	103	E F1	ng/L		205	70 - 130		

QC Sample Results

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-157187-1 MS
Matrix: Water
Analysis Batch: 160070

Client Sample ID: Ka'amilo Wells P1
Prep Type: Total/NA
Prep Batch: 159952

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
13C3-GenX	99		70 - 130

Lab Sample ID: 380-157187-1 MSD
Matrix: Water
Analysis Batch: 160070

Client Sample ID: Ka'amilo Wells P1
Prep Type: Total/NA
Prep Batch: 159952

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	F1 F2	50.3	50.6	F2	ng/L		101	70 - 130	64	30
Perfluorooctanesulfonic acid (PFOS)	3.9	F1 F2	50.3	54.9	F2	ng/L		101	70 - 130	64	30
Perfluoroundecanoic acid (PFUnA)	<2.0	F1 F2	50.3	48.3	F2	ng/L		96	70 - 130	73	30
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0	F1 F2	50.3	48.8	F2	ng/L		97	70 - 130	68	30
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0	F1 F2	50.3	48.6	F2	ng/L		97	70 - 130	66	30
Perfluorohexanoic acid (PFHxA)	3.3	F1 F2	50.3	53.5	F2	ng/L		100	70 - 130	67	30
Perfluorododecanoic acid (PFDoA)	<2.0	F1 F2	50.3	48.5	F2	ng/L		96	70 - 130	68	30
Perfluorooctanoic acid (PFOA)	3.4	F1 F2	50.3	55.8	F2	ng/L		104	70 - 130	65	30
Perfluorodecanoic acid (PFDA)	<2.0	F1 F2	50.3	51.2	F2	ng/L		102	70 - 130	68	30
Perfluorohexanesulfonic acid (PFHxS)	3.0	F1 F2	50.3	55.5	F2	ng/L		104	70 - 130	60	30
Perfluorobutanesulfonic acid (PFBS)	2.6	F1 F2	50.3	53.3	F2	ng/L		101	70 - 130	65	30
Perfluoroheptanoic acid (PFHpA)	2.0	F1 F2	50.3	53.5	F2	ng/L		103	70 - 130	64	30
Perfluorononanoic acid (PFNA)	<2.0	F1 F2	50.3	52.3	F2	ng/L		104	70 - 130	67	30
Perfluorotetradecanoic acid (PFTA)	<2.0	F1 F2	50.3	41.8	F2	ng/L		83	70 - 130	71	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0	F1 F2	50.3	50.5	F2	ng/L		100	70 - 130	70	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0	F1 F2	50.3	50.7	F2	ng/L		101	70 - 130	62	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0	F1 F2	50.3	48.0	F2	ng/L		95	70 - 130	65	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0	F1 F2	50.3	51.8	F2	ng/L		103	70 - 130	66	30

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
d5-NEtFOSAA	94		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	97		70 - 130
13C3-GenX	96		70 - 130

QC Association Summary

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 159952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-157187-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-157187-2	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-157187-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-157187-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MB 380-159952/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-159952/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-159952/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-157187-1 MS	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-157187-1 MSD	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	

Prep Batch: 160011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-157187-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-157187-2	Ka'amilo Wells P2	Total/NA	Water	533	
380-157187-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	
380-157187-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-160011/20-A	Method Blank	Total/NA	Water	533	
LCS 380-160011/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-160011/21-A	Lab Control Sample	Total/NA	Water	533	
380-157196-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-157196-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 160070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-157187-1	Ka'amilo Wells P1	Total/NA	Water	537.1	159952
380-157187-2	Ka'amilo Wells P2	Total/NA	Water	537.1	159952
380-157187-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	159952
380-157187-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	159952
MB 380-159952/20-A	Method Blank	Total/NA	Water	537.1	159952
LCS 380-159952/22-A	Lab Control Sample	Total/NA	Water	537.1	159952
MRL 380-159952/21-A	Lab Control Sample	Total/NA	Water	537.1	159952
380-157187-1 MS	Ka'amilo Wells P1	Total/NA	Water	537.1	159952
380-157187-1 MSD	Ka'amilo Wells P1	Total/NA	Water	537.1	159952

Analysis Batch: 160115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-157187-1	Ka'amilo Wells P1	Total/NA	Water	533	160011
380-157187-2	Ka'amilo Wells P2	Total/NA	Water	533	160011
380-157187-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	160011
380-157187-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	160011
MBL 380-160011/20-A	Method Blank	Total/NA	Water	533	160011
LCS 380-160011/22-A	Lab Control Sample	Total/NA	Water	533	160011
MRL 380-160011/21-A	Lab Control Sample	Total/NA	Water	533	160011
380-157196-E-1-A MS	Matrix Spike	Total/NA	Water	533	160011
380-157196-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	160011

Lab Chronicle

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

Job ID: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Date Collected: 06/23/25 11:52

Date Received: 06/25/25 09:19

Lab Sample ID: 380-157187-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			160011	E2HD	EA POM	06/26/25 16:32
Total/NA	Analysis	533		1	160115	Y5FM	EA POM	06/27/25 14:07
Total/NA	Prep	537.1 DW			159952	OTM3	EA POM	06/26/25 11:53
Total/NA	Analysis	537.1		1	160070	SZ9R	EA POM	06/27/25 06:54

Client Sample ID: Ka'amilo Wells P2

Date Collected: 06/23/25 12:37

Date Received: 06/25/25 09:19

Lab Sample ID: 380-157187-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			160011	E2HD	EA POM	06/26/25 16:32
Total/NA	Analysis	533		1	160115	Y5FM	EA POM	06/27/25 14:29
Total/NA	Prep	537.1 DW			159952	OTM3	EA POM	06/26/25 11:53
Total/NA	Analysis	537.1		1	160070	SZ9R	EA POM	06/27/25 08:20

Client Sample ID: FB: Ka'amilo Wells P1

Date Collected: 06/23/25 11:52

Date Received: 06/25/25 09:19

Lab Sample ID: 380-157187-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			160011	E2HD	EA POM	06/26/25 16:32
Total/NA	Analysis	533		1	160115	Y5FM	EA POM	06/27/25 14:40
Total/NA	Prep	537.1 DW			159952	OTM3	EA POM	06/26/25 11:53
Total/NA	Analysis	537.1		1	160070	SZ9R	EA POM	06/27/25 08:29

Client Sample ID: FB: Ka'amilo Wells P2

Date Collected: 06/23/25 12:37

Date Received: 06/25/25 09:19

Lab Sample ID: 380-157187-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			160011	E2HD	EA POM	06/26/25 16:32
Total/NA	Analysis	533		1	160115	Y5FM	EA POM	06/27/25 14:50
Total/NA	Prep	537.1 DW			159952	OTM3	EA POM	06/26/25 11:53
Total/NA	Analysis	537.1		1	160070	SZ9R	EA POM	06/27/25 08:39

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: 380-157187-1
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
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Method Summary

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

Job ID: 380-157187-1
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: 380-157187-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-157187-1	Ka'amilo Wells P1	Water	06/23/25 11:52	06/25/25 09:19
380-157187-2	Ka'amilo Wells P2	Water	06/23/25 12:37	06/25/25 09:19
380-157187-3	FB: Ka'amilo Wells P1	Water	06/23/25 11:52	06/25/25 09:19
380-157187-4	FB: Ka'amilo Wells P2	Water	06/23/25 12:37	06/25/25 09:19

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- 17

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

Environment Testing
America

[illegible]

Cooler Temperature(s) °C and Other Remarks

751A 4.0 - 0.0 = 4.0 GF 6/30/2025
FPOE

Ver 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-157187-1

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

Login Number: 157187

List Number: 1

Creator: Segura, Ryan

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	