

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

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

JOB NUMBER

380-164553-1

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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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	15
Surrogate Summary	17
Isotope Dilution Summary	18
QC Sample Results	19
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: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 380-164553-1

Job ID: 380-164553-1

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Job Narrative 380-164553-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 8/6/2025 9:34 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 2.4°C.

PFAS

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

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Detection Summary

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-164553-1

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)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		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)	3.6		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)	2.9		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

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)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		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: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

No Detections.

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

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: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-164553-1

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoropentanoic acid (PFPeA)	3.7		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C6 PFDA	100		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C5 PFHxA	98		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C4 PFHpA	104		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C8 PFOA	103		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C9 PFNA	101		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C7 PFUnA	107		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C2 PFDoA	106		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C4 PFBA	103		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C5 PFPeA	103		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C3 PFBS	106		50 - 200	08/07/25 08:57	08/08/25 10:32	1

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Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-164553-1

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	109		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C8 PFOS	104		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C2-4:2-FTS	128		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C2-6:2-FTS	179		50 - 200	08/07/25 08:57	08/08/25 10:32	1
13C2-8:2-FTS	135		50 - 200	08/07/25 08:57	08/08/25 10:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorooctanesulfonic acid (PFOS)	4.1		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	08/07/25 02:50	08/07/25 17:30	1
13C2 PFHxA	88		70 - 130	08/07/25 02:50	08/07/25 17:30	1
13C2 PFDA	93		70 - 130	08/07/25 02:50	08/07/25 17:30	1
13C3-GenX	86		70 - 130	08/07/25 02:50	08/07/25 17:30	1

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1

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Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorobutanesulfonic acid (PFBS)	2.6		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorohexanoic acid (PFHxA)	2.9		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoropentanoic acid (PFPeA)	3.2		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C6 PFDA	99		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C5 PFHxA	95		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C4 PFHpA	98		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C8 PFOA	96		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C9 PFNA	101		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C7 PFUnA	102		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C2 PFDoA	110		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C4 PFBA	96		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C5 PFPeA	96		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C3 PFBS	104		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C3 PFHxS	109		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C8 PFOS	102		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C2-4:2-FTS	121		50 - 200	08/07/25 08:57	08/08/25 10:43	1
13C2-6:2-FTS	133		50 - 200	08/07/25 08:57	08/08/25 10:43	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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	118		50 - 200	08/07/25 08:57	08/08/25 10:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorooctanesulfonic acid (PFOS)	3.5		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorohexanoic acid (PFHxA)	3.1		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorooctanoic acid (PFOA)	3.3		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			08/07/25 02:50	08/07/25 17:40	1
13C2 PFHxA	95		70 - 130			08/07/25 02:50	08/07/25 17:40	1
13C2 PFDA	99		70 - 130			08/07/25 02:50	08/07/25 17:40	1
13C3-GenX	96		70 - 130			08/07/25 02:50	08/07/25 17:40	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 10:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C6 PFDA	101		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C5 PFHxA	107		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C4 PFHpA	103		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C8 PFOA	103		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C9 PFNA	106		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C7 PFUnA	107		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C2 PFDoA	109		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C4 PFBA	97		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C5 PFPeA	101		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C3 PFBS	108		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C3 PFHxS	107		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C8 PFOS	103		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C2-4:2-FTS	108		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C2-6:2-FTS	107		50 - 200	08/07/25 08:57	08/08/25 10:54	1
13C2-8:2-FTS	105		50 - 200	08/07/25 08:57	08/08/25 10:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 17:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130			08/07/25 02:50	08/07/25 17:51	1
13C2 PFHxA	92		70 - 130			08/07/25 02:50	08/07/25 17:51	1
13C2 PFDA	98		70 - 130			08/07/25 02:50	08/07/25 17:51	1
13C3-GenX	90		70 - 130			08/07/25 02:50	08/07/25 17:51	1

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		08/07/25 08:57	08/08/25 11:04	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C6 PFDA	104		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C5 PFHxA	105		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C4 PFHpA	102		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C8 PFOA	105		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C9 PFNA	107		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C7 PFUnA	104		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C2 PFDoA	103		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C4 PFBA	106		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C5 PFPeA	104		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C3 PFBS	98		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C3 PFHxS	108		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C8 PFOS	102		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C2-4:2-FTS	107		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C2-6:2-FTS	101		50 - 200			08/07/25 08:57	08/08/25 11:04	1
13C2-8:2-FTS	103		50 - 200			08/07/25 08:57	08/08/25 11:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/07/25 02:50	08/07/25 18:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130			08/07/25 02:50	08/07/25 18:02	1
13C2 PFHxA	97		70 - 130			08/07/25 02:50	08/07/25 18:02	1
13C2 PFDA	94		70 - 130			08/07/25 02:50	08/07/25 18:02	1
13C3-GenX	91		70 - 130			08/07/25 02:50	08/07/25 18:02	1

Action Limit Summary

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-164553-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.3		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		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)	4.1		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)	3.4		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

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)	3.7		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		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.5		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-164553-3

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			
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

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: 380-164553-1
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)
380-164553-1	Ka'amilo Wells P1	102	88	93	86
380-164553-2	Ka'amilo Wells P2	108	95	99	96
380-164553-3	FB: Ka'amilo Wells P1	101	92	98	90
380-164553-4	FB: Ka'amilo Wells P2	96	97	94	91
380-164631-B-5-A MS	Matrix Spike	101	88	90	89
380-164631-C-5-A MSD	Matrix Spike Duplicate	102	93	97	94
LCS 380-167223/22-A	Lab Control Sample	94	94	92	86
MBL 380-167223/20-A	Method Blank	107	96	103	95
MRL 380-167223/21-A	Lab Control Sample	99	90	91	86

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: 380-164553-1
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)
380-164491-B-1-A MS	Matrix Spike	96	96	99	97	96	101	100	103
380-164491-C-1-A MSD	Matrix Spike Duplicate	95	97	94	92	92	98	99	106
380-164553-1	Ka'amilo Wells P1	98	100	98	104	103	101	107	106
380-164553-2	Ka'amilo Wells P2	88	99	95	98	96	101	102	110
380-164553-3	FB: Ka'amilo Wells P1	92	101	107	103	103	106	107	109
380-164553-4	FB: Ka'amilo Wells P2	90	104	105	102	105	107	104	103
LCS 380-167247/24-A	Lab Control Sample	95	106	101	101	105	106	107	105
MBL 380-167247/22-A	Method Blank	92	104	101	102	104	103	103	99
MRL 380-167247/23-A	Lab Control Sample	95	103	103	102	106	108	104	101

		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)
380-164491-B-1-A MS	Matrix Spike	97	105	99	107	104	119	115	118
380-164491-C-1-A MSD	Matrix Spike Duplicate	97	97	102	106	104	126	118	117
380-164553-1	Ka'amilo Wells P1	103	103	106	109	104	128	179	135
380-164553-2	Ka'amilo Wells P2	96	96	104	109	102	121	133	118
380-164553-3	FB: Ka'amilo Wells P1	97	101	108	107	103	108	107	105
380-164553-4	FB: Ka'amilo Wells P2	106	104	98	108	102	107	101	103
LCS 380-167247/24-A	Lab Control Sample	103	103	106	109	105	112	111	111
MBL 380-167247/22-A	Method Blank	99	95	102	104	101	110	110	105
MRL 380-167247/23-A	Lab Control Sample	102	98	104	105	102	109	109	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: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-167247/22-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 167247

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		08/07/25 08:57	08/08/25 06:58	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C6 PFDA	104		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C5 PFHxA	101		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C4 PFHpA	102		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C8 PFOA	104		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C9 PFNA	103		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C7 PFUnA	103		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C2 PFDoA	99		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C4 PFBA	99		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C5 PFPeA	95		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C3 PFBS	102		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C3 PFHxS	104		50 - 200	08/07/25 08:57	08/08/25 06:58	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-167247/22-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 167247

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	101		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C2-4:2-FTS	110		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C2-6:2-FTS	110		50 - 200	08/07/25 08:57	08/08/25 06:58	1
13C2-8:2-FTS	105		50 - 200	08/07/25 08:57	08/08/25 06:58	1

Lab Sample ID: LCS 380-167247/24-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	66.0		ng/L		110	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.1	65.9		ng/L		110	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	65.8		ng/L		109	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	62.9		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	61.5		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	66.0		ng/L		110	70 - 130
Perfluorododecanoic acid (PFDaA)	60.1	64.9		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	66.2		ng/L		110	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	61.4		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	62.9		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	60.1	62.2		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	64.6		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	63.5		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	64.4		ng/L		107	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	63.1		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	63.5		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	63.0		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	64.8		ng/L		108	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	71.1		ng/L		118	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	64.1		ng/L		107	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	66.4		ng/L		110	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	63.0		ng/L		105	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	66.6		ng/L		111	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	65.4		ng/L		109	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: LCS 380-167247/24-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	61.0		ng/L		101	70 - 130
		LCS	LCS				
		%Recovery	Qualifier				Limits
13C3 HFPO-DA		95					50 - 200
13C6 PFDA		106					50 - 200
13C5 PFHxA		101					50 - 200
13C4 PFHpA		101					50 - 200
13C8 PFOA		105					50 - 200
13C9 PFNA		106					50 - 200
13C7 PFUnA		107					50 - 200
13C2 PFDoA		105					50 - 200
13C4 PFBA		103					50 - 200
13C5 PFPeA		103					50 - 200
13C3 PFBS		106					50 - 200
13C3 PFHxS		109					50 - 200
13C8 PFOS		105					50 - 200
13C2-4:2-FTS		112					50 - 200
13C2-6:2-FTS		111					50 - 200
13C2-8:2-FTS		111					50 - 200

Lab Sample ID: MRL 380-167247/23-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.12	J	ng/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	2.24	J	ng/L		112	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.14	J	ng/L		107	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.19	J	ng/L		109	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-167247/23-A

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.29	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.33	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	1.94	J	ng/L		97	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.15	J	ng/L		108	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.12	J	ng/L		106	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	95		50 - 200
13C6 PFDA	103		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	104		50 - 200
13C2 PFDoA	101		50 - 200
13C4 PFBA	102		50 - 200
13C5 PFPeA	98		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-164491-B-1-A MS

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 167247

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		60.5	65.2		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.5	66.6		ng/L		110	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.5	61.1		ng/L		101	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-164491-B-1-A MS

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.5	62.3		ng/L		103	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.5	66.6		ng/L		110	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.5	66.3		ng/L		110	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.5	62.7		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.5	64.9		ng/L		107	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.5	64.4		ng/L		107	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.5	65.1		ng/L		108	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.5	64.8		ng/L		107	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.5	64.9		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.5	64.6		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.5	65.4		ng/L		108	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.5	66.2		ng/L		109	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.5	62.8		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.5	67.3		ng/L		111	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.5	66.0		ng/L		109	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		60.5	65.3		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.5	67.4		ng/L		112	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.5	69.2		ng/L		114	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.5	62.1		ng/L		103	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.5	64.4		ng/L		106	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.5	63.7		ng/L		105	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.5	61.6		ng/L		102	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	96		50 - 200
13C5 PFHxA	99		50 - 200
13C4 PFHpA	97		50 - 200
13C8 PFOA	96		50 - 200
13C9 PFNA	101		50 - 200
13C7 PFUnA	100		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	97		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	99		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	104		50 - 200

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QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-164491-B-1-A MS

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 167247

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	118		50 - 200

Lab Sample ID: 380-164491-C-1-A MSD

Matrix: Water

Analysis Batch: 167448

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 167247

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		60.4	64.7		ng/L		107	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		60.4	67.9		ng/L		113	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	65.1		ng/L		108	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	61.1		ng/L		101	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.1		ng/L		105	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	66.1		ng/L		110	70 - 130	0	30
Perfluorododecanoic acid (PFDaA)	<2.0		60.4	62.8		ng/L		104	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	66.7		ng/L		110	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	63.4		ng/L		105	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	64.7		ng/L		107	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	66.7		ng/L		110	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	66.6		ng/L		110	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	65.6		ng/L		109	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	65.3		ng/L		108	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	64.9		ng/L		108	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	66.6		ng/L		110	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	64.3		ng/L		107	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	67.3		ng/L		111	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	64.9		ng/L		107	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.4	66.7		ng/L		110	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	70.3		ng/L		116	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	65.2		ng/L		108	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	68.3		ng/L		113	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	63.3		ng/L		105	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	62.5		ng/L		104	70 - 130	1	30

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QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	95		50 - 200
13C6 PFDA	97		50 - 200
13C5 PFHxA	94		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	92		50 - 200
13C9 PFNA	98		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	97		50 - 200
13C5 PFPeA	97		50 - 200
13C3 PFBS	102		50 - 200
13C3 PFHxS	106		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	126		50 - 200
13C2-6:2-FTS	118		50 - 200
13C2-8:2-FTS	117		50 - 200

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

Lab Sample ID: MBL 380-167223/20-A
Matrix: Water
Analysis Batch: 167288

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 167223

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		08/07/25 02:50	08/07/25 14:56	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130			08/07/25 02:50	08/07/25 14:56	1
13C2 PFHxA	96		70 - 130			08/07/25 02:50	08/07/25 14:56	1
13C2 PFDA	103		70 - 130			08/07/25 02:50	08/07/25 14:56	1

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QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MBL 380-167223/20-A
Matrix: Water
Analysis Batch: 167288

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 167223

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	95		70 - 130	08/07/25 02:50	08/07/25 14:56	1

Lab Sample ID: LCS 380-167223/22-A
Matrix: Water
Analysis Batch: 167288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 167223

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.2	46.7		ng/L		93	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.2	50.3		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	48.9		ng/L		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	49.6		ng/L		99	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	47.7		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	46.5		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	46.2		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	50.2	50.8		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	50.2	50.1		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	50.9		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	51.5		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	49.2		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	50.2	47.7		ng/L		95	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	40.5		ng/L		81	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	47.1		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	52.9		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	48.2		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	45.3		ng/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	94		70 - 130
13C2 PFHxA	94		70 - 130
13C2 PFDA	92		70 - 130
13C3-GenX	86		70 - 130

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: MRL 380-167223/21-A

Matrix: Water

Analysis Batch: 167288

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167223

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	2.16	J	ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.05	J	ng/L		102	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.06	J	ng/L		103	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.23	J	ng/L		112	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.74	J	ng/L		87	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.07	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.34	J	ng/L		117	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.05	J	ng/L		102	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.03	J	ng/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	90		70 - 130
13C2 PFDA	91		70 - 130
13C3-GenX	86		70 - 130

Lab Sample ID: 380-164631-B-5-A MS

Matrix: Water

Analysis Batch: 167288

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 167223

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	45.8		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	50.8		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	48.7		ng/L		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	53.0		ng/L		105	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-164631-B-5-A MS

Matrix: Water

Analysis Batch: 167288

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 167223

Sample Data: 10/12/20										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	53.0		ng/L		105	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	48.2		ng/L		94	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	46.0		ng/L		92	70 - 130	
Perfluorooctanoic acid (PFOA)	<2.0		50.2	50.0		ng/L		98	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		50.2	48.0		ng/L		96	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	53.6		ng/L		105	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	55.0		ng/L		109	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	48.4		ng/L		95	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		50.2	47.9		ng/L		95	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	37.5		ng/L		75	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	45.9		ng/L		91	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	55.7		ng/L		111	70 - 130	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	50.3		ng/L		100	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	47.5		ng/L		95	70 - 130	

Lab Sample ID: 380-164631-C-5-A MSD

Matrix: Water

Analysis Batch: 167288

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 167223

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	47.5		ng/L		95	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	51.1		ng/L		101	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	48.1		ng/L		96	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	51.4		ng/L		102	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	52.1		ng/L		104	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	49.3		ng/L		96	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	48.6		ng/L		97	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	49.6		ng/L		97	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	48.5		ng/L		97	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

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

Lab Sample ID: 380-164631-C-5-A MSD

Matrix: Water

Analysis Batch: 167288

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 167223

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	55.4		ng/L		108	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	53.1		ng/L		105	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	49.4		ng/L		97	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	49.3		ng/L		98	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	39.0		ng/L		78	70 - 130	4	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		50.2	45.4		ng/L		91	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	52.0		ng/L		104	70 - 130	7	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	49.3		ng/L		98	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	48.9		ng/L		97	70 - 130	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	102		70 - 130
13C2 PFHxA	93		70 - 130
13C2 PFDA	97		70 - 130
13C3-GenX	94		70 - 130

QC Association Summary

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 167223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-164553-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-164553-2	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-164553-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-164553-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-167223/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-167223/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-167223/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-164631-B-5-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-164631-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 167247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-164553-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-164553-2	Ka'amilo Wells P2	Total/NA	Water	533	
380-164553-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	
380-164553-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-167247/22-A	Method Blank	Total/NA	Water	533	
LCS 380-167247/24-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-167247/23-A	Lab Control Sample	Total/NA	Water	533	
380-164491-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-164491-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 167288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-164553-1	Ka'amilo Wells P1	Total/NA	Water	537.1	167223
380-164553-2	Ka'amilo Wells P2	Total/NA	Water	537.1	167223
380-164553-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	167223
380-164553-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	167223
MBL 380-167223/20-A	Method Blank	Total/NA	Water	537.1	167223
LCS 380-167223/22-A	Lab Control Sample	Total/NA	Water	537.1	167223
MRL 380-167223/21-A	Lab Control Sample	Total/NA	Water	537.1	167223
380-164631-B-5-A MS	Matrix Spike	Total/NA	Water	537.1	167223
380-164631-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	167223

Analysis Batch: 167448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-164553-1	Ka'amilo Wells P1	Total/NA	Water	533	167247
380-164553-2	Ka'amilo Wells P2	Total/NA	Water	533	167247
380-164553-3	FB: Ka'amilo Wells P1	Total/NA	Water	533	167247
380-164553-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	167247
MBL 380-167247/22-A	Method Blank	Total/NA	Water	533	167247
LCS 380-167247/24-A	Lab Control Sample	Total/NA	Water	533	167247
MRL 380-167247/23-A	Lab Control Sample	Total/NA	Water	533	167247
380-164491-B-1-A MS	Matrix Spike	Total/NA	Water	533	167247
380-164491-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	167247

Lab Chronicle

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

Job ID: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-164553-1

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			167247	X5FS	EA POM	08/07/25 08:57
Total/NA	Analysis	533		1	167448	SZ9R	EA POM	08/08/25 10:32
Total/NA	Prep	537.1 DW			167223	G9MN	EA POM	08/07/25 02:50
Total/NA	Analysis	537.1		1	167288	SZ9R	EA POM	08/07/25 17:30

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-164553-2

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			167247	X5FS	EA POM	08/07/25 08:57
Total/NA	Analysis	533		1	167448	SZ9R	EA POM	08/08/25 10:43
Total/NA	Prep	537.1 DW			167223	G9MN	EA POM	08/07/25 02:50
Total/NA	Analysis	537.1		1	167288	SZ9R	EA POM	08/07/25 17:40

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-164553-3

Date Collected: 08/04/25 11:58

Matrix: Water

Date Received: 08/06/25 09:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			167247	X5FS	EA POM	08/07/25 08:57
Total/NA	Analysis	533		1	167448	SZ9R	EA POM	08/08/25 10:54
Total/NA	Prep	537.1 DW			167223	G9MN	EA POM	08/07/25 02:50
Total/NA	Analysis	537.1		1	167288	SZ9R	EA POM	08/07/25 17:51

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-164553-4

Date Collected: 08/04/25 12:36

Matrix: Water

Date Received: 08/06/25 09:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			167247	X5FS	EA POM	08/07/25 08:57
Total/NA	Analysis	533		1	167448	SZ9R	EA POM	08/08/25 11:04
Total/NA	Prep	537.1 DW			167223	G9MN	EA POM	08/07/25 02:50
Total/NA	Analysis	537.1		1	167288	SZ9R	EA POM	08/07/25 18:02

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: 380-164553-1
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: 380-164553-1
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: 380-164553-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-164553-1	Ka'amilo Wells P1	Water	08/04/25 11:58	08/06/25 09:34	Hawaii
380-164553-2	Ka'amilo Wells P2	Water	08/04/25 12:36	08/06/25 09:34	Hawaii
380-164553-3	FB: Ka'amilo Wells P1	Water	08/04/25 11:58	08/06/25 09:34	Hawaii
380-164553-4	FB: Ka'amilo Wells P2	Water	08/04/25 12:36	08/06/25 09:34	Hawaii

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

Chain of Custody Record

eurolins
Environment Testing
America

Client Information		Lab PIR Arada Rachelle		Carrier Tracking No(s)		COC No: 380-27941-2757 2			
Client Contact: Kirk Iwamoto		Phone: +1 808 748 5840		State of Origin		Page: Page 2 of 2			
Company: City & County of Honolulu		PWSID		Analysis Requested		Job #:			
Address: 630 South Beretania Street, Chemistry Lab		Due Date Requested:		Analysis Requested		Preservation Codes			
City: Honolulu		TAT Requested (days): RUSH		Analysis Requested		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)			
State, Zip: HI 96843		Compliance Project: ☐ No		Analysis Requested		Total Number of Containers			
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023		Analysis Requested		Special Instructions/Note:			
Email: kiwamoto@hbws.org		WFO #:		Analysis Requested		380-164553 COC			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 3800111		Analysis Requested					
Site:		SSOW#:		Analysis Requested					
Sample Identification		Sample Date		Sample Time		Sample Type (G=grab)		Matrix (W=water, S=solid, O=other)	
Ka'amilo Wells P1		4-Aug-2025		1158		G		Water	
Ka'amilo Wells P2		4-Aug-2025		1236		G		Water	
FB: Ka'amilo Wells P1		4-Aug-2025		1158				Water	
FB: Ka'amilo Wells P2		4-Aug-2025		1236				Water	
Possible Hazard Identification		☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological							
Deliverable Requested 1 II III IV Other (specify)									
Empty Kit Relinquished by		Date:		Time:					
Relinquished by		Date/Time:		Company:					
Relinquished by		Date/Time:		Company:					
Custody Seals Intact:		Custody Seal No							

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-164553-1

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

Login Number: 164553

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Hernandez, Orlando

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	