

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

RED-HILL
PFAS: Ka'amilo Wells P1

JOB NUMBER

380-185038-1

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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: 380-185038-1

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Job Narrative 380-185038-1

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 11/28/2025 10:12 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 2.6°C.

PFAS

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

Detection Summary

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-185038-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.0		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.8		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-185038-1

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

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 (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoropentanoic acid (PFPeA)	3.9		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	69		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C6 PFDA	91		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C5 PFHxA	75		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C4 PFHpA	82		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C8 PFOA	84		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C9 PFNA	88		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C7 PFUnA	90		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C2 PFDoA	95		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C4 PFBA	83		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C5 PFPeA	84		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C3 PFBS	104		50 - 200	12/01/25 18:10	12/02/25 07:43	1

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Client Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-185038-1

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	102		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C8 PFOS	105		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C2-4:2-FTS	130		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C2-6:2-FTS	125		50 - 200	12/01/25 18:10	12/02/25 07:43	1
13C2-8:2-FTS	119		50 - 200	12/01/25 18:10	12/02/25 07:43	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		12/01/25 03:00	12/02/25 04:49	1
Perfluorooctanesulfonic acid (PFOS)	5.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorohexanoic acid (PFHxA)	3.8		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorohexanesulfonic acid (PFHxS)	3.9		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 04:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130	12/01/25 03:00	12/02/25 04:49	1
13C2 PFHxA	106		70 - 130	12/01/25 03:00	12/02/25 04:49	1
13C2 PFDA	116		70 - 130	12/01/25 03:00	12/02/25 04:49	1
13C3-GenX	99		70 - 130	12/01/25 03:00	12/02/25 04:49	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

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		12/01/25 18:10	12/02/25 11:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1

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Client Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

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		12/01/25 18:10	12/02/25 11:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/01/25 18:10	12/02/25 11:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C6 PFDA	104		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C5 PFHxA	102		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C4 PFHpA	103		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C8 PFOA	107		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C9 PFNA	106		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C7 PFUnA	108		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C2 PFDoA	109		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C4 PFBA	104		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C5 PFPeA	103		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C3 PFBS	104		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C3 PFHxS	106		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C8 PFOS	108		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C2-4:2-FTS	136		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C2-6:2-FTS	133		50 - 200	12/01/25 18:10	12/02/25 11:04	1
13C2-8:2-FTS	123		50 - 200	12/01/25 18:10	12/02/25 11:04	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

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		12/01/25 03:00	12/02/25 06:35	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/01/25 03:00	12/02/25 06:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	97		70 - 130			12/01/25 03:00	12/02/25 06:35	1
13C2 PFHxA	99		70 - 130			12/01/25 03:00	12/02/25 06:35	1
13C2 PFDA	109		70 - 130			12/01/25 03:00	12/02/25 06:35	1
13C3-GenX	87		70 - 130			12/01/25 03:00	12/02/25 06:35	1

Action Limit Summary

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-185038-1

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)	3.5		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)	3.8		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

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)	<2.0		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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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)
380-185038-1	Ka'amilo Wells P1	110	106	116	99
380-185038-1 MS	Ka'amilo Wells P1	104	98	106	90
380-185038-1 MSD	Ka'amilo Wells P1	102	104	107	95
380-185038-2	FB: Ka'amilo Wells P1	97	99	109	87
LCS 380-189146/21-A	Lab Control Sample	92	93	107	81
MBL 380-189146/19-A	Method Blank	94	88	104	78
MRL 380-189146/20-A	Lab Control Sample	97	94	108	84

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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)
380-185038-1	Ka'amilo Wells P1	69	91	75	82	84	88	90	95
380-185038-1 MS	Ka'amilo Wells P1	102	108	98	100	103	105	108	107
380-185038-1 MSD	Ka'amilo Wells P1	101	106	100	101	103	104	106	106
380-185038-2	FB: Ka'amilo Wells P1	95	104	102	103	107	106	108	109
LCS 380-189305/22-A	Lab Control Sample	94	105	97	96	100	104	106	106
MBL 380-189305/20-A	Method Blank	100	116	110	113	115	114	114	114
MRL 380-189305/21-A	Lab Control Sample	90	102	98	100	102	102	102	103

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)
380-185038-1	Ka'amilo Wells P1	83	84	104	102	105	130	125	119
380-185038-1 MS	Ka'amilo Wells P1	104	106	102	101	100	117	114	116
380-185038-1 MSD	Ka'amilo Wells P1	103	104	104	106	102	117	115	117
380-185038-2	FB: Ka'amilo Wells P1	104	103	104	106	108	136	133	123
LCS 380-189305/22-A	Lab Control Sample	101	101	99	100	101	108	110	112
MBL 380-189305/20-A	Method Blank	111	112	107	109	109	132	125	123
MRL 380-189305/21-A	Lab Control Sample	98	99	101	103	101	120	116	111

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-189305/20-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 189305

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		12/01/25 18:10	12/02/25 07:15	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C6 PFDA	116		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C5 PFHxA	110		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C4 PFHpA	113		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C8 PFOA	115		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C9 PFNA	114		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C7 PFUnA	114		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C2 PFDoA	114		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C4 PFBA	111		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C5 PFPeA	112		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C3 PFBS	107		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C3 PFHxS	109		50 - 200	12/01/25 18:10	12/02/25 07:15	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-189305/20-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 189305

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	109		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C2-4:2-FTS	132		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C2-6:2-FTS	125		50 - 200	12/01/25 18:10	12/02/25 07:15	1
13C2-8:2-FTS	123		50 - 200	12/01/25 18:10	12/02/25 07:15	1

Lab Sample ID: LCS 380-189305/22-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	117		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	120	118		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	121		ng/L		101	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	113		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	113		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	120	116		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDaA)	120	119		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	121		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	115		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	120	117		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	115		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	117		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	120	116		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	124		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	120	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	129		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	119		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	121		ng/L		100	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	114		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	121		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	118		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	120	119		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	123		ng/L		102	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: LCS 380-189305/22-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	113		ng/L		94	70 - 130
		LCS	LCS				
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	94		50 - 200				
13C6 PFDA	105		50 - 200				
13C5 PFHxA	97		50 - 200				
13C4 PFHpA	96		50 - 200				
13C8 PFOA	100		50 - 200				
13C9 PFNA	104		50 - 200				
13C7 PFUnA	106		50 - 200				
13C2 PFDoA	106		50 - 200				
13C4 PFBA	101		50 - 200				
13C5 PFPeA	101		50 - 200				
13C3 PFBS	99		50 - 200				
13C3 PFHxS	100		50 - 200				
13C8 PFOS	101		50 - 200				
13C2-4:2-FTS	108		50 - 200				
13C2-6:2-FTS	110		50 - 200				
13C2-8:2-FTS	112		50 - 200				

Lab Sample ID: MRL 380-189305/21-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.04	J	ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.97	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.02	J	ng/L		101	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.93	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.04	J	ng/L		102	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-189305/21-A

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.32	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.22	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.31	J	ng/L		115	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	1.81	J	ng/L		90	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.94	J	ng/L		97	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.91	J	ng/L		95	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	102		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	100		50 - 200
13C8 PFOA	102		50 - 200
13C9 PFNA	102		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	98		50 - 200
13C5 PFPeA	99		50 - 200
13C3 PFBS	101		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	101		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	116		50 - 200
13C2-8:2-FTS	111		50 - 200

Lab Sample ID: 380-185038-1 MS

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	120		ng/L		100	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	118		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	115		ng/L		95	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-185038-1 MS

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189305

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		121	116		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	3.0		121	118		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	118		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	2.0		121	120		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.5		121	120		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	3.7		121	122		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	116		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	4.5		121	124		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	3.8		121	121		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	120		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	117		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	118		ng/L		97	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	130		ng/L		107	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	114		ng/L		94	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	121		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	121		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	3.9		121	119		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	122		ng/L		101	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	117		ng/L		97	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	102		50 - 200
13C6 PFDA	108		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	100		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	106		50 - 200
13C3 PFBS	102		50 - 200
13C3 PFHxS	101		50 - 200
13C8 PFOS	100		50 - 200

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QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-185038-1 MS

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189305

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	116		50 - 200

Lab Sample ID: 380-185038-1 MSD

Matrix: Water

Analysis Batch: 189429

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189305

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		121	118		ng/L		98	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		121	119		ng/L		99	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	116		ng/L		96	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	116		ng/L		96	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	3.0		121	117		ng/L		94	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		121	117		ng/L		97	70 - 130	0	30
Perfluorododecanoic acid (PFDaA)	<2.0		121	118		ng/L		98	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	2.0		121	122		ng/L		99	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	3.5		121	119		ng/L		96	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	3.7		121	119		ng/L		96	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		121	118		ng/L		98	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	4.5		121	123		ng/L		98	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	3.8		121	121		ng/L		97	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	120		ng/L		99	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		121	117		ng/L		96	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	122		ng/L		101	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	125		ng/L		103	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	120		ng/L		100	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	120		ng/L		99	70 - 130	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		121	119		ng/L		98	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	123		ng/L		102	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	119		ng/L		99	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	3.9		121	124		ng/L		99	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	124		ng/L		103	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	116		ng/L		95	70 - 130	1	30

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QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	101		50 - 200
13C6 PFDA	106		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	104		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	106		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	117		50 - 200

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

Lab Sample ID: MBL 380-189146/19-A
Matrix: Water
Analysis Batch: 189288

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189146

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		12/01/25 03:00	12/02/25 04:18	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/01/25 03:00	12/02/25 04:18	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	94		70 - 130			12/01/25 03:00	12/02/25 04:18	1
13C2 PFHxA	88		70 - 130			12/01/25 03:00	12/02/25 04:18	1
13C2 PFDA	104		70 - 130			12/01/25 03:00	12/02/25 04:18	1

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QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-189146/19-A
Matrix: Water
Analysis Batch: 189288

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189146

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	78		70 - 130	12/01/25 03:00	12/02/25 04:18	1

Lab Sample ID: LCS 380-189146/21-A
Matrix: Water
Analysis Batch: 189288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189146

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.2	41.9		ng/L		83	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.2	53.6		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	52.5		ng/L		105	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	48.7		ng/L		97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	48.5		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	48.1		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	54.0		ng/L		108	70 - 130
Perfluorooctanoic acid (PFOA)	50.2	49.8		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	50.2	54.8		ng/L		109	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	53.3		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	52.6		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	49.5		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	50.2	51.1		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	49.4		ng/L		98	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	55.7		ng/L		111	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	54.7		ng/L		109	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	52.1		ng/L		104	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	43.3		ng/L		86	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	92		70 - 130
13C2 PFHxA	93		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	81		70 - 130

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-189146/20-A

Matrix: Water

Analysis Batch: 189288

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 189146

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.64	J	ng/L		82	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.31	J	ng/L		116	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.21	J	ng/L		110	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.97	J	ng/L		98	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.01	J	ng/L		101	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.01	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.19	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.29	J	ng/L		115	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.25	J	ng/L		112	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.05	J	ng/L		103	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.25	J	ng/L		113	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.12	J	ng/L		106	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.11	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.83	J	ng/L		92	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	94		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	84		70 - 130

Lab Sample ID: 380-185038-1 MS

Matrix: Water

Analysis Batch: 189288

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.3		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	5.0		25.1	32.3		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.5		ng/L		109	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.7		ng/L		106	70 - 130

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QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-185038-1 MS

Matrix: Water

Analysis Batch: 189288

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189146

Table 1: PFAS Data - 10/1/2024									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	27.3		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	3.8		25.1	29.2		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	27.6		ng/L		110	70 - 130
Perfluorooctanoic acid (PFOA)	4.1		25.1	29.8		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	27.3		ng/L		109	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.9		25.1	31.2		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	3.1		25.1	29.7		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	2.0		25.1	28.0		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	27.2		ng/L		108	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.0		ng/L		88	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	28.3		ng/L		113	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.4		ng/L		109	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.4		ng/L		105	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.4		ng/L		97	70 - 130

Lab Sample ID: 380-185038-1 MSD

Matrix: Water

Analysis Batch: 189288

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.8		ng/L		95	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	5.0		25.1	32.3		ng/L		109	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.7		ng/L		110	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.2		ng/L		97	70 - 130	10	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	3.8		25.1	29.4		ng/L		102	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	27.1		ng/L		108	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	4.1		25.1	29.6		ng/L		102	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	28.5		ng/L		114	70 - 130	4	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-185038-1 MSD

Matrix: Water

Analysis Batch: 189288

Client Sample ID: Ka'amilo Wells P1

Prep Type: Total/NA

Prep Batch: 189146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	3.9		25.1	31.3		ng/L		109	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	3.1		25.1	29.5		ng/L		105	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	2.0		25.1	28.4		ng/L		105	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.6		ng/L		106	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.7		ng/L		90	70 - 130	3	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	28.6		ng/L		114	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.6		ng/L		110	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.5		ng/L		106	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.0		ng/L		100	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	102		70 - 130
13C2 PFHxA	104		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	95		70 - 130

QC Association Summary

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

LCMS

Prep Batch: 189146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185038-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-185038-2	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
MBL 380-189146/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-189146/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-189146/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-185038-1 MS	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-185038-1 MSD	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	

Analysis Batch: 189288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185038-1	Ka'amilo Wells P1	Total/NA	Water	537.1	189146
380-185038-2	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	189146
MBL 380-189146/19-A	Method Blank	Total/NA	Water	537.1	189146
LCS 380-189146/21-A	Lab Control Sample	Total/NA	Water	537.1	189146
MRL 380-189146/20-A	Lab Control Sample	Total/NA	Water	537.1	189146
380-185038-1 MS	Ka'amilo Wells P1	Total/NA	Water	537.1	189146
380-185038-1 MSD	Ka'amilo Wells P1	Total/NA	Water	537.1	189146

Prep Batch: 189305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185038-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-185038-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	
MBL 380-189305/20-A	Method Blank	Total/NA	Water	533	
LCS 380-189305/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-189305/21-A	Lab Control Sample	Total/NA	Water	533	
380-185038-1 MS	Ka'amilo Wells P1	Total/NA	Water	533	
380-185038-1 MSD	Ka'amilo Wells P1	Total/NA	Water	533	

Analysis Batch: 189429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185038-1	Ka'amilo Wells P1	Total/NA	Water	533	189305
380-185038-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	189305
MBL 380-189305/20-A	Method Blank	Total/NA	Water	533	189305
LCS 380-189305/22-A	Lab Control Sample	Total/NA	Water	533	189305
MRL 380-189305/21-A	Lab Control Sample	Total/NA	Water	533	189305
380-185038-1 MS	Ka'amilo Wells P1	Total/NA	Water	533	189305
380-185038-1 MSD	Ka'amilo Wells P1	Total/NA	Water	533	189305

Lab Chronicle

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-185038-1

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189305	E2HD	EA POM	12/01/25 18:10
Total/NA	Analysis	533		1	189429	SZ9R	EA POM	12/02/25 07:43
Total/NA	Prep	537.1 DW			189146	G9MN	EA POM	12/01/25 03:00
Total/NA	Analysis	537.1		1	189288	M7ML	EA POM	12/02/25 04:49

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-185038-2

Date Collected: 11/24/25 10:40

Matrix: Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189305	E2HD	EA POM	12/01/25 18:10
Total/NA	Analysis	533		1	189429	SZ9R	EA POM	12/02/25 11:04
Total/NA	Prep	537.1 DW			189146	G9MN	EA POM	12/01/25 03:00
Total/NA	Analysis	537.1		1	189288	M7ML	EA POM	12/02/25 06:35

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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
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Method Summary

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

Job ID: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

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: 380-185038-1
SDG: PFAS: Ka'amilo Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-185038-1	Ka'amilo Wells P1	Water	11/24/25 10:40	11/28/25 10:12	Hawaii
380-185038-2	FB: Ka'amilo Wells P1	Water	11/24/25 10:40	11/28/25 10:12	Hawaii

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

Phone (626) 386-1100

Ver: 01/16/2019
12/3/2025

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-185038-1

SDG Number: PFAS: Ka'amilo Wells P1

Login Number: 185038

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

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	