

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2
RUSH Weekly Red Hill

JOB NUMBER

380-159460-1

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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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: 380-159460-1

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Job Narrative 380-159460-1

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

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

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

Receipt

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

PFAS

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

Detection Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-1

No Detections.

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-159460-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L	1		537.1	Total/NA

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-159460-3

No Detections.

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-159460-4

No Detections.

**Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400)**

Lab Sample ID: 380-159460-5

No Detections.

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

No Detections.

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-159460-7

No Detections.

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

No Detections.

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

No Detections.

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-159460-10

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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-1

Date Collected: 07/07/25 09:44

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 13:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C6 PFDA	91		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C5 PFHxA	92		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C4 PFHpA	93		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C8 PFOA	94		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C9 PFNA	94		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C7 PFUnA	89		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C2 PFDoA	83		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C4 PFBA	97		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C5 PFPeA	95		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C3 PFBS	118		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C3 PFHxS	117		50 - 200	07/10/25 14:55	07/11/25 13:58	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-1

Date Collected: 07/07/25 09:44

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	111		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C2-4:2-FTS	110		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C2-6:2-FTS	101		50 - 200	07/10/25 14:55	07/11/25 13:58	1
13C2-8:2-FTS	94		50 - 200	07/10/25 14:55	07/11/25 13:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130	07/11/25 03:25	07/11/25 18:33	1
13C2 PFHxA	121		70 - 130	07/11/25 03:25	07/11/25 18:33	1
13C2 PFDA	112		70 - 130	07/11/25 03:25	07/11/25 18:33	1
13C3-GenX	109		70 - 130	07/11/25 03:25	07/11/25 18:33	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-159460-2

Date Collected: 07/07/25 10:17

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-159460-2

Date Collected: 07/07/25 10:17

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	58		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C6 PFDA	71		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C5 PFHxA	64		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C4 PFHpA	66		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C8 PFOA	68		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C9 PFNA	70		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C7 PFUnA	76		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C2 PFDoA	81		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C4 PFBA	65		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C5 PFPeA	64		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C3 PFBS	101		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C3 PFHxS	107		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C8 PFOS	102		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C2-4:2-FTS	100		50 - 200	07/10/25 14:55	07/11/25 14:19	1
13C2-6:2-FTS	98		50 - 200	07/10/25 14:55	07/11/25 14:19	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-159460-2

Date Collected: 07/07/25 10:17

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	85		50 - 200	07/10/25 14:55	07/11/25 14:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130			07/11/25 03:25	07/11/25 18:44	1
13C2 PFHxA	116		70 - 130			07/11/25 03:25	07/11/25 18:44	1
13C2 PFDA	115		70 - 130			07/11/25 03:25	07/11/25 18:44	1
13C3-GenX	113		70 - 130			07/11/25 03:25	07/11/25 18:44	1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-159460-3

Date Collected: 07/07/25 10:43

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-159460-3

Date Collected: 07/07/25 10:43

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 12:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C6 PFDA	87		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C5 PFHxA	90		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C4 PFHpA	90		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C8 PFOA	89		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C9 PFNA	90		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C7 PFUnA	84		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C2 PFDoA	87		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C4 PFBA	90		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C5 PFPeA	89		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C3 PFBS	105		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C3 PFHxS	105		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C8 PFOS	102		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C2-4:2-FTS	98		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C2-6:2-FTS	93		50 - 200	07/10/25 14:55	07/11/25 12:12	1
13C2-8:2-FTS	88		50 - 200	07/10/25 14:55	07/11/25 12:12	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)

Lab Sample ID: 380-159460-3

Date Collected: 07/07/25 10:43

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 18:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130			07/11/25 03:25	07/11/25 18:55	1
13C2 PFHxA	119		70 - 130			07/11/25 03:25	07/11/25 18:55	1
13C2 PFDA	119		70 - 130			07/11/25 03:25	07/11/25 18:55	1
13C3-GenX	111		70 - 130			07/11/25 03:25	07/11/25 18:55	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)

Lab Sample ID: 380-159460-4

Date Collected: 07/07/25 11:00

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-159460-4

Date Collected: 07/07/25 11:00

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	70		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C6 PFDA	77		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C5 PFHxA	75		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C4 PFHpA	76		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C8 PFOA	75		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C9 PFNA	79		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C7 PFUnA	80		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C2 PFDoA	84		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C4 PFBA	79		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C5 PFPeA	76		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C3 PFBS	102		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C3 PFHxS	101		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C8 PFOS	102		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C2-4:2-FTS	96		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C2-6:2-FTS	93		50 - 200	07/10/25 14:55	07/11/25 14:30	1
13C2-8:2-FTS	86		50 - 200	07/10/25 14:55	07/11/25 14:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-159460-4

Date Collected: 07/07/25 11:00

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130			07/11/25 03:25	07/11/25 19:05	1
13C2 PFHxA	119		70 - 130			07/11/25 03:25	07/11/25 19:05	1
13C2 PFDA	117		70 - 130			07/11/25 03:25	07/11/25 19:05	1
13C3-GenX	112		70 - 130			07/11/25 03:25	07/11/25 19:05	1

**Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400)**

Lab Sample ID: 380-159460-5

Date Collected: 07/07/25 11:24

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400)

Lab Sample ID: 380-159460-5

Date Collected: 07/07/25 11:24

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	60		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C6 PFDA	66		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C5 PFHxA	63		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C4 PFHpA	65		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C8 PFOA	65		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C9 PFNA	66		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C7 PFUnA	67		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C2 PFDoA	72		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C4 PFBA	65		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C5 PFPeA	64		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C3 PFBS	102		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C3 PFHxS	103		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C8 PFOS	101		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C2-4:2-FTS	98		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C2-6:2-FTS	92		50 - 200	07/10/25 14:55	07/11/25 14:39	1
13C2-8:2-FTS	89		50 - 200	07/10/25 14:55	07/11/25 14:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400)

Lab Sample ID: 380-159460-5

Date Collected: 07/07/25 11:24

Matrix: Drinking Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorodecanoic acid (PFDA)	2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130			07/11/25 03:25	07/11/25 19:16	1
13C2 PFHxA	121		70 - 130			07/11/25 03:25	07/11/25 19:16	1
13C2 PFDA	114		70 - 130			07/11/25 03:25	07/11/25 19:16	1
13C3-GenX	117		70 - 130			07/11/25 03:25	07/11/25 19:16	1

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

Date Collected: 07/07/25 09:44

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

Date Collected: 07/07/25 09:44

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 14:49	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C6 PFDA	90		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C5 PFHxA	98		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C4 PFHpA	99		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C8 PFOA	100		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C9 PFNA	97		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C7 PFUnA	89		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C2 PFDoA	91		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C4 PFBA	103		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C5 PFPeA	102		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C3 PFBS	103		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C3 PFHxS	104		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C8 PFOS	101		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C2-4:2-FTS	101		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C2-6:2-FTS	94		50 - 200			07/10/25 14:55	07/11/25 14:49	1
13C2-8:2-FTS	81		50 - 200			07/10/25 14:55	07/11/25 14:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

Date Collected: 07/07/25 09:44

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			07/11/25 03:25	07/11/25 19:38	1
13C2 PFHxA	113		70 - 130			07/11/25 03:25	07/11/25 19:38	1
13C2 PFDA	112		70 - 130			07/11/25 03:25	07/11/25 19:38	1
13C3-GenX	106		70 - 130			07/11/25 03:25	07/11/25 19:38	1

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-159460-7

Date Collected: 07/07/25 10:17

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-159460-7

Date Collected: 07/07/25 10:17

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:00	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C6 PFDA	92		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C5 PFHxA	98		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C4 PFHpA	99		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C8 PFOA	101		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C9 PFNA	99		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C7 PFUnA	93		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C2 PFDoA	98		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C4 PFBA	99		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C5 PFPeA	99		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C3 PFBS	102		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C3 PFHxS	101		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C8 PFOS	100		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C2-4:2-FTS	99		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C2-6:2-FTS	92		50 - 200			07/10/25 14:55	07/11/25 15:00	1
13C2-8:2-FTS	85		50 - 200			07/10/25 14:55	07/11/25 15:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-159460-7

**Date Collected: 07/07/25 10:17
Date Received: 07/09/25 09:30**

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			07/11/25 03:25	07/11/25 19:48	1
13C2 PFHxA	116		70 - 130			07/11/25 03:25	07/11/25 19:48	1
13C2 PFDA	112		70 - 130			07/11/25 03:25	07/11/25 19:48	1
13C3-GenX	109		70 - 130			07/11/25 03:25	07/11/25 19:48	1

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

**Date Collected: 07/07/25 10:43
Date Received: 07/09/25 09:30**

Matrix: Water

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		07/10/25 14:55	07/11/25 15:11	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

Date Collected: 07/07/25 10:43

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:11	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C6 PFDA	96		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C5 PFHxA	100		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C4 PFHpA	100		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C8 PFOA	99		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C9 PFNA	99		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C7 PFUnA	93		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C2 PFDoA	94		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C4 PFBA	104		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C5 PFPeA	98		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C3 PFBS	101		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C3 PFHxS	101		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C8 PFOS	101		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C2-4:2-FTS	100		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C2-6:2-FTS	94		50 - 200			07/10/25 14:55	07/11/25 15:11	1
13C2-8:2-FTS	91		50 - 200			07/10/25 14:55	07/11/25 15:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 19:59	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

Date Collected: 07/07/25 10:43

Matrix: Water

Date Received: 07/09/25 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	117		70 - 130	07/11/25 03:25	07/11/25 19:59	1
13C2 PFHxA	114		70 - 130	07/11/25 03:25	07/11/25 19:59	1
13C2 PFDA	115		70 - 130	07/11/25 03:25	07/11/25 19:59	1
13C3-GenX	117		70 - 130	07/11/25 03:25	07/11/25 19:59	1

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

Date Collected: 07/07/25 11:00

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:21	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200			07/10/25 14:55	07/11/25 15:21	1
13C6 PFDA	94		50 - 200			07/10/25 14:55	07/11/25 15:21	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

Date Collected: 07/07/25 11:00

Matrix: Water

Date Received: 07/09/25 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFHxA	101		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C4 PFHpA	100		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C8 PFOA	100		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C9 PFNA	100		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C7 PFUnA	96		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C2 PFDoA	98		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C4 PFBA	101		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C5 PFPeA	103		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C3 PFBS	104		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C3 PFHxS	102		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C8 PFOS	102		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C2-4:2-FTS	99		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C2-6:2-FTS	94		50 - 200	07/10/25 14:55	07/11/25 15:21	1
13C2-8:2-FTS	89		50 - 200	07/10/25 14:55	07/11/25 15:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130	07/11/25 03:25	07/11/25 20:10	1
13C2 PFHxA	119		70 - 130	07/11/25 03:25	07/11/25 20:10	1
13C2 PFDA	118		70 - 130	07/11/25 03:25	07/11/25 20:10	1
13C3-GenX	116		70 - 130	07/11/25 03:25	07/11/25 20:10	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)

Lab Sample ID: 380-159460-10

Date Collected: 07/07/25 11:24

Matrix: Water

Date Received: 07/09/25 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/10/25 14:55	07/11/25 15:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C6 PFDA	96		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C5 PFHxA	100		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C4 PFHpA	100		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C8 PFOA	98		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C9 PFNA	95		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C7 PFUnA	95		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C2 PFDoA	97		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C4 PFBA	101		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C5 PFPeA	103		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C3 PFBS	103		50 - 200	07/10/25 14:55	07/11/25 15:30	1

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Client Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)

Lab Sample ID: 380-159460-10

Date Collected: 07/07/25 11:24

Matrix: Water

Date Received: 07/09/25 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	105		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C8 PFOS	99		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C2-4:2-FTS	98		50 - 200	07/10/25 14:55	07/11/25 15:30	1
13C2 6 2 FTS	93		50 - 200	07/10/25 14 55	07/11/25 15 30	1
13C2-8:2-FTS	91		50 - 200	07/10/25 14:55	07/11/25 15:30	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/11/25 03:25	07/11/25 20:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	119		70 - 130	07/11/25 03:25	07/11/25 20:21	1
13C2 PFHxA	115		70 - 130	07/11/25 03:25	07/11/25 20:21	1
13C2 PFDA	117		70 - 130	07/11/25 03:25	07/11/25 20:21	1
13C3-GenX	111		70 - 130	07/11/25 03:25	07/11/25 20:21	1

Action Limit Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-1

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)	<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

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-159460-2

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)	2.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		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)	2.5		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)	3.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-159460-3

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071) (Continued)

Lab Sample ID: 380-159460-3

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
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

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-159460-4

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 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

Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)

Lab Sample ID: 380-159460-5

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400) (Continued)

Lab Sample ID: 380-159460-5

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
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: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

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

Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)

Lab Sample ID: 380-159460-7

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

Action Limit Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

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

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

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

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-159460-10

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400) (Continued)**

Lab Sample ID: 380-159460-10

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	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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-159460-1	MOANALUA WELLS (331-223-T	111	121	112	109
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	114	116	115	113
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	114	119	119	111
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	115	119	117	112
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	115	121	114	117

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
GenX = 13C3-GenX

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-159411-E-1-A MS	Matrix Spike	103	108	102	103
380-159411-F-1-A MSD	Matrix Spike Duplicate	112	112	105	105
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	108	113	112	106
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	113	116	112	109
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	117	114	115	117
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	115	119	118	116
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	119	115	117	111
LCS 380-162203/22-A	Lab Control Sample	106	113	109	108
MBL 380-162203/20-A	Method Blank	114	115	105	109
MRL 380-162203/21-A	Lab Control Sample	114	121	115	113

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
GenX = 13C3-GenX

Isotope Dilution Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking 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)
380-159460-1	MOANALUA WELLS (331-223-T	89	91	92	93	94	94	89	83
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	58	71	64	66	68	70	76	81
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	88	87	90	90	89	90	84	87
380-159460-3 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	81	85	83	84	84	86	87	93
380-159460-3 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	62	74	63	64	67	70	79	83
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	70	77	75	76	75	79	80	84
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	60	66	63	65	65	66	67	72

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)
380-159460-1	MOANALUA WELLS (331-223-T	97	95	118	117	111	110	101	94
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	65	64	101	107	102	100	98	85
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	90	89	105	105	102	98	93	88
380-159460-3 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	88	83	113	114	112	108	102	98
380-159460-3 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	68	67	102	104	103	96	93	89
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	79	76	102	101	102	96	93	86
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	65	64	102	103	101	98	92	89

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

Isotope Dilution Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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)
380-159460-6	TB:MOANALUA WELLS (331-22)	96	90	98	99	100	97	89	91
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	96	92	98	99	101	99	93	98
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	96	96	100	100	99	99	93	94
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	98	94	101	100	100	100	96	98
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	97	96	100	100	98	95	95	97
LCS 380-162025/22-A	Lab Control Sample	101	100	105	100	102	101	98	100
MBL 380-162025/20-A	Method Blank	102	101	104	105	104	101	98	105
MRL 380-162025/21-A	Lab Control Sample	103	100	102	101	104	106	103	100

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)
380-159460-6	TB:MOANALUA WELLS (331-22)	103	102	103	104	101	101	94	81
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	99	99	102	101	100	99	92	85
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	104	98	101	101	101	100	94	91
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	101	103	104	102	102	99	94	89
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	101	103	103	105	99	98	93	91
LCS 380-162025/22-A	Lab Control Sample	102	101	106	105	103	101	96	89
MBL 380-162025/20-A	Method Blank	104	104	105	104	103	105	96	87
MRL 380-162025/21-A	Lab Control Sample	104	101	105	109	106	104	97	95

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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-162025/20-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162025

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		07/10/25 14:55	07/11/25 11:41	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		07/10/25 14:55	07/11/25 11:41	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C6 PFDA	101		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C5 PFHxA	104		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C4 PFHpA	105		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C8 PFOA	104		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C9 PFNA	101		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C7 PFUnA	98		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C2 PFDoA	105		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C4 PFBA	104		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C5 PFPeA	104		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C3 PFBS	105		50 - 200	07/10/25 14:55	07/11/25 11:41	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-162025/20-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162025

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	104		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C8 PFOS	103		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C2-4:2-FTS	105		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C2-6:2-FTS	96		50 - 200	07/10/25 14:55	07/11/25 11:41	1
13C2-8:2-FTS	87		50 - 200	07/10/25 14:55	07/11/25 11:41	1

Lab Sample ID: LCS 380-162025/22-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	58.2		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	58.7		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	61.7		ng/L		103	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	59.3		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	57.3		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	59.1		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	61.0		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	60.7		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	60.0		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	59.7		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	60.1	57.2		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	59.2		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	59.1		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	59.2		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	61.0		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	61.6		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	58.8		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	60.8		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	58.0		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.1	57.8		ng/L		96	70 - 130
Perfluoro 3 methoxypropanoic acid (PFMPA)	60.1	59.9		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	60.5		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	59.5		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: LCS 380-162025/22-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	60.1	59.6		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.1	61.0		ng/L		101	70 - 130
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C3 HFPO-DA	101		50 - 200				
13C6 PFDA	100		50 - 200				
13C5 PFHxA	105		50 - 200				
13C4 PFHpA	100		50 - 200				
13C8 PFOA	102		50 - 200				
13C9 PFNA	101		50 - 200				
13C7 PFUnA	98		50 - 200				
13C2 PFDoA	100		50 - 200				
13C4 PFBA	102		50 - 200				
13C5 PFPeA	101		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	105		50 - 200				
13C8 PFOS	103		50 - 200				
13C2-4:2-FTS	101		50 - 200				
13C2-6:2-FTS	96		50 - 200				
13C2-8:2-FTS	89		50 - 200				

Lab Sample ID: MRL 380-162025/21-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162025

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.03	J	ng/L		101	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.96	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.15	J	ng/L		107	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.16	J	ng/L		108	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MRL 380-162025/21-A

Matrix: Water

Analysis Batch: 162271

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162025

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.19	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.11	J	ng/L		105	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	2.27	J	ng/L		113	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.00	J	ng/L		100	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	103		50 - 200
13C6 PFDA	100		50 - 200
13C5 PFHxA	102		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	104		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	103		50 - 200
13C2 PFDoA	100		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	104		50 - 200
13C2-6:2-FTS	97		50 - 200
13C2-8:2-FTS	95		50 - 200

Lab Sample ID: 380-159460-3 MS

Matrix: Drinking Water

Analysis Batch: 162271

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Prep Type: Total/NA

Prep Batch: 162025

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		60.4	57.4		ng/L		95	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-159460-3 MS

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 162271

Prep Batch: 162025

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	58.0		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	56.1		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	60.5		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	57.2		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	60.1		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	61.0		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	61.4		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.5		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	60.2		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	59.5		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	59.6		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	60.3		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	61.9		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	59.4		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	62.6		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	57.8		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	62.2		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	56.5		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.4	58.1		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	55.8		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	58.7		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	62.6		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	58.2		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	59.0		ng/L		98	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	81		50 - 200
13C6 PFDA	85		50 - 200
13C5 PFHxA	83		50 - 200
13C4 PFHpA	84		50 - 200
13C8 PFOA	84		50 - 200
13C9 PFNA	86		50 - 200
13C7 PFUnA	87		50 - 200
13C2 PFDoA	93		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-159460-3 MS

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 162271

Prep Batch: 162025

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	88		50 - 200
13C5 PFPeA	83		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	108		50 - 200
13C2-6:2-FTS	102		50 - 200
13C2-8:2-FTS	98		50 - 200

Lab Sample ID: 380-159460-3 MSD

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 162271

Prep Batch: 162025

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 (11Cl-PF3OUdS)	<2.0		60.4	57.1		ng/L		95	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		60.4	56.6		ng/L		94	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	56.5		ng/L		94	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	59.9		ng/L		99	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	59.8		ng/L		99	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	60.8		ng/L		101	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	60.2		ng/L		100	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	59.9		ng/L		99	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	60.4		ng/L		99	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	63.8		ng/L		105	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	60.4		ng/L		100	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	59.4		ng/L		98	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	59.2		ng/L		98	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	59.0		ng/L		98	70 - 130	5	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	60.4		ng/L		100	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	60.1		ng/L		100	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	60.7		ng/L		101	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	59.8		ng/L		99	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	54.4		ng/L		90	70 - 130	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	59.4		ng/L		98	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	57.1		ng/L		95	70 - 130	2	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-159460-3 MSD

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 162271

Prep Batch: 162025

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	55.8		ng/L		92	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	59.6		ng/L		97	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	58.7		ng/L		97	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	57.2		ng/L		95	70 - 130	3	30
Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits								
13C3 HFPO-DA	62		50 - 200								
13C6 PFDA	74		50 - 200								
13C5 PFHxA	63		50 - 200								
13C4 PFHpA	64		50 - 200								
13C8 PFOA	67		50 - 200								
13C9 PFNA	70		50 - 200								
13C7 PFUnA	79		50 - 200								
13C2 PFDoA	83		50 - 200								
13C4 PFBA	68		50 - 200								
13C5 PFPeA	67		50 - 200								
13C3 PFBS	102		50 - 200								
13C3 PFHxS	104		50 - 200								
13C8 PFOS	103		50 - 200								
13C2-4:2-FTS	96		50 - 200								
13C2-6:2-FTS	93		50 - 200								
13C2-8:2-FTS	89		50 - 200								

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

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

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 162319

Prep Batch: 162203

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

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

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 162203

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/11/25 03:25	07/11/25 16:46	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NetFOSAA	114		70 - 130			07/11/25 03:25	07/11/25 16:46	1
13C2 PFHxA	115		70 - 130			07/11/25 03:25	07/11/25 16:46	1
13C2 PFDA	105		70 - 130			07/11/25 03:25	07/11/25 16:46	1
13C3-GenX	109		70 - 130			07/11/25 03:25	07/11/25 16:46	1

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

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	25.2		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	27.0		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.5		ng/L		110	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	25.9		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NetFOSAA)	25.1	27.7		ng/L		111	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.5		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	25.4		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	27.2		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	26.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.1		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	26.4		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.7		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.7		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	22.9		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.1	27.0		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.2		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.3		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	26.2		ng/L		105	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

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

Lab Sample ID: MRL 380-162203/21-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 162319				Prep Batch: 162203			

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.01	1.89	J	ng/L		94	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.11	J	ng/L		105	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.02	J	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.08	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.13	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.25	J	ng/L		112	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.20	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.08	J	ng/L		103	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.10	J	ng/L		104	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.03	J	ng/L		101	50 - 150

Surrogate	MRL		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	114		70 - 130
13C2 PFHxA	121		70 - 130
13C2 PFDA	115		70 - 130
13C3-GenX	113		70 - 130

QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

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

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 162203

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

Lab Sample ID: 380-159411-F-1-A MSD

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.3		ng/L		93	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	28.7		ng/L		108	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.5		ng/L		102	70 - 130	3	30

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QC Sample Results

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-159411-F-1-A MSD

Matrix: Water

Analysis Batch: 162319

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 162203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	27.7		ng/L		110	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.2		ng/L		98	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.7		ng/L		102	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.5		ng/L		105	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.1		ng/L		100	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	28.0		ng/L		109	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.9		ng/L		105	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.0		ng/L		108	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.6		ng/L		102	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	21.0		ng/L		84	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.4		ng/L		109	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.1		ng/L		104	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.6		ng/L		98	70 - 130	3	30

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

QC Association Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

LCMS

Prep Batch: 162025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159460-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	533	
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP06)	Total/NA	Water	533	
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	Total/NA	Water	533	
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	533	
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP073)	Total/NA	Water	533	
MBL 380-162025/20-A	Method Blank	Total/NA	Water	533	
LCS 380-162025/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-162025/21-A	Lab Control Sample	Total/NA	Water	533	
380-159460-3 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-159460-3 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	

Prep Batch: 162203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159460-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1 DW	
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	537.1 DW	
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1 DW	
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP06)	Total/NA	Water	537.1 DW	
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	Total/NA	Water	537.1 DW	
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	537.1 DW	
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP073)	Total/NA	Water	537.1 DW	
MBL 380-162203/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-162203/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-162203/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-159411-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-159411-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 162271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159460-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	162025
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	162025
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	162025
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	162025
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	533	162025
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	162025
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP06)	Total/NA	Water	533	162025
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	Total/NA	Water	533	162025
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	533	162025
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP073)	Total/NA	Water	533	162025
MBL 380-162025/20-A	Method Blank	Total/NA	Water	533	162025
LCS 380-162025/22-A	Lab Control Sample	Total/NA	Water	533	162025
MRL 380-162025/21-A	Lab Control Sample	Total/NA	Water	533	162025
380-159460-3 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	162025

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

LCMS (Continued)

Analysis Batch: 162271 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159460-3 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	162025

Analysis Batch: 162319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-159460-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	162203
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP06)	Total/NA	Drinking Water	537.1	162203
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	162203
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	162203
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP07)	Total/NA	Drinking Water	537.1	162203
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1	162203
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP06)	Total/NA	Water	537.1	162203
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	Total/NA	Water	537.1	162203
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	537.1	162203
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP07)	Total/NA	Water	537.1	162203
MBL 380-162203/20-A	Method Blank	Total/NA	Water	537.1	162203
LCS 380-162203/22-A	Lab Control Sample	Total/NA	Water	537.1	162203
MRL 380-162203/21-A	Lab Control Sample	Total/NA	Water	537.1	162203
380-159411-E-1-A MS	Matrix Spike	Total/NA	Water	537.1	162203
380-159411-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	162203

Lab Chronicle

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-1

Date Collected: 07/07/25 09:44

Matrix: Drinking Water

Date Received: 07/09/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 13:58
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 18:33

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-159460-2

Date Collected: 07/07/25 10:17

Matrix: Drinking Water

Date Received: 07/09/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 14:19
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 18:44

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-159460-3

Date Collected: 07/07/25 10:43

Matrix: Drinking Water

Date Received: 07/09/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 12:12
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 18:55

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-159460-4

Date Collected: 07/07/25 11:00

Matrix: Drinking Water

Date Received: 07/09/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 14:30
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 19:05

Lab Chronicle

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: AIEA WELLS PUMPS 1&2 P2 (260)
(331-203-TP400)

Lab Sample ID: 380-159460-5

Date Collected: 07/07/25 11:24
Date Received: 07/09/25 09:30

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 14:39
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 19:16

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-159460-6

Date Collected: 07/07/25 09:44
Date Received: 07/09/25 09:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 14:49
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 19:38

Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)

Lab Sample ID: 380-159460-7

Date Collected: 07/07/25 10:17
Date Received: 07/09/25 09:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 15:00
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 19:48

Client Sample ID: TB:AIEA GULCH WELLS P1 (331-201-TP071)

Lab Sample ID: 380-159460-8

Date Collected: 07/07/25 10:43
Date Received: 07/09/25 09:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 15:11
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 19:59

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

Date Collected: 07/07/25 11:00
Date Received: 07/09/25 09:30

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 15:21

Eurofins Eaton Analytical Pomona

Lab Chronicle

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-159460-9

Date Collected: 07/07/25 11:00

Matrix: Water

Date Received: 07/09/25 09:30

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

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-159460-10

Date Collected: 07/07/25 11:24

Matrix: Water

Date Received: 07/09/25 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			162025	E2HD	EA POM	07/10/25 14:55
Total/NA	Analysis	533		1	162271	Y5FM	EA POM	07/11/25 15:30
Total/NA	Prep	537.1 DW			162203	G9MN	EA POM	07/11/25 03:25
Total/NA	Analysis	537.1		1	162319	Y5FM	EA POM	07/11/25 20:21

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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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
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- 15
- 16
- 17

Method Summary

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

Job ID: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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: 380-159460-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-159460-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	07/07/25 09:44	07/09/25 09:30
380-159460-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	07/07/25 10:17	07/09/25 09:30
380-159460-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	07/07/25 10:43	07/09/25 09:30
380-159460-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	07/07/25 11:00	07/09/25 09:30
380-159460-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	Drinking Water	07/07/25 11:24	07/09/25 09:30
380-159460-6	TB:MOANALUA WELLS (331-223-TP202)	Water	07/07/25 09:44	07/09/25 09:30
380-159460-7	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	Water	07/07/25 10:17	07/09/25 09:30
380-159460-8	TB:AIEA GULCH WELLS P1 (331-201-TP071)	Water	07/07/25 10:43	07/09/25 09:30
380-159460-9	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Water	07/07/25 11:00	07/09/25 09:30
380-159460-10	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	07/07/25 11:24	07/09/25 09:30

Ver- 01/16/2019



380-159460 COC

Client Information			Company			City & County of Honolulu			Lab PM:			Carrier Tracking No(s):			COC No:		
Client Contact			City			Address:			bailey			380-27941-2757.2			380-159460		
Kirk Iwamoto			Honolulu			6330 South Beretania Street, Chemistry Lab			Phone:			State of Origin:			Page:		
			State, Zip:						+1 808 748 5840						Page 2 of 2		
PO #:			Compliance Project:			TAT Requested (days):			Due Date Requested:			Job #:			Preservation Codes:		
C20525101 exp 05312023			Δ No												M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
WO #:			Project #:			SSOW#:			Matrix (Water, Seawater, Other):			Sample Type (C=Comp, G=Grab):			Sample Time		
			38001111						Preservation Code:			Sample Date			Sample Instructions/Note:		
Sample Identification			Sample Date			Sample Time			Sample Type (C=Comp, G=Grab)			Matrix (Water, Seawater, Other)			Total Number of Containers		
Moanalua Wells			7-Jul-2025			0944			G			Water			chlorinated		
Halawa Wells Units 1&2 P1			7-Jul-2025			1017			G			Water			chlorinated		
Aiea Gulch Wells Pump 1			7-Jul-2025			1043			G			Water			chlorinated		
Aiea Gulch Wells Pump 2			7-Jul-2025			1100			G			Water			chlorinated		
Aiea Wells Pumps 1&2 (260) P 2			7-Jul-2025			1124			G			Water			chlorinated		
FB Moanalua Wells			7-Jul-2025			0944									1 1		
FB Halawa Wells Units 1&2			7-Jul-2025			1017									1 1		
FB Aiea Gulch Wells Pump 1			7-Jul-2025			1043									1 1		
FB Aiea Gulch Wells Pump 2			7-Jul-2025			1100									1 1		
FB Aiea Wells Pumps 1&2 (260)			7-Jul-2025			1124									1 1		
Possible Hazard Identification			Non-Hazard			Flammable			Skn Irritant			Poison B			Unknown		
Deliverable Requested: I, II, III, IV, Other (specify)																	
Empty Kit Relinquished by:			Date:			Time:			Received by:			Date/Time:			Company		
Relinquished by:			08/04/2025			1430			HBWS			07/09/25			09:50		
Relinquished by:									Company						Company		
Relinquished by:									Company						Company		
Custody Seals Intact:			A Yes A No			Custody Seal No.			Cooler Temperature(s) °C and Other Remarks:			3.0°-0.0°=3.0°			3.0°-0.0°=3.0°		

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-159460-1

SDG Number: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2

Login Number: 159460

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	