

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL

PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea Gulch Wells P1/Halawa Wells P1

JOB NUMBER

380-156051-1

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: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Qualifiers

LCMS

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

Glossary

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

Case Narrative

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

Job ID: 380-156051-1

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Job Narrative 380-156051-1

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

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

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

Receipt

The samples were received on 6/18/2025 9:43 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.9°C, 2.4°C, 2.8°C, 3.5°C and 3.8°C.

PFAS

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results. (XWB4)
HALAWA WELLS P1 (331-023-WL065) (380-156051-5)

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

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Detection Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: MOANALUA WELLS P3 (331-223-TP202)

Lab Sample ID: 380-156051-1

No Detections.

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

Lab Sample ID: 380-156051-2

No Detections.

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

Lab Sample ID: 380-156051-3

No Detections.

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.8		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.3		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L	1		537.1	Total/NA

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

Lab Sample ID: 380-156051-6

No Detections.

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

Lab Sample ID: 380-156051-7

No Detections.

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

Lab Sample ID: 380-156051-8

No Detections.

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-10

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: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: MOANALUA WELLS P3 (331-223-TP202)

Lab Sample ID: 380-156051-1

Date Collected: 06/16/25 09:05

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 20:43	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C6 PFDA	101		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C5 PFHxA	97		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C4 PFHpA	99		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C8 PFOA	106		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C9 PFNA	99		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C7 PFUnA	103		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C2 PFDoA	103		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C4 PFBA	106		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C5 PFPeA	112		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C3 PFBS	106		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C3 PFHxS	112		50 - 200	06/20/25 08:20	06/20/25 20:43	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: MOANALUA WELLS P3 (331-223-TP202)

Lab Sample ID: 380-156051-1

Date Collected: 06/16/25 09:05

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	108		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C2-4:2-FTS	121		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C2-6:2-FTS	117		50 - 200	06/20/25 08:20	06/20/25 20:43	1
13C2-8:2-FTS	112		50 - 200	06/20/25 08:20	06/20/25 20:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	06/19/25 07:03	06/19/25 21:13	1
13C2 PFHxA	100		70 - 130	06/19/25 07:03	06/19/25 21:13	1
13C2 PFDA	101		70 - 130	06/19/25 07:03	06/19/25 21:13	1
13C3-GenX	88		70 - 130	06/19/25 07:03	06/19/25 21:13	1

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

Lab Sample ID: 380-156051-2

Date Collected: 06/16/25 10:10

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-2

Date Collected: 06/16/25 10:10
Date Received: 06/18/25 09:43

Matrix: Drinking Water

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		06/20/25 08:20	06/20/25 20:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 20:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	69		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C6 PFDA	69		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C5 PFHxA	72		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C4 PFHpA	71		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C8 PFOA	70		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C9 PFNA	69		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C7 PFUnA	78		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C2 PFDoA	83		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C4 PFBA	81		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C5 PFPeA	82		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C3 PFBS	104		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C3 PFHxS	108		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C8 PFOS	110		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C2-4:2-FTS	117		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C2-6:2-FTS	113		50 - 200	06/20/25 08:20	06/20/25 20:52	1
13C2-8:2-FTS	108		50 - 200	06/20/25 08:20	06/20/25 20:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-2

Date Collected: 06/16/25 10:10
Date Received: 06/18/25 09:43

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130			06/19/25 07:03	06/19/25 21:24	1
13C2 PFHxA	100		70 - 130			06/19/25 07:03	06/19/25 21:24	1
13C2 PFDA	107		70 - 130			06/19/25 07:03	06/19/25 21:24	1
13C3-GenX	97		70 - 130			06/19/25 07:03	06/19/25 21:24	1

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

Lab Sample ID: 380-156051-3

Date Collected: 06/16/25 09:50
Date Received: 06/18/25 09:43

Matrix: Drinking 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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-3

Date Collected: 06/16/25 09:50

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 21:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:02	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	82		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C6 PFDA	95		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C5 PFHxA	92		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C4 PFHpA	90		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C8 PFOA	102		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C9 PFNA	96		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C7 PFUnA	103		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C2 PFDoA	105		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C4 PFBA	92		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C5 PFPeA	96		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C3 PFBS	118		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C3 PFHxS	123		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C8 PFOS	115		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C2-4:2-FTS	123		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C2-6:2-FTS	128		50 - 200	06/20/25 08:20	06/20/25 21:02	1
13C2-8:2-FTS	122		50 - 200	06/20/25 08:20	06/20/25 21:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-3

Date Collected: 06/16/25 09:50

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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		06/19/25 07:03	06/19/25 21:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:34	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			06/19/25 07:03	06/19/25 21:34	1
13C2 PFHxA	107		70 - 130			06/19/25 07:03	06/19/25 21:34	1
13C2 PFDA	114		70 - 130			06/19/25 07:03	06/19/25 21:34	1
13C3-GenX	101		70 - 130			06/19/25 07:03	06/19/25 21:34	1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

Date Collected: 06/16/25 09:30

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

Date Collected: 06/16/25 09:30

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 21:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoropentanoic acid (PFPeA)	2.3		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	79		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C6 PFDA	93		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C5 PFHxA	86		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C4 PFHpA	85		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C8 PFOA	93		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C9 PFNA	91		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C7 PFUnA	100		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C2 PFDoA	101		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C4 PFBA	93		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C5 PFPeA	96		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C3 PFBS	110		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C3 PFHxS	113		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C8 PFOS	110		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C2-4:2-FTS	123		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C2-6:2-FTS	120		50 - 200	06/20/25 08:20	06/20/25 21:11	1
13C2-8:2-FTS	115		50 - 200	06/20/25 08:20	06/20/25 21:11	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		06/19/25 07:03	06/19/25 21:45	1
Perfluorooctanesulfonic acid (PFOS)	2.8		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorohexanoic acid (PFHxA)	2.3		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

Date Collected: 06/16/25 09:30

Matrix: Drinking Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 21:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130	06/19/25 07:03	06/19/25 21:45	1
13C2 PFHxA	114		70 - 130	06/19/25 07:03	06/19/25 21:45	1
13C2 PFDA	116		70 - 130	06/19/25 07:03	06/19/25 21:45	1
13C3-GenX	107		70 - 130	06/19/25 07:03	06/19/25 21:45	1

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

Lab Sample ID: 380-156051-6

Date Collected: 06/16/25 09:05

Matrix: Water

Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 21:21	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-6

Date Collected: 06/16/25 09:05

Matrix: Water

Date Received: 06/18/25 09:43

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-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:21	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C6 PFDA	108		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C5 PFHxA	108		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C4 PFHpA	108		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C8 PFOA	117		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C9 PFNA	113		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C7 PFUnA	108		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C2 PFDoA	110		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C4 PFBA	114		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C5 PFPeA	111		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C3 PFBS	115		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C3 PFHxS	115		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C8 PFOS	111		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C2-4:2-FTS	125		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C2-6:2-FTS	114		50 - 200			06/20/25 08:20	06/20/25 21:21	1
13C2-8:2-FTS	111		50 - 200			06/20/25 08:20	06/20/25 21:21	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		06/19/25 07:03	06/19/25 22:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-6

Date Collected: 06/16/25 09:05

Matrix: Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	98		70 - 130			06/19/25 07:03	06/19/25 22:07	1
13C2 PFHxA	99		70 - 130			06/19/25 07:03	06/19/25 22:07	1
13C2 PFDA	104		70 - 130			06/19/25 07:03	06/19/25 22:07	1
13C3-GenX	88		70 - 130			06/19/25 07:03	06/19/25 22:07	1

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

Lab Sample ID: 380-156051-7

Date Collected: 06/16/25 10:10

Matrix: Water

Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 21:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-7

Date Collected: 06/16/25 10:10

Matrix: Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:40	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	105		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C6 PFDA	111		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C5 PFHxA	110		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C4 PFHpA	113		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C8 PFOA	117		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C9 PFNA	111		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C7 PFUnA	115		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C2 PFDoA	113		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C4 PFBA	113		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C5 PFPeA	121		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C3 PFBS	111		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C3 PFHxS	116		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C8 PFOS	111		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C2-4:2-FTS	119		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C2-6:2-FTS	120		50 - 200			06/20/25 08:20	06/20/25 21:40	1
13C2-8:2-FTS	115		50 - 200			06/20/25 08:20	06/20/25 21:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-7

Date Collected: 06/16/25 10:10
Date Received: 06/18/25 09:43

Matrix: Water

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

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		06/19/25 07:03	06/19/25 22:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130			06/19/25 07:03	06/19/25 22:17	1
13C2 PFHxA	108		70 - 130			06/19/25 07:03	06/19/25 22:17	1
13C2 PFDA	116		70 - 130			06/19/25 07:03	06/19/25 22:17	1
13C3-GenX	99		70 - 130			06/19/25 07:03	06/19/25 22:17	1

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

Lab Sample ID: 380-156051-8

Date Collected: 06/16/25 09:50
Date Received: 06/18/25 09:43

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		06/20/25 08:20	06/20/25 21:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-8

Date Collected: 06/16/25 09:50

Matrix: Water

Date Received: 06/18/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:49	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C6 PFDA	105		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C5 PFHxA	106		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C4 PFHpA	106		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C8 PFOA	111		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C9 PFNA	113		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C7 PFUnA	111		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C2 PFDoA	108		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C4 PFBA	108		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C5 PFPeA	114		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C3 PFBS	107		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C3 PFHxS	112		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C8 PFOS	112		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C2-4:2-FTS	117		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C2-6:2-FTS	114		50 - 200			06/20/25 08:20	06/20/25 21:49	1
13C2-8:2-FTS	108		50 - 200			06/20/25 08:20	06/20/25 21:49	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		06/19/25 07:03	06/19/25 22:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUs)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:28	1

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Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-8

**Date Collected: 06/16/25 09:50
Date Received: 06/18/25 09:43**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130	06/19/25 07:03	06/19/25 22:28	1
13C2 PFHxA	104		70 - 130	06/19/25 07:03	06/19/25 22:28	1
13C2 PFDA	110		70 - 130	06/19/25 07:03	06/19/25 22:28	1
13C3-GenX	97		70 - 130	06/19/25 07:03	06/19/25 22:28	1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-10

**Date Collected: 06/16/25 09:30
Date Received: 06/18/25 09:43**

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/20/25 08:20	06/20/25 21:59	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	102		50 - 200			06/20/25 08:20	06/20/25 21:59	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-10

Date Collected: 06/16/25 09:30

Matrix: Water

Date Received: 06/18/25 09:43

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	110		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C5 PFHxA	105		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C4 PFHpA	106		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C8 PFOA	113		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C9 PFNA	109		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C7 PFUnA	109		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C2 PFDoA	110		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C4 PFBA	118		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C5 PFPeA	121		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C3 PFBS	114		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C3 PFHxS	118		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C8 PFOS	118		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C2-4:2-FTS	122		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C2-6:2-FTS	122		50 - 200	06/20/25 08:20	06/20/25 21:59	1
13C2-8:2-FTS	119		50 - 200	06/20/25 08:20	06/20/25 21:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Acid (HFPO-DA/GenX)								
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/19/25 07:03	06/19/25 22:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		70 - 130			06/19/25 07:03	06/19/25 22:39	1
13C2 PFHxA	102		70 - 130			06/19/25 07:03	06/19/25 22:39	1
13C2 PFDA	108		70 - 130			06/19/25 07:03	06/19/25 22:39	1
13C3-GenX	94		70 - 130			06/19/25 07:03	06/19/25 22:39	1

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Action Limit Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: MOANALUA WELLS P3 (331-223-TP202)

Lab Sample ID: 380-156051-1

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

Lab Sample ID: 380-156051-2

Compliance Check

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

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

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

Lab Sample ID: 380-156051-3

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: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-3

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: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

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)	2.6		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)	2.8		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)	2.8		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-156051-6

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-6

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
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-156051-7

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

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

Lab Sample ID: 380-156051-8

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

Action Limit Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-10

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	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Surrogate Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-156051-1	MOANALUA WELLS P3 (331-22	102	100	101	88
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	99	100	107	97
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	108	107	114	101
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	111	114	116	107
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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-156051-6	FB: MOANALUA WELLS (331-2	98	99	104	88
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	105	108	116	99
380-156051-8	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	105	104	110	97
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	100	102	108	94
380-156099-B-1-A MS	Matrix Spike	104	122	121	104
380-156099-C-1-A MSD	Matrix Spike Duplicate	106	114	112	103
LCS 380-158771/22-A	Lab Control Sample	105	108	108	101
MBL 380-158771/20-A	Method Blank	103	107	108	95
MRL 380-158771/21-A	Lab Control Sample	96	99	102	87
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: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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)
380-156051-1	MOANALUA WELLS P3 (331-22	94	101	97	99	106	99	103	103
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	69	69	72	71	70	69	78	83
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	82	95	92	90	102	96	103	105
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	79	93	86	85	93	91	100	101

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-156051-1	MOANALUA WELLS P3 (331-22	106	112	106	112	108	121	117	112
380 156051 2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	81	82	104	108	110	117	113	108
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	92	96	118	123	115	123	128	122
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	93	96	110	113	110	123	120	115

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

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)
380-156049-E-1-A MS	Matrix Spike	79	83	78	79	83	79	92	96
380-156049-F-1-A MSD	Matrix Spike Duplicate	82	78	78	76	81	74	88	95
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	101	108	108	108	117	113	108	110
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	105	111	110	113	117	111	115	113
380-156051-8	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	102	105	106	106	111	113	111	108
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	102	110	105	106	113	109	109	110

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Isotope Dilution Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

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)
LCS 380-158987/22-A	Lab Control Sample	105	107	103	104	113	107	111	111
MBL 380-158987/20-A	Method Blank	106	114	111	111	121	114	118	116
MRL 380-158987/21-A	Lab Control Sample	101	100	105	104	105	102	108	106
		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)
380-156049-E-1-A MS	Matrix Spike	91	96	106	114	106	120	110	113
380-156049-F-1-A MSD	Matrix Spike Duplicate	82	85	107	113	109	116	114	116
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	114	111	115	115	111	125	114	111
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	113	121	111	116	111	119	120	115
380-156051-8	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	108	114	107	112	112	117	114	108
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	118	121	114	118	118	122	122	119
LCS 380-158987/22-A	Lab Control Sample	114	113	109	107	109	107	111	108
MBL 380-158987/20-A	Method Blank	115	120	113	121	119	125	119	119
MRL 380-158987/21-A	Lab Control Sample	111	113	101	111	104	110	107	110
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: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: MBL 380-158987/20-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 158987

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		06/20/25 08:20	06/20/25 19:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		06/20/25 08:20	06/20/25 19:07	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	106		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C6 PFDA	114		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C5 PFHxA	111		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C4 PFHpA	111		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C8 PFOA	121		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C9 PFNA	114		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C7 PFUnA	118		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C2 PFDoA	116		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C4 PFBA	115		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C5 PFPeA	120		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C3 PFBS	113		50 - 200	06/20/25 08:20	06/20/25 19:07	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: MBL 380-158987/20-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 158987

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	121		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C8 PFOS	119		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C2-4:2-FTS	125		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C2-6:2-FTS	119		50 - 200	06/20/25 08:20	06/20/25 19:07	1
13C2-8:2-FTS	119		50 - 200	06/20/25 08:20	06/20/25 19:07	1

Lab Sample ID: LCS 380-158987/22-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 158987

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	112		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	115		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	120		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	116		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	116		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	120	117		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	120	113		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	117		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	121		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	120	116		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	115		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	115		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	120	108		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	114		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	116		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	115		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	118		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	115		ng/L		96	70 - 130
Perfluoro 3 methoxypropanoic acid (PFMPA)	120	109		ng/L		90	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	120	113		ng/L		94	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: LCS 380-158987/22-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 158987

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	120	113		ng/L		94	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	118		ng/L		98	70 - 130
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C3 HFPO-DA	105		50 - 200				
13C6 PFDA	107		50 - 200				
13C5 PFHxA	103		50 - 200				
13C4 PFHpA	104		50 - 200				
13C8 PFOA	113		50 - 200				
13C9 PFNA	107		50 - 200				
13C7 PFUnA	111		50 - 200				
13C2 PFDoA	111		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	113		50 - 200				
13C3 PFBS	109		50 - 200				
13C3 PFHxS	107		50 - 200				
13C8 PFOS	109		50 - 200				
13C2-4:2-FTS	107		50 - 200				
13C2-6:2-FTS	111		50 - 200				
13C2-8:2-FTS	108		50 - 200				

Lab Sample ID: MRL 380-158987/21-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 158987

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.24	J	ng/L		112	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.98	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.94	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.90	J	ng/L		95	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.05	J	ng/L		102	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: MRL 380-158987/21-A

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 158987

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.01	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	1.99	J	ng/L		99	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	2.22	J	ng/L		111	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	1.81	J	ng/L		91	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.83	J	ng/L		91	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.91	J	ng/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.87	J	ng/L		93	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	101		50 - 200
13C6 PFDA	100		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	105		50 - 200
13C9 PFNA	102		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	101		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-156049-E-1-A MS

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 158987

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	115		ng/L		95	70 - 130

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QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156049-E-1-A MS

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 158987

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		121	117		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	113		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	115		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	2.5		121	121		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	120		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	120		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	118		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.1		121	115		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	3.0		121	124		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	4.0		121	122		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	3.1		121	112		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	114		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	114		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	119		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	119		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	113		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	3.1		121	109		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	117		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	111		ng/L		91	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	79		50 - 200
13C6 PFDA	83		50 - 200
13C5 PFHxA	78		50 - 200
13C4 PFHpA	79		50 - 200
13C8 PFOA	83		50 - 200
13C9 PFNA	79		50 - 200
13C7 PFUnA	92		50 - 200
13C2 PFDoA	96		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156049-E-1-A MS

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 158987

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	91		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	113		50 - 200

Lab Sample ID: 380-156049-F-1-A MSD

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 158987

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		120	118		ng/L		98	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	119		ng/L		99	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	120		ng/L		99	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	115		ng/L		95	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	2.5		120	120		ng/L		97	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		120	116		ng/L		96	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	117		ng/L		97	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	122		ng/L		100	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	3.1		120	115		ng/L		93	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	3.0		120	121		ng/L		98	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		120	118		ng/L		98	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	4.0		120	119		ng/L		96	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	3.1		120	115		ng/L		93	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	115		ng/L		95	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	119		ng/L		98	70 - 130	4	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	110		ng/L		91	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	120		ng/L		100	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	120		ng/L		99	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	109		ng/L		90	70 - 130	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	122		ng/L		101	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	115		ng/L		95	70 - 130	4	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156049-F-1-A MSD

Matrix: Water

Analysis Batch: 159131

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 158987

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		120	113		ng/L		94	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	3.1		120	116		ng/L		93	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	116		ng/L		96	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	113		ng/L		93	70 - 130	2	30
Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits								
13C3 HFPO-DA	82		50 - 200								
13C6 PFDA	78		50 - 200								
13C5 PFHxA	78		50 - 200								
13C4 PFHpA	76		50 - 200								
13C8 PFOA	81		50 - 200								
13C9 PFNA	74		50 - 200								
13C7 PFUnA	88		50 - 200								
13C2 PFDoA	95		50 - 200								
13C4 PFBA	82		50 - 200								
13C5 PFPeA	85		50 - 200								
13C3 PFBS	107		50 - 200								
13C3 PFHxS	113		50 - 200								
13C8 PFOS	109		50 - 200								
13C2-4:2-FTS	116		50 - 200								
13C2-6:2-FTS	114		50 - 200								
13C2-8:2-FTS	116		50 - 200								

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

Lab Sample ID: MBL 380-158771/20-A

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 158771

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		06/19/25 07:03	06/19/25 19:15	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: MBL 380-158771/20-A

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 158771

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/19/25 07:03	06/19/25 19:15	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130			06/19/25 07:03	06/19/25 19:15	1
13C2 PFHxA	107		70 - 130			06/19/25 07:03	06/19/25 19:15	1
13C2 PFDA	108		70 - 130			06/19/25 07:03	06/19/25 19:15	1
13C3-GenX	95		70 - 130			06/19/25 07:03	06/19/25 19:15	1

Lab Sample ID: LCS 380-158771/22-A

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 158771

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.0	46.6		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	51.3		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	49.7		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	49.4		ng/L		99	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	47.2		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	50.0		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	48.2		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	50.3		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	50.5		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	53.4		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	50.8		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	49.4		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	50.0	50.8		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	38.1		ng/L		76	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	50.0	49.1		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	51.5		ng/L		103	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	47.7		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	47.8		ng/L		96	70 - 130

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QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Surrogate	LCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	101		70 - 130

Lab Sample ID: MRL 380-158771/21-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 158913				Prep Batch: 158771			

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.01	1.67	J	ng/L		83	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.01	2.29	J	ng/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.05	J	ng/L		102	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.94	J	ng/L		97	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.90	J	ng/L		94	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.29	J	ng/L		114	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.57	J	ng/L		78	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	1.88	J	ng/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.17	J	ng/L		108	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.03	J	ng/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.79	J	ng/L		89	50 - 150

Surrogate	MRL		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	99		70 - 130
13C2 PFDA	102		70 - 130
13C3-GenX	87		70 - 130

QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156099-B-1-A MS

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 158771

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.1	47.0		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.1	58.1		ng/L		116	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	53.4		ng/L		107	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	51.8		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	50.0		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.1	52.2		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	51.9		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.1	52.1		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.1	55.2		ng/L		110	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.1	62.3		ng/L		121	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.1	59.2		ng/L		117	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.1	55.8		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.1	57.8		ng/L		115	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.1	40.9		ng/L		82	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.1	49.2		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.1	57.7		ng/L		115	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.1	51.8		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.1	51.1		ng/L		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
d5-NEtFOSAA	104		70 - 130
13C2 PFHxA	122		70 - 130
13C2 PFDA	121		70 - 130
13C3-GenX	104		70 - 130

Lab Sample ID: 380-156099-C-1-A MSD

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 158771

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	48.2		ng/L		96	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	58.1		ng/L		116	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	52.2		ng/L		104	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156099-C-1-A MSD

Matrix: Water

Analysis Batch: 158913

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 158771

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		50.2	51.4		ng/L		102	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	51.5		ng/L		103	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	51.8		ng/L		101	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	50.5		ng/L		101	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	55.3		ng/L		108	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	54.3		ng/L		108	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	61.8		ng/L		120	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	59.8		ng/L		118	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	54.5		ng/L		109	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	56.0		ng/L		111	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	41.0		ng/L		82	70 - 130	0	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	49.8		ng/L		99	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	58.4		ng/L		116	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	53.7		ng/L		107	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	51.8		ng/L		103	70 - 130	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	114		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	103		70 - 130

QC Association Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea Gulch Wells P1/Halawa Wells P1

LCMS

Prep Batch: 158771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-156051-1	MOANALUA WELLS P3 (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	537.1 DW	
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1 DW	
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	537.1 DW	
380-156051-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	537.1 DW	
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	537.1 DW	
MBL 380-158771/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-158771/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-158771/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-156099-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-156099-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 158913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-156051-1	MOANALUA WELLS P3 (331-223-TP202)	Total/NA	Drinking Water	537.1	158771
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	537.1	158771
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	158771
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1	158771
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1	158771
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	537.1	158771
380-156051-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	537.1	158771
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	537.1	158771
MBL 380-158771/20-A	Method Blank	Total/NA	Water	537.1	158771
LCS 380-158771/22-A	Lab Control Sample	Total/NA	Water	537.1	158771
MRL 380-158771/21-A	Lab Control Sample	Total/NA	Water	537.1	158771
380-156099-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	158771
380-156099-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	158771

Prep Batch: 158987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-156051-1	MOANALUA WELLS P3 (331-223-TP202)	Total/NA	Drinking Water	533	
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	533	
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	533	
380-156051-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	
MBL 380-158987/20-A	Method Blank	Total/NA	Water	533	
LCS 380-158987/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-158987/21-A	Lab Control Sample	Total/NA	Water	533	
380-156049-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-156049-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 159131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-156051-1	MOANALUA WELLS P3 (331-223-TP202)	Total/NA	Drinking Water	533	158987
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	533	158987

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QC Association Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

LCMS (Continued)

Analysis Batch: 159131 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	158987
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	158987
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	158987
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	533	158987
380-156051-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	158987
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	158987
MBL 380-158987/20-A	Method Blank	Total/NA	Water	533	158987
LCS 380-158987/22-A	Lab Control Sample	Total/NA	Water	533	158987
MRL 380-158987/21-A	Lab Control Sample	Total/NA	Water	533	158987
380-156049-E-1-A MS	Matrix Spike	Total/NA	Water	533	158987
380-156049-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	158987

Lab Chronicle

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Client Sample ID: MOANALUA WELLS P3 (331-223-TP202)

Lab Sample ID: 380-156051-1

Date Collected: 06/16/25 09:05

Matrix: Drinking Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 20:43
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 21:13

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

Lab Sample ID: 380-156051-2

Date Collected: 06/16/25 10:10

Matrix: Drinking Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 20:52
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 21:24

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

Lab Sample ID: 380-156051-3

Date Collected: 06/16/25 09:50

Matrix: Drinking Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:02
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 21:34

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-5

Date Collected: 06/16/25 09:30

Matrix: Drinking Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:11
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 21:45

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

Lab Sample ID: 380-156051-6

Date Collected: 06/16/25 09:05

Matrix: Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:21

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Lab Chronicle

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

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

Lab Sample ID: 380-156051-6

Date Collected: 06/16/25 09:05

Matrix: Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 22:07

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

Lab Sample ID: 380-156051-7

Date Collected: 06/16/25 10:10

Matrix: Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:40
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 22:17

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

Lab Sample ID: 380-156051-8

Date Collected: 06/16/25 09:50

Matrix: Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:49
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 22:28

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-156051-10

Date Collected: 06/16/25 09:30

Matrix: Water

Date Received: 06/18/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			158987	E2HD	EA POM	06/20/25 08:20
Total/NA	Analysis	533		1	159131	Y5FM	EA POM	06/20/25 21:59
Total/NA	Prep	537.1 DW			158771	G9MN	EA POM	06/19/25 07:03
Total/NA	Analysis	537.1		1	158913	Y5FM	EA POM	06/19/25 22:39

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Accreditation/Certification Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Laboratory: Eurofins Eaton Analytical Pomona

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26

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Method Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Sample Summary

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

Job ID: 380-156051-1
SDG: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea
Gulch Wells P1/Halawa Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-156051-1	MOANALUA WELLS P3 (331-223-TP202)	Drinking Water	06/16/25 09:05	06/18/25 09:43
380-156051-2	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	Drinking Water	06/16/25 10:10	06/18/25 09:43
380-156051-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	06/16/25 09:50	06/18/25 09:43
380-156051-5	HALAWA WELLS P1 (331-023-WL065)	Drinking Water	06/16/25 09:30	06/18/25 09:43
380-156051-6	FB: MOANALUA WELLS (331-223-TP202)	Water	06/16/25 09:05	06/18/25 09:43
380-156051-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	06/16/25 10:10	06/18/25 09:43
380-156051-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	06/16/25 09:50	06/18/25 09:43
380-156051-10	FB: HALAWA WELLS P1 (331-023-WL065)	Water	06/16/25 09:30	06/18/25 09:43

Eurofins Eaton Analytical Pomona

941 Corporate Center Drive

Pomona, CA 91768-2642

Phone (626) 386-1100

Chain of Custody Record



Environment Testing

Client Information		Sampler Olaf Happe/Jason Rakofsky		Lab PM Arada, Rachelle		Carrier Tracking No(s)		COC No: 380-28005-2757 1			
Client Contact: Kirk Iwamoto		Phone: +1 808 748 5840		E-Mail: Rachelle Arada@et.eurofins.com		State of Origin:		Page: Page 1 of 1			
Company: City & County of Honolulu		PWSID:		Analysis Requested						Job #:	
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested		 380-156051 COC						Preservation Codes: R - NaThioSO4 RA - NaThio/HCl Q - Na2SO3 QA - Na2SO3/HCl Y - Trizma I - NH4 Acetate	
City: Honolulu		TAT Requested (days):								Other:	
State Zip: HI, 96843		Compliance Project ☐ Yes ☐ No									
Phone: 808-748-5840 (Tel)		PO #: C20525101 exp 05312023									
Email: kiwamoto@hbws.org		WO #:									
Project Name: RED-HILL/HBWS Sites Event Desc. RUSH Weekly Red Hill		Project #: 38001111		Field Filtered Sample (Yes or No)						Total Number of Containers	
Site: Hawaii		SSOW#:		Perform MS/MSD (Yes or No)							
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Special Instructions/Note:	
Moanalua Wells P 3		16-Jun-2025		0905		G		Water		chlorinated	
Aiea Wells Units 1&2 (260) P 2		16-Jun-2025		1010				Water			
Aiea Gulch Wells P1		16-Jun-2025		0950				Water		chlorinated	
Aiea Gulch Wells P2		16-Jun-2025						Water		chlorinated	
Halawa Wells P1		16-Jun-2025		0930				Water		FED Ex (A51A)	
FB Moanalua Wells		16-Jun-2025		0905						① 8820 9934 2160 (A51A) 2.8°-0.0°=2.8°	
FB Aiea Wells Units 1&2		16-Jun-2025		1010						② 8820 9934 2182 (A51A) 1.9°-0.0°=1.9°	
FB Aiea Gulch Wells P1		16-Jun-2025		0950						③ 8820 9934 2113 (A51A) 3.8°-0.0°=3.8°	
FB Aiea Gulch Wells P2		16-Jun-2025									
FB Halawa Wells P1		16-Jun-2025		0930							
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological										☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Deliverable Requested I, II, III, IV, Other (specify)										Special Instructions/QC Requirements	
Empty Kit Relinquished by										Method of Shipment	
Date										Time	
Date/Time: 6/17/25 1100										Date/Time: 06/18/25 09:43	
Company										Company	
Relinquished by										Relinquished by	
Date/Time:										Date/Time:	
Company										Company	
Relinquished by										Relinquished by	
Date/Time:										Date/Time:	
Company										Company	
Custody Seals Intact. ☐ Yes ☐ No										Custody Seal No.	
Cooler Temperature(s) °C and Other Remarks:											

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-156051-1

SDG Number: PFAS: Moanalua Wells P3/Aiea Wells 1&2 P2/Aiea Gulch Wells P1/Halawa Wells P1

Login Number: 156051

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Segura, Ryan

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