

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells
RUSH Weekly Red Hill

JOB NUMBER

380-158605-1

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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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: 380-158605-1

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Job Narrative 380-158605-1

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

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

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

Receipt

The samples were received on 7/3/2025 9:42 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.8°C and 2.7°C.

PFAS

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

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Detection Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: MOANALUA WELLS (331-223-TP202)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-1

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-3

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-4

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-5

No Detections.

Client Sample ID: FB Moanalua Wells

Lab Sample ID: 380-158605-6

No Detections.

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

No Detections.

Client Sample ID: FB Aiea Gulch Wells Pump 1

Lab Sample ID: 380-158605-8

No Detections.

Client Sample ID: FB Aiea Gulch Wells Pump 2

Lab Sample ID: 380-158605-9

No Detections.

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1

Date Collected: 06/30/25 09:59

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C6 PFDA	95		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C5 PFHxA	91		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C4 PFHpA	94		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C8 PFOA	95		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C9 PFNA	96		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C7 PFUnA	96		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C2 PFDoA	94		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C4 PFBA	93		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C5 PFPeA	96		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C3 PFBS	101		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C3 PFHxS	96		50 - 200	07/05/25 13:59	07/07/25 12:18	1

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Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1

Date Collected: 06/30/25 09:59

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	102		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C2-4:2-FTS	119		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C2-6:2-FTS	104		50 - 200	07/05/25 13:59	07/07/25 12:18	1
13C2-8:2-FTS	98		50 - 200	07/05/25 13:59	07/07/25 12:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 09:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130	07/05/25 19:16	07/07/25 09:29	1
13C2 PFHxA	123		70 - 130	07/05/25 19:16	07/07/25 09:29	1
13C2 PFDA	112		70 - 130	07/05/25 19:16	07/07/25 09:29	1
13C3-GenX	117		70 - 130	07/05/25 19:16	07/07/25 09:29	1

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

Lab Sample ID: 380-158605-2

Date Collected: 06/30/25 10:28

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-2

Date Collected: 06/30/25 10:28

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 12:56	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	62		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C6 PFDA	78		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C5 PFHxA	69		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C4 PFHpA	75		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C8 PFOA	73		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C9 PFNA	76		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C7 PFUnA	81		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C2 PFDoA	87		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C4 PFBA	79		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C5 PFPeA	82		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C3 PFBS	95		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C3 PFHxS	100		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C8 PFOS	106		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C2-4:2-FTS	153		50 - 200	07/05/25 13:59	07/07/25 12:56	1
13C2-6:2-FTS	156		50 - 200	07/05/25 13:59	07/07/25 12:56	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-2

Date Collected: 06/30/25 10:28

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	119		50 - 200	07/05/25 13:59	07/07/25 12:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130	07/05/25 19:16	07/07/25 11:03	1
13C2 PFHxA	120		70 - 130	07/05/25 19:16	07/07/25 11:03	1
13C2 PFDA	110		70 - 130	07/05/25 19:16	07/07/25 11:03	1
13C3-GenX	114		70 - 130	07/05/25 19:16	07/07/25 11:03	1

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

Lab Sample ID: 380-158605-3

Date Collected: 06/30/25 10:49

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-3

**Date Collected: 06/30/25 10:49
Date Received: 07/03/25 09:42**

**Matrix: Drinking Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:06	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C6 PFDA	104		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C5 PFHxA	101		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C4 PFHpA	106		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C8 PFOA	103		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C9 PFNA	104		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C7 PFUnA	102		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C2 PFDoA	101		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C4 PFBA	104		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C5 PFPeA	110		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C3 PFBS	99		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C3 PFHxS	98		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C8 PFOS	104		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C2-4:2-FTS	120		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C2-6:2-FTS	118		50 - 200	07/05/25 13:59	07/07/25 13:06	1
13C2-8:2-FTS	101		50 - 200	07/05/25 13:59	07/07/25 13:06	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-3

Date Collected: 06/30/25 10:49
Date Received: 07/03/25 09:42

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C2 PFHxA	114		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C2 PFDA	122		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C3-GenX	116		70 - 130			07/05/25 19:16	07/07/25 11:33	1

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

Lab Sample ID: 380-158605-4

Date Collected: 06/30/25 11:06
Date Received: 07/03/25 09:42

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-4

Date Collected: 06/30/25 11:06

Matrix: Drinking Water

Date Received: 07/03/25 09:42

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C6 PFDA	98		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C5 PFHxA	90		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C4 PFHpA	96		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C8 PFOA	95		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C9 PFNA	97		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C7 PFUnA	96		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C2 PFDoA	95		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C4 PFBA	91		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C5 PFPeA	93		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C3 PFBS	102		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C3 PFHxS	101		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C8 PFOS	104		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C2-4:2-FTS	120		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C2-6:2-FTS	123		50 - 200	07/05/25 13:59	07/07/25 13:15	1
13C2-8:2-FTS	106		50 - 200	07/05/25 13:59	07/07/25 13:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-4

**Date Collected: 06/30/25 11:06
Date Received: 07/03/25 09:42**

**Matrix: Drinking Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130			07/05/25 19:16	07/07/25 11:44	1
13C2 PFHxA	117		70 - 130			07/05/25 19:16	07/07/25 11:44	1
13C2 PFDA	111		70 - 130			07/05/25 19:16	07/07/25 11:44	1
13C3-GenX	109		70 - 130			07/05/25 19:16	07/07/25 11:44	1

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

Lab Sample ID: 380-158605-5

**Date Collected: 06/30/25 11:29
Date Received: 07/03/25 09:42**

**Matrix: Drinking Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1

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Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-5

**Date Collected: 06/30/25 11:29
Date Received: 07/03/25 09:42**

**Matrix: Drinking Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	65		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C6 PFDA	84		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C5 PFHxA	73		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C4 PFHpA	79		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C8 PFOA	79		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C9 PFNA	83		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C7 PFUnA	87		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C2 PFDoA	89		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C4 PFBA	75		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C5 PFPeA	80		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C3 PFBS	97		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C3 PFHxS	96		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C8 PFOS	104		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C2-4:2-FTS	136		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C2-6:2-FTS	150		50 - 200	07/05/25 13:59	07/07/25 13:25	1
13C2-8:2-FTS	112		50 - 200	07/05/25 13:59	07/07/25 13:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1

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Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-5

**Date Collected: 06/30/25 11:29
Date Received: 07/03/25 09:42**

**Matrix: Drinking Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorodecanoic acid (PFDA)	2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			07/05/25 19:16	07/07/25 11:55	1
13C2 PFHxA	116		70 - 130			07/05/25 19:16	07/07/25 11:55	1
13C2 PFDA	119		70 - 130			07/05/25 19:16	07/07/25 11:55	1
13C3-GenX	111		70 - 130			07/05/25 19:16	07/07/25 11:55	1

Client Sample ID: FB Moanalua Wells

Lab Sample ID: 380-158605-6

**Date Collected: 06/30/25 09:59
Date Received: 07/03/25 09:42**

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1

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Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Moanalua Wells

Lab Sample ID: 380-158605-6

Date Collected: 06/30/25 09:59

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:34	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C6 PFDA	103		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C5 PFHxA	100		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C4 PFHpA	101		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C8 PFOA	102		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C9 PFNA	104		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C7 PFUnA	102		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C2 PFDoA	102		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C4 PFBA	106		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C5 PFPeA	110		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C3 PFBS	102		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C3 PFHxS	100		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C8 PFOS	105		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C2-4:2-FTS	131		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C2-6:2-FTS	114		50 - 200			07/05/25 13:59	07/07/25 13:34	1
13C2-8:2-FTS	105		50 - 200			07/05/25 13:59	07/07/25 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Moanalua Wells

Lab Sample ID: 380-158605-6

Date Collected: 06/30/25 09:59

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130			07/05/25 19:16	07/07/25 11:13	1
13C2 PFHxA	125		70 - 130			07/05/25 19:16	07/07/25 11:13	1
13C2 PFDA	111		70 - 130			07/05/25 19:16	07/07/25 11:13	1
13C3-GenX	115		70 - 130			07/05/25 19:16	07/07/25 11:13	1

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

Date Collected: 06/30/25 10:28

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

Date Collected: 06/30/25 10:28

Matrix: Water

Date Received: 07/03/25 09:42

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		07/05/25 13:59	07/07/25 13:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:44	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C6 PFDA	102		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C5 PFHxA	101		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C4 PFHpA	105		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C8 PFOA	103		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C9 PFNA	103		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C7 PFUnA	102		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C2 PFDoA	101		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C4 PFBA	108		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C5 PFPeA	111		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C3 PFBS	100		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C3 PFHxS	97		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C8 PFOS	104		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C2-4:2-FTS	123		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C2-6:2-FTS	109		50 - 200			07/05/25 13:59	07/07/25 13:44	1
13C2-8:2-FTS	100		50 - 200			07/05/25 13:59	07/07/25 13:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

Date Collected: 06/30/25 10:28

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C2 PFHxA	114		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C2 PFDA	109		70 - 130			07/05/25 19:16	07/07/25 11:33	1
13C3-GenX	107		70 - 130			07/05/25 19:16	07/07/25 11:33	1

Client Sample ID: FB Aiea Gulch Wells Pump 1

Lab Sample ID: 380-158605-8

Date Collected: 06/30/25 10:49

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 13:54	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Gulch Wells Pump 1

Lab Sample ID: 380-158605-8

Date Collected: 06/30/25 10:49

Matrix: Water

Date Received: 07/03/25 09:42

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C6 PFDA	107		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C5 PFHxA	105		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C4 PFHpA	109		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C8 PFOA	109		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C9 PFNA	109		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C7 PFUnA	108		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C2 PFDoA	106		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C4 PFBA	108		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C5 PFPeA	113		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C3 PFBS	100		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C3 PFHxS	100		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C8 PFOS	108		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C2-4:2-FTS	126		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C2-6:2-FTS	109		50 - 200	07/05/25 13:59	07/07/25 13:54	1
13C2-8:2-FTS	102		50 - 200	07/05/25 13:59	07/07/25 13:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			07/05/25 19:16	07/07/25 11:43	1
13C2 PFHxA	122		70 - 130			07/05/25 19:16	07/07/25 11:43	1
13C2 PFDA	112		70 - 130			07/05/25 19:16	07/07/25 11:43	1
13C3-GenX	113		70 - 130			07/05/25 19:16	07/07/25 11:43	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Gulch Wells Pump 2

Lab Sample ID: 380-158605-9

Date Collected: 06/30/25 11:06

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C6 PFDA	102		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C5 PFHxA	99		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C4 PFHpA	101		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C8 PFOA	101		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C9 PFNA	104		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C7 PFUnA	106		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C2 PFDoA	105		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C4 PFBA	102		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C5 PFPeA	108		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C3 PFBS	99		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C3 PFHxS	100		50 - 200	07/05/25 13:59	07/07/25 14:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Gulch Wells Pump 2

Lab Sample ID: 380-158605-9

Date Collected: 06/30/25 11:06

Matrix: Water

Date Received: 07/03/25 09:42

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C2-4:2-FTS	133		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C2-6:2-FTS	125		50 - 200	07/05/25 13:59	07/07/25 14:03	1
13C2-8:2-FTS	128		50 - 200	07/05/25 13:59	07/07/25 14:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130	07/05/25 19:16	07/07/25 11:53	1
13C2 PFHxA	119		70 - 130	07/05/25 19:16	07/07/25 11:53	1
13C2 PFDA	109		70 - 130	07/05/25 19:16	07/07/25 11:53	1
13C3-GenX	111		70 - 130	07/05/25 19:16	07/07/25 11:53	1

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

Date Collected: 06/30/25 11:29

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

Date Collected: 06/30/25 11:29

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/05/25 13:59	07/07/25 14:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C6 PFDA	104		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C5 PFHxA	103		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C4 PFHpA	106		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C8 PFOA	107		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C9 PFNA	106		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C7 PFUnA	107		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C2 PFDoA	105		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C4 PFBA	106		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C5 PFPeA	113		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C3 PFBS	105		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C3 PFHxS	102		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C8 PFOS	109		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C2-4:2-FTS	139		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C2-6:2-FTS	114		50 - 200	07/05/25 13:59	07/07/25 14:22	1
13C2-8:2-FTS	108		50 - 200	07/05/25 13:59	07/07/25 14:22	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

Date Collected: 06/30/25 11:29

Matrix: Water

Date Received: 07/03/25 09:42

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/05/25 19:16	07/07/25 12:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130	07/05/25 19:16	07/07/25 12:02	1
13C2 PFHxA	121		70 - 130	07/05/25 19:16	07/07/25 12:02	1
13C2 PFDA	110		70 - 130	07/05/25 19:16	07/07/25 12:02	1
13C3-GenX	112		70 - 130	07/05/25 19:16	07/07/25 12:02	1

Action Limit Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1

PWSID Number: HI0000331

Compliance Check

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

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

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-158605-2

(331-206-TP065)

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		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)	2.3		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)	2.7		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

Lab Sample ID: 380-158605-3

(331-201-TP071)

PWSID Number: HI0000331

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071) (Continued)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	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 2
(331-202-TP072)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-4

Compliance Check

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

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

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-5

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	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400) (Continued)
PWSID Number: HI0000331

Lab Sample ID: 380-158605-5

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	RL	Method	Prep Type
				Limit			
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 Moanalua Wells

Lab Sample ID: 380-158605-6

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	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

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

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	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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Halawa Wells Unit 1&2 (Continued)

Lab Sample ID: 380-158605-7

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	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

Lab Sample ID: 380-158605-8

Compliance Check

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

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

Client Sample ID: FB Aiea Gulch Wells Pump 2

Lab Sample ID: 380-158605-9

Compliance Check

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

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

Action Limit Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

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)
380-158605-1	MOANALUA WELLS (331-223-T	107	123	112	117
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	109	118	109	114
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	108	126	113	120
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	104	120	110	114
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	110	114	122	116
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	111	117	111	109
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	113	116	119	111
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)
380-158528-A-1-B MS	Matrix Spike	110	115	116	115
380-158528-A-1-C MSD	Matrix Spike Duplicate	105	119	119	120
380-158605-6	FB Moanalua Wells	106	125	111	115
380-158605-7	FB Halawa Wells Unit 1&2	93	114	109	107
380-158605-8	FB Aiea Gulch Wells Pump 1	109	122	112	113
380-158605-9	FB Aiea Gulch Wells Pump 2	113	119	109	111
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	114	121	110	112
LCS 380-161172/23-A	Lab Control Sample	106	118	113	114
LCS 380-161173/24-A	Lab Control Sample	109	120	119	110
MBL 380-161172/21-A	Method Blank	98	120	118	119
MBL 380-161173/22-A	Method Blank	115	119	115	114
MRL 380-161172/22-A	Lab Control Sample	105	117	112	116
MRL 380-161173/23-A	Lab Control Sample	115	113	109	109
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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

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)
380-158605-1	MOANALUA WELLS (331-223-T	85	95	91	94	95	96	96	94
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	71	88	76	79	81	84	88	91
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	80	83	86	87	84	84	90	93
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	62	78	69	75	73	76	81	87
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	94	104	101	106	103	104	102	101
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	80	98	90	96	95	97	96	95
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	65	84	73	79	79	83	87	89

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)
380-158605-1	MOANALUA WELLS (331-223-T	93	96	101	96	102	119	104	98
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	81	81	100	100	106	118	112	104
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	93	93	99	99	103	117	103	101
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	79	82	95	100	106	153	156	119
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	104	110	99	98	104	120	118	101
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	91	93	102	101	104	120	123	106
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	75	80	97	96	104	136	150	112

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C6PFDA = 13C6 PFDA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
42FTS = 13C2-4:2-FTS
62FTS = 13C2-6:2-FTS
82FTS = 13C2-8:2-FTS

Isotope Dilution Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

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)
380-158605-6	FB Moanalua Wells	92	103	100	101	102	104	102	102
380-158605-7	FB Halawa Wells Unit 1&2	96	102	101	105	103	103	102	101
380-158605-8	FB Aiea Gulch Wells Pump 1	98	107	105	109	109	109	108	106
380-158605-9	FB Aiea Gulch Wells Pump 2	90	102	99	101	101	104	106	105
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	96	104	103	106	107	106	107	105
LCS 380-161161/22-A	Lab Control Sample	93	101	99	100	101	101	100	99
MBL 380-161161/20-A	Method Blank	93	105	103	105	104	105	105	103
MRL 380-161161/21-A	Lab Control Sample	94	105	99	105	101	105	105	103

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-158605-6	FB Moanalua Wells	106	110	102	100	105	131	114	105
380-158605-7	FB Halawa Wells Unit 1&2	108	111	100	97	104	123	109	100
380-158605-8	FB Aiea Gulch Wells Pump 1	108	113	100	100	108	126	109	102
380-158605-9	FB Aiea Gulch Wells Pump 2	102	108	99	100	106	133	125	128
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	106	113	105	102	109	139	114	108
LCS 380-161161/22-A	Lab Control Sample	106	108	99	97	103	111	101	98
MBL 380-161161/20-A	Method Blank	105	105	97	99	107	119	106	100
MRL 380-161161/21-A	Lab Control Sample	103	105	98	98	105	115	103	101

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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MBL 380-161161/20-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161161

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		07/05/25 13:59	07/07/25 11:49	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C6 PFDA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C5 PFHxA	103		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C4 PFHpA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C8 PFOA	104		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C9 PFNA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C7 PFUnA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C2 PFDoA	103		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C4 PFBA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C5 PFPeA	105		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C3 PFBS	97		50 - 200	07/05/25 13:59	07/07/25 11:49	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MBL 380-161161/20-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161161

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	99		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C8 PFOS	107		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C2-4:2-FTS	119		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C2-6:2-FTS	106		50 - 200	07/05/25 13:59	07/07/25 11:49	1
13C2-8:2-FTS	100		50 - 200	07/05/25 13:59	07/07/25 11:49	1

Lab Sample ID: LCS 380-161161/22-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161161

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.4	57.0		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.4	56.6		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	60.1		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	63.5		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	61.0		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	57.8		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	60.4	59.8		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	59.2		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	60.7		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	59.2		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	60.4	59.1		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	57.2		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	59.1		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	59.6		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	59.8		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	60.8		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	60.0		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	59.7		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	60.6		ng/L		100	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.4	59.0		ng/L		98	70 - 130
Perfluoro 3 methoxypropanoic acid (PFMPA)	60.4	59.0		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	58.8		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	61.2		ng/L		101	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: LCS 380-161161/22-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161161

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	60.4	56.2		ng/L		93	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.4	60.7		ng/L		101	70 - 130
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C3 HFPO-DA	93		50 - 200				
13C6 PFDA	101		50 - 200				
13C5 PFHxA	99		50 - 200				
13C4 PFHpA	100		50 - 200				
13C8 PFOA	101		50 - 200				
13C9 PFNA	101		50 - 200				
13C7 PFUnA	100		50 - 200				
13C2 PFDoA	99		50 - 200				
13C4 PFBA	106		50 - 200				
13C5 PFPeA	108		50 - 200				
13C3 PFBS	99		50 - 200				
13C3 PFHxS	97		50 - 200				
13C8 PFOS	103		50 - 200				
13C2-4:2-FTS	111		50 - 200				
13C2-6:2-FTS	101		50 - 200				
13C2-8:2-FTS	98		50 - 200				

Lab Sample ID: MRL 380-161161/21-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161161

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	2.01	2.00	J	ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	2.01	1.92	J	ng/L		96	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.95	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.14	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.15	J	ng/L		107	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MRL 380-161161/21-A

Matrix: Water

Analysis Batch: 161242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161161

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.02	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.14	J	ng/L		107	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.07	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.15	J	ng/L		107	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.27	J	ng/L		113	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.99	J	ng/L		99	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.02	J	ng/L		101	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	94		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	99		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	101		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	98		50 - 200
13C3 PFHxS	98		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	115		50 - 200
13C2-6:2-FTS	103		50 - 200
13C2-8:2-FTS	101		50 - 200

Lab Sample ID: 380-158605-1 MS

Matrix: Drinking Water

Analysis Batch: 161242

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

Prep Type: Total/NA

Prep Batch: 161161

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1 MS

Matrix: Drinking Water

Analysis Batch: 161242

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

Prep Type: Total/NA

Prep Batch: 161161

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		120	111		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	112		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	119		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	119		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	110		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	116		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	113		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	119		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		120	114		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	115		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	113		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	112		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	115		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	113		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	109		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	123		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	113		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	115		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		120	124		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	109		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	120		ng/L		100	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	71		50 - 200
13C6 PFDA	88		50 - 200
13C5 PFHxA	76		50 - 200
13C4 PFHpA	79		50 - 200
13C8 PFOA	81		50 - 200
13C9 PFNA	84		50 - 200
13C7 PFUnA	88		50 - 200
13C2 PFDoA	91		50 - 200

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QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1 MS

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 161242

Prep Batch: 161161

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	81		50 - 200
13C5 PFPeA	81		50 - 200
13C3 PFBS	100		50 - 200
13C3 PFHxS	100		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	118		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-158605-1 MSD

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 161242

Prep Batch: 161161

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	112		ng/L		93	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	113		ng/L		94	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	114		ng/L		94	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	121		ng/L		101	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	120		ng/L		100	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		120	114		ng/L		95	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	116		ng/L		96	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	114		ng/L		95	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	120		ng/L		100	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	116		ng/L		96	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		120	114		ng/L		95	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	114		ng/L		94	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		120	113		ng/L		94	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	114		ng/L		94	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		120	116		ng/L		96	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	116		ng/L		97	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	114		ng/L		95	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	116		ng/L		97	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	111		ng/L		92	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	119		ng/L		99	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	113		ng/L		94	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1 MSD

Matrix: Drinking Water

Analysis Batch: 161242

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

Prep Type: Total/NA

Prep Batch: 161161

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	117		ng/L		97	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	119		ng/L		98	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	110		ng/L		92	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	114		ng/L		95	70 - 130	5	30
Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits								
13C3 HFPO-DA	80		50 - 200								
13C6 PFDA	83		50 - 200								
13C5 PFHxA	86		50 - 200								
13C4 PFHpA	87		50 - 200								
13C8 PFOA	84		50 - 200								
13C9 PFNA	84		50 - 200								
13C7 PFUnA	90		50 - 200								
13C2 PFDoA	93		50 - 200								
13C4 PFBA	93		50 - 200								
13C5 PFPeA	93		50 - 200								
13C3 PFBS	99		50 - 200								
13C3 PFHxS	99		50 - 200								
13C8 PFOS	103		50 - 200								
13C2-4:2-FTS	117		50 - 200								
13C2-6:2-FTS	103		50 - 200								
13C2-8:2-FTS	101		50 - 200								

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

Lab Sample ID: MBL 380-161172/21-A

Matrix: Water

Analysis Batch: 161245

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161172

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MBL 380-161172/21-A

Matrix: Water

Analysis Batch: 161245

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161172

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/05/25 19:16	07/07/25 08:59	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NeFOSAA	98		70 - 130			07/05/25 19:16	07/07/25 08:59	1
13C2 PFHxA	120		70 - 130			07/05/25 19:16	07/07/25 08:59	1
13C2 PFDA	118		70 - 130			07/05/25 19:16	07/07/25 08:59	1
13C3-GenX	119		70 - 130			07/05/25 19:16	07/07/25 08:59	1

Lab Sample ID: LCS 380-161172/23-A

Matrix: Water

Analysis Batch: 161245

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.0	24.9		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	23.9		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	24.5		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	24.4		ng/L		98	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NeFOSAA)	25.0	23.0		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	28.0		ng/L		112	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	26.7		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	25.8		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	24.6		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	25.4		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	23.6		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	26.1		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	25.0	24.5		ng/L		98	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	29.8		ng/L		119	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.0	27.8		ng/L		111	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	24.2		ng/L		97	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	23.8		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	25.7		ng/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Surrogate	LCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	118		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	114		70 - 130

Lab Sample ID: MRL 380-161172/22-A				Client Sample ID: Lab Control Sample			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 161245				Prep Batch: 161172			

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.00	2.01	J	ng/L		101	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.15	J	ng/L		107	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.02	J	ng/L		101	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.89	J	ng/L		95	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.99	J	ng/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.89	J	ng/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.41	J	ng/L		121	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.18	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.93	J	ng/L		97	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.89	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.16	J	ng/L		108	50 - 150

Surrogate	MRL		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	117		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	116		70 - 130

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1 MS

Matrix: Drinking Water

Analysis Batch: 161245

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

Prep Type: Total/NA

Prep Batch: 161172

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	24.4		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	23.8		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	24.6		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.1		ng/L		96	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	23.3		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	27.3		ng/L		109	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.0		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	25.3		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	23.6		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	24.7		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	23.8		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	24.7		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	24.2		ng/L		96	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	27.8		ng/L		111	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	26.2		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	23.2		ng/L		92	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	23.3		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.1		ng/L		100	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	118		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	114		70 - 130

Lab Sample ID: 380-158605-1 MSD

Matrix: Drinking Water

Analysis Batch: 161245

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

Prep Type: Total/NA

Prep Batch: 161172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.2		ng/L		104	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	25.0		ng/L		100	70 - 130	5	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.2		ng/L		100	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1 MSD

Matrix: Drinking Water

Analysis Batch: 161245

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

Prep Type: Total/NA

Prep Batch: 161172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.8		ng/L		99	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	23.9		ng/L		95	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	30.4		ng/L		121	70 - 130	11	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.4		ng/L		105	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.8		ng/L		107	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.6		ng/L		98	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	25.8		ng/L		101	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	24.2		ng/L		96	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.9		ng/L		107	70 - 130	9	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.4		ng/L		101	70 - 130	5	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	28.1		ng/L		112	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.0		ng/L		107	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	24.4		ng/L		97	70 - 130	5	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	23.5		ng/L		94	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.6		ng/L		106	70 - 130	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	108		70 - 130
13C2 PFHxA	126		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	120		70 - 130

Lab Sample ID: MBL 380-161173/22-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161173

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1

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QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MBL 380-161173/22-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 161173

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/05/25 19:16	07/07/25 07:37	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130	07/05/25 19:16	07/07/25 07:37	1
13C2 PFHxA	119		70 - 130	07/05/25 19:16	07/07/25 07:37	1
13C2 PFDA	115		70 - 130	07/05/25 19:16	07/07/25 07:37	1
13C3-GenX	114		70 - 130	07/05/25 19:16	07/07/25 07:37	1

Lab Sample ID: LCS 380-161173/24-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.1	46.5		ng/L		93	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.1	49.8		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	50.0		ng/L		100	70 - 130
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	50.1	44.8		ng/L		89	70 - 130
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	50.1	43.1		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	46.7		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDaA)	50.1	50.3		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	49.3		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	48.6		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	48.8		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	48.5		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	49.4		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	50.1	49.6		ng/L		99	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	46.5		ng/L		93	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	56.2		ng/L		112	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: LCS 380-161173/24-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.1	49.1		ng/L		98	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.1	46.9		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.1	47.0		ng/L		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	120		70 - 130
13C2 PFDA	119		70 - 130
13C3-GenX	110		70 - 130

Lab Sample ID: MRL 380-161173/23-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161173

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.05	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.17	J	ng/L		109	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.09	J	ng/L		104	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.88	J	ng/L		94	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.30	J	ng/L		115	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.17	J	ng/L		108	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.00	J	ng/L		100	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: MRL 380-161173/23-A

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 161173

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.00	J	ng/L		100	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	115		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	109		70 - 130

Lab Sample ID: 380-158528-A-1-B MS

Matrix: Water

Analysis Batch: 161241

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 161173

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	49.1		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.1	47.9		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	50.8		ng/L		101	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	49.1		ng/L		98	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	48.3		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.1	47.3		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	51.8		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.1	48.6		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.1	49.5		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.1	47.9		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.1	47.5		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.1	48.8		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.1	49.9		ng/L		100	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.1	44.0		ng/L		88	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	<2.0		50.1	57.1		ng/L		114	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.1	47.4		ng/L		95	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.1	47.1		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.1	48.7		ng/L		97	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	115		70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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

Lab Sample ID: 380-158528-A-1-B MS
Matrix: Water
Analysis Batch: 161241

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 161173

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
13C2 PFDA	116		70 - 130
13C3-GenX	115		70 - 130

Lab Sample ID: 380-158528-A-1-C MSD
Matrix: Water
Analysis Batch: 161241

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 161173

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide	<2.0		50.1	49.9		ng/L		100	70 - 130	1	30
Dimer Acid (HFPO-DA/GenX)											
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.1	48.9		ng/L		98	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	49.5		ng/L		99	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	47.2		ng/L		94	70 - 130	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	46.6		ng/L		93	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.1	46.8		ng/L		93	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	49.9		ng/L		100	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		50.1	50.3		ng/L		100	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		50.1	51.1		ng/L		102	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.1	48.7		ng/L		97	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.1	48.2		ng/L		96	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.1	48.9		ng/L		98	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		50.1	49.6		ng/L		99	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.1	43.9		ng/L		88	70 - 130	0	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.1	57.2		ng/L		114	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.1	48.6		ng/L		97	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUS)	<2.0		50.1	46.9		ng/L		94	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.1	49.6		ng/L		99	70 - 130	2	30

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	119		70 - 130
13C2 PFDA	119		70 - 130
13C3-GenX	120		70 - 130

QC Association Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

LCMS

Prep Batch: 161161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	533	
380-158605-6	FB Moanalua Wells	Total/NA	Water	533	
380-158605-7	FB Halawa Wells Unit 1&2	Total/NA	Water	533	
380-158605-8	FB Aiea Gulch Wells Pump 1	Total/NA	Water	533	
380-158605-9	FB Aiea Gulch Wells Pump 2	Total/NA	Water	533	
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	Total/NA	Water	533	
MBL 380-161161/20-A	Method Blank	Total/NA	Water	533	
LCS 380-161161/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-161161/21-A	Lab Control Sample	Total/NA	Water	533	
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	

Prep Batch: 161172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1 DW	
380-158605-6	FB Moanalua Wells	Total/NA	Water	537.1 DW	
380-158605-7	FB Halawa Wells Unit 1&2	Total/NA	Water	537.1 DW	
380-158605-8	FB Aiea Gulch Wells Pump 1	Total/NA	Water	537.1 DW	
380-158605-9	FB Aiea Gulch Wells Pump 2	Total/NA	Water	537.1 DW	
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	Total/NA	Water	537.1 DW	
MBL 380-161172/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-161172/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-161172/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 161173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	537.1 DW	
MBL 380-161173/22-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-161173/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-161173/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-158528-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-158528-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 161241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	161173
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	161173
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	537.1	161173
MBL 380-161173/22-A	Method Blank	Total/NA	Water	537.1	161173
LCS 380-161173/24-A	Lab Control Sample	Total/NA	Water	537.1	161173
MRL 380-161173/23-A	Lab Control Sample	Total/NA	Water	537.1	161173

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

LCMS (Continued)

Analysis Batch: 161241 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158528-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	161173
380-158528-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	161173

Analysis Batch: 161242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	161161
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	161161
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	161161
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	161161
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	533	161161
380-158605-6	FB Moanalua Wells	Total/NA	Water	533	161161
380-158605-7	FB Halawa Wells Unit 1&2	Total/NA	Water	533	161161
380-158605-8	FB Aiea Gulch Wells Pump 1	Total/NA	Water	533	161161
380-158605-9	FB Aiea Gulch Wells Pump 2	Total/NA	Water	533	161161
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	Total/NA	Water	533	161161
MBL 380-161161/20-A	Method Blank	Total/NA	Water	533	161161
LCS 380-161161/22-A	Lab Control Sample	Total/NA	Water	533	161161
MRL 380-161161/21-A	Lab Control Sample	Total/NA	Water	533	161161
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	161161
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	161161

Analysis Batch: 161245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-158605-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	161172
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1	161172
380-158605-6	FB Moanalua Wells	Total/NA	Water	537.1	161172
380-158605-7	FB Halawa Wells Unit 1&2	Total/NA	Water	537.1	161172
380-158605-8	FB Aiea Gulch Wells Pump 1	Total/NA	Water	537.1	161172
380-158605-9	FB Aiea Gulch Wells Pump 2	Total/NA	Water	537.1	161172
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	Total/NA	Water	537.1	161172
MBL 380-161172/21-A	Method Blank	Total/NA	Water	537.1	161172
LCS 380-161172/23-A	Lab Control Sample	Total/NA	Water	537.1	161172
MRL 380-161172/22-A	Lab Control Sample	Total/NA	Water	537.1	161172
380-158605-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	161172
380-158605-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	161172

Lab Chronicle

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

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

Lab Sample ID: 380-158605-1

Date Collected: 06/30/25 09:59

Matrix: Drinking Water

Date Received: 07/03/25 09:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 12:18
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 09:29

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

Lab Sample ID: 380-158605-2

Date Collected: 06/30/25 10:28

Matrix: Drinking Water

Date Received: 07/03/25 09:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 12:56
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 11:03

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

Lab Sample ID: 380-158605-3

Date Collected: 06/30/25 10:49

Matrix: Drinking Water

Date Received: 07/03/25 09:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:06
Total/NA	Prep	537.1 DW			161173	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161241	SZ9R	EA POM	07/07/25 11:33

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

Lab Sample ID: 380-158605-4

Date Collected: 06/30/25 11:06

Matrix: Drinking Water

Date Received: 07/03/25 09:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:15
Total/NA	Prep	537.1 DW			161173	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161241	SZ9R	EA POM	07/07/25 11:44

Lab Chronicle

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

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

Lab Sample ID: 380-158605-5

**Date Collected: 06/30/25 11:29
Date Received: 07/03/25 09:42**

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:25
Total/NA	Prep	537.1 DW			161173	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161241	SZ9R	EA POM	07/07/25 11:55

Client Sample ID: FB Moanalua Wells

Lab Sample ID: 380-158605-6

**Date Collected: 06/30/25 09:59
Date Received: 07/03/25 09:42**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:34
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 11:13

Client Sample ID: FB Halawa Wells Unit 1&2

Lab Sample ID: 380-158605-7

**Date Collected: 06/30/25 10:28
Date Received: 07/03/25 09:42**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:44
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 11:33

Client Sample ID: FB Aiea Gulch Wells Pump 1

Lab Sample ID: 380-158605-8

**Date Collected: 06/30/25 10:49
Date Received: 07/03/25 09:42**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 13:54
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 11:43

Client Sample ID: FB Aiea Gulch Wells Pump 2

Lab Sample ID: 380-158605-9

**Date Collected: 06/30/25 11:06
Date Received: 07/03/25 09:42**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 14:03
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 11:53

Eurofins Eaton Analytical Pomona

Lab Chronicle

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Client Sample ID: FB Aiea Wells Pumps 1&2 (260)

Lab Sample ID: 380-158605-10

Date Collected: 06/30/25 11:29

Matrix: Water

Date Received: 07/03/25 09:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			161161	N8NE	EA POM	07/05/25 13:59
Total/NA	Analysis	533		1	161242	M7ML	EA POM	07/07/25 14:22
Total/NA	Prep	537.1 DW			161172	E9PK	EA POM	07/05/25 19:16
Total/NA	Analysis	537.1		1	161245	M7ML	EA POM	07/07/25 12:02

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Laboratory: Eurofins Eaton Analytical Pomona

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

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

1
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Method Summary

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

Job ID: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

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: 380-158605-1
SDG: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch
Wells/Aiea Wells

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-158605-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	06/30/25 09:59	07/03/25 09:42	HI0000331
380-158605-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	06/30/25 10:28	07/03/25 09:42	HI0000331
380-158605-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	06/30/25 10:49	07/03/25 09:42	HI0000331
380-158605-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	06/30/25 11:06	07/03/25 09:42	HI0000331
380-158605-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	06/30/25 11:29	07/03/25 09:42	HI0000331
380-158605-6	FB Moanalua Wells	Water	06/30/25 09:59	07/03/25 09:42	
380-158605-7	FB Halawa Wells Unit 1&2	Water	06/30/25 10:28	07/03/25 09:42	
380-158605-8	FB Aiea Gulch Wells Pump 1	Water	06/30/25 10:49	07/03/25 09:42	
380-158605-9	FB Aiea Gulch Wells Pump 2	Water	06/30/25 11:06	07/03/25 09:42	
380-158605-10	FB Aiea Wells Pumps 1&2 (260)	Water	06/30/25 11:29	07/03/25 09:42	

Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100

Monrovia CA 91016

Phone (626) 386-1100

Chain of Custody Record

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Client Information		Sampler bailey		Lab PM Arada Rachelle		Carrier Tracking No(s)		COC No: 380-27941 2757 2	
Client Contact kirk lwamoto		Phone +1 808 748 5840		E-Mail Rachelle.Arada@et.euronisus.com		State of Origin		Page Page 2 of 2	
Company City & County of Honolulu		PWSID		Analysis Requested		Job #		380-158605 COC	
Address 630 South Beretania Street; Chemistry Lab		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18 525.2_PREC - (MOD) 525plus PLUS TICs 537.1_DW_PREC - 537.1 Full List 533 - All Analytes Total Number of containers		Preservation Codes			
City Honolulu		TAT Requested (days)				A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)			
State Zip HI 96843		Compliance Project. Δ 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							
Site		SSOW#							
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		Special Instructions/Note	
Moanalua Wells		30-Jun-2025	0959	G	Water				chlorinated
Halawa Wells Units 1&2 P1		30-Jun-2025	1028	G	Water				
Aiea Gulch Wells Pump 1		30-Jun-2025	1049	G	Water				chlorinated
Aiea Gulch Wells Pump 2		30-Jun-2025	1106	G	Water				chlorinated
Aiea Wells Pumps 1&2 (260) P2		30-Jun-2025	1129	G	Water				
FB Moanalua Wells		30-Jun-2025	0959						
FB Halawa Wells Units 1&2		30-Jun-2025	1028						
FB Aiea Gulch Wells Pump 1		30-Jun-2025	1049						
FB Aiea Gulch Wells Pump 2		30-Jun-2025	1106						
FB Aiea Wells Pumps 1&2 (260)		30-Jun-2025	1129						
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/OC Requirements				
Empty Kit Relinquished by		Date		Time		Method of Shipment			
[Redacted]		01/30/2025		1400		Received by: [Signature] Date/Time: 07/03/25 09:42 Company: EEA			
Relinquished by		Date/Time		Company		Received by			
Relinquished by		Date/Time		Company		Received by			
Custody Seals Intact:		Custody Seal No		Cooler Temperature(s) °C and Other Remarks					
Δ Yes Δ No				(95A) 10.8 - 0.0 = 0.8 / 22.7 - 0.0 = 2.7 GEL-FLD					

Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100

Monrovia CA 91016

Phone (626) 386-1100

Chain of Custody Record



Environment Testing
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Client Information		Sampler bailey		Lab PM Arada Rachelle		Carrier Tracking No(s)		COC No: 380-27941 2757 2	
Client Contact: kirk lwamoto		Phone: +1 808 748 5840		E-Mail: Rachelle.Arada@et.euronisus.com		State of Origin		Page: Page 2 of 2	
Company: City & County of Honolulu		PWSID:		Analysis Requested		Job #:		380-158605 COC	
Address: 630 South Beretania Street; Chemistry Lab		Due Date Requested		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18 525.2_PREC - (MOD) 525plus PLUS TICs 537.1_DW_PREC - 537.1 Full List 533 - All Analytes Total Number of containers		Preservation Codes			
City: Honolulu		TAT Requested (days).				A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)			
State Zip: HI 96843		Compliance Project. Δ 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							
Site		SSOW#:							
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, G=wasteoil, BT=Tissue, A=Air)	
Moanalua Wells		30-Jun-2025		0959		G		Water	
Halawa Wells Units 1&2 P1		30-Jun-2025		1028		G		Water	
Aiea Gulch Wells Pump 1		30-Jun-2025		1049		G		Water	
Aiea Gulch Wells Pump 2		30-Jun-2025		1106		G		Water	
Aiea Wells Pumps 1&2 (260) P2		30-Jun-2025		1129		G		Water	
FB Moanalua Wells		30-Jun-2025		0959					
FB Halawa Wells Units 1&2		30-Jun-2025		1028					
FB Aiea Gulch Wells Pump 1		30-Jun-2025		1049					
FB Aiea Gulch Wells Pump 2		30-Jun-2025		1106					
FB Aiea Wells Pumps 1&2 (260)		30-Jun-2025		1129					
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested I II, III IV Other (specify)									
Special Instructions/OC Requirements									
Empty Kit Relinquished by		Date		Time		Method of Shipment			
Relinquished by		Date/Time		Company		Received by		Date/Time	
Relinquished by		Date/Time		Company		Received by		Date/Time	
Relinquished by		Date/Time		Company		Received by		Date/Time	
Custody Seals Intact:		Custody Seal No		Cooler Temperature(s) °C and Other Remarks					
Δ Yes Δ No									

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-158605-1

SDG Number: PFAS: Moanalua Wells/Halawa Wells/Aiea Gulch Wells/Aiea Wells

Login Number: 158605

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Sanchez Velasquez, Gustavo

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	