

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 7/23/2025 11:27:50 PM

JOB DESCRIPTION

RED-HILL
PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

JOB NUMBER

380-160918-1

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
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

Generated
7/23/2025 11:27:50 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	23
Surrogate Summary	27
Isotope Dilution Summary	28
QC Sample Results	30
QC Association Summary	48
Lab Chronicle	50
Certification Summary	52
Method Summary	53
Sample Summary	54
Chain of Custody	55
Receipt Checklists	56



Definitions/Glossary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea
Wells Pumps 1&2 P2

Qualifiers

LCMS

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

Glossary

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

Case Narrative

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

Job ID: 380-160918-1

Job ID: 380-160918-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-160918-1

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 7/16/2025 9:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.5°C.

PFAS

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

Eurofins Eaton Analytical Pomona

Detection Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L	1		537.1	Total/NA

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

Lab Sample ID: 380-160918-2

No Detections.

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

Lab Sample ID: 380-160918-3

No Detections.

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

Lab Sample ID: 380-160918-4

No Detections.

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

Lab Sample ID: 380-160918-5

No Detections.

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

Lab Sample ID: 380-160918-6

No Detections.

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

Lab Sample ID: 380-160918-7

No Detections.

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

Lab Sample ID: 380-160918-8

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-1

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C6 PFDA	81		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C5 PFHxA	85		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C4 PFHpA	87		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C8 PFOA	83		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C9 PFNA	80		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C7 PFUnA	78		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C2 PFDoA	86		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C4 PFBA	97		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C5 PFPeA	95		50 - 200	07/18/25 16:36	07/19/25 18:00	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-1

Date Collected: 07/14/25 10:04
Date Received: 07/16/25 09:17

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	108		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C3 PFHxS	112		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C8 PFOS	109		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C2 4 2 FTS	112		50 - 200	07/18/25 16 36	07/19/25 18 00	1
13C2-6:2-FTS	110		50 - 200	07/18/25 16:36	07/19/25 18:00	1
13C2-8:2-FTS	108		50 - 200	07/18/25 16:36	07/19/25 18:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 16:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	112		70 - 130			07/17/25 03:00	07/17/25 16:59	1
13C2 PFHxA	112		70 - 130			07/17/25 03:00	07/17/25 16:59	1
13C2 PFDA	112		70 - 130			07/17/25 03:00	07/17/25 16:59	1
13C3-GenX	109		70 - 130			07/17/25 03:00	07/17/25 16:59	1

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-2

Date Collected: 07/14/25 10:31
Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:09	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C6 PFDA	97		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C5 PFHxA	86		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C4 PFHpA	93		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C8 PFOA	93		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C9 PFNA	96		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C7 PFUnA	98		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C2 PFDoA	97		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C4 PFBA	96		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C5 PFPeA	91		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C3 PFBS	106		50 - 200	07/18/25 16:36	07/19/25 18:09	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-2

Date Collected: 07/14/25 10:31
Date Received: 07/16/25 09:17

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	110		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C8 PFOS	113		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C2-4:2-FTS	112		50 - 200	07/18/25 16:36	07/19/25 18:09	1
13C2 6 2 FTS	110		50 - 200	07/18/25 16 36	07/19/25 18 09	1
13C2-8:2-FTS	107		50 - 200	07/18/25 16:36	07/19/25 18:09	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		07/17/25 03:00	07/17/25 17:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130	07/17/25 03:00	07/17/25 17:09	1
13C2 PFHxA	111		70 - 130	07/17/25 03:00	07/17/25 17:09	1
13C2 PFDA	110		70 - 130	07/17/25 03:00	07/17/25 17:09	1
13C3-GenX	105		70 - 130	07/17/25 03:00	07/17/25 17:09	1

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

Lab Sample ID: 380-160918-3

Date Collected: 07/14/25 10:49
Date Received: 07/16/25 09:17

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-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-3

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	66		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C6 PFDA	72		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C5 PFHxA	67		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C4 PFHpA	67		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C8 PFOA	69		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C9 PFNA	71		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C7 PFUnA	76		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C2 PFDoA	79		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C4 PFBA	69		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C5 PFPeA	68		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C3 PFBS	105		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C3 PFHxS	104		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C8 PFOS	104		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C2-4:2-FTS	123		50 - 200	07/22/25 05:17	07/23/25 09:39	1
13C2-6:2-FTS	143		50 - 200	07/22/25 05:17	07/23/25 09:39	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-3

Date Collected: 07/14/25 10:49
Date Received: 07/16/25 09:17

Matrix: Water

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	110		50 - 200	07/22/25 05:17	07/23/25 09:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			07/17/25 03:00	07/17/25 17:19	1
13C2 PFHxA	110		70 - 130			07/17/25 03:00	07/17/25 17:19	1
13C2 PFDA	110		70 - 130			07/17/25 03:00	07/17/25 17:19	1
13C3-GenX	106		70 - 130			07/17/25 03:00	07/17/25 17:19	1

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

Lab Sample ID: 380-160918-4

Date Collected: 07/14/25 11:11
Date Received: 07/16/25 09:17

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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-4

Date Collected: 07/14/25 11:11
Date Received: 07/16/25 09:17

Matrix: Water

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		07/22/25 05:17	07/23/25 09:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/22/25 05:17	07/23/25 09:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C6 PFDA	91		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C5 PFHxA	96		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C4 PFHpA	93		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C8 PFOA	95		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C9 PFNA	95		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C7 PFUnA	88		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C2 PFDoA	87		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C4 PFBA	93		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C5 PFPeA	94		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C3 PFBS	105		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C3 PFHxS	104		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C8 PFOS	102		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C2-4:2-FTS	110		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C2-6:2-FTS	113		50 - 200	07/22/25 05:17	07/23/25 09:48	1
13C2-8:2-FTS	102		50 - 200	07/22/25 05:17	07/23/25 09:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-4

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

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		07/17/25 03:00	07/17/25 17:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			07/17/25 03:00	07/17/25 17:28	1
13C2 PFHxA	113		70 - 130			07/17/25 03:00	07/17/25 17:28	1
13C2 PFDA	114		70 - 130			07/17/25 03:00	07/17/25 17:28	1
13C3-GenX	110		70 - 130			07/17/25 03:00	07/17/25 17:28	1

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

Lab Sample ID: 380-160918-5

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-5

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:38	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:38	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C6 PFDA	104		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C5 PFHxA	100		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C4 PFHpA	105		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C8 PFOA	103		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C9 PFNA	105		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C7 PFUnA	98		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C2 PFDoA	100		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C4 PFBA	107		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C5 PFPeA	106		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C3 PFBS	104		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C3 PFHxS	105		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C8 PFOS	108		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C2-4:2-FTS	111		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C2-6:2-FTS	106		50 - 200	07/18/25 16:36	07/19/25 18:38	1
13C2-8:2-FTS	102		50 - 200	07/18/25 16:36	07/19/25 18:38	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		07/17/25 03:00	07/17/25 17:38	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-5

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

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		07/17/25 03:00	07/17/25 17:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			07/17/25 03:00	07/17/25 17:38	1
13C2 PFHxA	107		70 - 130			07/17/25 03:00	07/17/25 17:38	1
13C2 PFDA	109		70 - 130			07/17/25 03:00	07/17/25 17:38	1
13C3-GenX	102		70 - 130			07/17/25 03:00	07/17/25 17:38	1

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

Lab Sample ID: 380-160918-6

Date Collected: 07/14/25 10:31

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-6

Date Collected: 07/14/25 10:31

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:48	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C6 PFDA	101		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C5 PFHxA	90		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C4 PFHpA	94		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C8 PFOA	96		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C9 PFNA	101		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C7 PFUnA	98		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C2 PFDoA	101		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C4 PFBA	99		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C5 PFPeA	96		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C3 PFBS	106		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C3 PFHxS	105		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C8 PFOS	111		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C2-4:2-FTS	109		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C2-6:2-FTS	104		50 - 200	07/18/25 16:36	07/19/25 18:48	1
13C2-8:2-FTS	106		50 - 200	07/18/25 16:36	07/19/25 18:48	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		07/17/25 03:00	07/17/25 17:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-6

Date Collected: 07/14/25 10:31

Matrix: Water

Date Received: 07/16/25 09:17

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		07/17/25 03:00	07/17/25 17:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorodecanoic acid (PFDA)	2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			07/17/25 03:00	07/17/25 17:48	1
13C2 PFHxA	108		70 - 130			07/17/25 03:00	07/17/25 17:48	1
13C2 PFDA	107		70 - 130			07/17/25 03:00	07/17/25 17:48	1
13C3-GenX	107		70 - 130			07/17/25 03:00	07/17/25 17:48	1

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

Lab Sample ID: 380-160918-7

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 18:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-7

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 18:58	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C6 PFDA	98		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C5 PFHxA	88		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C4 PFHpA	92		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C8 PFOA	96		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C9 PFNA	98		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C7 PFUnA	100		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C2 PFDoA	102		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C4 PFBA	96		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C5 PFPeA	91		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C3 PFBS	108		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C3 PFHxS	107		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C8 PFOS	113		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C2-4:2-FTS	107		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C2-6:2-FTS	112		50 - 200	07/18/25 16:36	07/19/25 18:58	1
13C2-8:2-FTS	111		50 - 200	07/18/25 16:36	07/19/25 18:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-7

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 17:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130			07/17/25 03:00	07/17/25 17:57	1
13C2 PFHxA	109		70 - 130			07/17/25 03:00	07/17/25 17:57	1
13C2 PFDA	108		70 - 130			07/17/25 03:00	07/17/25 17:57	1
13C3-GenX	106		70 - 130			07/17/25 03:00	07/17/25 17:57	1

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

Lab Sample ID: 380-160918-8

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

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		07/18/25 16:36	07/19/25 19:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-8

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/18/25 16:36	07/19/25 19:07	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C6 PFDA	98		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C5 PFHxA	87		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C4 PFHpA	90		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C8 PFOA	94		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C9 PFNA	97		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C7 PFUnA	98		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C2 PFDoA	100		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C4 PFBA	95		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C5 PFPeA	92		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C3 PFBS	107		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C3 PFHxS	109		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C8 PFOS	113		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C2-4:2-FTS	107		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C2-6:2-FTS	109		50 - 200	07/18/25 16:36	07/19/25 19:07	1
13C2-8:2-FTS	105		50 - 200	07/18/25 16:36	07/19/25 19:07	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		07/17/25 03:00	07/17/25 18:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-8

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/17/25 03:00	07/17/25 18:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			07/17/25 03:00	07/17/25 18:07	1
13C2 PFHxA	110		70 - 130			07/17/25 03:00	07/17/25 18:07	1
13C2 PFDA	111		70 - 130			07/17/25 03:00	07/17/25 18:07	1
13C3-GenX	109		70 - 130			07/17/25 03:00	07/17/25 18:07	1

Action Limit Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		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)	2.4		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
(331-201-TP071)**

Lab Sample ID: 380-160918-2

Compliance Check

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

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

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

Lab Sample ID: 380-160918-3

Compliance Check

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

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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)

Lab Sample ID: 380-160918-4

Compliance Check

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

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

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

Lab Sample ID: 380-160918-5

Compliance Check

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

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-5

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-160918-6

Compliance Check

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

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

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

Lab Sample ID: 380-160918-7

Compliance Check

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

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea
Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-7

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

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

Lab Sample ID: 380-160918-8

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

Surrogate Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-160918-1	HALAWA WELLS UNITS 1 & 2 F	112	112	112	109
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	108	111	110	105
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	109	110	110	106
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	109	113	114	110
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	102	107	109	102
380-160918-6	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	102	108	107	107
380-160918-7	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	107	109	108	106
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	109	110	111	109
380-161024-E-1-A MS	Matrix Spike	107	104	103	102
380-161024-F-1-A MSD	Matrix Spike Duplicate	101	108	108	104
LCS 380-163332/37-A	Lab Control Sample	101	104	106	99
MBL 380-163332/35-A	Method Blank	107	113	110	110
MRL 380-163332/36-A	Lab Control Sample	97	101	104	95

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: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-160494-B-1-A MS	Matrix Spike	89	94	89	90	90	93	96	96
380-160494-C-1-A MSD	Matrix Spike Duplicate	79	58	79	76	71	63	60	65
380-160617-B-1-A MS	Matrix Spike	84	65	83	80	76	71	62	62
380-160617-C-1-A MSD	Matrix Spike Duplicate	85	76	77	81	80	77	76	80
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	83	81	85	87	83	80	78	86
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	85	97	86	93	93	96	98	97
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	66	72	67	67	69	71	76	79
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	88	91	96	93	95	95	88	87
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	96	104	100	105	103	105	98	100
380-160918-6	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	86	101	90	94	96	101	98	101
380-160918-7	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	85	98	88	92	96	98	100	102
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	83	98	87	90	94	97	98	100
LCS 380-163727/22-A	Lab Control Sample	95	102	95	102	103	105	101	101
LCS 380-164234/22-A	Lab Control Sample	84	95	89	89	92	93	97	97
MBL 380-163727/20-A	Method Blank	94	104	103	109	109	109	100	101
MBL 380-164234/20-A	Method Blank	86	97	92	92	94	93	96	100
MRL 380-163727/21-A	Lab Control Sample	97	107	105	105	108	110	106	104
MRL 380-164234/21-A	Lab Control Sample	79	89	85	84	87	87	92	93
		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)
380-160494-B-1-A MS	Matrix Spike	91	94	104	106	107	111	105	99
380-160494-C-1-A MSD	Matrix Spike Duplicate	86	85	105	105	106	112	108	104
380-160617-B-1-A MS	Matrix Spike	89	87	103	109	112	106	104	105
380-160617-C-1-A MSD	Matrix Spike Duplicate	77	83	106	106	113	107	105	104
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	97	95	108	112	109	112	110	108
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	96	91	106	110	113	112	110	107
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	69	68	105	104	104	123	143	110
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	93	94	105	104	102	110	113	102
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	107	106	104	105	108	111	106	102
380-160918-6	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	99	96	106	105	111	109	104	106
380-160918-7	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	96	91	108	107	113	107	112	111
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	95	92	107	109	113	107	109	105
LCS 380-163727/22-A	Lab Control Sample	107	100	106	109	110	106	105	104
LCS 380-164234/22-A	Lab Control Sample	89	90	105	105	105	118	109	99
MBL 380-163727/20-A	Method Blank	115	114	112	115	115	117	114	106

Eurofins Eaton Analytical Pomona

Isotope Dilution Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea
Wells Pumps 1&2 P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)
Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
MBL 380-164234/20-A	Method Blank	85	86	111	112	111	118	109	103
MRL 380-163727/21-A	Lab Control Sample	108	104	106	109	115	105	103	104
MRL 380-164234/21-A	Lab Control Sample	86	86	104	104	105	107	103	95
Surrogate Legend									
HFPODA = 13C3 HFPO-DA									
C6PFDA = 13C6 PFDA									
13C5PHA = 13C5 PFHxA									
C4PFHA = 13C4 PFHpA									
C8PFOA = 13C8 PFOA									
C9PFNA = 13C9 PFNA									
13C7PUA = 13C7 PFUnA									
PFDoA = 13C2 PFDoA									
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: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MBL 380-163727/20-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163727

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		07/18/25 16:36	07/19/25 15:12	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		07/18/25 16:36	07/19/25 15:12	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C6 PFDA	104		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C5 PFHxA	103		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C4 PFHpA	109		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C8 PFOA	109		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C9 PFNA	109		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C7 PFUnA	100		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C2 PFDoA	101		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C4 PFBA	115		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C5 PFPeA	114		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C3 PFBS	112		50 - 200	07/18/25 16:36	07/19/25 15:12	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MBL 380-163727/20-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163727

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	115		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C8 PFOS	115		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C2-4:2-FTS	117		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C2-6:2-FTS	114		50 - 200	07/18/25 16:36	07/19/25 15:12	1
13C2-8:2-FTS	106		50 - 200	07/18/25 16:36	07/19/25 15:12	1

Lab Sample ID: LCS 380-163727/22-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.0	54.8		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.0	56.3		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.0	57.1		ng/L		95	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.0	60.0		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.0	60.4		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.0	58.2		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	60.0	59.4		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.0	59.6		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.0	61.2		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	60.0	62.2		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	60.0	58.8		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.0	58.3		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	60.0	59.8		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.0	59.1		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	60.0	58.4		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.0	57.9		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.0	60.8		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.0	61.7		ng/L		103	70 - 130
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	60.0	55.0		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.0	60.2		ng/L		100	70 - 130
Perfluoro 3 methoxypropanoic acid (PFMPA)	60.0	56.6		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.0	58.8		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	60.0	59.5		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: LCS 380-163727/22-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	60.0	59.0		ng/L		98	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.0	59.1		ng/L		99	70 - 130
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C3 HFPO-DA	95		50 - 200				
13C6 PFDA	102		50 - 200				
13C5 PFHxA	95		50 - 200				
13C4 PFHpA	102		50 - 200				
13C8 PFOA	103		50 - 200				
13C9 PFNA	105		50 - 200				
13C7 PFUnA	101		50 - 200				
13C2 PFDoA	101		50 - 200				
13C4 PFBA	107		50 - 200				
13C5 PFPeA	100		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	109		50 - 200				
13C8 PFOS	110		50 - 200				
13C2-4:2-FTS	106		50 - 200				
13C2-6:2-FTS	105		50 - 200				
13C2-8:2-FTS	104		50 - 200				

Lab Sample ID: MRL 380-163727/21-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.81	J	ng/L		90	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.79	J	ng/L		89	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.94	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.94	J	ng/L		97	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MRL 380-163727/21-A

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.99	J	ng/L		99	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.03	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.17	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	1.98	J	ng/L		99	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.74	J	ng/L		87	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.88	J	ng/L		94	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.86	J	ng/L		93	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.99	J	ng/L		99	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	97		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	108		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	115		50 - 200
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	103		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-160617-B-1-A MS

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	103		ng/L		86	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160617-B-1-A MS

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	106		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	110		ng/L		91	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	113		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	3.0		121	115		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	118		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	4.7		121	118		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	2.4		121	112		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	108		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	3.0		121	111		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	110		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	113		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	112		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	109		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	107		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	99.1		ng/L		82	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		121	113		ng/L		94	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	105		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	2.4		121	116		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	109		ng/L		90	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	110		ng/L		90	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
¹³ C3 HFPO-DA	84		50 - 200
¹³ C6 PFDA	65		50 - 200
¹³ C5 PFHxA	83		50 - 200
¹³ C4 PFHpA	80		50 - 200
¹³ C8 PFOA	76		50 - 200
¹³ C9 PFNA	71		50 - 200
¹³ C7 PFUnA	62		50 - 200
¹³ C2 PFDoA	62		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160617-B-1-A MS

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 163727

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	89		50 - 200
13C5 PFPeA	87		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-160617-C-1-A MSD

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 163727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	99.9		ng/L		83	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	102		ng/L		84	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	110		ng/L		92	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	112		ng/L		93	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	3.0		120	111		ng/L		90	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		120	110		ng/L		91	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	112		ng/L		93	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	112		ng/L		92	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)	4.7		120	119		ng/L		95	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	2.4		120	116		ng/L		95	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		120	113		ng/L		94	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	3.0		120	110		ng/L		89	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		120	110		ng/L		90	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	112		ng/L		93	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	112		ng/L		92	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	109		ng/L		90	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	108		ng/L		90	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	112		ng/L		93	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	96.0		ng/L		80	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	108		ng/L		89	70 - 130	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	108		ng/L		90	70 - 130	3	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160617-C-1-A MSD

Matrix: Water

Analysis Batch: 163795

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 163727

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	109		ng/L		90	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	2.4		120	109		ng/L		89	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	107		ng/L		89	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	114		ng/L		93	70 - 130	3	30
Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits								
13C3 HFPO-DA	85		50 - 200								
13C6 PFDA	76		50 - 200								
13C5 PFHxA	77		50 - 200								
13C4 PFHpA	81		50 - 200								
13C8 PFOA	80		50 - 200								
13C9 PFNA	77		50 - 200								
13C7 PFUnA	76		50 - 200								
13C2 PFDoA	80		50 - 200								
13C4 PFBA	77		50 - 200								
13C5 PFPeA	83		50 - 200								
13C3 PFBS	106		50 - 200								
13C3 PFHxS	106		50 - 200								
13C8 PFOS	113		50 - 200								
13C2-4:2-FTS	107		50 - 200								
13C2-6:2-FTS	105		50 - 200								
13C2-8:2-FTS	104		50 - 200								

Lab Sample ID: MBL 380-164234/20-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164234

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		07/22/25 05:17	07/23/25 06:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MBL 380-164234/20-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164234

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.48		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		07/22/25 05:17	07/23/25 06:37	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C6 PFDA	97		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C5 PFHxA	92		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C4 PFHpA	92		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C8 PFOA	94		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C9 PFNA	93		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C7 PFUnA	96		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C2 PFDoA	100		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C4 PFBA	85		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C5 PFPeA	86		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C3 PFBS	111		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C3 PFHxS	112		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C8 PFOS	111		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C2-4:2-FTS	118		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C2-6:2-FTS	109		50 - 200	07/22/25 05:17	07/23/25 06:37	1
13C2-8:2-FTS	103		50 - 200	07/22/25 05:17	07/23/25 06:37	1

Lab Sample ID: LCS 380-164234/22-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	62.4		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.2	60.4		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	60.2		ng/L		100	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: LCS 380-164234/22-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	60.2	62.8		ng/L		104	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorobutanesulfonic acid (PFBS)	60.2	63.3		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	61.6		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	61.6		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	63.1		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	63.6		ng/L		106	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	62.4		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	60.2	61.7		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	62.8		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	61.3		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	62.2		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	64.0		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	64.5		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	61.7		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	61.7		ng/L		102	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	60.2	57.7		ng/L		96	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.2	59.0		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	61.4		ng/L		102	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	59.5		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	62.0		ng/L		103	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	62.4		ng/L		104	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.2	63.6		ng/L		106	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	84		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	89		50 - 200
13C4 PFHpA	89		50 - 200
13C8 PFOA	92		50 - 200
13C9 PFNA	93		50 - 200
13C7 PFUnA	97		50 - 200
13C2 PFDoA	97		50 - 200
13C4 PFBA	89		50 - 200
13C5 PFPeA	90		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	105		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: LCS 380-164234/22-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164234

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	118		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	99		50 - 200

Lab Sample ID: MRL 380-164234/21-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.15	J	ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.95	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.97	J	ng/L		98	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorododecanoic acid (PFDaA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.95	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.00	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.32	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.21	J	ng/L		110	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.12	J	ng/L		106	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MRL 380-164234/21-A

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.03	J	ng/L		101	50 - 150
Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits				
13C3 HFPO-DA	79		50 - 200				
13C6 PFDA	89		50 - 200				
13C5 PFHxA	85		50 - 200				
13C4 PFHpA	84		50 - 200				
13C8 PFOA	87		50 - 200				
13C9 PFNA	87		50 - 200				
13C7 PFUnA	92		50 - 200				
13C2 PFDoA	93		50 - 200				
13C4 PFBA	86		50 - 200				
13C5 PFPeA	86		50 - 200				
13C3 PFBS	104		50 - 200				
13C3 PFHxS	104		50 - 200				
13C8 PFOS	105		50 - 200				
13C2-4:2-FTS	107		50 - 200				
13C2-6:2-FTS	103		50 - 200				
13C2-8:2-FTS	95		50 - 200				

Lab Sample ID: 380-160494-B-1-A MS

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	61.2		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		60.4	59.4		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	59.0		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	62.0		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.4		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	62.8		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.5		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	61.8		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	62.5		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	62.8		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	61.4		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	62.6		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	60.6		ng/L		100	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160494-B-1-A MS

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	62.2		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	63.9		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	64.3		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	63.5		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	63.6		ng/L		105	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	59.4		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.4	59.9		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	60.6		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	60.3		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	60.8		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	61.9		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	62.8		ng/L		104	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	89		50 - 200
13C6 PFDA	94		50 - 200
13C5 PFHxA	89		50 - 200
13C4 PFHpA	90		50 - 200
13C8 PFOA	90		50 - 200
13C9 PFNA	93		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	96		50 - 200
13C4 PFBA	91		50 - 200
13C5 PFPeA	94		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	106		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	99		50 - 200

Lab Sample ID: 380-160494-C-1-A MSD

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		60.2	59.2		ng/L		98	70 - 130	3	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160494-C-1-A MSD

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 164234

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	56.7		ng/L		94	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	58.0		ng/L		96	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	59.6		ng/L		99	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	60.8		ng/L		101	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	59.5		ng/L		99	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	59.3		ng/L		98	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	59.8		ng/L		99	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	60.7		ng/L		101	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	59.7		ng/L		99	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	58.8		ng/L		98	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	59.5		ng/L		99	70 - 130	5	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	57.7		ng/L		96	70 - 130	5	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	60.4		ng/L		100	70 - 130	3	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	60.0		ng/L		100	70 - 130	6	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	60.3		ng/L		100	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	59.9		ng/L		99	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	60.4		ng/L		100	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	60.4		ng/L		100	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	56.1		ng/L		93	70 - 130	7	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	58.8		ng/L		98	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	59.9		ng/L		99	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	58.5		ng/L		97	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	58.7		ng/L		97	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	61.0		ng/L		101	70 - 130	3	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	79		50 - 200
13C6 PFDA	58		50 - 200
13C5 PFHxA	79		50 - 200
13C4 PFHpA	76		50 - 200
13C8 PFOA	71		50 - 200
13C9 PFNA	63		50 - 200
13C7 PFUnA	60		50 - 200
13C2 PFDoA	65		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160494-C-1-A MSD

Matrix: Water

Analysis Batch: 164534

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 164234

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	86		50 - 200
13C5 PFPeA	85		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	104		50 - 200

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

Lab Sample ID: MBL 380-163332/35-A

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163332

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		07/17/25 03:00	07/17/25 14:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/17/25 03:00	07/17/25 14:42	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	107		70 - 130	07/17/25 03:00	07/17/25 14:42	1
13C2 PFHxA	113		70 - 130	07/17/25 03:00	07/17/25 14:42	1
13C2 PFDA	110		70 - 130	07/17/25 03:00	07/17/25 14:42	1
13C3-GenX	110		70 - 130	07/17/25 03:00	07/17/25 14:42	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: LCS 380-163332/37-A

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163332

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	25.4		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	26.1		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.0		ng/L		108	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	25.2		ng/L		101	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	25.3		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.6		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	26.3		ng/L		105	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	26.6		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	27.0		ng/L		108	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	26.7		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	25.7		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	26.3		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	25.1	27.4		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	27.1		ng/L		108	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	28.8		ng/L		115	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.9		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.8		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	26.4		ng/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	104		70 - 130
13C2 PFDA	106		70 - 130
13C3-GenX	99		70 - 130

Lab Sample ID: MRL 380-163332/36-A

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163332

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.11	J	ng/L		105	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: MRL 380-163332/36-A

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163332

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.95	J	ng/L		97	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.22	J	ng/L		111	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	2.09	J	ng/L		104	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.11	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.11	J	ng/L		105	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	95		70 - 130

Lab Sample ID: 380-161024-E-1-A MS

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 163332

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	25.3		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.4		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.2		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.1		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.0		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.9		ng/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-161024-E-1-A MS

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 163332

	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Perfluorooctanoic acid (PFOA)	<2.0		25.1	25.8		ng/L		103	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.4		ng/L		101	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.9		ng/L		108	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.4		ng/L		106	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	25.8		ng/L		103	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.4		ng/L		105	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	23.8		ng/L		95	70 - 130		
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	27.5		ng/L		110	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.4		ng/L		106	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.1		ng/L		100	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.2		ng/L		105	70 - 130		

Lab Sample ID: 380-161024-F-1-A MSD

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 163332

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	25.0		ng/L		100	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.3		ng/L		105	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.6		ng/L		106	70 - 130	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.2		ng/L		105	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.2		ng/L		100	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.1		ng/L		104	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.2		ng/L		104	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.2		ng/L		104	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.5		ng/L		106	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.5		ng/L		106	70 - 130	0	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-161024-F-1-A MSD

Matrix: Water

Analysis Batch: 163418

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 163332

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.1		ng/L		104	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	27.3		ng/L		109	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.4		ng/L		101	70 - 130	6	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	27.7		ng/L		111	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.6		ng/L		106	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.0		ng/L		104	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.4		ng/L		105	70 - 130	1	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	101		70 - 130								
13C2 PFHxA	108		70 - 130								
13C2 PFDA	108		70 - 130								
13C3-GenX	104		70 - 130								

QC Association Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

LCMS

Prep Batch: 163332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Water	537.1 DW	
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1 DW	
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1 DW	
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP01)	Total/NA	Water	537.1 DW	
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC)	Total/NA	Water	537.1 DW	
380-160918-6	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC)	Total/NA	Water	537.1 DW	
380-160918-7	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC)	Total/NA	Water	537.1 DW	
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF)	Total/NA	Water	537.1 DW	
MBL 380-163332/35-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-163332/37-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-163332/36-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-161024-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-161024-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 163418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Water	537.1	163332
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1	163332
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1	163332
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP01)	Total/NA	Water	537.1	163332
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC)	Total/NA	Water	537.1	163332
380-160918-6	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC)	Total/NA	Water	537.1	163332
380-160918-7	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC)	Total/NA	Water	537.1	163332
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF)	Total/NA	Water	537.1	163332
MBL 380-163332/35-A	Method Blank	Total/NA	Water	537.1	163332
LCS 380-163332/37-A	Lab Control Sample	Total/NA	Water	537.1	163332
MRL 380-163332/36-A	Lab Control Sample	Total/NA	Water	537.1	163332
380-161024-E-1-A MS	Matrix Spike	Total/NA	Water	537.1	163332
380-161024-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	163332

Prep Batch: 163727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Water	533	
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC)	Total/NA	Water	533	
380-160918-6	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC)	Total/NA	Water	533	
380-160918-7	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC)	Total/NA	Water	533	
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF)	Total/NA	Water	533	
MBL 380-163727/20-A	Method Blank	Total/NA	Water	533	
LCS 380-163727/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-163727/21-A	Lab Control Sample	Total/NA	Water	533	
380-160617-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-160617-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 163795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Water	533	163727
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	163727
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC)	Total/NA	Water	533	163727
380-160918-6	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC)	Total/NA	Water	533	163727

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

LCMS (Continued)

Analysis Batch: 163795 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-7	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	533	163727
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	533	163727
MBL 380-163727/20-A	Method Blank	Total/NA	Water	533	163727
LCS 380-163727/22-A	Lab Control Sample	Total/NA	Water	533	163727
MRL 380-163727/21-A	Lab Control Sample	Total/NA	Water	533	163727
380-160617-B-1-A MS	Matrix Spike	Total/NA	Water	533	163727
380-160617-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	163727

Prep Batch: 164234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Water	533	
MBL 380-164234/20-A	Method Blank	Total/NA	Water	533	
LCS 380-164234/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-164234/21-A	Lab Control Sample	Total/NA	Water	533	
380-160494-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-160494-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 164534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	164234
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Water	533	164234
MBL 380-164234/20-A	Method Blank	Total/NA	Water	533	164234
LCS 380-164234/22-A	Lab Control Sample	Total/NA	Water	533	164234
MRL 380-164234/21-A	Lab Control Sample	Total/NA	Water	533	164234
380-160494-B-1-A MS	Matrix Spike	Total/NA	Water	533	164234
380-160494-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	164234

Lab Chronicle

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-1

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 18:00
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 16:59

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

Lab Sample ID: 380-160918-2

Date Collected: 07/14/25 10:31

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 18:09
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:09

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

Lab Sample ID: 380-160918-3

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			164234	XTD8	EA POM	07/22/25 05:17
Total/NA	Analysis	533		1	164534	SZ9R	EA POM	07/23/25 09:39
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:19

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

Lab Sample ID: 380-160918-4

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			164234	XTD8	EA POM	07/22/25 05:17
Total/NA	Analysis	533		1	164534	SZ9R	EA POM	07/23/25 09:48
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:28

Lab Chronicle

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

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

Lab Sample ID: 380-160918-5

Date Collected: 07/14/25 10:04

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 18:38
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:38

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

Lab Sample ID: 380-160918-6

Date Collected: 07/14/25 10:31

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 18:48
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:48

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

Lab Sample ID: 380-160918-7

Date Collected: 07/14/25 10:49

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 18:58
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 17:57

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

Lab Sample ID: 380-160918-8

Date Collected: 07/14/25 11:11

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			163727	N8NE	EA POM	07/18/25 16:36
Total/NA	Analysis	533		1	163795	M7ML	EA POM	07/19/25 19:07
Total/NA	Prep	537.1 DW			163332	G9MN	EA POM	07/17/25 03:00
Total/NA	Analysis	537.1		1	163418	Y5FM	EA POM	07/17/25 18:07

Laboratory References:

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

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea Wells Pumps 1&2 P2

Laboratory: Eurofins Eaton Analytical Pomona

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

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

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

Method Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea
Wells Pumps 1&2 P2

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

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

Job ID: 380-160918-1
SDG: PFAS: Halawa Wells, Aiea Gulch Wells P1/P2, Aiea
Wells Pumps 1&2 P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-160918-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Water	07/14/25 10:04	07/16/25 09:17
380-160918-2	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	07/14/25 10:31	07/16/25 09:17
380-160918-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	07/14/25 10:49	07/16/25 09:17
380-160918-4	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Water	07/14/25 11:11	07/16/25 09:17
380-160918-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Water	07/14/25 10:04	07/16/25 09:17
380-160918-6	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	07/14/25 10:31	07/16/25 09:17
380-160918-7	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	07/14/25 10:49	07/16/25 09:17
380-160918-8	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	07/14/25 11:11	07/16/25 09:17

Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100

Monrovia CA 91016

Phone (626) 386-1100

Chain of Custody Record



Environment Testing
America

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 #			
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	
State Zip HI 96843		Compliance Project. Δ No								C Zn Acetate O AsNaO2		D Nitric Acid P Na2O4S	
Phone 808-748-5840 (tel)		PO #: C20525101 exp 05312023								E NaHSO4 Q Na2SO3		F MeOH R Na2S2O3	
Email kiwamoto@hbws.org		WO #								G Amchlor S H2SO4		H Ascorbic Acid T TSP Dodecahydrate	
Project Name RED-HILL/HBWS sites Event Desc RUSH Weekly Red Hill		Project #: 38001111		I Ice U Acetone		J DI Water V MCAA		K EDTA W pH 4-5					
Site		SSOW#		L EDA Y Trizma		Z other (specify)		Other					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Special Instructions/Note			
Halawa Wells Units 1&2 P1		14-Jul-2025		1004		G		Water					
Aiea Gulch Wells Pump 1		14-Jul-2025		1031		G		Water		chlorinated			
Aiea Gulch Wells Pump 2		14-Jul-2025		1049		G		Water		chlorinated			
Aiea Wells Pumps 1&2 (260) P2		14-Jul-2025		1111		G		Water					
FB Halawa Wells Units 1&2		14-Jul-2025		1004									
FB Aiea Gulch Wells Pump 1		14-Jul-2025		1031									
FB Aiea Gulch Wells Pump 2		14-Jul-2025		1049									
FB Aiea Wells Pumps 1&2 (260)		14-Jul-2025		1111									
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/QC Requirements			
Empty Kit Relinquished by				Date		Time		Method of Shipment. FedEx: 8828 0568 4461					
Relinquished by				Date/Time 15 JUL 2025 1400		Company HBWS		Received by Mark Varrutia		Date/Time 7/16/25 9:17			
Relinquished by				Date/Time		Company		Received by		Date/Time			
Relinquished by				Date/Time		Company		Received by		Date/Time			
Custody Seals Intact Δ Yes Δ No				Custody Seal No		Cooler Temperature(s) °C and Other Remarks (631A) 3.5 + 0.0 3.5 9/26 - fro 20							

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-160918-1

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

Login Number: 160918

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Ngo, Theodore

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