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# ANALYTICAL REPORT

## PREPARED FOR

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

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## JOB DESCRIPTION

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

## JOB NUMBER

380-178593-1

# 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](mailto:Maria.Lopez@et.eurofinsus.com)  
(626)386-1100

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# Definitions/Glossary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

## Qualifiers

### LCMS

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

## Glossary

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

# Case Narrative

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

Job ID: 380-178593-1

**Job ID: 380-178593-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-178593-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### Receipt

The samples were received on 10/22/2025 10:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.5°C, 1.9°C, 2.2°C, 3.3°C, 5.3°C and 5.7°C.

### PFAS

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

## Detection Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1**

No Detections.

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

**Lab Sample ID: 380-178593-2**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.6		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.0		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L	1		537.1	Total/NA

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

**Lab Sample ID: 380-178593-3**

No Detections.

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

**Lab Sample ID: 380-178593-4**

No Detections.

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

**Lab Sample ID: 380-178593-5**

No Detections.

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

**Lab Sample ID: 380-178593-6**

No Detections.

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

**Lab Sample ID: 380-178593-7**

No Detections.

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

**Lab Sample ID: 380-178593-8**

No Detections.

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

**Lab Sample ID: 380-178593-9**

No Detections.

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

**Lab Sample ID: 380-178593-10**

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1**

Date Collected: 10/20/25 09:59

Matrix: Drinking Water

Date Received: 10/22/25 10:08

**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		10/27/25 17:03	10/28/25 14:19	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 14:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C6 PFDA	73		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C5 PFHxA	81		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C4 PFHpA	78		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C8 PFOA	77		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C9 PFNA	72		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C7 PFUnA	70		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C2 PFDoA	84		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C4 PFBA	93		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C5 PFPeA	89		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C3 PFBS	116		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C3 PFHxS	112		50 - 200	10/27/25 17:03	10/28/25 14:19	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1**

Date Collected: 10/20/25 09:59

Matrix: Drinking Water

Date Received: 10/22/25 10:08

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	112		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C2-4:2-FTS	124		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C2-6:2-FTS	130		50 - 200	10/27/25 17:03	10/28/25 14:19	1
13C2-8:2-FTS	135		50 - 200	10/27/25 17:03	10/28/25 14:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:23	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130	10/27/25 16:55	10/30/25 02:23	1
13C2 PFHxA	104		70 - 130	10/27/25 16:55	10/30/25 02:23	1
13C2 PFDA	105		70 - 130	10/27/25 16:55	10/30/25 02:23	1
13C3-GenX	100		70 - 130	10/27/25 16:55	10/30/25 02:23	1

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

**Lab Sample ID: 380-178593-2**

Date Collected: 10/20/25 10:30

Matrix: Drinking Water

Date Received: 10/22/25 10:08

**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		10/27/25 17:03	10/28/25 15:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-2**

Date Collected: 10/20/25 10:30  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.6</b>		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>2.1</b>		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.5</b>		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>2.2</b>		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C6 PFDA	111		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C5 PFHxA	102		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C4 PFHpA	109		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C8 PFOA	105		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C9 PFNA	108		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C7 PFUnA	110		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C2 PFDoA	111		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C4 PFBA	109		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C5 PFPeA	112		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C3 PFBS	113		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C3 PFHxS	114		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C8 PFOS	112		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C2-4:2-FTS	125		50 - 200	10/27/25 17:03	10/28/25 15:26	1
13C2-6:2-FTS	134		50 - 200	10/27/25 17:03	10/28/25 15:26	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-2**

Date Collected: 10/20/25 10:30  
Date Received: 10/22/25 10:08

Matrix: Drinking 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	130		50 - 200	10/27/25 17:03	10/28/25 15:26	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		10/27/25 16:55	10/30/25 02:32	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.6</b>		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>2.0</b>		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.6</b>		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:32	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	102		70 - 130			10/27/25 16:55	10/30/25 02:32	1
13C2 PFHxA	111		70 - 130			10/27/25 16:55	10/30/25 02:32	1
13C2 PFDA	109		70 - 130			10/27/25 16:55	10/30/25 02:32	1
13C3-GenX	105		70 - 130			10/27/25 16:55	10/30/25 02:32	1

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

**Lab Sample ID: 380-178593-3**

Date Collected: 10/20/25 11:02  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-3**

Date Collected: 10/20/25 11:02

Matrix: Drinking Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C6 PFDA	105		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C5 PFHxA	102		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C4 PFHpA	102		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C8 PFOA	100		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C9 PFNA	107		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C7 PFUnA	108		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C2 PFDoA	107		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C4 PFBA	106		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C5 PFPeA	108		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C3 PFBS	107		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C3 PFHxS	106		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C8 PFOS	108		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C2-4:2-FTS	117		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C2-6:2-FTS	122		50 - 200	10/27/25 17:03	10/28/25 15:36	1
13C2-8:2-FTS	130		50 - 200	10/27/25 17:03	10/28/25 15:36	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-3**

Date Collected: 10/20/25 11:02

Matrix: Drinking Water

Date Received: 10/22/25 10:08

**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		10/27/25 16:55	10/30/25 02:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 02:53	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	103		70 - 130			10/27/25 16:55	10/30/25 02:53	1
13C2 PFHxA	103		70 - 130			10/27/25 16:55	10/30/25 02:53	1
13C2 PFDA	103		70 - 130			10/27/25 16:55	10/30/25 02:53	1
13C3-GenX	103		70 - 130			10/27/25 16:55	10/30/25 02:53	1

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

**Lab Sample ID: 380-178593-4**

Date Collected: 10/20/25 11:20

Matrix: Drinking Water

Date Received: 10/22/25 10:08

**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		10/27/25 17:03	10/28/25 15:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-4**

Date Collected: 10/20/25 11:20  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorooctanesulfonic acid (PFOS)	2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C6 PFDA	107		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C5 PFHxA	99		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C4 PFHpA	102		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C8 PFOA	101		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C9 PFNA	103		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C7 PFUnA	103		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C2 PFDoA	110		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C4 PFBA	105		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C5 PFPeA	102		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C3 PFBS	101		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C3 PFHxS	101		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C8 PFOS	102		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C2-4:2-FTS	111		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C2-6:2-FTS	118		50 - 200	10/27/25 17:03	10/28/25 15:46	1
13C2-8:2-FTS	121		50 - 200	10/27/25 17:03	10/28/25 15:46	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		10/27/25 16:55	10/30/25 03:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-4**

Date Collected: 10/20/25 11:20  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

**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		10/27/25 16:55	10/30/25 03:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:04	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	106		70 - 130			10/27/25 16:55	10/30/25 03:04	1
13C2 PFHxA	101		70 - 130			10/27/25 16:55	10/30/25 03:04	1
13C2 PFDA	102		70 - 130			10/27/25 16:55	10/30/25 03:04	1
13C3-GenX	100		70 - 130			10/27/25 16:55	10/30/25 03:04	1

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

**Lab Sample ID: 380-178593-5**

Date Collected: 10/20/25 11:38  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-5**

Date Collected: 10/20/25 11:38

Matrix: Drinking Water

Date Received: 10/22/25 10:08

**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		10/27/25 17:03	10/28/25 15:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 15:55	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C6 PFDA	99		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C5 PFHxA	99		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C4 PFHpA	101		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C8 PFOA	99		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C9 PFNA	100		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C7 PFUnA	92		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C2 PFDoA	92		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C4 PFBA	102		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C5 PFPeA	103		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C3 PFBS	101		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C3 PFHxS	102		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C8 PFOS	98		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C2-4:2-FTS	117		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C2-6:2-FTS	119		50 - 200			10/27/25 17:03	10/28/25 15:55	1
13C2-8:2-FTS	119		50 - 200			10/27/25 17:03	10/28/25 15:55	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		10/27/25 16:55	10/30/25 03:14	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-5**

Date Collected: 10/20/25 11:38  
Date Received: 10/22/25 10:08

Matrix: Drinking Water

**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		10/27/25 16:55	10/30/25 03:14	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorodecanoic acid (PFDA)	2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			10/27/25 16:55	10/30/25 03:14	1
13C2 PFHxA	102		70 - 130			10/27/25 16:55	10/30/25 03:14	1
13C2 PFDA	104		70 - 130			10/27/25 16:55	10/30/25 03:14	1
13C3-GenX	99		70 - 130			10/27/25 16:55	10/30/25 03:14	1

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

**Lab Sample ID: 380-178593-6**

Date Collected: 10/20/25 09:59  
Date Received: 10/22/25 10:08

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		10/27/25 17:03	10/28/25 16:05	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-6**

Date Collected: 10/20/25 09:59

Matrix: Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:05	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C6 PFDA	109		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C5 PFHxA	105		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C4 PFHpA	105		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C8 PFOA	102		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C9 PFNA	109		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C7 PFUnA	104		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C2 PFDoA	109		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C4 PFBA	104		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C5 PFPeA	106		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C3 PFBS	108		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C3 PFHxS	107		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C8 PFOS	109		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C2-4:2-FTS	125		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C2-6:2-FTS	125		50 - 200			10/27/25 17:03	10/28/25 16:05	1
13C2-8:2-FTS	128		50 - 200			10/27/25 17:03	10/28/25 16:05	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		10/27/25 16:55	10/30/25 03:24	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
N-methylperfluorooctanesulfonamidocetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
N-ethylperfluorooctanesulfonamidocetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-6**

Date Collected: 10/20/25 09:59

Matrix: Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Perfluorotridecanoic acid (PFTDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130			10/27/25 16:55	10/30/25 03:24	1
13C2 PFHxA	99		70 - 130			10/27/25 16:55	10/30/25 03:24	1
13C2 PFDA	100		70 - 130			10/27/25 16:55	10/30/25 03:24	1
13C3-GenX	95		70 - 130			10/27/25 16:55	10/30/25 03:24	1

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

**Lab Sample ID: 380-178593-7**

Date Collected: 10/20/25 10:30

Matrix: Water

Date Received: 10/22/25 10:08

**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		10/27/25 17:03	10/28/25 16:26	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-7**

Date Collected: 10/20/25 10:30

Matrix: Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:26	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C6 PFDA	98		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C5 PFHxA	97		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C4 PFHpA	99		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C8 PFOA	100		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C9 PFNA	99		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C7 PFUnA	97		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C2 PFDoA	105		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C4 PFBA	103		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C5 PFPeA	100		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C3 PFBS	105		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C3 PFHxS	104		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C8 PFOS	106		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C2-4:2-FTS	118		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C2-6:2-FTS	124		50 - 200			10/27/25 17:03	10/28/25 16:26	1
13C2-8:2-FTS	106		50 - 200			10/27/25 17:03	10/28/25 16:26	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		10/27/25 16:55	10/30/25 03:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Perfluorotridecanoic acid (PFTDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-7**

Date Collected: 10/20/25 10:30  
Date Received: 10/22/25 10:08

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130			10/27/25 16:55	10/30/25 03:33	1
13C2 PFHxA	103		70 - 130			10/27/25 16:55	10/30/25 03:33	1
13C2 PFDA	106		70 - 130			10/27/25 16:55	10/30/25 03:33	1
13C3-GenX	103		70 - 130			10/27/25 16:55	10/30/25 03:33	1

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

**Lab Sample ID: 380-178593-8**

Date Collected: 10/20/25 11:02  
Date Received: 10/22/25 10:08

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		10/27/25 17:03	10/28/25 16:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-8**

Date Collected: 10/20/25 11:02  
Date Received: 10/22/25 10:08

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:37	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C6 PFDA	109		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C5 PFHxA	102		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C4 PFHpA	104		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C8 PFOA	102		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C9 PFNA	106		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C7 PFUnA	103		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C2 PFDoA	105		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C4 PFBA	102		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C5 PFPeA	103		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C3 PFBS	102		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C3 PFHxS	104		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C8 PFOS	107		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C2-4:2-FTS	118		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C2-6:2-FTS	122		50 - 200			10/27/25 17:03	10/28/25 16:37	1
13C2-8:2-FTS	122		50 - 200			10/27/25 17:03	10/28/25 16:37	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		10/27/25 16:55	10/30/25 03:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-8**

Date Collected: 10/20/25 11:02  
Date Received: 10/22/25 10:08

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:43	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	95		70 - 130			10/27/25 16:55	10/30/25 03:43	1
13C2 PFHxA	97		70 - 130			10/27/25 16:55	10/30/25 03:43	1
13C2 PFDA	106		70 - 130			10/27/25 16:55	10/30/25 03:43	1
13C3-GenX	91		70 - 130			10/27/25 16:55	10/30/25 03:43	1

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

**Lab Sample ID: 380-178593-9**

Date Collected: 10/20/25 11:20  
Date Received: 10/22/25 10:08

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		10/27/25 17:03	10/28/25 16:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-9**

Date Collected: 10/20/25 11:20  
Date Received: 10/22/25 10:08

Matrix: Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:46	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C6 PFDA	109		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C5 PFHxA	105		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C4 PFHpA	103		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C8 PFOA	102		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C9 PFNA	107		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C7 PFUnA	109		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C2 PFDoA	105		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C4 PFBA	106		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C5 PFPeA	105		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C3 PFBS	104		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C3 PFHxS	105		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C8 PFOS	104		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C2-4:2-FTS	116		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C2-6:2-FTS	123		50 - 200			10/27/25 17:03	10/28/25 16:46	1
13C2-8:2-FTS	122		50 - 200			10/27/25 17:03	10/28/25 16:46	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		10/27/25 16:55	10/30/25 03:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 03:53	1

# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-9**

Date Collected: 10/20/25 11:20  
Date Received: 10/22/25 10:08

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	10/27/25 16:55	10/30/25 03:53	1
13C2 PFHxA	94		70 - 130	10/27/25 16:55	10/30/25 03:53	1
13C2 PFDA	98		70 - 130	10/27/25 16:55	10/30/25 03:53	1
13C3-GenX	89		70 - 130	10/27/25 16:55	10/30/25 03:53	1

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

**Lab Sample ID: 380-178593-10**

Date Collected: 10/20/25 11:38  
Date Received: 10/22/25 10:08

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		10/27/25 17:03	10/28/25 16:56	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/27/25 17:03	10/28/25 16:56	1

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# Client Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-10**

Date Collected: 10/20/25 11:38  
Date Received: 10/22/25 10:08

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C6 PFDA	107		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C5 PFHxA	101		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C4 PFHpA	102		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C8 PFOA	99		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C9 PFNA	106		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C7 PFUnA	100		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C2 PFDoA	101		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C4 PFBA	102		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C5 PFPeA	102		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C3 PFBS	102		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C3 PFHxS	104		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C8 PFOS	101		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C2-4:2-FTS	115		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C2-6:2-FTS	120		50 - 200	10/27/25 17:03	10/28/25 16:56	1
13C2-8:2-FTS	122		50 - 200	10/27/25 17:03	10/28/25 16:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/27/25 16:55	10/30/25 04:02	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	95		70 - 130	10/27/25 16:55	10/30/25 04:02	1
13C2 PFHxA	100		70 - 130	10/27/25 16:55	10/30/25 04:02	1
13C2 PFDA	102		70 - 130	10/27/25 16:55	10/30/25 04:02	1
13C3-GenX	94		70 - 130	10/27/25 16:55	10/30/25 04:02	1

# Action Limit Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1**

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

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

**Lab Sample ID: 380-178593-2**

## 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	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.6		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.6		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)	2.6		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: 380-178593-3**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
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

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# Action Limit Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-3**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL		RL	Method	Prep Type
				Limit				
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: 380-178593-4**

## Compliance Check

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

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

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

**Lab Sample ID: 380-178593-5**

## Compliance Check

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

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

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## Action Limit Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-5**

### Compliance Check

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

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

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

**Lab Sample ID: 380-178593-6**

### Compliance Check

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

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

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

**Lab Sample ID: 380-178593-7**

### Compliance Check

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

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

## Action Limit Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-8**

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

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

**Lab Sample ID: 380-178593-9**

### Compliance Check

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

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

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

**Lab Sample ID: 380-178593-10**

### Compliance Check

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

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

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# Action Limit Summary

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-10**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-178593-1	MOANALUA WELLS (331-223-TP2C)	106	104	105	100
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	102	111	109	105
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	103	103	103	103
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	106	101	102	100
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	102	102	104	99

**Surrogate Legend**  
 d5NEFOS = d5-NEtFOSAA  
 PFHxA = 13C2 PFHxA  
 PFDA = 13C2 PFDA  
 GenX = 13C3-GenX

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-178593-6	FB: MOANALUA WELLS (331-223-1)	103	99	100	95
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	106	103	106	103
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	95	97	106	91
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	96	94	98	89
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	95	100	102	94
380-179184-A-1-B MS	Matrix Spike	99	104	106	101
380-179184-A-1-C MSD	Matrix Spike Duplicate	99	102	101	96
LCS 380-182598/22-A	Lab Control Sample	102	97	98	92
MBL 380-182598/20-A	Method Blank	108	111	110	109
MRL 380-182598/21-A	Lab Control Sample	106	105	104	102

**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: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFD <sub>o</sub> A (50-200)
380-178593-1	MOANALUA WELLS (331-223-TP2C)	78	73	81	78	77	72	70	84
380-178593-1 MS	MOANALUA WELLS (331-223-TP202)	104	109	100	106	101	102	111	107
380-178593-1 MSD	MOANALUA WELLS (331-223-TP202)	105	115	105	107	106	111	111	115
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	100	111	102	109	105	108	110	111
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	97	105	102	102	100	107	108	107
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	95	107	99	102	101	103	103	110
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	97	99	99	101	99	100	92	92

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-178593-1	MOANALUA WELLS (331-223-TP2C)	93	89	116	112	112	124	130	135
380-178593-1 MS	MOANALUA WELLS (331-223-TP202)	104	105	108	107	106	116	127	130
380-178593-1 MSD	MOANALUA WELLS (331-223-TP202)	109	107	106	107	108	122	127	124
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	109	112	113	114	112	125	134	130
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	106	108	107	106	108	117	122	130
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	105	102	101	101	102	111	118	121
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	102	103	101	102	98	117	119	119

**Surrogate Legend**

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFD<sub>o</sub>A = 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

# Isotope Dilution Summary

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-178593-6	FB: MOANALUA WELLS (331-223-1	100	109	105	105	102	109	104	109
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	92	98	97	99	100	99	97	105
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	99	109	102	104	102	106	103	105
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	98	109	105	103	102	107	109	105
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	97	107	101	102	99	106	100	101
LCS 380-182594/22-A	Lab Control Sample	95	108	98	102	103	106	100	106
MBL 380-182594/20-A	Method Blank	107	107	108	107	109	107	108	113
MRL 380-182594/21-A	Lab Control Sample	111	118	118	110	115	113	113	120

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-178593-6	FB: MOANALUA WELLS (331-223-1	104	106	108	107	109	125	125	128
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	103	100	105	104	106	118	124	106
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	102	103	102	104	107	118	122	122
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	106	105	104	105	104	116	123	122
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	102	102	102	104	101	115	120	122
LCS 380-182594/22-A	Lab Control Sample	106	107	103	106	109	117	122	125
MBL 380-182594/20-A	Method Blank	110	108	110	115	110	116	125	110
MRL 380-182594/21-A	Lab Control Sample	116	117	117	116	119	128	136	131

**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: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: MBL 380-182594/20-A**  
**Matrix: Water**  
**Analysis Batch: 182781**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 182594**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		10/27/25 17:03	10/28/25 13:48	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	107		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C6 PFDA	107		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C5 PFHxA	108		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C4 PFHpA	107		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C8 PFOA	109		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C9 PFNA	107		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C7 PFUnA	108		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C2 PFDoA	113		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C4 PFBA	110		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C5 PFPeA	108		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C3 PFBS	110		50 - 200	10/27/25 17:03	10/28/25 13:48	1

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# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: MBL 380-182594/20-A**

**Matrix: Water**

**Analysis Batch: 182781**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 182594**

<i>Isotope Dilution</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>				
13C3 PFHxS	115		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C8 PFOS	110		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C2-4:2-FTS	116		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C2-6:2-FTS	125		50 - 200	10/27/25 17:03	10/28/25 13:48	1
13C2-8:2-FTS	110		50 - 200	10/27/25 17:03	10/28/25 13:48	1

**Lab Sample ID: LCS 380-182594/22-A**

**Matrix: Water**

**Analysis Batch: 182781**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 182594**

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>			<i>Limits</i>	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	56.7		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	56.6		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	59.2		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	57.4		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	58.9		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	60.3		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	59.8		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	59.7		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	59.3		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	60.6		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	60.1	59.4		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	57.9		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	61.0		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	62.3		ng/L		104	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	60.2		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	64.7		ng/L		108	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	60.3		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	62.0		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	61.3		ng/L		102	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.1	60.2		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	62.8		ng/L		105	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	59.1		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	60.6		ng/L		101	70 - 130

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# QC Sample Results

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: LCS 380-182594/22-A**  
**Matrix: Water**  
**Analysis Batch: 182781**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 182594**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Perfluoroheptanesulfonic acid (PFHpS)	60.1	64.2		ng/L		107	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.1	60.9		ng/L		101	70 - 130
<b>Isotope Dilution</b>							
		<b>LCS</b>	<b>LCS</b>				
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
13C3 HFPO-DA	95		50 - 200				
13C6 PFDA	108		50 - 200				
13C5 PFHxA	98		50 - 200				
13C4 PFHpA	102		50 - 200				
13C8 PFOA	103		50 - 200				
13C9 PFNA	106		50 - 200				
13C7 PFUnA	100		50 - 200				
13C2 PFDoA	106		50 - 200				
13C4 PFBA	106		50 - 200				
13C5 PFPeA	107		50 - 200				
13C3 PFBS	103		50 - 200				
13C3 PFHxS	106		50 - 200				
13C8 PFOS	109		50 - 200				
13C2-4:2-FTS	117		50 - 200				
13C2-6:2-FTS	122		50 - 200				
13C2-8:2-FTS	125		50 - 200				

**Lab Sample ID: MRL 380-182594/21-A**  
**Matrix: Water**  
**Analysis Batch: 182781**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 182594**

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.22	J	ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.14	J	ng/L		106	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.28	J	ng/L		113	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.14	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.29	J	ng/L		114	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.38	J	ng/L		118	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.12	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.26	J	ng/L		113	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.24	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.28	J	ng/L		113	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: MRL 380-182594/21-A**  
**Matrix: Water**  
**Analysis Batch: 182781**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 182594**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.39	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.32	J	ng/L		115	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.46	J	ng/L		123	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.29	J	ng/L		114	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.26	J	ng/L		112	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.32	J	ng/L		115	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.35	J	ng/L		117	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.48	J	ng/L		124	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	111		50 - 200
13C6 PFDA	118		50 - 200
13C5 PFHxA	118		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	113		50 - 200
13C2 PFDoA	120		50 - 200
13C4 PFBA	116		50 - 200
13C5 PFPeA	117		50 - 200
13C3 PFBS	117		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	119		50 - 200
13C2-4:2-FTS	128		50 - 200
13C2-6:2-FTS	136		50 - 200
13C2-8:2-FTS	131		50 - 200

**Lab Sample ID: 380-178593-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 182781**

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**  
**Prep Type: Total/NA**  
**Prep Batch: 182594**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	58.5		ng/L		97	70 - 130

# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-178593-1 MS

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 182781

Prep Batch: 182594

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	59.6		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	60.4		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	57.2		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	58.6		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	62.6		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	60.5		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	60.2		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	61.4		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	63.0		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	62.0		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	60.5		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	63.5		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	59.2		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	60.6		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	63.1		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	62.7		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	58.8		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	62.0		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	59.4		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	61.5		ng/L		102	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	59.7		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	62.4		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	64.5		ng/L		107	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	62.7		ng/L		104	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	104		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	101		50 - 200
13C9 PFNA	102		50 - 200
13C7 PFUnA	111		50 - 200
13C2 PFDoA	107		50 - 200

# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1 MS**

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

**Matrix: Drinking Water**

**Prep Type: Total/NA**

**Analysis Batch: 182781**

**Prep Batch: 182594**

<i>Isotope Dilution</i>	<i>MS</i>	<i>MS</i>	<i>Limits</i>
<i>%Recovery</i>	<i>Qualifier</i>		
13C4 PFBA	104		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	127		50 - 200
13C2-8:2-FTS	130		50 - 200

**Lab Sample ID: 380-178593-1 MSD**

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

**Matrix: Drinking Water**

**Prep Type: Total/NA**

**Analysis Batch: 182781**

**Prep Batch: 182594**

<i>Analyte</i>	<i>Sample</i>	<i>Sample</i>	<i>Spike</i>	<i>MSD</i>	<i>MSD</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>RPD</i>	<i>RPD</i>
	<i>Result</i>	<i>Qualifier</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>			<i>Limits</i>	<i>Limits</i>	<i>RPD</i>	<i>Limit</i>
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.5	61.8		ng/L		102	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.5	58.8		ng/L		97	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.5	60.3		ng/L		100	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.5	58.0		ng/L		96	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.5	58.4		ng/L		96	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		60.5	59.0		ng/L		98	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.5	60.4		ng/L		100	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.5	63.1		ng/L		103	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.5	62.0		ng/L		100	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.5	61.2		ng/L		99	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.5	60.9		ng/L		101	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.5	61.2		ng/L		98	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.5	62.7		ng/L		102	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.5	61.3		ng/L		101	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	<2.0		60.5	60.9		ng/L		98	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.5	66.9		ng/L		111	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.5	63.3		ng/L		105	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.5	60.9		ng/L		101	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.5	61.5		ng/L		102	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.5	61.7		ng/L		102	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.5	63.4		ng/L		105	70 - 130	3	30

## QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-178593-1 MSD

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 182781

Prep Batch: 182594

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.5	62.5		ng/L		103	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.5	62.5		ng/L		101	70 - 130	0	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.5	64.0		ng/L		106	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.5	61.3		ng/L		101	70 - 130	2	30
		<b>MSD</b>	<b>MSD</b>								
<b>Isotope Dilution</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
13C3 HFPO-DA		105		50 - 200							
13C6 PFDA		115		50 - 200							
13C5 PFHxA		105		50 - 200							
13C4 PFHpA		107		50 - 200							
13C8 PFOA		106		50 - 200							
13C9 PFNA		111		50 - 200							
13C7 PFUnA		111		50 - 200							
13C2 PFDoA		115		50 - 200							
13C4 PFBA		109		50 - 200							
13C5 PFPeA		107		50 - 200							
13C3 PFBS		106		50 - 200							
13C3 PFHxS		107		50 - 200							
13C8 PFOS		108		50 - 200							
13C2-4:2-FTS		122		50 - 200							
13C2-6:2-FTS		127		50 - 200							
13C2-8:2-FTS		124		50 - 200							

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

Lab Sample ID: MBL 380-182598/20-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 183237

Prep Batch: 182598

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1

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# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: MBL 380-182598/20-A**

**Matrix: Water**

**Analysis Batch: 183237**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 182598**

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		10/27/25 16:55	10/30/25 00:15	1

  

Surrogate	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	108		70 - 130	10/27/25 16:55	10/30/25 00:15	1
13C2 PFHxA	111		70 - 130	10/27/25 16:55	10/30/25 00:15	1
13C2 PFDA	110		70 - 130	10/27/25 16:55	10/30/25 00:15	1
13C3-GenX	109		70 - 130	10/27/25 16:55	10/30/25 00:15	1

**Lab Sample ID: LCS 380-182598/22-A**

**Matrix: Water**

**Analysis Batch: 183237**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 182598**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	43.6		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.1	52.4		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	48.8		ng/L		97	70 - 130
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	50.1	51.2		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	50.1	49.2		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	46.7		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	50.0		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	46.9		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	48.3		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	52.1		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	51.6		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	49.0		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	50.1	50.3		ng/L		100	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	44.5		ng/L		89	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	50.1	49.6		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	50.1	53.1		ng/L		106	70 - 130
11-Chloroeicosfluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	50.1	53.1		ng/L		106	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.1	46.6		ng/L		93	70 - 130

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# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Surrogate	LCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	102		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	98		70 - 130
13C3-GenX	92		70 - 130

**Lab Sample ID: MRL 380-182598/21-A**  
**Matrix: Water**  
**Analysis Batch: 183237**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 182598**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	2.02	2.54	J	ng/L		126	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.02	2.29	J	ng/L		114	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.02	2.36	J	ng/L		117	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.02	2.35	J	ng/L		117	50 - 150
Perfluorohexanoic acid (PFHxA)	2.02	2.30	J	ng/L		114	50 - 150
Perfluorododecanoic acid (PFDoA)	2.02	2.26	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.02	2.26	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.02	2.32	J	ng/L		115	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.02	2.38	J	ng/L		118	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.02	2.41	J	ng/L		119	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.02	2.40	J	ng/L		119	50 - 150
Perfluorononanoic acid (PFNA)	2.02	2.47	J	ng/L		122	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.02	1.98	J	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.02	2.30	J	ng/L		114	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.02	2.35	J	ng/L		117	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.02	2.30	J	ng/L		114	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.02	2.36	J	ng/L		117	50 - 150

Surrogate	MRL		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	105		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	102		70 - 130

# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-179184-A-1-B MS

Matrix: Water

Analysis Batch: 183237

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 182598

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	24.3		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	25.9		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	25.3		ng/L		101	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.6		ng/L		97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	24.1		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	25.2		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	25.6		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	25.5		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.2		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	26.9		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.1		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	25.7		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	26.1		ng/L		104	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	23.0		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	26.0		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.5		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	26.0		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.3		ng/L		104	70 - 130

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

Lab Sample ID: 380-179184-A-1-C MSD

Matrix: Water

Analysis Batch: 183237

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 182598

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	24.1		ng/L		96	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	26.1		ng/L		104	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	25.0		ng/L		99	70 - 130	1	30

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# QC Sample Results

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-179184-A-1-C MSD

Matrix: Water

Analysis Batch: 183237

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 182598

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	25.8		ng/L		102	70 - 130	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	25.0		ng/L		99	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	24.4		ng/L		97	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	25.8		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	25.4		ng/L		101	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.1		ng/L		100	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	26.6		ng/L		106	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	27.0		ng/L		107	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	25.2		ng/L		100	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	25.8		ng/L		102	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	22.1		ng/L		88	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	26.5		ng/L		105	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	27.2		ng/L		108	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid(11Cl-PF3OUdS)	<2.0		25.2	26.5		ng/L		105	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	25.2		ng/L		100	70 - 130	4	30
<b>Surrogate</b>		<b>MSD</b>	<b>MSD</b>					<b>%Recovery</b>		<b>Qualifier</b>	<b>Limits</b>
d5-NEtFOSAA		99									70 - 130
13C2 PFHxA		102									70 - 130
13C2 PFDA		101									70 - 130
13C3-GenX		96									70 - 130

# QC Association Summary

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

## LCMS

### Prep Batch: 182594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178593-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Total/NA	Drinking Water	533	
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Total/NA	Drinking Water	533	
380-178593-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Water	533	
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Total/NA	Water	533	
MBL 380-182594/20-A	Method Blank	Total/NA	Water	533	
LCS 380-182594/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-182594/21-A	Lab Control Sample	Total/NA	Water	533	
380-178593-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
380-178593-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	

### Prep Batch: 182598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178593-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Total/NA	Drinking Water	537.1 DW	
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Total/NA	Drinking Water	537.1 DW	
380-178593-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1 DW	
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Water	537.1 DW	
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1 DW	
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1 DW	
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Total/NA	Water	537.1 DW	
MBL 380-182598/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-182598/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-182598/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-179184-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-179184-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

### Analysis Batch: 182781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178593-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	182594
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Total/NA	Drinking Water	533	182594
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	182594
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	182594
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Total/NA	Drinking Water	533	182594
380-178593-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	533	182594
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Water	533	182594
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	182594
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	182594
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Total/NA	Water	533	182594
MBL 380-182594/20-A	Method Blank	Total/NA	Water	533	182594
LCS 380-182594/22-A	Lab Control Sample	Total/NA	Water	533	182594
MRL 380-182594/21-A	Lab Control Sample	Total/NA	Water	533	182594
380-178593-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	182594

# QC Association Summary

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

## LCMS (Continued)

### Analysis Batch: 182781 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178593-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	182594

### Analysis Batch: 183237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178593-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	182598
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Total/NA	Drinking Water	537.1	182598
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	182598
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	182598
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Total/NA	Drinking Water	537.1	182598
380-178593-6	FB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	537.1	182598
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Water	537.1	182598
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1	182598
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1	182598
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Total/NA	Water	537.1	182598
MBL 380-182598/20-A	Method Blank	Total/NA	Water	537.1	182598
LCS 380-182598/22-A	Lab Control Sample	Total/NA	Water	537.1	182598
MRL 380-182598/21-A	Lab Control Sample	Total/NA	Water	537.1	182598
380-179184-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	182598
380-179184-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	182598



# Lab Chronicle

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-1**

Date Collected: 10/20/25 09:59  
 Date Received: 10/22/25 10:08

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 14:19
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 02:23

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**

**Lab Sample ID: 380-178593-2**

**(331-206-TP065)**

Date Collected: 10/20/25 10:30  
 Date Received: 10/22/25 10:08

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 15:26
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 02:32

**Client Sample ID: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-178593-3**

**(331-201-TP071)**

Date Collected: 10/20/25 11:02  
 Date Received: 10/22/25 10:08

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 15:36
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 02:53

**Client Sample ID: AIEA GULCH WELLS PUMP 2**

**Lab Sample ID: 380-178593-4**

**(331-202-TP072)**

Date Collected: 10/20/25 11:20  
 Date Received: 10/22/25 10:08

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 15:46
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:04

# Lab Chronicle

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-5**

Date Collected: 10/20/25 11:38  
 Date Received: 10/22/25 10:08

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 15:55
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:14

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

**Lab Sample ID: 380-178593-6**

Date Collected: 10/20/25 09:59  
 Date Received: 10/22/25 10:08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 16:05
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:24

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

**Lab Sample ID: 380-178593-7**

Date Collected: 10/20/25 10:30  
 Date Received: 10/22/25 10:08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 16:26
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:33

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

**Lab Sample ID: 380-178593-8**

Date Collected: 10/20/25 11:02  
 Date Received: 10/22/25 10:08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 16:37
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:43

# Lab Chronicle

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-178593-9**

Date Collected: 10/20/25 11:20  
 Date Received: 10/22/25 10:08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 16:46
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 03:53

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

**Lab Sample ID: 380-178593-10**

Date Collected: 10/20/25 11:38  
 Date Received: 10/22/25 10:08

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182594	E2HD	EA POM	10/27/25 17:03
Total/NA	Analysis	533		1	182781	M7ML	EA POM	10/28/25 16:56
Total/NA	Prep	537.1 DW			182598	N8NE	EA POM	10/27/25 16:55
Total/NA	Analysis	537.1		1	183237	Y5FM	EA POM	10/30/25 04:02

**Laboratory References:**

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

# Accreditation/Certification Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

## Laboratory: Eurofins Eaton Analytical Pomona

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

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

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

# Method Summary

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

Job ID: 380-178593-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

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



# Sample Summary

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

Job ID: 380-178593-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch  
 Wells P1/P2, Aiea Wells Pumps 1&2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-178593-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	10/20/25 09:59	10/22/25 10:08	Hawaii
380-178593-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	10/20/25 10:30	10/22/25 10:08	Hawaii
380-178593-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	10/20/25 11:02	10/22/25 10:08	Hawaii
380-178593-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	10/20/25 11:20	10/22/25 10:08	Hawaii
380-178593-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	10/20/25 11:38	10/22/25 10:08	Hawaii
380-178593-6	FB: MOANALUA WELLS (331-223-TP202)	Water	10/20/25 09:59	10/22/25 10:08	Hawaii
380-178593-7	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Water	10/20/25 10:30	10/22/25 10:08	Hawaii
380-178593-8	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	10/20/25 11:02	10/22/25 10:08	Hawaii
380-178593-9	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	10/20/25 11:20	10/22/25 10:08	Hawaii
380-178593-10	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	10/20/25 11:38	10/22/25 10:08	Hawaii





## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-178593-1

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

**Login Number: 178593**

**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	

