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# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

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

## JOB NUMBER

380-171937-1

# 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



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# Definitions/Glossary

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

Job ID: 380-171937-1  
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: 380-171937-1

**Job ID: 380-171937-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-171937-1

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 9/17/2025 9:33 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°C.

### PFAS

Method 533: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method control limit: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065) (380-171937-2). IDA recovery for analytes 13C7 PFUnA and 13C2 PFDoA bias low. Insufficient volume for re-extraction. PFAS results for HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065) (380-171937-2) collected on 09/15/25 is not acceptable for compliance reporting due to QC failures of Isotope Dilution Analytes (IDA) not meeting the method limits. Analysis has been canceled, the sample is collected weekly thus follow up sample was collected on 09/23/25 under job # 380-173542-1. Analysis by EPA 533 is currently in progress. (XWB4)

Method 537.1\_DW\_PREC: Surrogates 13C2 PFHxA, 13C2 PFDA and 13C3-GenX failed biased high MRL check possibly due to double spiking the surrogates. Another MRL check was extracted on the same day (Prep Batch: 174860, Analytical Batch 174971) using the same lot of reagents and consumables and extracted by the same analyst. Only one MRL check is required on each day. Method blank and LCS passed all QC requirements for affected samples

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results MOANALUA WELLS (331-223-TP202) (380-171937-1)

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

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# Detection Summary

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

Job ID: 380-171937-1  
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: 380-171937-1**

**PWSID Number: HI0000331**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0	ng/L	1		533	Total/NA

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

**Lab Sample ID: 380-171937-2**

**PWSID Number: HI0000331**

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

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

**Lab Sample ID: 380-171937-3**

**PWSID Number: HI0000331**

No Detections.

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

**Lab Sample ID: 380-171937-4**

**PWSID Number: HI0000331**

No Detections.

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

**Lab Sample ID: 380-171937-5**

**PWSID Number: HI0000331**

No Detections.

**Client Sample ID: FB MOANALUA WELLS (331-204-TP073)**

**Lab Sample ID: 380-171937-6**

**PWSID Number: HI0000331**

No Detections.

**Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 (331-205-TP074)**

**Lab Sample ID: 380-171937-7**

**PWSID Number: HI0000331**

No Detections.

**Client Sample ID: FB AIEA GULCH WELLS PUMP 1 (331-206-TP075)**

**Lab Sample ID: 380-171937-8**

**PWSID Number: HI0000331**

No Detections.

**Client Sample ID: FB AIEA GULCH WELLS PUMP 2 (331-207-TP076)**

**Lab Sample ID: 380-171937-9**

**PWSID Number: HI0000331**

No Detections.

**Client Sample ID: FB AIEA WELLS PUMPS 1&2 (331-208-TP077)**

**Lab Sample ID: 380-171937-10**

**PWSID Number: HI0000331**

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: 380-171937-1  
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: 380-171937-1**

Date Collected: 09/15/25 10:06

Matrix: Drinking Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.1</b>		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:51	09/18/25 22:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C6 PFDA	112		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C5 PFHxA	114		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C4 PFHpA	112		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C8 PFOA	116		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C9 PFNA	114		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C7 PFUnA	113		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C2 PFDoA	110		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C4 PFBA	115		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C5 PFPeA	121		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C3 PFBS	119		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C3 PFHxS	115		50 - 200	09/18/25 07:51	09/18/25 22:50	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-1**

Date Collected: 09/15/25 10:06

Matrix: Drinking Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	115		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C2-4:2-FTS	128		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C2-6:2-FTS	111		50 - 200	09/18/25 07:51	09/18/25 22:50	1
13C2-8:2-FTS	112		50 - 200	09/18/25 07:51	09/18/25 22:50	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		09/18/25 02:46	09/18/25 17:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130	09/18/25 02:46	09/18/25 17:39	1
13C2 PFHxA	107		70 - 130	09/18/25 02:46	09/18/25 17:39	1
13C2 PFDA	112		70 - 130	09/18/25 02:46	09/18/25 17:39	1
13C3-GenX	101		70 - 130	09/18/25 02:46	09/18/25 17:39	1

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

**Lab Sample ID: 380-171937-2**

Date Collected: 09/15/25 10:33

Matrix: Drinking Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.4</b>		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-2**

**Date Collected: 09/15/25 10:33**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.5</b>		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:48	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	110		70 - 130			09/18/25 02:46	09/18/25 17:48	1
13C2 PFHxA	108		70 - 130			09/18/25 02:46	09/18/25 17:48	1
13C2 PFDA	114		70 - 130			09/18/25 02:46	09/18/25 17:48	1
13C3-GenX	108		70 - 130			09/18/25 02:46	09/18/25 17:48	1

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

**Lab Sample ID: 380-171937-3**

**Date Collected: 09/15/25 11:01**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-3**

**Date Collected: 09/15/25 11:01**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluorobutanoic acid (PFBA)	2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C6 PFDA	109		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C5 PFHxA	114		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C4 PFHpA	117		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C8 PFOA	117		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C9 PFNA	115		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C7 PFUnA	112		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C2 PFDoA	108		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C4 PFBA	114		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C5 PFPeA	120		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C3 PFBS	119		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C3 PFHxS	113		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C8 PFOS	114		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C2-4:2-FTS	124		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C2-6:2-FTS	115		50 - 200	09/18/25 07:46	09/18/25 18:43	1
13C2-8:2-FTS	104		50 - 200	09/18/25 07:46	09/18/25 18:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-3**

**Date Collected: 09/15/25 11:01**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 17:58	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			09/18/25 02:46	09/18/25 17:58	1
13C2 PFHxA	107		70 - 130			09/18/25 02:46	09/18/25 17:58	1
13C2 PFDA	112		70 - 130			09/18/25 02:46	09/18/25 17:58	1
13C3-GenX	99		70 - 130			09/18/25 02:46	09/18/25 17:58	1

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

**Lab Sample ID: 380-171937-4**

**Date Collected: 09/15/25 11:20**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-4**

**Date Collected: 09/15/25 11:20  
Date Received: 09/17/25 09:33**

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

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 18:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C6 PFDA	112		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C5 PFHxA	117		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C4 PFHpA	115		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C8 PFOA	117		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C9 PFNA	115		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C7 PFUnA	110		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C2 PFDoA	108		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C4 PFBA	116		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C5 PFPeA	123		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C3 PFBS	120		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C3 PFHxS	116		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C8 PFOS	113		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C2-4:2-FTS	127		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C2-6:2-FTS	114		50 - 200	09/18/25 07:46	09/18/25 18:53	1
13C2-8:2-FTS	106		50 - 200	09/18/25 07:46	09/18/25 18:53	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		09/18/25 02:46	09/18/25 18:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-171937-1  
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: 380-171937-4**

Date Collected: 09/15/25 11:20

Matrix: Drinking Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		70 - 130			09/18/25 02:46	09/18/25 18:08	1
13C2 PFHxA	105		70 - 130			09/18/25 02:46	09/18/25 18:08	1
13C2 PFDA	109		70 - 130			09/18/25 02:46	09/18/25 18:08	1
13C3-GenX	98		70 - 130			09/18/25 02:46	09/18/25 18:08	1

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

**Lab Sample ID: 380-171937-5**

Date Collected: 09/15/25 11:43

Matrix: Drinking Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-171937-5**

**Date Collected: 09/15/25 11:43**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C6 PFDA	113		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C5 PFHxA	116		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C4 PFHpA	113		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C8 PFOA	116		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C9 PFNA	117		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C7 PFUnA	113		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C2 PFDoA	110		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C4 PFBA	115		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C5 PFPeA	119		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C3 PFBS	117		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C3 PFHxS	115		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C8 PFOS	114		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C2-4:2-FTS	123		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C2-6:2-FTS	112		50 - 200	09/18/25 07:46	09/18/25 19:03	1
13C2-8:2-FTS	105		50 - 200	09/18/25 07:46	09/18/25 19:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1

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# Client Sample Results

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-171937-5**

**Date Collected: 09/15/25 11:43**

**Matrix: Drinking Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorotetradecanoic acid (PFTA)	2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			09/18/25 02:46	09/18/25 18:17	1
13C2 PFHxA	109		70 - 130			09/18/25 02:46	09/18/25 18:17	1
13C2 PFDA	112		70 - 130			09/18/25 02:46	09/18/25 18:17	1
13C3-GenX	102		70 - 130			09/18/25 02:46	09/18/25 18:17	1

**Client Sample ID: FB MOANALUA WELLS**

**Lab Sample ID: 380-171937-6**

**Date Collected: 09/15/25 10:06**

**Matrix: Water**

**Date Received: 09/17/25 09:33**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1

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# Client Sample Results

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: FB MOANALUA WELLS**

**Lab Sample ID: 380-171937-6**

Date Collected: 09/15/25 10:06

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:12	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C6 PFDA	110		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C5 PFHxA	114		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C4 PFHpA	111		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C8 PFOA	115		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C9 PFNA	111		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C7 PFUnA	112		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C2 PFDoA	108		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C4 PFBA	114		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C5 PFPeA	118		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C3 PFBS	114		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C3 PFHxS	111		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C8 PFOS	110		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C2-4:2-FTS	116		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C2-6:2-FTS	107		50 - 200			09/18/25 07:46	09/18/25 19:12	1
13C2-8:2-FTS	105		50 - 200			09/18/25 07:46	09/18/25 19:12	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		09/18/25 02:46	09/18/25 18:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1

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# Client Sample Results

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

**Client Sample ID: FB MOANALUA WELLS**

**Lab Sample ID: 380-171937-6**

Date Collected: 09/15/25 10:06

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			09/18/25 02:46	09/18/25 18:27	1
13C2 PFHxA	108		70 - 130			09/18/25 02:46	09/18/25 18:27	1
13C2 PFDA	111		70 - 130			09/18/25 02:46	09/18/25 18:27	1
13C3-GenX	102		70 - 130			09/18/25 02:46	09/18/25 18:27	1

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

**Lab Sample ID: 380-171937-7**

Date Collected: 09/15/25 10:33

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
N-methylperfluorooctanesulfonamidoac etic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			09/18/25 02:46	09/18/25 18:36	1
13C2 PFHxA	106		70 - 130			09/18/25 02:46	09/18/25 18:36	1
13C2 PFDA	109		70 - 130			09/18/25 02:46	09/18/25 18:36	1
13C3-GenX	99		70 - 130			09/18/25 02:46	09/18/25 18:36	1

# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-8**

Date Collected: 09/15/25 11:01

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:43	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C6 PFDA	111		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C5 PFHxA	113		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C4 PFHpA	112		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C8 PFOA	114		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C9 PFNA	116		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C7 PFUnA	110		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C2 PFDoA	110		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C4 PFBA	113		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C5 PFPeA	118		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C3 PFBS	118		50 - 200			09/18/25 07:46	09/18/25 19:43	1
13C3 PFHxS	113		50 - 200			09/18/25 07:46	09/18/25 19:43	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-8**

Date Collected: 09/15/25 11:01

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	113		50 - 200	09/18/25 07:46	09/18/25 19:43	1
13C2-4:2-FTS	122		50 - 200	09/18/25 07:46	09/18/25 19:43	1
13C2-6:2-FTS	114		50 - 200	09/18/25 07:46	09/18/25 19:43	1
13C2-8:2-FTS	102		50 - 200	09/18/25 07:46	09/18/25 19:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 18:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	91		70 - 130	09/18/25 02:46	09/18/25 18:55	1
13C2 PFHxA	96		70 - 130	09/18/25 02:46	09/18/25 18:55	1
13C2 PFDA	101		70 - 130	09/18/25 02:46	09/18/25 18:55	1
13C3-GenX	92		70 - 130	09/18/25 02:46	09/18/25 18:55	1

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

**Lab Sample ID: 380-171937-9**

Date Collected: 09/15/25 11:20

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-9**

Date Collected: 09/15/25 11:20

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 19:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C6 PFDA	112		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C5 PFHxA	114		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C4 PFHpA	113		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C8 PFOA	114		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C9 PFNA	115		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C7 PFUnA	112		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C2 PFDoA	110		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C4 PFBA	112		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C5 PFPeA	117		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C3 PFBS	120		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C3 PFHxS	114		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C8 PFOS	115		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C2-4:2-FTS	127		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C2-6:2-FTS	113		50 - 200	09/18/25 07:46	09/18/25 19:54	1
13C2-8:2-FTS	108		50 - 200	09/18/25 07:46	09/18/25 19:54	1

# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-9**

Date Collected: 09/15/25 11:20

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:05	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	98		70 - 130			09/18/25 02:46	09/18/25 19:05	1
13C2 PFHxA	104		70 - 130			09/18/25 02:46	09/18/25 19:05	1
13C2 PFDA	108		70 - 130			09/18/25 02:46	09/18/25 19:05	1
13C3-GenX	94		70 - 130			09/18/25 02:46	09/18/25 19:05	1

**Client Sample ID: FB AIEA WELLS PUMPS 1&2**

**Lab Sample ID: 380-171937-10**

Date Collected: 09/15/25 11:43

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-10**

Date Collected: 09/15/25 11:43

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/18/25 07:46	09/18/25 20:03	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C6 PFDA	112		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C5 PFHxA	115		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C4 PFHpA	114		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C8 PFOA	118		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C9 PFNA	113		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C7 PFUnA	113		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C2 PFDoA	108		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C4 PFBA	114		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C5 PFPeA	117		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C3 PFBS	116		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C3 PFHxS	117		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C8 PFOS	113		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C2-4:2-FTS	121		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C2-6:2-FTS	114		50 - 200			09/18/25 07:46	09/18/25 20:03	1
13C2-8:2-FTS	108		50 - 200			09/18/25 07:46	09/18/25 20:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1

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# Client Sample Results

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-10**

Date Collected: 09/15/25 11:43

Matrix: Water

Date Received: 09/17/25 09:33

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/18/25 02:46	09/18/25 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130	09/18/25 02:46	09/18/25 19:14	1
13C2 PFHxA	110		70 - 130	09/18/25 02:46	09/18/25 19:14	1
13C2 PFDA	111		70 - 130	09/18/25 02:46	09/18/25 19:14	1
13C3-GenX	104		70 - 130	09/18/25 02:46	09/18/25 19:14	1

# Action Limit Summary

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

Job ID: 380-171937-1  
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: 380-171937-1**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	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)	2.1		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

**Lab Sample ID: 380-171937-2**

**(331-206-TP065)**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

**Lab Sample ID: 380-171937-3**

**(331-201-TP071)**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	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

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# Action Limit Summary

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

Job ID: 380-171937-1  
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)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-171937-3**

## 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			
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

**Lab Sample ID: 380-171937-4**

## 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 P2 (260)**  
**(331-203-TP400)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-171937-5**

## 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

# Action Limit Summary

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

**Lab Sample ID: 380-171937-5**

## 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			
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

**Client Sample ID: FB MOANALUA WELLS**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-171937-6**

## 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**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-171937-7**

## 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	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: 380-171937-1  
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**

**Lab Sample ID: 380-171937-8**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	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**

**Lab Sample ID: 380-171937-9**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	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**

**Lab Sample ID: 380-171937-10**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	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

Eurofins Eaton Analytical Pomona

# Action Limit Summary

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

Job ID: 380-171937-1  
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 (Continued)**

**Lab Sample ID: 380-171937-10**

**PWSID Number: HI0000331**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
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: 380-171937-1  
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)
380-171937-1	MOANALUA WELLS (331-223-T	109	107	112	101
380-171937-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	110	108	114	108
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	102	107	112	99
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	100	105	109	98
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	110	109	112	102

**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)
380-171937-6	FB MOANALUA WELLS	108	108	111	102
380-171937-7	FB HALAWA WELLS UNITS 1 & 2	102	106	109	99
380-171937-8	FB AIEA GULCH WELLS PUMP 1	91	96	101	92
380-171937-9	FB AIEA GULCH WELLS PUMP 2	98	104	108	94
380-171937-10	FB AIEA WELLS PUMPS 1&2	106	110	111	104
380-171974-F-1-A MS	Matrix Spike	105	110	109	103
380-171974-G-1-A MSD	Matrix Spike Duplicate	109	110	110	105
LCS 380-174859/22-A	Lab Control Sample	99	112	114	98
MBL 380-174859/20-A	Method Blank	93	97	98	90
MRL 380-174860/21-A	Lab Control Sample	107	111	107	104

**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: 380-171937-1  
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)	PFDaA (50-200)
380-171937-1	MOANALUA WELLS (331-223-T	101	112	114	112	116	114	113	110
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	100	109	114	117	117	115	112	108
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	102	112	117	115	117	115	110	108
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	103	113	116	113	116	117	113	110
380-171937-E-2-A MS	380-171937-E-2-A MS	101	111	108	108	112	111	110	108
380-171937-F-2-A MSD	380-171937-F-2-A MSD	95	112	106	106	110	108	115	109

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)
380-171937-1	MOANALUA WELLS (331-223-T	115	121	119	115	115	128	111	112
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	114	120	119	113	114	124	115	104
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	116	123	120	116	113	127	114	106
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	115	119	117	115	114	123	112	105
380-171937-E-2-A MS	380-171937-E-2-A MS	109	113	110	108	108	117	107	106
380-171937-F-2-A MSD	380-171937-F-2-A MSD	106	107	117	113	112	123	113	109

**Surrogate Legend**

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

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

Matrix: Water

Prep Type: Total/NA

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)	PFDaA (50-200)
380-171694-B-17-A MS	Matrix Spike	99	110	112	110	113	111	108	107
380-171694-C-17-A MSD	Matrix Spike Duplicate	105	114	114	114	118	114	112	111
380-171937-6	FB MOANALUA WELLS	90	110	114	111	115	111	112	108
380-171937-8	FB AIEA GULCH WELLS PUMP 1	88	111	113	112	114	116	110	110

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# Isotope Dilution Summary

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

Job ID: 380-171937-1  
 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)

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)	PFDaA (50-200)
380-171937-9	FB AIEA GULCH WELLS PUMP	91	112	114	113	114	115	112	110
380-171937-10	FB AIEA WELLS PUMPS 1&2	90	112	115	114	118	113	113	108
LCS 380-174869/22-A	Lab Control Sample	89	111	109	109	114	113	110	108
LCS 380-174871/22-A	Lab Control Sample	92	112	108	111	112	113	109	109
MBL 380-174869/20-A	Method Blank	93	115	124	123	127	121	116	114
MBL 380-174871/20-A	Method Blank	80	108	114	112	112	113	109	107
MRL 380-174869/21-A	Lab Control Sample	92	111	118	115	118	117	109	110
MRL 380-174871/21-A	Lab Control Sample	94	111	113	112	113	112	109	108

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)
380-171694-B-17-A MS	Matrix Spike	109	112	114	114	111	126	110	110
380-171694-C-17-A MSD	Matrix Spike Duplicate	116	120	118	114	113	120	116	108
380-171937-6	FB MOANALUA WELLS	114	118	114	111	110	116	107	105
380-171937-8	FB AIEA GULCH WELLS PUMP 1	113	118	118	113	113	122	114	102
380-171937-9	FB AIEA GULCH WELLS PUMP 2	112	117	120	114	115	127	113	108
380-171937-10	FB AIEA WELLS PUMPS 1&2	114	117	116	117	113	121	114	108
LCS 380-174869/22-A	Lab Control Sample	111	114	117	112	110	116	110	109
LCS 380-174871/22-A	Lab Control Sample	110	117	111	110	110	115	109	108
MBL 380-174869/20-A	Method Blank	122	126	127	124	119	130	120	105
MBL 380-174871/20-A	Method Blank	112	115	115	114	112	119	110	100
MRL 380-174869/21-A	Lab Control Sample	114	120	118	116	116	118	112	107
MRL 380-174871/21-A	Lab Control Sample	111	116	116	112	109	117	107	105

### Surrogate Legend

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

# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174869/20-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/18/25 07:46	09/18/25 17:05	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C6 PFDA	115		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C5 PFHxA	124		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C4 PFHpA	123		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C8 PFOA	127		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C9 PFNA	121		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C7 PFUnA	116		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C2 PFDoA	114		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C4 PFBA	122		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C5 PFPeA	126		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C3 PFBS	127		50 - 200	09/18/25 07:46	09/18/25 17:05	1

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# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174869/20-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 PFHxS	124		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C8 PFOS	119		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C2-4:2-FTS	130		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C2-6:2-FTS	120		50 - 200	09/18/25 07:46	09/18/25 17:05	1
13C2-8:2-FTS	105		50 - 200	09/18/25 07:46	09/18/25 17:05	1

**Lab Sample ID: LCS 380-174869/22-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.4	62.6		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.4	60.5		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	59.4		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	58.4		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	60.7		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	61.3		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	60.4	60.3		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	60.6		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	58.8		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	60.3		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	60.4	58.0		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	61.5		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	58.1		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	58.6		ng/L		97	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	58.1		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	58.3		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	59.9		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	61.0		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	59.3		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.4	55.6		ng/L		92	70 - 130
Perfluoro 3 methoxypropanoic acid (PFMPA)	60.4	59.5		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	57.1		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	56.8		ng/L		94	70 - 130

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# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174869/22-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	60.4	60.6		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.4	58.5		ng/L		97	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	89		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	114		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	117		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	109		50 - 200

**Lab Sample ID: MRL 380-174869/21-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.07	J	ng/L		103	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.98	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.99	J	ng/L		99	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.95	J	ng/L		97	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.04	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.08	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.18	J	ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.04	J	ng/L		101	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174869/21-A**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.05	J	ng/L		102	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.24	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	1.98	J	ng/L		99	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.82	J	ng/L		90	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.94	J	ng/L		97	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.98	J	ng/L		99	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	92		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	118		50 - 200
13C4 PFHpA	115		50 - 200
13C8 PFOA	118		50 - 200
13C9 PFNA	117		50 - 200
13C7 PFUnA	109		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	120		50 - 200
13C3 PFBS	118		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	118		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	107		50 - 200

**Lab Sample ID: 380-171694-B-17-A MS**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	65.6		ng/L		109	70 - 130



# QC Sample Results

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

Job ID: 380-171937-1  
 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: 380-171694-B-17-A MS**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C4 PFBA	109		50 - 200
13C5 PFPeA	112		50 - 200
13C3 PFBS	114		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	126		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	110		50 - 200

**Lab Sample ID: 380-171694-C-17-A MSD**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	64.5		ng/L		107	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	61.7		ng/L		102	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	60.0		ng/L		100	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	60.1		ng/L		100	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	64.3		ng/L		105	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	62.6		ng/L		104	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	60.9		ng/L		101	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	62.2		ng/L		103	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	61.5		ng/L		101	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	60.8		ng/L		98	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	61.0		ng/L		101	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	63.3		ng/L		105	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	60.9		ng/L		99	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	60.1		ng/L		100	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	2.2		60.2	60.6		ng/L		97	70 - 130	7	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	60.8		ng/L		101	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	60.9		ng/L		101	70 - 130	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	62.8		ng/L		104	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	60.5		ng/L		100	70 - 130	0	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	59.0		ng/L		98	70 - 130	7	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	60.4		ng/L		100	70 - 130	2	30

# QC Sample Results

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

Job ID: 380-171937-1  
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: 380-171694-C-17-A MSD**  
**Matrix: Water**  
**Analysis Batch: 174999**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 174869**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	55.1		ng/L		91	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	59.2		ng/L		96	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	61.5		ng/L		102	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	60.1		ng/L		100	70 - 130	3	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		114		50 - 200							
13C5 PFHxA		114		50 - 200							
13C4 PFHpA		114		50 - 200							
13C8 PFOA		118		50 - 200							
13C9 PFNA		114		50 - 200							
13C7 PFUnA		112		50 - 200							
13C2 PFDoA		111		50 - 200							
13C4 PFBA		116		50 - 200							
13C5 PFPeA		120		50 - 200							
13C3 PFBS		118		50 - 200							
13C3 PFHxS		114		50 - 200							
13C8 PFOS		113		50 - 200							
13C2-4:2-FTS		120		50 - 200							
13C2-6:2-FTS		116		50 - 200							
13C2-8:2-FTS		108		50 - 200							

**Lab Sample ID: MBL 380-174871/20-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosfluoro-3-oxaundecanoic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
9-Chlorohexadecafluoro-3-oxanonanoic acid (9Cl-PF3ONS)	<0.30		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1

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# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174871/20-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.48		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/18/25 07:51	09/18/25 21:41	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C6 PFDA	108		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C5 PFHxA	114		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C4 PFHpA	112		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C8 PFOA	112		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C9 PFNA	113		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C7 PFUnA	109		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C2 PFDoA	107		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C4 PFBA	112		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C5 PFPeA	115		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C3 PFBS	115		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C3 PFHxS	114		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C8 PFOS	112		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C2-4:2-FTS	119		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C2-6:2-FTS	110		50 - 200	09/18/25 07:51	09/18/25 21:41	1
13C2-8:2-FTS	100		50 - 200	09/18/25 07:51	09/18/25 21:41	1

**Lab Sample ID: LCS 380-174871/22-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	123		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	120		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	116		ng/L		97	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174871/22-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	117		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	125		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	120	120		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	120	120		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	119		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	118		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	120	119		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	120	119		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	121		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	120	118		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	118		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	120	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	118		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	119		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	115		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	121		ng/L		101	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	109		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	120	114		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	117		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	115		ng/L		95	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	92		50 - 200
13C6 PFDA	112		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	109		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	117		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	110		50 - 200

# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174871/22-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

<i>Isotope Dilution</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	115		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	108		50 - 200

**Lab Sample ID: MRL 380-174871/21-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL Result</i>	<i>MRL Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.23	J	ng/L		111	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.20	J	ng/L		109	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.03	J	ng/L		101	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.16	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.24	J	ng/L		111	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.16	J	ng/L		108	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.11	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.25	J	ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.20	J	ng/L		110	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.23	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.28	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.33	J	ng/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.13	J	ng/L		106	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.90	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.09	J	ng/L		104	50 - 150

# QC Sample Results

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

Job ID: 380-171937-1  
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 380-174871/21-A**  
**Matrix: Water**  
**Analysis Batch: 175003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.25	J	ng/L		112	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.22	J	ng/L		110	50 - 150
<b>Isotope Dilution</b>	<b>MRL %Recovery</b>	<b>MRL Qualifier</b>	<b>Limits</b>				
13C3 HFPO-DA	94		50 - 200				
13C6 PFDA	111		50 - 200				
13C5 PFHxA	113		50 - 200				
13C4 PFHpA	112		50 - 200				
13C8 PFOA	113		50 - 200				
13C9 PFNA	112		50 - 200				
13C7 PFUnA	109		50 - 200				
13C2 PFDoA	108		50 - 200				
13C4 PFBA	111		50 - 200				
13C5 PFPeA	116		50 - 200				
13C3 PFBS	116		50 - 200				
13C3 PFHxS	112		50 - 200				
13C8 PFOS	109		50 - 200				
13C2-4:2-FTS	117		50 - 200				
13C2-6:2-FTS	107		50 - 200				
13C2-8:2-FTS	105		50 - 200				

**Lab Sample ID: 380-171937-E-2-A MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 175003**

**Client Sample ID: 380-171937-E-2-A MS**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	123		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	119		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	119		ng/L		99	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	118		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	125		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	123		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	120	118		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	123		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.5		120	122		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	2.0		120	120		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	122		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.4		120	126		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	116		ng/L		95	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-171937-1  
 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: 380-171937-E-2-A MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 175003**

**Client Sample ID: 380-171937-E-2-A MS**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	120	120		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	119		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	119		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	121		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	119		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	116		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	109		ng/L		90	70 - 130
Perfluoropentanoic acid (PFPeA)	2.3		120	115		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	117		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	119		ng/L		99	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	101		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	106		50 - 200

**Lab Sample ID: 380-171937-F-2-A MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 175003**

**Client Sample ID: 380-171937-F-2-A MSD**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	124		ng/L		103	70 - 130	1	30

# QC Sample Results

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

Job ID: 380-171937-1  
 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: 380-171937-F-2-A MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 175003**

**Client Sample ID: 380-171937-F-2-A MSD**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	121		ng/L		100	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	115		ng/L		95	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	116		ng/L		96	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	126		ng/L		103	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		121	122		ng/L		101	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	121	120		ng/L		99	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	121		ng/L		99	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	2.5		121	121		ng/L		98	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	2.0		121	119		ng/L		97	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		121	121		ng/L		100	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	2.4		121	125		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		121	117		ng/L		96	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	121	115		ng/L		95	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	<2.0		121	117		ng/L		97	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	120		ng/L		99	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	111		ng/L		92	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	120		ng/L		100	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	117		ng/L		97	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	114		ng/L		95	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	117		ng/L		97	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	107		ng/L		89	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	2.3		121	116		ng/L		94	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	118		ng/L		98	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	120		ng/L		99	70 - 130	1	30

Isotope Dilution	MSD	MSD	Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	95		50 - 200
13C6 PFDA	112		50 - 200
13C5 PFHxA	106		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	115		50 - 200
13C2 PFDoA	109		50 - 200

# QC Sample Results

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

Job ID: 380-171937-1  
 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: 380-171937-F-2-A MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 175003**

**Client Sample ID: 380-171937-F-2-A MSD**  
**Prep Type: Total/NA**  
**Prep Batch: 174871**

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	106		50 - 200
13C5 PFPeA	107		50 - 200
13C3 PFBS	117		50 - 200
13C3 PFHxS	113		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	123		50 - 200
13C2-6:2-FTS	113		50 - 200
13C2-8:2-FTS	109		50 - 200

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

**Lab Sample ID: MBL 380-174859/20-A**  
**Matrix: Water**  
**Analysis Batch: 174966**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 174859**

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		09/18/25 02:46	09/18/25 16:23	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.30		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/18/25 02:46	09/18/25 16:23	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	93		70 - 130	09/18/25 02:46	09/18/25 16:23	1
13C2 PFHxA	97		70 - 130	09/18/25 02:46	09/18/25 16:23	1
13C2 PFDA	98		70 - 130	09/18/25 02:46	09/18/25 16:23	1
13C3-GenX	90		70 - 130	09/18/25 02:46	09/18/25 16:23	1

# QC Sample Results

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

Job ID: 380-171937-1  
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: LCS 380-174859/22-A**  
**Matrix: Water**  
**Analysis Batch: 174966**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 174859**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.3	41.8		ng/L		83	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.3	49.1		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.3	49.6		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.3	43.8		ng/L		87	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.3	42.6		ng/L		85	70 - 130
Perfluorohexanoic acid (PFHxA)	50.3	45.3		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	50.3	48.1		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	50.3	47.0		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	50.3	49.0		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.3	49.6		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.3	49.8		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.3	46.5		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	50.3	47.5		ng/L		95	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.3	43.9		ng/L		87	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	50.3	49.8		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.3	49.6		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.3	48.3		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.3	42.3		ng/L		84	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	112		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	98		70 - 130

**Lab Sample ID: 380-171974-F-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 174966**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 174859**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.2		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	25.0		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.1		ng/L		100	70 - 130

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# QC Sample Results

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

Job ID: 380-171937-1  
 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: MRL 380-174860/21-A  
 Matrix: Water  
 Analysis Batch: 174971

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 174860

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	2.01	2.24	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.20	J	ng/L		110	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.01	2.11	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.26	J	ng/L		112	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.07	J	ng/L		103	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.08	J	ng/L		103	50 - 150
		<b>MRL</b>	<b>MRL</b>				
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>				<b>Limits</b>
d5-NEtFOSAA		107					70 - 130
13C2 PFHxA		111					70 - 130
13C2 PFDA		107					70 - 130
13C3-GenX		104					70 - 130

# QC Association Summary

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

## LCMS

### Prep Batch: 174859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-171937-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1 DW	
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	537.1 DW	
380-171937-6	FB MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-171937-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	537.1 DW	
380-171937-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	537.1 DW	
380-171937-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
380-171937-10	FB AIEA WELLS PUMPS 1&2	Total/NA	Water	537.1 DW	
MBL 380-174859/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-174859/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-171974-F-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-171974-G-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

### Prep Batch: 174860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-174860/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	

### Prep Batch: 174869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	533	
380-171937-6	FB MOANALUA WELLS	Total/NA	Water	533	
380-171937-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	
380-171937-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
380-171937-10	FB AIEA WELLS PUMPS 1&2	Total/NA	Water	533	
MBL 380-174869/20-A	Method Blank	Total/NA	Water	533	
LCS 380-174869/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-174869/21-A	Lab Control Sample	Total/NA	Water	533	
380-171694-B-17-A MS	Matrix Spike	Total/NA	Water	533	
380-171694-C-17-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

### Prep Batch: 174871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	
MBL 380-174871/20-A	Method Blank	Total/NA	Water	533	
LCS 380-174871/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-174871/21-A	Lab Control Sample	Total/NA	Water	533	
380-171937-E-2-A MS	380-171937-E-2-A MS	Total/NA	Drinking Water	533	
380-171937-F-2-A MSD	380-171937-F-2-A MSD	Total/NA	Drinking Water	533	

### Analysis Batch: 174966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	174859
380-171937-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1	174859
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	174859
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	174859
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP073)	Total/NA	Drinking Water	537.1	174859

# QC Association Summary

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

Job ID: 380-171937-1  
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
 P1/P2, Aiea Wells Pumps 1&2

## LCMS (Continued)

### Analysis Batch: 174966 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-6	FB MOANALUA WELLS	Total/NA	Water	537.1	174859
380-171937-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	537.1	174859
380-171937-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	537.1	174859
380-171937-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	174859
380-171937-10	FB AIEA WELLS PUMPS 1&2	Total/NA	Water	537.1	174859
MBL 380-174859/20-A	Method Blank	Total/NA	Water	537.1	174859
LCS 380-174859/22-A	Lab Control Sample	Total/NA	Water	537.1	174859
380-171974-F-1-A MS	Matrix Spike	Total/NA	Water	537.1	174859
380-171974-G-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	174859

### Analysis Batch: 174971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-174860/21-A	Lab Control Sample	Total/NA	Water	537.1	174860

### Analysis Batch: 174999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	174869
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	174869
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	533	174869
380-171937-6	FB MOANALUA WELLS	Total/NA	Water	533	174869
380-171937-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	174869
380-171937-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	174869
380-171937-10	FB AIEA WELLS PUMPS 1&2	Total/NA	Water	533	174869
MBL 380-174869/20-A	Method Blank	Total/NA	Water	533	174869
LCS 380-174869/22-A	Lab Control Sample	Total/NA	Water	533	174869
MRL 380-174869/21-A	Lab Control Sample	Total/NA	Water	533	174869
380-171694-B-17-A MS	Matrix Spike	Total/NA	Water	533	174869
380-171694-C-17-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	174869

### Analysis Batch: 175003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171937-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	533	174871
MBL 380-174871/20-A	Method Blank	Total/NA	Water	533	174871
LCS 380-174871/22-A	Lab Control Sample	Total/NA	Water	533	174871
MRL 380-174871/21-A	Lab Control Sample	Total/NA	Water	533	174871
380-171937-E-2-A MS	380-171937-E-2-A MS	Total/NA	Drinking Water	533	174871
380-171937-F-2-A MSD	380-171937-F-2-A MSD	Total/NA	Drinking Water	533	174871

# Lab Chronicle

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

Job ID: 380-171937-1  
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: 380-171937-1

Date Collected: 09/15/25 10:06

Matrix: Drinking Water

Date Received: 09/17/25 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174871	XTD8	EA POM	09/18/25 07:51
Total/NA	Analysis	533		1	175003	Y5FM	EA POM	09/18/25 22:50
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 17:39

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

Lab Sample ID: 380-171937-2

Date Collected: 09/15/25 10:33

Matrix: Drinking Water

Date Received: 09/17/25 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 17:48

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

Lab Sample ID: 380-171937-3

Date Collected: 09/15/25 11:01

Matrix: Drinking Water

Date Received: 09/17/25 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 18:43
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 17:58

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

Lab Sample ID: 380-171937-4

Date Collected: 09/15/25 11:20

Matrix: Drinking Water

Date Received: 09/17/25 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 18:53
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 18:08

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

Lab Sample ID: 380-171937-5

Date Collected: 09/15/25 11:43

Matrix: Drinking Water

Date Received: 09/17/25 09:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 19:03

Eurofins Eaton Analytical Pomona

# Lab Chronicle

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

Job ID: 380-171937-1  
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells  
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-171937-5

Date Collected: 09/15/25 11:43  
Date Received: 09/17/25 09:33

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 18:17

## Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-171937-6

Date Collected: 09/15/25 10:06  
Date Received: 09/17/25 09:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 19:12
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 18:27

## Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-171937-7

Date Collected: 09/15/25 10:33  
Date Received: 09/17/25 09:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 18:36

## Client Sample ID: FB AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-171937-8

Date Collected: 09/15/25 11:01  
Date Received: 09/17/25 09:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 19:43
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 18:55

## Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-171937-9

Date Collected: 09/15/25 11:20  
Date Received: 09/17/25 09:33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 19:54
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 19:05

# Lab Chronicle

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

Job ID: 380-171937-1  
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**

**Lab Sample ID: 380-171937-10**

**Date Collected: 09/15/25 11:43**

**Matrix: Water**

**Date Received: 09/17/25 09:33**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174869	XTD8	EA POM	09/18/25 07:46
Total/NA	Analysis	533		1	174999	SZ9R	EA POM	09/18/25 20:03
Total/NA	Prep	537.1 DW			174859	G9MN	EA POM	09/18/25 02:46
Total/NA	Analysis	537.1		1	174966	SZ9R	EA POM	09/18/25 19:14

**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: 380-171937-1  
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
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# Method Summary

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

Job ID: 380-171937-1  
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

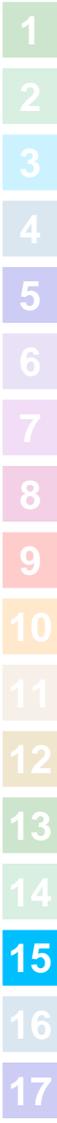
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# Sample Summary

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

Job ID: 380-171937-1  
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	PWSID Number
380-171937-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	09/15/25 10:06	09/17/25 09:33	HI0000331
380-171937-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	09/15/25 10:33	09/17/25 09:33	HI0000331
380-171937-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	09/15/25 11:01	09/17/25 09:33	HI0000331
380-171937-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	09/15/25 11:20	09/17/25 09:33	HI0000331
380-171937-5	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	Drinking Water	09/15/25 11:43	09/17/25 09:33	HI0000331
380-171937-6	FB MOANALUA WELLS	Water	09/15/25 10:06	09/17/25 09:33	HI0000331
380-171937-7	FB HALAWA WELLS UNITS 1 & 2	Water	09/15/25 10:33	09/17/25 09:33	HI0000331
380-171937-8	FB AIEA GULCH WELLS PUMP 1	Water	09/15/25 11:01	09/17/25 09:33	HI0000331
380-171937-9	FB AIEA GULCH WELLS PUMP 2	Water	09/15/25 11:20	09/17/25 09:33	HI0000331
380-171937-10	FB AIEA WELLS PUMPS 1&2	Water	09/15/25 11:43	09/17/25 09:33	HI0000331



**Monrovia, CA (Suite 100)**  
 750 Royal Oaks Drive Suite 100  
 Monrovia CA 91016  
 Phone (626) 386-1100

**Chain of Custody Record**



COC No: 380-171937 COC

380-27941-2757 2

Page: Page 2 of 2

Job #:

Lab PM: Lopez, Maria

Lab PM: Lopez, Maria

E-Mail: Maria.Lopez@eurofins.com

Phone: +1 808 748 5840

Client Contact: kirk iwamoto

Company: City & County of Honolulu

Address: 630 South Beretania Street, Chemistry Lab

City: Honolulu

State Zip: HI 96843

Phone: 808-748-5840 (tel)

Email: kiwamoto@hbws.org

Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill

Project #: 38001111

SSOW#:

Due Date Requested:

TAT Requested (days):

Compliance Project: Δ No

PO #: C20525101 exp 05312023

WO #:

Analysis Requested

525.2\_PRC (MOD) 525plus PLUS TICs

537.1\_DW\_PRC - 537.1 Full List

633 - All Analytes

8015B\_DR0\_LL\_CS HNL Ranges C10-C24/C24-C38/C8-C18

8015B\_GRO\_LL (MOD) GRO

8015B\_GRO\_LL (MOD) GRO

SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs

Form MS/MSD (Yes or No)

Field Filtered Sample (Yes or No)

R A Q QA Y I

3 3

3 3

3 3

3 3

3 3

1 1

1 1

1 1

1 1

1 1

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Months

Special Instructions/OC Requirements

Method of Shipment: FedEx 92442499 1650

Date/Time: 9/17/25 9:33

Received by: [Signature]

Company: BEAP

Date/Time:

Company:

Date/Time:

Company:

Cooler Temperature(s) °C and Other Remarks: (63A) 41+00 41 961-510760

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-171937-1

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

**Login Number: 171937**

**List Source: Eurofins Eaton Analytical Pomona**

**List Number: 1**

**Creator: Edrosa, Rey**

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