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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Erwin Kawata  
City & County of Honolulu  
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## JOB DESCRIPTION

RED-HILL  
PFAS: Aiea Gulch Wells P1/P2

## JOB NUMBER

380-194032-1

# Eurofins 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 Drinking Water and Wastewater West, LLC Project Manager.

## Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW, Water matrices)

## Authorization



Authorized for release by  
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# Definitions/Glossary

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

## Qualifiers

### LCMS

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

## Glossary

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

# Case Narrative

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

Job ID: 380-194032-1

**Job ID: 380-194032-1**

**Eurofins Pomona**

## Job Narrative 380-194032-1

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 1/22/2026 9:55 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 5.0°C.

### PFAS

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

## Detection Summary

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1**

No Detections.

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

**Lab Sample ID: 380-194032-2**

No Detections.

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

**Lab Sample ID: 380-194032-3**

No Detections.

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

**Lab Sample ID: 380-194032-4**

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: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

**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		01/23/26 16:22	01/24/26 17:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:50	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C6 PFDA	105		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C5 PFHxA	103		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C4 PFHpA	110		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C8 PFOA	110		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C9 PFNA	108		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C7 PFUnA	104		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C2 PFDoA	101		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C4 PFBA	110		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C5 PFPeA	117		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C3 PFBS	109		50 - 200			01/23/26 16:22	01/24/26 17:50	1
13C3 PFHxS	110		50 - 200			01/23/26 16:22	01/24/26 17:50	1

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# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	01/23/26 16:22	01/24/26 17:50	1
13C2-4:2-FTS	120		50 - 200	01/23/26 16:22	01/24/26 17:50	1
13C2-6:2-FTS	121		50 - 200	01/23/26 16:22	01/24/26 17:50	1
13C2-8:2-FTS	120		50 - 200	01/23/26 16:22	01/24/26 17:50	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		01/23/26 16:18	01/24/26 18:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	112		70 - 130	01/23/26 16:18	01/24/26 18:30	1
13C2 PFHxA	104		70 - 130	01/23/26 16:18	01/24/26 18:30	1
13C2 PFDA	111		70 - 130	01/23/26 16:18	01/24/26 18:30	1
13C3-GenX	100		70 - 130	01/23/26 16:18	01/24/26 18:30	1

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

**Lab Sample ID: 380-194032-2**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

**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		01/23/26 16:22	01/24/26 20:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1

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# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-2**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C6 PFDA	109		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C5 PFHxA	107		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C4 PFHpA	112		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C8 PFOA	109		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C9 PFNA	112		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C7 PFUnA	112		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C2 PFDoA	109		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C4 PFBA	109		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C5 PFPeA	104		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C3 PFBS	112		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C3 PFHxS	114		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C8 PFOS	107		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C2-4:2-FTS	115		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C2-6:2-FTS	122		50 - 200	01/23/26 16:22	01/24/26 20:42	1
13C2-8:2-FTS	121		50 - 200	01/23/26 16:22	01/24/26 20:42	1

# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-2**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

**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		01/23/26 16:18	01/24/26 20:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
N-methylperfluorooctanesulfonamide cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
N-ethylperfluorooctanesulfonamide cetic acid (NEtFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:48	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	116		70 - 130			01/23/26 16:18	01/24/26 20:48	1
13C2 PFHxA	105		70 - 130			01/23/26 16:18	01/24/26 20:48	1
13C2 PFDA	115		70 - 130			01/23/26 16:18	01/24/26 20:48	1
13C3-GenX	105		70 - 130			01/23/26 16:18	01/24/26 20:48	1

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

**Lab Sample ID: 380-194032-3**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

**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		01/23/26 16:22	01/24/26 20:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1

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# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-3**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 20:51	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C6 PFDA	112		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C5 PFHxA	108		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C4 PFHpA	109		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C8 PFOA	113		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C9 PFNA	113		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C7 PFUnA	110		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C2 PFDoA	111		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C4 PFBA	112		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C5 PFPeA	111		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C3 PFBS	106		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C3 PFHxS	116		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C8 PFOS	112		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C2-4:2-FTS	117		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C2-6:2-FTS	120		50 - 200			01/23/26 16:22	01/24/26 20:51	1
13C2-8:2-FTS	116		50 - 200			01/23/26 16:22	01/24/26 20:51	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		01/23/26 16:18	01/24/26 20:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
N-methylperfluorooctanesulfonamidooctic acid (NMeFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1

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# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-3**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

**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		01/23/26 16:18	01/24/26 20:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Perfluorotridecanoic acid (PFTDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 20:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130			01/23/26 16:18	01/24/26 20:58	1
13C2 PFHxA	99		70 - 130			01/23/26 16:18	01/24/26 20:58	1
13C2 PFDA	112		70 - 130			01/23/26 16:18	01/24/26 20:58	1
13C3-GenX	92		70 - 130			01/23/26 16:18	01/24/26 20:58	1

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

**Lab Sample ID: 380-194032-4**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1

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# Client Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-4**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		01/23/26 16:22	01/24/26 21:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C6 PFDA	110		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C5 PFHxA	113		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C4 PFHpA	111		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C8 PFOA	111		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C9 PFNA	110		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C7 PFUnA	111		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C2 PFDoA	109		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C4 PFBA	110		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C5 PFPeA	117		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C3 PFBS	110		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C3 PFHxS	109		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C8 PFOS	106		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C2-4:2-FTS	116		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C2-6:2-FTS	118		50 - 200	01/23/26 16:22	01/24/26 21:01	1
13C2-8:2-FTS	119		50 - 200	01/23/26 16:22	01/24/26 21:01	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		01/23/26 16:18	01/24/26 21:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1

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# Client Sample Results

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

Job ID: 380-194032-1  
 SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-4**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/23/26 16:18	01/24/26 21:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130			01/23/26 16:18	01/24/26 21:07	1
13C2 PFHxA	107		70 - 130			01/23/26 16:18	01/24/26 21:07	1
13C2 PFDA	118		70 - 130			01/23/26 16:18	01/24/26 21:07	1
13C3-GenX	100		70 - 130			01/23/26 16:18	01/24/26 21:07	1

## Action Limit Summary

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1**

### Compliance Check

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

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

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

**Lab Sample ID: 380-194032-2**

### Compliance Check

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

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

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

**Lab Sample ID: 380-194032-3**

### Compliance Check

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

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

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## Action Limit Summary

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-3**

### Compliance Check

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

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

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

**Lab Sample ID: 380-194032-4**

### 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

# Surrogate Summary

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

Job ID: 380-194032-1  
 SDG: PFAS: Aiea Gulch Wells P1/P2

## 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)
380-194032-1	AIEA GULCH WELLS PUMP 1 (331	112	104	111	100
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	107	107	115	101
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	106	112	119	103
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	116	105	115	105

**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)
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (;	99	99	112	92
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	105	107	118	100
LCS 380-200586/21-A	Lab Control Sample	111	113	118	108
MBL 380-200586/19-A	Method Blank	114	104	116	95
MRL 380-200586/20-A	Lab Control Sample	109	102	105	89

**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: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFD <sub>o</sub> A (50-200)
380-194032-1	AIEA GULCH WELLS PUMP 1 (331	97	105	103	110	110	108	104	101
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	111	111	108	107	109	112	112	114
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	113	113	110	108	112	112	112	114
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	98	109	107	112	109	112	112	109

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-194032-1	AIEA GULCH WELLS PUMP 1 (331	110	117	109	110	106	120	121	120
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	110	114	109	111	111	121	114	113
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	107	115	116	116	114	126	122	122
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	109	104	112	114	107	115	122	121

**Surrogate Legend**

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

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFD <sub>o</sub> A (50-200)
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (:	100	112	108	109	113	113	110	111
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	103	110	113	111	111	110	111	109
LCS 380-200581/22-A	Lab Control Sample	104	112	108	108	108	111	111	113
MBL 380-200581/20-A	Method Blank	97	109	110	111	111	110	107	106
MRL 380-200581/21-A	Lab Control Sample	94	110	104	109	113	112	106	108

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (:	112	111	106	116	112	117	120	116

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# Isotope Dilution Summary

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

Job ID: 380-194032-1  
 SDG: PFAS: Aiea Gulch Wells P1/P2

## 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)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (;	110	117	110	109	106	116	118	119
LCS 380-200581/22-A	Lab Control Sample	114	115	114	112	110	118	117	121
MBL 380-200581/20-A	Method Blank	106	111	107	104	108	111	115	110
MRL 380-200581/21-A	Lab Control Sample	108	114	106	110	112	119	114	113

**Surrogate Legend**

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

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: MBL 380-200581/20-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		01/23/26 16:22	01/24/26 17:21	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C6 PFDA	109		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C5 PFHxA	110		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C4 PFHpA	111		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C8 PFOA	111		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C9 PFNA	110		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C7 PFUnA	107		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C2 PFDoA	106		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C4 PFBA	106		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C5 PFPeA	111		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C3 PFBS	107		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C3 PFHxS	104		50 - 200	01/23/26 16:22	01/24/26 17:21	1

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# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: MBL 380-200581/20-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C8 PFOS	108		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C2-4:2-FTS	111		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C2-6:2-FTS	115		50 - 200	01/23/26 16:22	01/24/26 17:21	1
13C2-8:2-FTS	110		50 - 200	01/23/26 16:22	01/24/26 17:21	1

**Lab Sample ID: LCS 380-200581/22-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	111		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	111		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	119		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	109		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	120	113		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	120	112		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	113		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	112		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	120	113		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	120	112		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	115		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	120	114		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	111		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	106		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	117		ng/L		97	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	110		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	102		ng/L		84	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	113		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	108		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	120	110		ng/L		92	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	115		ng/L		95	70 - 130

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: LCS 380-200581/22-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Perfluoropentanesulfonic acid (PFPeS)	120	113		ng/L		94	70 - 130	
<b>LCS LCS</b>								
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>						<b>Limits</b>
13C3 HFPO-DA	104							50 - 200
13C6 PFDA	112							50 - 200
13C5 PFHxA	108							50 - 200
13C4 PFHpA	108							50 - 200
13C8 PFOA	108							50 - 200
13C9 PFNA	111							50 - 200
13C7 PFUnA	111							50 - 200
13C2 PFDoA	113							50 - 200
13C4 PFBA	114							50 - 200
13C5 PFPeA	115							50 - 200
13C3 PFBS	114							50 - 200
13C3 PFHxS	112							50 - 200
13C8 PFOS	110							50 - 200
13C2-4:2-FTS	118							50 - 200
13C2-6:2-FTS	117							50 - 200
13C2-8:2-FTS	121							50 - 200

**Lab Sample ID: MRL 380-200581/21-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.92	J	ng/L		96	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.99	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.92	J	ng/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.91	J	ng/L		95	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.92	J	ng/L		96	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.96	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.01	J	ng/L		100	50 - 150

Eurofins Pomona

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: MRL 380-200581/21-A**  
**Matrix: Water**  
**Analysis Batch: 200698**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.12	J	ng/L		105	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.09	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.47	J	ng/L		123	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	2.28	J	ng/L		113	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	1.94	J	ng/L		97	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.86	J	ng/L		93	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.81	J	ng/L		90	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.95	J	ng/L		97	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	94		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	113		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	110		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	113		50 - 200

**Lab Sample ID: 380-194032-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 200698**

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	114		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	114		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	116		ng/L		96	70 - 130

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1 MS**

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

**Matrix: Drinking Water**

**Prep Type: Total/NA**

**Analysis Batch: 200698**

**Prep Batch: 200581**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexafluoropropylene Oxide	<2.0		121	115		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	115		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	114		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	115		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	115		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	125		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	116		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	115		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	115		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	118		ng/L		97	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	115		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	115		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	114		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	120		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	123		ng/L		102	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	110		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	116		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	114		ng/L		94	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	111		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	114		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	111		50 - 200

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 200698**

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

<i>Isotope Dilution</i>	<i>MS MS</i> %Recovery	<i>Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	113		50 - 200

**Lab Sample ID: 380-194032-1 MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 200698**

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**  
**Prep Type: Total/NA**  
**Prep Batch: 200581**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	112		ng/L		93	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	113		ng/L		94	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	113		ng/L		94	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	114		ng/L		94	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	112		ng/L		93	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		120	113		ng/L		94	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	110		ng/L		91	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	113		ng/L		94	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	107		ng/L		89	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	116		ng/L		96	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		120	116		ng/L		96	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	115		ng/L		96	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		120	111		ng/L		92	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	112		ng/L		93	70 - 130	5	30
Perfluorobutanoic acid (PFBA)	<2.0		120	114		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	114		ng/L		95	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	114		ng/L		95	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	114		ng/L		95	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	116		ng/L		96	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	116		ng/L		96	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	123		ng/L		102	70 - 130	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	113		ng/L		94	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	111		ng/L		91	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	115		ng/L		95	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	117		ng/L		97	70 - 130	2	30

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	113		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	114		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	116		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	126		50 - 200
13C2-6:2-FTS	122		50 - 200
13C2-8:2-FTS	122		50 - 200

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

**Lab Sample ID: MBL 380-200586/19-A**  
**Matrix: Water**  
**Analysis Batch: 200705**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 200586**

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		01/23/26 16:18	01/24/26 17:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		01/23/26 16:18	01/24/26 17:59	1

  

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	114		70 - 130	01/23/26 16:18	01/24/26 17:59	1
13C2 PFHxA	104		70 - 130	01/23/26 16:18	01/24/26 17:59	1
13C2 PFDA	116		70 - 130	01/23/26 16:18	01/24/26 17:59	1

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# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: MBL 380-200586/19-A**  
**Matrix: Water**  
**Analysis Batch: 200705**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 200586**

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	95	Qualifier	70 - 130	01/23/26 16:18	01/24/26 17:59	1

**Lab Sample ID: LCS 380-200586/21-A**  
**Matrix: Water**  
**Analysis Batch: 200705**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200586**

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Hexafluoropropylene Oxide	25.1	25.4		ng/L		101	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.1	28.9		ng/L		115	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	28.2		ng/L		112	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	27.5		ng/L		109	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	26.4		ng/L		105	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	27.7		ng/L		110	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	28.0		ng/L		112	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	27.0		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	27.1		ng/L		108	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	28.2		ng/L		112	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	28.0		ng/L		111	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.9		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	25.1	28.7		ng/L		114	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	21.6		ng/L		86	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	28.7		ng/L		114	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	27.5		ng/L		110	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	29.3		ng/L		117	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	27.8		ng/L		111	70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	111		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	118		70 - 130
13C3-GenX	108		70 - 130

# QC Sample Results

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: MRL 380-200586/20-A**  
**Matrix: Water**  
**Analysis Batch: 200705**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 200586**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.72	J	ng/L		86	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.30	J	ng/L		115	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.17	J	ng/L		108	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.07	J	ng/L		103	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.08	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.07	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.21	J	ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.10	J	ng/L		105	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.35	J	ng/L		117	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.98	J	ng/L		99	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	102		70 - 130
13C2 PFDA	105		70 - 130
13C3-GenX	89		70 - 130

**Lab Sample ID: 380-194032-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 200705**

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**  
**Prep Type: Total/NA**  
**Prep Batch: 200586**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.3	47.4		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.3	55.3		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	58.3		ng/L		116	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	49.6		ng/L		99	70 - 130

Eurofins Pomona





# QC Association Summary

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

Job ID: 380-194032-1  
 SDG: PFAS: Aiea Gulch Wells P1/P2

## LCMS

### Prep Batch: 200581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-194032-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	
MBL 380-200581/20-A	Method Blank	Total/NA	Water	533	
LCS 380-200581/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-200581/21-A	Lab Control Sample	Total/NA	Water	533	
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	

### Prep Batch: 200586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-194032-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1 DW	
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1 DW	
MBL 380-200586/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-200586/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-200586/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	

### Analysis Batch: 200698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-194032-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	200581
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	200581
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	200581
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	533	200581
MBL 380-200581/20-A	Method Blank	Total/NA	Water	533	200581
LCS 380-200581/22-A	Lab Control Sample	Total/NA	Water	533	200581
MRL 380-200581/21-A	Lab Control Sample	Total/NA	Water	533	200581
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	200581
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	200581

### Analysis Batch: 200705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-194032-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	200586
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	200586
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1	200586
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Water	537.1	200586
MBL 380-200586/19-A	Method Blank	Total/NA	Water	537.1	200586
LCS 380-200586/21-A	Lab Control Sample	Total/NA	Water	537.1	200586
MRL 380-200586/20-A	Lab Control Sample	Total/NA	Water	537.1	200586
380-194032-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	200586
380-194032-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	200586

# Lab Chronicle

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Lab Sample ID: 380-194032-1**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			200581	E2HD	EA POM	01/23/26 16:22
Total/NA	Analysis	533		1	200698	M7ML	EA POM	01/24/26 17:50
Total/NA	Prep	537.1 DW			200586	N8NE	EA POM	01/23/26 16:18
Total/NA	Analysis	537.1		1	200705	M7ML	EA POM	01/24/26 18:30

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

**Lab Sample ID: 380-194032-2**

Date Collected: 01/21/26 09:00

Matrix: Drinking Water

Date Received: 01/22/26 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			200581	E2HD	EA POM	01/23/26 16:22
Total/NA	Analysis	533		1	200698	M7ML	EA POM	01/24/26 20:42
Total/NA	Prep	537.1 DW			200586	N8NE	EA POM	01/23/26 16:18
Total/NA	Analysis	537.1		1	200705	M7ML	EA POM	01/24/26 20:48

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

**Lab Sample ID: 380-194032-3**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			200581	E2HD	EA POM	01/23/26 16:22
Total/NA	Analysis	533		1	200698	M7ML	EA POM	01/24/26 20:51
Total/NA	Prep	537.1 DW			200586	N8NE	EA POM	01/23/26 16:18
Total/NA	Analysis	537.1		1	200705	M7ML	EA POM	01/24/26 20:58

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

**Lab Sample ID: 380-194032-4**

Date Collected: 01/21/26 09:00

Matrix: Water

Date Received: 01/22/26 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			200581	E2HD	EA POM	01/23/26 16:22
Total/NA	Analysis	533		1	200698	M7ML	EA POM	01/24/26 21:01
Total/NA	Prep	537.1 DW			200586	N8NE	EA POM	01/23/26 16:18
Total/NA	Analysis	537.1		1	200705	M7ML	EA POM	01/24/26 21:07

**Laboratory References:**

EA POM = Eurofins 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: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

## Laboratory: Eurofins 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: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

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

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

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



# Sample Summary

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

Job ID: 380-194032-1  
SDG: PFAS: Aiea Gulch Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-194032-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	01/21/26 09:00	01/22/26 09:55	Hawaii
380-194032-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	01/21/26 09:00	01/22/26 09:55	Hawaii
380-194032-3	FB AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	01/21/26 09:00	01/22/26 09:55	Hawaii
380-194032-4	FB AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	01/21/26 09:00	01/22/26 09:55	Hawaii

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- 17

**Eurofins Eaton Analytical Pomona**

941 Corporate Center Drive  
 Pomona, CA 91768-2642  
 Phone (626) 386-1100

**Chain of Custody Record**



<b>Client Information</b>		Sampler Kal Edison	Lab PM Arada, Rachele	Carrier Tracking No(s)	COC No 380-28005-2757 1																
Client Contact Kirk Iwamoto		Phone: +1 808 748 5840	E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin	Page: Page 1 of 1																
Company City & County of Honolulu			PWSID	Analysis Requested																	
Address 630 South Beretania Street Chemistry Lab		Due Date Requested		Preservation Codes R NaThioSO4 RA - NaThio/HCl Q - Na2SO3 QA Na2SO3/HCl Y Trizma I NH4 Acetate																	
City: Honolulu		TAT Requested (days)		Other																	
State, Zip: HI, 96843		Compliance Project. <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Number of Containers																	
Phone 808-748-5840 (Tel)		PO # C20525101 exp 05312023		Special Instructions/Note:																	
Email: kiwamoto@hbws.org		WO #																			
Project Name RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		Project # 38001111																			
Site Hawaii		SSOW#																			
<b>Sample Identification</b>	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625.1, 625.1_SIM	8015B_GRO_LL - (MOD) GRO	8015B_DRO_LL_CS - HNL Ranges: C10-C24/C24-C36/C8-C18	525.2_PREC - (MOD) 525plus Plus TICs	537_1_DW_PREC - 537 1 Full List	523 - All Analytes									
			Preservation Code:																		
Aiea Gulch Wells P1	21-Jan-2026	9:00	G	Water																chlorinated	
Aiea Gulch Wells P2	21-Jan-2026	9:00	G	Water																chlorinated	
FB Aiea Gulch Wells P1	21-Jan-2026	9:00	G	Water																	
FB Aiea Gulch Wells P2	21-Jan-2026	9:00	G	Water																	
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months															
Deliverable Requested I, II, III, IV, Other (specify)				Special Instructions/QC Requirements																	
Empty Kit Relinquished by		Date	Time	Method of Shipment: <b>FED EXP 0123 3176</b>																	
Relinquish		Date/Time <b>1/21/26 12:00</b>	Company HBWS	Received by <b>TAIK</b>	Date/Time <b>1/22/26 955</b>	Company <b>EEAP</b>															
Relinquished by		Date/Time	Company	Received by	Date/Time	Company															
Relinquished by		Date/Time	Company	Received by	Date/Time	Company															
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.		Cooler Temperature(s) °C and Other Remarks. <b>75.1A 5.015.0 gel frozen</b>																		



380-194032 COC



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-194032-1  
SDG Number: PFAS: Aiea Gulch Wells P1/P2

**Login Number: 194032**

**List Number: 1**

**Creator: Ngo, Theodore**

**List Source: Eurofins Pomona**

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

