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# ANALYTICAL REPORT

## PREPARED FOR

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

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## JOB DESCRIPTION

RED-HILL  
PFAS: Aiea Gulch Wells Pump 1  
RUSH Weekly Red Hill

## JOB NUMBER

380-203659-1

# 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



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Authorized for release by  
Jeannette Gutierrez, Project Manager  
[Jeannette.Gutierrez@et.eurofinsus.com](mailto:Jeannette.Gutierrez@et.eurofinsus.com)  
Designee for  
Maria Lopez, Project Manager  
[Maria.Lopez@et.eurofinsus.com](mailto:Maria.Lopez@et.eurofinsus.com)  
(626)386-1100



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# Definitions/Glossary

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## 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: 380-203659-1

**Job ID: 380-203659-1**

**Eurofins Pomona**

## Job Narrative 380-203659-1

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 3/18/2026 10:20 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 2.2°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: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-1**

No Detections.

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

**Lab Sample ID: 380-203659-2**

No Detections.

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This Detection Summary does not include radiochemical test results.

# Client Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-1**

**Date Collected: 03/16/26 11:03**

**Matrix: Drinking Water**

**Date Received: 03/18/26 10:20**

**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		03/26/26 06:09	03/27/26 03:41	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:41	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C6 PFDA	113		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C5 PFHxA	113		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C4 PFHpA	111		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C8 PFOA	115		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C9 PFNA	112		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C7 PFUnA	110		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C2 PFDoA	112		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C4 PFBA	114		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C5 PFPeA	115		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C3 PFBS	109		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C3 PFHxS	112		50 - 200	03/26/26 06:09	03/27/26 03:41	1

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# Client Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-1**

Date Collected: 03/16/26 11:03

Matrix: Drinking Water

Date Received: 03/18/26 10:20

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	111		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C2-4:2-FTS	123		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C2-6:2-FTS	111		50 - 200	03/26/26 06:09	03/27/26 03:41	1
13C2-8:2-FTS	112		50 - 200	03/26/26 06:09	03/27/26 03:41	1

**Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		70 - 130	03/20/26 01:00	03/20/26 17:08	1
13C2 PFHxA	101		70 - 130	03/20/26 01:00	03/20/26 17:08	1
13C2 PFDA	101		70 - 130	03/20/26 01:00	03/20/26 17:08	1
13C3-GenX	95		70 - 130	03/20/26 01:00	03/20/26 17:08	1

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

**Lab Sample ID: 380-203659-2**

Date Collected: 03/16/26 11:03

Matrix: Water

Date Received: 03/18/26 10:20

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		03/26/26 06:09	03/27/26 03:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1

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# Client Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-2**

**Date Collected: 03/16/26 11:03**

**Matrix: Water**

**Date Received: 03/18/26 10:20**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/26/26 06:09	03/27/26 03:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C6 PFDA	104		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C5 PFHxA	104		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C4 PFHpA	107		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C8 PFOA	106		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C9 PFNA	108		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C7 PFUnA	105		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C2 PFDoA	102		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C4 PFBA	107		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C5 PFPeA	107		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C3 PFBS	108		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C3 PFHxS	107		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C8 PFOS	109		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C2-4:2-FTS	117		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C2-6:2-FTS	113		50 - 200	03/26/26 06:09	03/27/26 03:50	1
13C2-8:2-FTS	104		50 - 200	03/26/26 06:09	03/27/26 03:50	1

# Client Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-2**

**Date Collected: 03/16/26 11:03**

**Matrix: Water**

**Date Received: 03/18/26 10:20**

**PWSID Number: HI0000331**

**Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
N-methylperfluorooctanesulfonamide cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
N-ethylperfluorooctanesulfonamide cetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/20/26 01:00	03/20/26 17:46	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	94		70 - 130			03/20/26 01:00	03/20/26 17:46	1
13C2 PFHxA	94		70 - 130			03/20/26 01:00	03/20/26 17:46	1
13C2 PFDA	102		70 - 130			03/20/26 01:00	03/20/26 17:46	1
13C3-GenX	82		70 - 130			03/20/26 01:00	03/20/26 17:46	1

# Action Limit Summary

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-1**

## 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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

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

**Lab Sample ID: 380-203659-2**

## 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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

# Surrogate Summary

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

Job ID: 380-203659-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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)
380-203659-1	AIEA GULCH WELLS PUMP 1 (	100	101	101	95
380-203659-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	98	97	101	94
380-203659-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	107	109	110	102

**Surrogate Legend**

d5NEFOS = d5-NEtFOSAA  
 PFHxA = 13C2 PFHxA  
 PFDA = 13C2 PFDA  
 GenX = 13C3-GenX

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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)
380-203659-2	FB: AIEA GULCH WELLS PUMI	94	94	102	82
LCS 380-214328/21-A	Lab Control Sample	98	100	113	90
MBL 380-214328/19-A	Method Blank	100	99	104	91
MRL 380-214328/20-A	Lab Control Sample	96	98	109	85

**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: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-203659-1	AIEA GULCH WELLS PUMP 1 (	108	113	113	111	115	112	110	112

### 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)
380-203659-1	AIEA GULCH WELLS PUMP 1 (	114	115	109	112	111	123	111	112

#### Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

### Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-203659-2	FB: AIEA GULCH WELLS PUMI	101	104	104	107	106	108	105	102
380-203991-B-1-A MS	Matrix Spike	100	105	104	105	107	105	107	105
380-203991-C-1-A MSD	Matrix Spike Duplicate	107	109	112	109	112	111	111	113
LCS 380-215887/22-A	Lab Control Sample	107	113	119	115	116	119	115	114
MBL 380-215887/20-A	Method Blank	100	117	116	116	118	116	111	113
MRL 380-215887/21-A	Lab Control Sample	99	117	116	115	120	116	116	111

### 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)
380-203659-2	FB: AIEA GULCH WELLS PUMI	107	107	108	107	109	117	113	104
380-203991-B-1-A MS	Matrix Spike	115	121	112	114	112	132	118	113
380-203991-C-1-A MSD	Matrix Spike Duplicate	113	126	113	112	113	131	119	116
LCS 380-215887/22-A	Lab Control Sample	118	121	121	116	114	115	111	112
MBL 380-215887/20-A	Method Blank	113	114	115	123	118	132	122	116
MRL 380-215887/21-A	Lab Control Sample	119	118	119	121	121	133	124	113

#### Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA

# Isotope Dilution Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

- 1
- 2
- 3
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- 17

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: MBL 380-215887/20-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

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		03/26/26 06:09	03/27/26 02:33	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/26/26 06:09	03/27/26 02:33	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C6 PFDA	117		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C5 PFHxA	116		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C4 PFHpA	116		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C8 PFOA	118		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C9 PFNA	116		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C7 PFUnA	111		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C2 PFDoA	113		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C4 PFBA	113		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C5 PFPeA	114		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C3 PFBS	115		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C3 PFHxS	123		50 - 200	03/26/26 06:09	03/27/26 02:33	1

Eurofins Pomona

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: MBL 380-215887/20-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	118		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C2-4:2-FTS	132		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C2-6:2-FTS	122		50 - 200	03/26/26 06:09	03/27/26 02:33	1
13C2-8:2-FTS	116		50 - 200	03/26/26 06:09	03/27/26 02:33	1

**Lab Sample ID: LCS 380-215887/22-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	56.2		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	54.4		ng/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	57.3		ng/L		95	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	56.4		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	53.1		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	57.5		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	57.6		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	56.2		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	54.4		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	56.3		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	60.1	54.2		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	57.0		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	56.8		ng/L		94	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	56.6		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	55.3		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	56.7		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	59.1		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	57.4		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	51.9		ng/L		86	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	52.7		ng/L		88	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	55.0		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	55.0		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	56.4		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	57.0		ng/L		95	70 - 130

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: LCS 380-215887/22-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	55.3		ng/L		92	70 - 130
<b>LCS LCS</b>							
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
13C3 HFPO-DA	107		50 - 200				
13C6 PFDA	113		50 - 200				
13C5 PFHxA	119		50 - 200				
13C4 PFHpA	115		50 - 200				
13C8 PFOA	116		50 - 200				
13C9 PFNA	119		50 - 200				
13C7 PFUnA	115		50 - 200				
13C2 PFDoA	114		50 - 200				
13C4 PFBA	118		50 - 200				
13C5 PFPeA	121		50 - 200				
13C3 PFBS	121		50 - 200				
13C3 PFHxS	116		50 - 200				
13C8 PFOS	114		50 - 200				
13C2-4:2-FTS	115		50 - 200				
13C2-6:2-FTS	111		50 - 200				
13C2-8:2-FTS	112		50 - 200				

**Lab Sample ID: MRL 380-215887/21-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.30	J	ng/L		115	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.25	J	ng/L		112	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.41	J	ng/L		121	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.45	J	ng/L		122	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.39	J	ng/L		119	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.47	J	ng/L		123	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.45	J	ng/L		122	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.44	J	ng/L		122	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.39	J	ng/L		119	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.36	J	ng/L		118	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.31	J	ng/L		115	50 - 150

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# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: MRL 380-215887/21-A**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.69	J	ng/L		134	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.53	J	ng/L		126	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.72	J	ng/L		136	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.41	J	ng/L		120	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.21	J	ng/L		110	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	99		50 - 200
13C6 PFDA	117		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	115		50 - 200
13C8 PFOA	120		50 - 200
13C9 PFNA	116		50 - 200
13C7 PFUnA	116		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	119		50 - 200
13C5 PFPeA	118		50 - 200
13C3 PFBS	119		50 - 200
13C3 PFHxS	121		50 - 200
13C8 PFOS	121		50 - 200
13C2-4:2-FTS	133		50 - 200
13C2-6:2-FTS	124		50 - 200
13C2-8:2-FTS	113		50 - 200

**Lab Sample ID: 380-203991-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

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		60.2	56.9		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	55.8		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	55.6		ng/L		92	70 - 130

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203991-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.2	58.0		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	6.2		60.2	61.7		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	57.3		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	59.0		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	58.5		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	4.3		60.2	61.2		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	58.4		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	59.4		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	7.5		60.2	64.8		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	2.6		60.2	59.7		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	57.9		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	2.8		60.2	57.7		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	59.0		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	56.4		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	59.4		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	53.1		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	58.8		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	59.3		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	59.2		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	60.1		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	58.6		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	56.9		ng/L		94	70 - 130

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C3 HFPO-DA	100		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	115		50 - 200
13C5 PFPeA	121		50 - 200
13C3 PFBS	112		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	112		50 - 200

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203991-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	132		50 - 200
13C2-6:2-FTS	118		50 - 200
13C2-8:2-FTS	113		50 - 200

**Lab Sample ID: 380-203991-C-1-A MSD**  
**Matrix: Water**  
**Analysis Batch: 216062**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 215887**

<b>Analyte</b>	<b>Sample Result</b>	<b>Sample Qualifier</b>	<b>Spike Added</b>	<b>MSD Result</b>	<b>MSD Qualifier</b>	<b>Unit</b>	<b>D</b>	<b>%Rec</b>	<b>%Rec Limits</b>	<b>RPD</b>	<b>RPD Limit</b>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	56.8		ng/L		94	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	55.2		ng/L		92	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	56.7		ng/L		94	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	56.9		ng/L		95	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	6.2		60.2	61.6		ng/L		92	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	58.3		ng/L		97	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	59.4		ng/L		99	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	57.2		ng/L		94	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	4.3		60.2	62.9		ng/L		97	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	56.5		ng/L		93	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	58.3		ng/L		95	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	7.5		60.2	64.5		ng/L		95	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	2.6		60.2	59.7		ng/L		95	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	57.6		ng/L		96	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	2.8		60.2	59.4		ng/L		94	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	57.2		ng/L		95	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	56.4		ng/L		94	70 - 130	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	60.4		ng/L		100	70 - 130	2	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	53.2		ng/L		88	70 - 130	0	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	57.8		ng/L		96	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	60.0		ng/L		100	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	57.5		ng/L		95	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	57.5		ng/L		94	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	59.4		ng/L		99	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	58.2		ng/L		96	70 - 130	2	30

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# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

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

<i>Isotope Dilution</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
<i>%Recovery</i>	<i>Qualifier</i>		
13C3 HFPO-DA	107		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	112		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	111		50 - 200
13C2 PFDoA	113		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	126		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	131		50 - 200
13C2-6:2-FTS	119		50 - 200
13C2-8:2-FTS	116		50 - 200

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

**Lab Sample ID: MBL 380-214328/19-A**  
**Matrix: Water**  
**Analysis Batch: 214681**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 214328**

<i>Analyte</i>	<i>MBL</i>	<i>MBL</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>Result</i>	<i>Qualifier</i>						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/20/26 01:00	03/20/26 16:39	1
<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>						
d5-NEtFOSAA	100		70 - 130			03/20/26 01:00	03/20/26 16:39	1
13C2 PFHxA	99		70 - 130			03/20/26 01:00	03/20/26 16:39	1
13C2 PFDA	104		70 - 130			03/20/26 01:00	03/20/26 16:39	1

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# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

**Lab Sample ID: MBL 380-214328/19-A**  
**Matrix: Water**  
**Analysis Batch: 214681**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 214328**

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	91	Qualifier	70 - 130	03/20/26 01:00	03/20/26 16:39	1

**Lab Sample ID: LCS 380-214328/21-A**  
**Matrix: Water**  
**Analysis Batch: 214681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 214328**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.0	40.9	Qualifier	ng/L	-	82	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	54.1	Qualifier	ng/L	-	108	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	52.0	Qualifier	ng/L	-	104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	48.6	Qualifier	ng/L	-	97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	46.1	Qualifier	ng/L	-	92	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	48.0	Qualifier	ng/L	-	96	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	53.5	Qualifier	ng/L	-	107	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	51.2	Qualifier	ng/L	-	102	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	51.4	Qualifier	ng/L	-	103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	55.6	Qualifier	ng/L	-	111	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	52.6	Qualifier	ng/L	-	105	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	49.8	Qualifier	ng/L	-	100	70 - 130
Perfluorononanoic acid (PFNA)	50.0	54.2	Qualifier	ng/L	-	108	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	46.4	Qualifier	ng/L	-	93	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	55.0	Qualifier	ng/L	-	110	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	53.6	Qualifier	ng/L	-	107	70 - 130
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	52.0	Qualifier	ng/L	-	104	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	44.5	Qualifier	ng/L	-	89	70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
d5-NEtFOSAA	98	Qualifier	70 - 130
13C2 PFHxA	100	Qualifier	70 - 130
13C2 PFDA	113	Qualifier	70 - 130
13C3-GenX	90	Qualifier	70 - 130

# QC Sample Results

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

**Lab Sample ID: MRL 380-214328/20-A**  
**Matrix: Water**  
**Analysis Batch: 214681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 214328**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.69	J	ng/L		85	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.21	J	ng/L		111	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.98	J	ng/L		99	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.19	J	ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.12	J	ng/L		106	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.00	J	ng/L		100	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.86	J	ng/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	98		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	85		70 - 130

**Lab Sample ID: 380-203659-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 214681**

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**  
**Prep Type: Total/NA**  
**Prep Batch: 214328**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	22.9		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	26.8		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	25.3		ng/L		100	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.3		ng/L		97	70 - 130

Eurofins Pomona





# QC Association Summary

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## LCMS

### Prep Batch: 214328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-203659-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-203659-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	537.1 DW	
MBL 380-214328/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-214328/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-214328/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-203659-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-203659-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	

### Analysis Batch: 214681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-203659-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA 537.1 V2	214328
380-203659-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	EPA 537.1 V2	214328
MBL 380-214328/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	214328
LCS 380-214328/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	214328
MRL 380-214328/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	214328
380-203659-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA 537.1 V2	214328
380-203659-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA 537.1 V2	214328

### Prep Batch: 215887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-203659-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-203659-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	
MBL 380-215887/20-A	Method Blank	Total/NA	Water	533	
LCS 380-215887/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-215887/21-A	Lab Control Sample	Total/NA	Water	533	
380-203991-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-203991-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

### Analysis Batch: 216062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-203659-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	215887
380-203659-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	215887
MBL 380-215887/20-A	Method Blank	Total/NA	Water	533	215887
LCS 380-215887/22-A	Lab Control Sample	Total/NA	Water	533	215887
MRL 380-215887/21-A	Lab Control Sample	Total/NA	Water	533	215887
380-203991-B-1-A MS	Matrix Spike	Total/NA	Water	533	215887
380-203991-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	215887

# Lab Chronicle

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

Job ID: 380-203659-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Lab Sample ID: 380-203659-1**

**Date Collected: 03/16/26 11:03**

**Matrix: Drinking Water**

**Date Received: 03/18/26 10:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			215887	XTD8	EA POM	03/26/26 06:09
Total/NA	Analysis	533		1	216062	Y5FM	EA POM	03/27/26 03:41
Total/NA	Prep	537.1 DW			214328	G9MN	EA POM	03/20/26 01:00
Total/NA	Analysis	EPA 537.1 V2		1	214681	Y5FM	EA POM	03/20/26 17:08

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

**Lab Sample ID: 380-203659-2**

**Date Collected: 03/16/26 11:03**

**Matrix: Water**

**Date Received: 03/18/26 10:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			215887	XTD8	EA POM	03/26/26 06:09
Total/NA	Analysis	533		1	216062	Y5FM	EA POM	03/27/26 03:50
Total/NA	Prep	537.1 DW			214328	G9MN	EA POM	03/20/26 01:00
Total/NA	Analysis	EPA 537.1 V2		1	214681	Y5FM	EA POM	03/20/26 17:46

**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: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## 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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- 13
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\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

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

Job ID: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	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: 380-203659-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-203659-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	03/16/26 11:03	03/18/26 10:20	HI0000331
380-203659-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	03/16/26 11:03	03/18/26 10:20	HI0000331

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- 17



# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-203659-1  
SDG Number: PFAS: Aiea Gulch Wells Pump 1

**Login Number: 203659**

**List Number: 1**

**Creator: Del Rosario, Michael**

**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").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

