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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

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

JOB NUMBER

380-185055-1

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Compliance Statement

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

Authorization



Authorized for release by
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Definitions/Glossary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Qualifiers

LCMS

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

Glossary

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

Case Narrative

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

Job ID: 380-185055-1

Job ID: 380-185055-1

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Job Narrative 380-185055-1

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 11/28/2025 10:12 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 2.6°C.

PFAS

Method 533: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method control limit: MOANALUA WELLS (331-223-TP202) (380-185055-1). IDA recovery of 13C6 PFDA, 13C9 PFNA and 13C7 PFOA bias low. Insufficient volume for re-extraction. Result not acceptable per method. PFAS results by 533 for MOANALUA WELLS (331-223-TP202) (380-185055-1) collected on 11/24/25 are not acceptable for compliance reporting due to QC failures of Isotope Dilution Analytes (IDA) not meeting the method Limits, analysis was canceled. The sample is collected weekly thus follow up sample was collected on 12/1/25 under Job # 380-185831. Analysis by EPA 533 is currently in progress. (XWB4)

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results: Halawa Wells Units 1 & 2 P1 (331-206-TP065) (380-185055-2). XWB4

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: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: MOANALUA WELLS (331-223-TP202)
PWSID Number: HI0000331

Lab Sample ID: 380-185055-1

No Detections.

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**
PWSID Number: HI0000331

Lab Sample ID: 380-185055-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L	1		537.1	Total/NA

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

Lab Sample ID: 380-185055-3

No Detections.

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

Lab Sample ID: 380-185055-4

No Detections.

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

Lab Sample ID: 380-185055-5

No Detections.

Client Sample ID: FB MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-185055-6

No Detections.

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2
PWSID Number: HI0000331

Lab Sample ID: 380-185055-7

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP 1
PWSID Number: HI0000331

Lab Sample ID: 380-185055-8

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP 2
PWSID Number: HI0000331

Lab Sample ID: 380-185055-9

No Detections.

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)
PWSID Number: HI0000331

Lab Sample ID: 380-185055-10

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-1

Date Collected: 11/24/25 10:22

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 18:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	112		70 - 130			12/02/25 01:08	12/02/25 18:30	1
13C2 PFHxA	115		70 - 130			12/02/25 01:08	12/02/25 18:30	1
13C2 PFDA	120		70 - 130			12/02/25 01:08	12/02/25 18:30	1
13C3-GenX	110		70 - 130			12/02/25 01:08	12/02/25 18:30	1

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

Lab Sample ID: 380-185055-2

Date Collected: 11/24/25 10:58

Matrix: Drinking Water

Date Received: 11/28/25 10:12

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		12/05/25 05:20	12/06/25 01:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-2

Date Collected: 11/24/25 10:58

Matrix: Drinking Water

Date Received: 11/28/25 10:12

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
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C6 PFDA	106		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C5 PFHxA	107		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C4 PFHpA	114		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C8 PFOA	116		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C9 PFNA	113		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C7 PFUnA	106		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C2 PFDoA	105		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C4 PFBA	114		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C5 PFPeA	112		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C3 PFBS	117		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C3 PFHxS	118		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C8 PFOS	122		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C2-4:2-FTS	116		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C2-6:2-FTS	105		50 - 200	12/05/25 05:20	12/06/25 01:04	1
13C2-8:2-FTS	104		50 - 200	12/05/25 05:20	12/06/25 01:04	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		12/02/25 01:08	12/02/25 20:58	1
Perfluorooctanesulfonic acid (PFOS)	2.9		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-2

Date Collected: 11/24/25 10:58

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 20:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130			12/02/25 01:08	12/02/25 20:58	1
13C2 PFHxA	118		70 - 130			12/02/25 01:08	12/02/25 20:58	1
13C2 PFDA	116		70 - 130			12/02/25 01:08	12/02/25 20:58	1
13C3-GenX	108		70 - 130			12/02/25 01:08	12/02/25 20:58	1

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

Lab Sample ID: 380-185055-3

Date Collected: 11/24/25 11:37

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-3

Date Collected: 11/24/25 11:37

Matrix: Drinking Water

Date Received: 11/28/25 10:12

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
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoroundecanoic acid (PFUnA)	2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	110		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C6 PFDA	110		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C5 PFHxA	113		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C4 PFHpA	114		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C8 PFOA	120		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C9 PFNA	121		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C7 PFUnA	107		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C2 PFDoA	109		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C4 PFBA	112		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C5 PFPeA	110		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C3 PFBS	121		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C3 PFHxS	118		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C8 PFOS	124		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C2-4:2-FTS	116		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C2-6:2-FTS	110		50 - 200	12/05/25 05:20	12/06/25 01:13	1
13C2-8:2-FTS	101		50 - 200	12/05/25 05:20	12/06/25 01:13	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		12/02/25 01:08	12/02/25 21:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-3

Date Collected: 11/24/25 11:37
Date Received: 11/28/25 10:12

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NETFOSAA	108		70 - 130			12/02/25 01:08	12/02/25 21:08	1
13C2 PFHxA	114		70 - 130			12/02/25 01:08	12/02/25 21:08	1
13C2 PFDA	113		70 - 130			12/02/25 01:08	12/02/25 21:08	1
13C3-GenX	106		70 - 130			12/02/25 01:08	12/02/25 21:08	1

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

Lab Sample ID: 380-185055-4

Date Collected: 11/24/25 12:10
Date Received: 11/28/25 10:12

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-4

Date Collected: 11/24/25 12:10

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:22	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C6 PFDA	98		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C5 PFHxA	97		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C4 PFHpA	100		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C8 PFOA	106		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C9 PFNA	106		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C7 PFUnA	98		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C2 PFDoA	102		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C4 PFBA	106		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C5 PFPeA	101		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C3 PFBS	117		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C3 PFHxS	116		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C8 PFOS	124		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C2-4:2-FTS	113		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C2-6:2-FTS	114		50 - 200	12/05/25 05:20	12/06/25 01:22	1
13C2-8:2-FTS	102		50 - 200	12/05/25 05:20	12/06/25 01:22	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		12/02/25 10:06	12/03/25 09:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-4

Date Collected: 11/24/25 12:10
Date Received: 11/28/25 10:12

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 09:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NETfOSAA	104		70 - 130			12/02/25 10:06	12/03/25 09:50	1
13C2 PFHxA	116		70 - 130			12/02/25 10:06	12/03/25 09:50	1
13C2 PFDA	112		70 - 130			12/02/25 10:06	12/03/25 09:50	1
13C3-GenX	121		70 - 130			12/02/25 10:06	12/03/25 09:50	1

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

Lab Sample ID: 380-185055-5

Date Collected: 11/24/25 12:44
Date Received: 11/28/25 10:12

Matrix: Drinking Water
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-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-5

Date Collected: 11/24/25 12:44

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/05/25 05:20	12/06/25 01:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C6 PFDA	97		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C5 PFHxA	97		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C4 PFHpA	104		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C8 PFOA	100		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C9 PFNA	102		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C7 PFUnA	94		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C2 PFDoA	97		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C4 PFBA	103		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C5 PFPeA	98		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C3 PFBS	117		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C3 PFHxS	113		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C8 PFOS	121		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C2-4:2-FTS	106		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C2-6:2-FTS	105		50 - 200	12/05/25 05:20	12/06/25 01:32	1
13C2-8:2-FTS	102		50 - 200	12/05/25 05:20	12/06/25 01:32	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		12/02/25 10:06	12/03/25 10:11	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-5

Date Collected: 11/24/25 12:44

Matrix: Drinking Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorotetradecanoic acid (PFTA)	2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130			12/02/25 10:06	12/03/25 10:11	1
13C2 PFHxA	119		70 - 130			12/02/25 10:06	12/03/25 10:11	1
13C2 PFDA	114		70 - 130			12/02/25 10:06	12/03/25 10:11	1
13C3-GenX	120		70 - 130			12/02/25 10:06	12/03/25 10:11	1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-185055-6

Date Collected: 11/24/25 10:22

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:17	1

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Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-185055-6

Date Collected: 11/24/25 10:22

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130	12/02/25 01:08	12/02/25 21:17	1
13C2 PFHxA	109		70 - 130	12/02/25 01:08	12/02/25 21:17	1
13C2 PFDA	110		70 - 130	12/02/25 01:08	12/02/25 21:17	1
13C3-GenX	95		70 - 130	12/02/25 01:08	12/02/25 21:17	1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-185055-7

Date Collected: 11/24/25 10:58

Matrix: Water

Date Received: 11/28/25 10:12

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		12/03/25 06:49	12/04/25 14:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:18	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200			12/03/25 06:49	12/04/25 14:18	1
13C6 PFDA	101		50 - 200			12/03/25 06:49	12/04/25 14:18	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-185055-7

Date Collected: 11/24/25 10:58

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFHxA	100		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C4 PFHpA	100		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C8 PFOA	102		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C9 PFNA	103		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C7 PFUnA	102		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C2 PFDoA	92		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C4 PFBA	102		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C5 PFPeA	102		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C3 PFBS	112		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C3 PFHxS	111		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C8 PFOS	105		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C2-4:2-FTS	121		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C2-6:2-FTS	117		50 - 200	12/03/25 06:49	12/04/25 14:18	1
13C2-8:2-FTS	116		50 - 200	12/03/25 06:49	12/04/25 14:18	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		12/02/25 01:08	12/02/25 21:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	12/02/25 01:08	12/02/25 21:27	1
13C2 PFHxA	111		70 - 130	12/02/25 01:08	12/02/25 21:27	1
13C2 PFDA	115		70 - 130	12/02/25 01:08	12/02/25 21:27	1
13C3-GenX	98		70 - 130	12/02/25 01:08	12/02/25 21:27	1

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-185055-8

Date Collected: 11/24/25 11:37

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	87		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C6 PFDA	90		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C5 PFHxA	92		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C4 PFHpA	93		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C8 PFOA	93		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C9 PFNA	94		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C7 PFUnA	94		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C2 PFDoA	93		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C4 PFBA	95		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C5 PFPeA	93		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C3 PFBS	113		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C3 PFHxS	110		50 - 200	12/03/25 06:49	12/04/25 14:27	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-185055-8

Date Collected: 11/24/25 11:37

Matrix: Water

Date Received: 11/28/25 10:12

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	107		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C2-4:2-FTS	124		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C2-6:2-FTS	116		50 - 200	12/03/25 06:49	12/04/25 14:27	1
13C2-8:2-FTS	116		50 - 200	12/03/25 06:49	12/04/25 14:27	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		12/02/25 01:08	12/02/25 21:37	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 01:08	12/02/25 21:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	116		70 - 130	12/02/25 01:08	12/02/25 21:37	1
13C2 PFHxA	127		70 - 130	12/02/25 01:08	12/02/25 21:37	1
13C2 PFDA	124		70 - 130	12/02/25 01:08	12/02/25 21:37	1
13C3-GenX	117		70 - 130	12/02/25 01:08	12/02/25 21:37	1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-185055-9

Date Collected: 11/24/25 12:10

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-185055-9

Date Collected: 11/24/25 12:10

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C6 PFDA	92		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C5 PFHxA	97		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C4 PFHpA	94		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C8 PFOA	94		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C9 PFNA	94		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C7 PFUnA	94		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C2 PFDoA	92		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C4 PFBA	101		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C5 PFPeA	97		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C3 PFBS	117		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C3 PFHxS	116		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C8 PFOS	114		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C2-4:2-FTS	129		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C2-6:2-FTS	120		50 - 200	12/03/25 06:49	12/04/25 14:37	1
13C2-8:2-FTS	124		50 - 200	12/03/25 06:49	12/04/25 14:37	1

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-185055-9

Date Collected: 11/24/25 12:10

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			12/02/25 10:06	12/03/25 10:21	1
13C2 PFHxA	114		70 - 130			12/02/25 10:06	12/03/25 10:21	1
13C2 PFDA	110		70 - 130			12/02/25 10:06	12/03/25 10:21	1
13C3-GenX	119		70 - 130			12/02/25 10:06	12/03/25 10:21	1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

Date Collected: 11/24/25 12:44

Matrix: Water

Date Received: 11/28/25 10:12

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		12/03/25 06:49	12/04/25 14:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

Date Collected: 11/24/25 12:44

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/03/25 06:49	12/04/25 14:47	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C6 PFDA	101		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C5 PFHxA	97		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C4 PFHpA	102		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C8 PFOA	104		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C9 PFNA	104		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C7 PFUnA	105		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C2 PFDoA	100		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C4 PFBA	102		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C5 PFPeA	100		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C3 PFBS	113		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C3 PFHxS	113		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C8 PFOS	110		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C2-4:2-FTS	120		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C2-6:2-FTS	118		50 - 200			12/03/25 06:49	12/04/25 14:47	1
13C2-8:2-FTS	122		50 - 200			12/03/25 06:49	12/04/25 14:47	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		12/02/25 10:06	12/03/25 10:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1

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Client Sample Results

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

Job ID: 380-185055-1
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
 P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

Date Collected: 11/24/25 12:44

Matrix: Water

Date Received: 11/28/25 10:12

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/02/25 10:06	12/03/25 10:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130	12/02/25 10:06	12/03/25 10:31	1
13C2 PFHxA	115		70 - 130	12/02/25 10:06	12/03/25 10:31	1
13C2 PFDA	112		70 - 130	12/02/25 10:06	12/03/25 10:31	1
13C3-GenX	121		70 - 130	12/02/25 10:06	12/03/25 10:31	1

Action Limit Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-1

PWSID Number: HI0000331

Compliance Check

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

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

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

Lab Sample ID: 380-185055-2

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		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)	2.9		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)	2.8		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-185055-3

PWSID Number: HI0000331

Compliance Check

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

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

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Action Limit Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-3

Compliance Check

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

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

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

Lab Sample ID: 380-185055-4

Compliance Check

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

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

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

Lab Sample ID: 380-185055-5

Compliance Check

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

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

Action Limit Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-5

Compliance Check

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

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

Client Sample ID: FB MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-185055-6

Compliance Check

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

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

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2
PWSID Number: HI0000331

Lab Sample ID: 380-185055-7

Compliance Check

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

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

Action Limit Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-185055-8

PWSID Number: HI0000331

Compliance Check

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

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

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-185055-9

PWSID Number: HI0000331

Compliance Check

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

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

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

PWSID Number: HI0000331

Compliance Check

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

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

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Action Limit Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

(Continued)

PWSID Number: HI0000331

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-185055-1	MOANALUA WELLS (331-223-T	112	115	120	110
380-185055-1 MS	MOANALUA WELLS (331-223-TP202)	106	113	112	105
380-185055-1 MSD	MOANALUA WELLS (331-223-TP202)	104	111	106	103
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	115	118	116	108
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	108	114	113	106
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	104	116	112	121
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	106	119	114	120

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)
380-185037-B-1-A MS	Matrix Spike	107	113	107	113
380-185037-C-1-A MSD	Matrix Spike Duplicate	106	115	109	118
380-185055-6	FB MOANALUA WELLS	99	109	110	95
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	102	111	115	98
380-185055-8	FB AIEA GULCH WELLS PUMP 1	116	127	124	117
380-185055-9	FB AIEA GULCH WELLS PUMP 2	110	114	110	119
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	103	115	112	121
LCS 380-189423/21-A	Lab Control Sample	109	111	110	104
LCS 380-189453/21-A	Lab Control Sample	96	114	108	111
MBL 380-189423/19-A	Method Blank	102	108	106	97
MBL 380-189453/19-A	Method Blank	105	117	113	118
MRL 380-189423/20-A	Lab Control Sample	104	104	109	96
MRL 380-189453/20-A	Lab Control Sample	107	118	109	123

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: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Drinking Water

Prep Type: Total/NA

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)
380-185055-2	HALAWA WELLS UNITS 1 & 2 F	102	106	107	114	116	113	106	105
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	110	110	113	114	120	121	107	109
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	97	98	97	100	106	106	98	102
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	94	97	97	104	100	102	94	97
380-185055-E-1-A MS	380-185055-E-1-A MS	116	113	117	114	117	124	112	114
380-185055-F-1-A MSD	380-185055-F-1-A MSD	121	111	117	120	119	119	112	114

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)
380-185055-2	HALAWA WELLS UNITS 1 & 2 F	114	112	117	118	122	116	105	104
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	112	110	121	118	124	116	110	101
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	106	101	117	116	124	113	114	102
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	103	98	117	113	121	106	105	102
380-185055-E-1-A MS	380-185055-E-1-A MS	116	111	113	114	126	106	105	105
380-185055-F-1-A MSD	380-185055-F-1-A MSD	116	115	118	115	122	106	108	100

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)
380-184611-E-1-A MS	Matrix Spike	65	57	68	67	63	58	59	66
380-184611-F-1-A MSD	Matrix Spike Duplicate	102	108	103	104	106	105	112	109
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	94	101	100	100	102	103	102	92

Isotope Dilution Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Matrix: Water

Prep Type: Total/NA

		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)	PFDoA (50-200)
380-185055-8	FB AIEA GULCH WELLS PUMP	87	90	92	93	93	94	94	93
380-185055-9	FB AIEA GULCH WELLS PUMP 2	89	92	97	94	94	94	94	92
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	91	101	97	102	104	104	105	100
LCS 380-189706/46-A	Lab Control Sample	90	99	92	95	93	99	106	105
LCS 380-190359/22-A	Lab Control Sample	119	113	123	117	119	117	108	112
MBL 380-189706/44-A	Method Blank	92	101	96	96	97	98	100	103
MBL 380-190359/20-A	Method Blank	112	113	116	123	122	123	111	115
MRL 380-189706/45-A	Lab Control Sample	85	99	92	90	92	94	98	96
MRL 380-190359/21-A	Lab Control Sample	109	107	112	114	121	121	108	117

		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)
380-184611-E-1-A MS	Matrix Spike	73	70	112	110	111	117	120	123
380-184611-F-1-A MSD	Matrix Spike Duplicate	106	101	109	105	109	115	114	117
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	102	102	112	111	105	121	117	116
380-185055-8	FB AIEA GULCH WELLS PUMP 1	95	93	113	110	107	124	116	116
380-185055-9	FB AIEA GULCH WELLS PUMP 2	101	97	117	116	114	129	120	124
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	102	100	113	113	110	120	118	122
LCS 380-189706/46-A	Lab Control Sample	96	92	110	107	109	110	113	118
LCS 380-190359/22-A	Lab Control Sample	115	117	124	116	121	113	107	100
MBL 380-189706/44-A	Method Blank	96	94	107	104	106	114	107	117
MBL 380-190359/20-A	Method Blank	124	116	123	116	127	114	110	101
MRL 380-189706/45-A	Lab Control Sample	95	91	114	111	112	119	117	120
MRL 380-190359/21-A	Lab Control Sample	112	110	115	116	125	112	104	103

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: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-189706/44-A
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189706

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		12/03/25 06:49	12/04/25 06:57	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		12/03/25 06:49	12/04/25 06:57	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C6 PFDA	101		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C5 PFHxA	96		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C4 PFHpA	96		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C8 PFOA	97		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C9 PFNA	98		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C7 PFUnA	100		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C2 PFDoA	103		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C4 PFBA	96		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C5 PFPeA	94		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C3 PFBS	107		50 - 200	12/03/25 06:49	12/04/25 06:57	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
 P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-189706/44-A
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189706

<i>Isotope Dilution</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	%Recovery	Qualifier				
13C3 PFHxS	104		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C8 PFOS	106		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C2-4:2-FTS	114		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C2-6:2-FTS	107		50 - 200	12/03/25 06:49	12/04/25 06:57	1
13C2-8:2-FTS	117		50 - 200	12/03/25 06:49	12/04/25 06:57	1

Lab Sample ID: LCS 380-189706/46-A
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189706

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>
	Added	Result	Qualifier				Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	103		ng/L		85	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	104		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	109		ng/L		90	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	120		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	112		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	120	116		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	120	116		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	112		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	115		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	120	118		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	120	114		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	111		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	120	117		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	112		ng/L		93	70 - 130
Perfluorobutanoic acid (PFBA)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	116		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	119		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	109		ng/L		90	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	110		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	114		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	109		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	120	117		ng/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MRL 380-189706/45-A
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189706

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.01	1.79	J	ng/L		89	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	1.90	J	ng/L		95	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.02	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	1.96	J	ng/L		97	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.24	J	ng/L		111	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.78	J	ng/L		88	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	1.70	J	ng/L		84	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	1.79	J	ng/L		89	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.76	J	ng/L		87	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.68	J	ng/L		83	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.70	J	ng/L		84	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	85		50 - 200
13C6 PFDA	99		50 - 200
13C5 PFHxA	92		50 - 200
13C4 PFHpA	90		50 - 200
13C8 PFOA	92		50 - 200
13C9 PFNA	94		50 - 200
13C7 PFUnA	98		50 - 200
13C2 PFDoA	96		50 - 200
13C4 PFBA	95		50 - 200
13C5 PFPeA	91		50 - 200
13C3 PFBS	114		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	117		50 - 200
13C2-8:2-FTS	120		50 - 200

Lab Sample ID: 380-184611-E-1-A MS
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 189706

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	106		ng/L		88	70 - 130

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-184611-E-1-A MS
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 189706

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	105		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	108		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	113		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	113		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	112		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	114		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	118		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	118		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	111		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	113		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	119		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	114		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	114		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	113		ng/L		93	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	107		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	107		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	108		ng/L		89	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	117		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	110		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	114		ng/L		95	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	65		50 - 200
13C6 PFDA	57		50 - 200
13C5 PFHxA	68		50 - 200
13C4 PFHpA	67		50 - 200
13C8 PFOA	63		50 - 200
13C9 PFNA	58		50 - 200
13C7 PFUnA	59		50 - 200
13C2 PFDoA	66		50 - 200

QC Sample Results

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

Job ID: 380-185055-1
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
 P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-184611-E-1-A MS
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 189706

<i>Isotope Dilution</i>	<i>MS %Recovery</i>	<i>MS Qualifier</i>	<i>Limits</i>
13C4 PFBA	73		50 - 200
13C5 PFPeA	70		50 - 200
13C3 PFBS	112		50 - 200
13C3 PFHxS	110		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	123		50 - 200

Lab Sample ID: 380-184611-F-1-A MSD
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 189706

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	108		ng/L		89	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	105		ng/L		86	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	115		ng/L		95	70 - 130	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	115		ng/L		94	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	110		ng/L		90	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		121	113		ng/L		94	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	115		ng/L		95	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	115		ng/L		95	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	115		ng/L		94	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	120		ng/L		98	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		121	121		ng/L		100	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	108		ng/L		89	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		121	114		ng/L		93	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	113		ng/L		94	70 - 130	5	30
Perfluorobutanoic acid (PFBA)	<2.0		121	114		ng/L		94	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	119		ng/L		98	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	111		ng/L		92	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	121		ng/L		99	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	109		ng/L		90	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	110		ng/L		90	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	111		ng/L		91	70 - 130	3	30

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-184611-F-1-A MSD
Matrix: Water
Analysis Batch: 190064

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 189706

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	111		ng/L		92	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	<2.0		121	117		ng/L		95	70 - 130	0	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	109		ng/L		90	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	114		ng/L		94	70 - 130	0	30
		MSD	MSD								
Isotope Dilution		%Recovery	Qualifier	Limits							
13C3 HFPO-DA		102		50 - 200							
13C6 PFDA		108		50 - 200							
13C5 PFHxA		103		50 - 200							
13C4 PFHpA		104		50 - 200							
13C8 PFOA		106		50 - 200							
13C9 PFNA		105		50 - 200							
13C7 PFUnA		112		50 - 200							
13C2 PFDoA		109		50 - 200							
13C4 PFBA		106		50 - 200							
13C5 PFPeA		101		50 - 200							
13C3 PFBS		109		50 - 200							
13C3 PFHxS		105		50 - 200							
13C8 PFOS		109		50 - 200							
13C2-4:2-FTS		115		50 - 200							
13C2-6:2-FTS		114		50 - 200							
13C2-8:2-FTS		117		50 - 200							

Lab Sample ID: MBL 380-190359/20-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 190359

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-190359/20-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 190359

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.48		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		12/05/25 05:20	12/05/25 21:46	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	112		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C6 PFDA	113		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C5 PFHxA	116		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C4 PFHpA	123		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C8 PFOA	122		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C9 PFNA	123		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C7 PFUnA	111		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C2 PFDoA	115		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C4 PFBA	124		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C5 PFPeA	116		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C3 PFBS	123		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C3 PFHxS	116		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C8 PFOS	127		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C2-4:2-FTS	114		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C2-6:2-FTS	110		50 - 200	12/05/25 05:20	12/05/25 21:46	1
13C2-8:2-FTS	101		50 - 200	12/05/25 05:20	12/05/25 21:46	1

Lab Sample ID: LCS 380-190359/22-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	111		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	110		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	121		ng/L		101	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: LCS 380-190359/22-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	116		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	108		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	120	110		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	120	114		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	111		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	116		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	120	103		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	120	119		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	111		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	120	115		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	116		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	115		ng/L		95	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	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	102		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	117		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	106		ng/L		88	70 - 130
Perfluoropentanoic acid (PFPeA)	120	107		ng/L		89	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	114		ng/L		95	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	117		ng/L		97	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	119		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	123		50 - 200
13C4 PFHpA	117		50 - 200
13C8 PFOA	119		50 - 200
13C9 PFNA	117		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	112		50 - 200
13C4 PFBA	115		50 - 200
13C5 PFPeA	117		50 - 200
13C3 PFBS	124		50 - 200
13C3 PFHxS	116		50 - 200

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: LCS 380-190359/22-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190359

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C8 PFOS	121		50 - 200
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	100		50 - 200

Lab Sample ID: MRL 380-190359/21-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190359

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL Result</i>	<i>MRL Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.77	J	ng/L		88	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.72	J	ng/L		86	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.02	J	ng/L		100	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.98	J	ng/L		98	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.95	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.98	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.90	J	ng/L		94	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	1.94	J	ng/L		97	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.88	J	ng/L		94	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	1.99	J	ng/L		99	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.01	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	1.90	J	ng/L		95	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.37	J	ng/L		118	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	1.95	J	ng/L		97	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.95	J	ng/L		97	50 - 150

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MRL 380-190359/21-A
Matrix: Water
Analysis Batch: 190557

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.80	J	ng/L		90	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.89	J	ng/L		94	50 - 150
Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits				
13C3 HFPO-DA	109		50 - 200				
13C6 PFDA	107		50 - 200				
13C5 PFHxA	112		50 - 200				
13C4 PFHpA	114		50 - 200				
13C8 PFOA	121		50 - 200				
13C9 PFNA	121		50 - 200				
13C7 PFUnA	108		50 - 200				
13C2 PFDoA	117		50 - 200				
13C4 PFBA	112		50 - 200				
13C5 PFPeA	110		50 - 200				
13C3 PFBS	115		50 - 200				
13C3 PFHxS	116		50 - 200				
13C8 PFOS	125		50 - 200				
13C2-4:2-FTS	112		50 - 200				
13C2-6:2-FTS	104		50 - 200				
13C2-8:2-FTS	103		50 - 200				

Lab Sample ID: 380-185055-E-1-A MS
Matrix: Drinking Water
Analysis Batch: 190557

Client Sample ID: 380-185055-E-1-A MS
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	104		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		121	111		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	121		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	120		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0	*5-	121	111		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	114		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	114		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	115		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	111		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	<2.0	*5-	121	110		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	110		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	113		ng/L		93	70 - 130

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QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-E-1-A MS
Matrix: Drinking Water
Analysis Batch: 190557

Client Sample ID: 380-185055-E-1-A MS
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	121	111		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	112		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	114		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	106		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	121		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	113		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	114		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	107		ng/L		89	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	117		ng/L		97	70 - 130

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	116		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	117		50 - 200
13C4 PFHpA	114		50 - 200
13C8 PFOA	117		50 - 200
13C9 PFNA	124		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	114		50 - 200
13C4 PFBA	116		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	126		50 - 200
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-185055-F-1-A MSD
Matrix: Drinking Water
Analysis Batch: 190557

Client Sample ID: 380-185055-F-1-A MSD
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD
	Result	Qualifier	Added	Result	Qualifier					
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	111		ng/L		92	70 - 130	6 30

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-F-1-A MSD
Matrix: Drinking Water
Analysis Batch: 190557

Client Sample ID: 380-185055-F-1-A MSD
Prep Type: Total/NA
Prep Batch: 190359

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	112		ng/L		93	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	118		ng/L		97	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	117		ng/L		97	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	113		ng/L		93	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0	*5-	121	117		ng/L		97	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	114		ng/L		94	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	113		ng/L		93	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	121		ng/L		99	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	108		ng/L		88	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0	*5-	121	116		ng/L		96	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	115		ng/L		94	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		121	116		ng/L		95	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	121	110		ng/L		91	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		121	114		ng/L		93	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	115		ng/L		95	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	113		ng/L		93	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	109		ng/L		90	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	119		ng/L		99	70 - 130	12	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	117		ng/L		96	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	121		ng/L		100	70 - 130	7	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	110		ng/L		91	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		121	116		ng/L		95	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	114		ng/L		95	70 - 130	6	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	124		ng/L		102	70 - 130	6	30

Isotope Dilution	MSD	MSD	Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	121		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	117		50 - 200
13C4 PFHpA	120		50 - 200
13C8 PFOA	119		50 - 200
13C9 PFNA	119		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	114		50 - 200

QC Sample Results

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

Job ID: 380-185055-1
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
 P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-F-1-A MSD
Matrix: Drinking Water
Analysis Batch: 190557

Client Sample ID: 380-185055-F-1-A MSD
Prep Type: Total/NA
Prep Batch: 190359

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	116		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	118		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	122		50 - 200
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	100		50 - 200

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

Lab Sample ID: MBL 380-189423/19-A
Matrix: Water
Analysis Batch: 189499

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189423

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		12/02/25 01:08	12/02/25 17:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/02/25 01:08	12/02/25 17:59	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	102		70 - 130	12/02/25 01:08	12/02/25 17:59	1
13C2 PFHxA	108		70 - 130	12/02/25 01:08	12/02/25 17:59	1
13C2 PFDA	106		70 - 130	12/02/25 01:08	12/02/25 17:59	1
13C3-GenX	97		70 - 130	12/02/25 01:08	12/02/25 17:59	1

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: LCS 380-189423/21-A
Matrix: Water
Analysis Batch: 189499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189423

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.0	25.8		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	28.5		ng/L		114	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	26.8		ng/L		107	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	27.8		ng/L		111	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	27.0		ng/L		108	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	28.0		ng/L		112	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	27.4		ng/L		109	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	27.4		ng/L		110	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	28.5		ng/L		114	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	28.0		ng/L		112	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	27.8		ng/L		111	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	27.4		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	25.0	26.9		ng/L		108	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	24.1		ng/L		97	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.0	29.4		ng/L		118	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	28.3		ng/L		113	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	27.2		ng/L		109	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	26.7		ng/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	104		70 - 130

Lab Sample ID: MRL 380-189423/20-A
Matrix: Water
Analysis Batch: 189499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189423

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.49	J	ng/L		125	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.28	J	ng/L		114	50 - 150

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MRL 380-189423/20-A
Matrix: Water
Analysis Batch: 189499

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189423

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	2.00	2.24	J	ng/L		112	50 - 150
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.45	J	ng/L		123	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.29	J	ng/L		115	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.29	J	ng/L		115	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.40	J	ng/L		120	50 - 150
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.27	J	ng/L		113	50 - 150
11-Chloroeicosafuoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.23	J	ng/L		111	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.18	J	ng/L		109	50 - 150
Surrogate		MRL	MRL				Limits
	%Recovery		Qualifier				
d5-NEtFOSAA	104						70 - 130
13C2 PFHxA	104						70 - 130
13C2 PFDA	109						70 - 130
13C3-GenX	96						70 - 130

Lab Sample ID: 380-185055-1 MS
Matrix: Drinking Water
Analysis Batch: 189499

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total/NA
Prep Batch: 189423

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		50.2	55.0		ng/L		110	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	58.6		ng/L		113	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	55.9		ng/L		111	70 - 130
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	<2.0		50.2	53.0		ng/L		106	70 - 130
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	<2.0		50.2	53.8		ng/L		107	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	57.1		ng/L		111	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	55.6		ng/L		111	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-1 MSD

Matrix: Drinking Water

Analysis Batch: 189499

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

Prep Type: Total/NA

Prep Batch: 189423

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	55.2		ng/L		108	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		50.3	53.3		ng/L		106	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.3	48.7		ng/L		97	70 - 130	3	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.3	57.1		ng/L		113	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	55.9		ng/L		111	70 - 130	2	30
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	55.5		ng/L		110	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	51.5		ng/L		102	70 - 130	9	30
Surrogate		MSD	MSD								
		%Recovery	Qualifier	Limits							
d5-NEtFOSAA		104		70 - 130							
13C2 PFHxA		111		70 - 130							
13C2 PFDA		106		70 - 130							
13C3-GenX		103		70 - 130							

Lab Sample ID: MBL 380-189453/19-A

Matrix: Water

Analysis Batch: 189705

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 189453

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		12/02/25 10:06	12/03/25 06:39	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/02/25 10:06	12/03/25 06:39	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MBL 380-189453/19-A
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 189453

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	105		70 - 130	12/02/25 10:06	12/03/25 06:39	1
13C2 PFHxA	117		70 - 130	12/02/25 10:06	12/03/25 06:39	1
13C2 PFDA	113		70 - 130	12/02/25 10:06	12/03/25 06:39	1
13C3-GenX	118		70 - 130	12/02/25 10:06	12/03/25 06:39	1

Lab Sample ID: LCS 380-189453/21-A
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	25.1	26.5		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	28.6		ng/L		114	70 - 130
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	25.1	23.2		ng/L		93	70 - 130
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	25.1	23.4		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	26.7		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	26.9		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	26.6		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	26.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.2		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	26.9		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.6		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.5		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	28.7		ng/L		115	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	29.2		ng/L		116	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.1	28.8		ng/L		115	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.4		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	26.6		ng/L		106	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	114		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	111		70 - 130

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: MRL 380-189453/20-A
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.38	J	ng/L		119	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.32	J	ng/L		116	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.00	J	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.40	J	ng/L		120	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.19	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.44	J	ng/L		122	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.49	J	ng/L		124	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.34	J	ng/L		117	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.36	J	ng/L		118	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.10	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.29	J	ng/L		114	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	107		70 - 130
13C2 PFHxA	118		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	123		70 - 130

Lab Sample ID: 380-185037-B-1-A MS
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.1		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.0		25.1	27.3		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.8		ng/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185037-B-1-A MS
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	22.8		ng/L		91	70 - 130	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	23.9		ng/L		95	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.5		ng/L		99	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.8		ng/L		99	70 - 130	
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.0		ng/L		104	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.4		ng/L		97	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	25.7		ng/L		100	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	25.5		ng/L		100	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.7		ng/L		106	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		25.1	24.9		ng/L		99	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	27.9		ng/L		111	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.0		ng/L		107	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.4		ng/L		109	70 - 130	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid(11Cl-PF3OUdS)	<2.0		25.1	24.5		ng/L		97	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.6		ng/L		102	70 - 130	
Surrogate		MS	MS							
		%Recovery	Qualifier	Limits						
d5-NEtFOSAA		107		70 - 130						
13C2 PFHxA		113		70 - 130						
13C2 PFDA		107		70 - 130						
13C3-GenX		113		70 - 130						

Lab Sample ID: 380-185037-C-1-A MSD
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.8		ng/L		107	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	2.0		25.1	27.7		ng/L		103	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.2		ng/L		109	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	23.1		ng/L		92	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	24.1		ng/L		96	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.7		ng/L		104	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.6		ng/L		98	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-185055-1
 SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
 P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185037-C-1-A MSD
Matrix: Water
Analysis Batch: 189705

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 189453

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.8		ng/L		107	70 - 130	3	30	
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.0		ng/L		96	70 - 130	2	30	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.8		ng/L		104	70 - 130	4	30	
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.2		ng/L		103	70 - 130	3	30	
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.9		ng/L		107	70 - 130	1	30	
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.7		ng/L		103	70 - 130	3	30	
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	28.9		ng/L		116	70 - 130	4	30	
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	28.0		ng/L		112	70 - 130	4	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.0		ng/L		108	70 - 130	1	30	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.7		ng/L		103	70 - 130	5	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.1		ng/L		104	70 - 130	2	30	
Surrogate												
		MSD	MSD									
		%Recovery	Qualifier	Limits								
d5-NEtFOSAA		106		70 - 130								
13C2 PFHxA		115		70 - 130								
13C2 PFDA		109		70 - 130								
13C3-GenX		118		70 - 130								

QC Association Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

LCMS

Prep Batch: 189423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1 DW	
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-185055-6	FB MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	537.1 DW	
380-185055-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	537.1 DW	
MBL 380-189423/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-189423/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-189423/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-185055-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	
380-185055-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 189453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP072)	Total/NA	Drinking Water	537.1 DW	
380-185055-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1 DW	
MBL 380-189453/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-189453/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-189453/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-185037-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-185037-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 189499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	189423
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	537.1	189423
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	189423
380-185055-6	FB MOANALUA WELLS	Total/NA	Water	537.1	189423
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	537.1	189423
380-185055-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	537.1	189423
MBL 380-189423/19-A	Method Blank	Total/NA	Water	537.1	189423
LCS 380-189423/21-A	Lab Control Sample	Total/NA	Water	537.1	189423
MRL 380-189423/20-A	Lab Control Sample	Total/NA	Water	537.1	189423
380-185055-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	189423
380-185055-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	537.1	189423

Analysis Batch: 189705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	189453
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP072)	Total/NA	Drinking Water	537.1	189453
380-185055-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	189453
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1	189453
MBL 380-189453/19-A	Method Blank	Total/NA	Water	537.1	189453
LCS 380-189453/21-A	Lab Control Sample	Total/NA	Water	537.1	189453
MRL 380-189453/20-A	Lab Control Sample	Total/NA	Water	537.1	189453
380-185037-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	189453
380-185037-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	189453

QC Association Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

LCMS

Prep Batch: 189706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	
380-185055-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	
380-185055-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	
MBL 380-189706/44-A	Method Blank	Total/NA	Water	533	
LCS 380-189706/46-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-189706/45-A	Lab Control Sample	Total/NA	Water	533	
380-184611-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-184611-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 190064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	189706
380-185055-8	FB AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	189706
380-185055-9	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	189706
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	189706
MBL 380-189706/44-A	Method Blank	Total/NA	Water	533	189706
LCS 380-189706/46-A	Lab Control Sample	Total/NA	Water	533	189706
MRL 380-189706/45-A	Lab Control Sample	Total/NA	Water	533	189706
380-184611-E-1-A MS	Matrix Spike	Total/NA	Water	533	189706
380-184611-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	189706

Prep Batch: 190359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	533	
MBL 380-190359/20-A	Method Blank	Total/NA	Water	533	
LCS 380-190359/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-190359/21-A	Lab Control Sample	Total/NA	Water	533	
380-185055-E-1-A MS	380-185055-E-1-A MS	Total/NA	Drinking Water	533	
380-185055-F-1-A MSD	380-185055-F-1-A MSD	Total/NA	Drinking Water	533	

Analysis Batch: 190557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01)	Total/NA	Drinking Water	533	190359
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	190359
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	190359
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP073)	Total/NA	Drinking Water	533	190359
MBL 380-190359/20-A	Method Blank	Total/NA	Water	533	190359
LCS 380-190359/22-A	Lab Control Sample	Total/NA	Water	533	190359
MRL 380-190359/21-A	Lab Control Sample	Total/NA	Water	533	190359
380-185055-E-1-A MS	380-185055-E-1-A MS	Total/NA	Drinking Water	533	190359
380-185055-F-1-A MSD	380-185055-F-1-A MSD	Total/NA	Drinking Water	533	190359

Lab Chronicle

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-1

Date Collected: 11/24/25 10:22

Matrix: Drinking Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 18:30

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

Lab Sample ID: 380-185055-2

Date Collected: 11/24/25 10:58

Matrix: Drinking Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			190359	XTD8	EA POM	12/05/25 05:20
Total/NA	Analysis	533		1	190557	Y5FM	EA POM	12/06/25 01:04
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 20:58

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

Lab Sample ID: 380-185055-3

Date Collected: 11/24/25 11:37

Matrix: Drinking Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			190359	XTD8	EA POM	12/05/25 05:20
Total/NA	Analysis	533		1	190557	Y5FM	EA POM	12/06/25 01:13
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 21:08

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

Lab Sample ID: 380-185055-4

Date Collected: 11/24/25 12:10

Matrix: Drinking Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			190359	XTD8	EA POM	12/05/25 05:20
Total/NA	Analysis	533		1	190557	Y5FM	EA POM	12/06/25 01:22
Total/NA	Prep	537.1 DW			189453	X5FS	EA POM	12/02/25 10:06
Total/NA	Analysis	537.1		1	189705	SZ9R	EA POM	12/03/25 09:50

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

Lab Sample ID: 380-185055-5

Date Collected: 11/24/25 12:44

Matrix: Drinking Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			190359	XTD8	EA POM	12/05/25 05:20
Total/NA	Analysis	533		1	190557	Y5FM	EA POM	12/06/25 01:32

Lab Chronicle

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Lab Sample ID: 380-185055-5

Date Collected: 11/24/25 12:44
Date Received: 11/28/25 10:12

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			189453	X5FS	EA POM	12/02/25 10:06
Total/NA	Analysis	537.1		1	189705	SZ9R	EA POM	12/03/25 10:11

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-185055-6

Date Collected: 11/24/25 10:22
Date Received: 11/28/25 10:12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 21:17

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-185055-7

Date Collected: 11/24/25 10:58
Date Received: 11/28/25 10:12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189706	XTD8	EA POM	12/03/25 06:49
Total/NA	Analysis	533		1	190064	Y5FM	EA POM	12/04/25 14:18
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 21:27

Client Sample ID: FB AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-185055-8

Date Collected: 11/24/25 11:37
Date Received: 11/28/25 10:12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189706	XTD8	EA POM	12/03/25 06:49
Total/NA	Analysis	533		1	190064	Y5FM	EA POM	12/04/25 14:27
Total/NA	Prep	537.1 DW			189423	G9MN	EA POM	12/02/25 01:08
Total/NA	Analysis	537.1		1	189499	SZ9R	EA POM	12/02/25 21:37

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-185055-9

Date Collected: 11/24/25 12:10
Date Received: 11/28/25 10:12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189706	XTD8	EA POM	12/03/25 06:49
Total/NA	Analysis	533		1	190064	Y5FM	EA POM	12/04/25 14:37
Total/NA	Prep	537.1 DW			189453	X5FS	EA POM	12/02/25 10:06
Total/NA	Analysis	537.1		1	189705	SZ9R	EA POM	12/03/25 10:21

Lab Chronicle

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-185055-10

Date Collected: 11/24/25 12:44

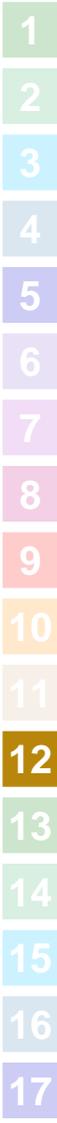
Matrix: Water

Date Received: 11/28/25 10:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			189706	XTD8	EA POM	12/03/25 06:49
Total/NA	Analysis	533		1	190064	Y5FM	EA POM	12/04/25 14:47
Total/NA	Prep	537.1 DW			189453	X5FS	EA POM	12/02/25 10:06
Total/NA	Analysis	537.1		1	189705	SZ9R	EA POM	12/03/25 10:31

Laboratory References:

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



Accreditation/Certification Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

Laboratory: Eurofins Eaton Analytical Pomona

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

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

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

Method Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch Wells
P1/P2, Aiea Wells Pumps 1&2

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

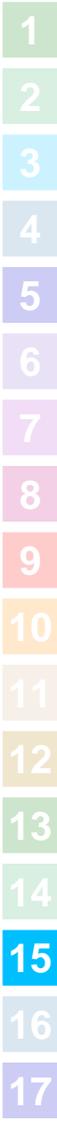


Sample Summary

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

Job ID: 380-185055-1
SDG: PFAS: Moanalua Wells, Halawa Wells, Aiea Gulch
Wells P1/P2, Aiea Wells Pumps 1&2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-185055-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	11/24/25 10:22	11/28/25 10:12	HI0000331
380-185055-2	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	11/24/25 10:58	11/28/25 10:12	HI0000331
380-185055-3	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	11/24/25 11:37	11/28/25 10:12	HI0000331
380-185055-4	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	11/24/25 12:10	11/28/25 10:12	HI0000331
380-185055-5	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	11/24/25 12:44	11/28/25 10:12	HI0000331
380-185055-6	FB MOANALUA WELLS	Water	11/24/25 10:22	11/28/25 10:12	HI0000331
380-185055-7	FB HALAWA WELLS UNITS 1 & 2	Water	11/24/25 10:58	11/28/25 10:12	HI0000331
380-185055-8	FB AIEA GULCH WELLS PUMP 1	Water	11/24/25 11:37	11/28/25 10:12	HI0000331
380-185055-9	FB AIEA GULCH WELLS PUMP 2	Water	11/24/25 12:10	11/28/25 10:12	HI0000331
380-185055-10	FB AIEA WELLS PUMPS 1&2 (260)	Water	11/24/25 12:44	11/28/25 10:12	HI0000331



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

Chain of Custody Record



Emmri
Amari



Client Information
 Client Contact: Kirk Iwamoto
 Phone: +1 808 748 5840
 City & County of Honolulu
 Address: 630 South Beretania Street, Chemistry Lab
 City: Honolulu
 State, Zip: HI, 96843
 Phone: 808-748-5840 (tel)
 Email: kiwamoto@hibws.org
 Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill
 Site:

Lab PW: Lopez, Maria
E-Mail: Maria.Lopez@et.eurofins.com
Carrier Tracking Note(s):
State of Origin:
Job #:
COC No: 380-27941-2757.2
Page: Page 2 of 2
380-185055 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Snow/I, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested				Special Instructions/Note:
							A	Q	QA	Y	
Moanalua Wells	24-Nov-2025	1022	G	Water			533 - All Analytes				chlorinated
Halawa Wells Units 1&2 P1	24-Nov-2025	1058	G	Water			537 1_DW_PREC - 637.1 Full List				chlorinated
Aiea Gulch Wells Pump 1	24-Nov-2025	1137	G	Water			525.2_PREC - (MOD) 626plus PLUS TICs				chlorinated
Aiea Gulch Wells Pump 2	24-Nov-2025	1210	G	Water			6016B_DRO_LL_C8 - HNL Ranges, C10-C24/C24-C36/C8 - C18				chlorinated
Aiea Wells Pumps 1&2 (260) P2	24-Nov-2025	1244	G	Water			6016B_GRO_LL - (MOD) GRO				chlorinated
FB Moanalua Wells	24-Nov-2025	1022					SUBCONTRACT - 625 PAH Physia LL (EAL) + TICs				
FB Halawa Wells Units 1&2	24-Nov-2025	1058					6016B_GRO_LL - (MOD) GRO				
FB Aiea Gulch Wells Pump 1	24-Nov-2025	1137					6016B_DRO_LL_C8 - HNL Ranges, C10-C24/C24-C36/C8 - C18				
FB Aiea Gulch Wells Pump 2	24-Nov-2025	1210					6016B_GRO_LL - (MOD) GRO				
FB Aiea Wells Pumps 1&2 (260)	24-Nov-2025	1244					SUBCONTRACT - 625 PAH Physia LL (EAL) + TICs				

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by
 Date/Time: 25 Nov 2025 1400
 Date/Time: 11/28/25 10:12
 Date/Time: 11/28/25 10:12
 Date/Time: 11/28/25 10:12
 Company: HBWS
 Company: Company
 Company: Company
 Company: Company

Method of Shipment: FedEx 8864 0524 4759
Received by: [Signature]
Received by: [Signature]
Received by: [Signature]
 Cooler Temperature(s) °C and Other Remarks: 750A 12.6 °C : 2.6 °C
 GEEL FROZER



Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone (626) 366-1100

Chain of Custody Record



Client Information
 Client Contact: Kirk Iwamoto
 Phone: +1 808 748 5840
 Lab PM: Lopez, Maria
 E-Mail: Maria.Lopez@et.eurofins.com
 COC No: 380-27941-2757.2
 Page: Page 2 of 2
 Job #: 380-185055 COC

Company
 City & County of Honolulu
 Address: 630 South Beretania Street, Chemistry Lab
 City: Honolulu
 State, Zip: HI, 96843
 Phone: 808-748-5840 (tel)
 Email: kiwamoto@hbws.org
 Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill
 Project #: 38001111
 SSOW#:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swab, On-site, etc.)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SUBCONTRACT - 625 PAH Phys LL (EAL) + TICs		8015B_GRO_LL - (MOD) GRO		8015B_PRO_LL_CS - HNL Ranges, C10-C21/C24-C36/C8-C18		625.2_PREC - (MOD) 625plus PLUS TICs		637.1_DW_PREC - 637.1 Full List		633 - All Analytes		Total Number of Containers	Special Instructions/Note:	
						Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N			
Moanalua Wells	24-Nov-2025	1022	G	Water																		chlorinated		
Halawa Wells Units 1&2 P1	24-Nov-2025	1058	G	Water																			chlorinated	
Aiea Gulch Wells Pump 1	24-Nov-2025	1137	G	Water																			chlorinated	
Aiea Gulch Wells Pump 2	24-Nov-2025	1210	G	Water																			chlorinated	
Aiea Wells Pumps 1&2 (260) P2	24-Nov-2025	1244	G	Water																			chlorinated	
FB Moanalua Wells	24-Nov-2025	1022																						
FB Halawa Wells Units 1&2	24-Nov-2025	1058																						
FB Aiea Gulch Wells Pump 1	24-Nov-2025	1137																						
FB Aiea Gulch Wells Pump 2	24-Nov-2025	1210																						
FB Aiea Wells Pumps 1&2 (260)	24-Nov-2025	1244																						

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by _____ **Date:** _____ **Time:** _____

Received by _____ **Date/Time:** 25 Nov 2025 1400 **Company:** HBWS

Received by _____ **Date/Time:** _____ **Company:** _____

Received by _____ **Date/Time:** _____ **Company:** _____

Method of Shipment: FED EX 8864 0524 4759 **Date/Time:** 11/28/25 10:12 **Company:** _____

Special Instructions/QC Requirements: 757A 12.6'-0.0' = 2.6' FLOOR



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-185055-1

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

Login Number: 185055

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

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