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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/2/2025 11:47:44 AM

JOB DESCRIPTION

RED-HILL
Weekly PFAS

JOB NUMBER

380-127908-1

Eurofins Eaton Analytical Pomona

Job Notes

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

Compliance Statement

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

Authorization



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Authorized for release by
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Definitions/Glossary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: 380-127908-1

Job ID: 380-127908-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-127908-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/27/2024 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.5°C and 3.3°C.

Receipt Exceptions

One or more containers for the following sample was received broken or leaking: AIEA GULCH WELLS P2 (260) (331-004-WL103) (380-127908-3). 1 of 3 bottles of 533 received broken from this site.

The following samples were received with ice present in the containers. The samples and containers appeared to be intact. FB KA'AMILO WELLS (380-127908-10). Sample analysis cancelled due to this.

PFAS

Method 533: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: FB AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-127908-9) FRB. The IDAs are biased low, which caused high biased results. This field reagent blank is not needed since the native sample is ND for all analytes. Results for the native sample are not affected by this FRB. Data excluded due to this QC failure. Analysis of the Field Blank is required only if a field sample contains a method analyte or analyte at, or above, the MRL.

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: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.0		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		537.1	Total/NA

**Client Sample ID: AIEA GULCH WELLS P1 (260)
(331-003-WL102)**
PWSID Number: HI0000331

Lab Sample ID: 380-127908-2

No Detections.

**Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103)**
PWSID Number: HI0000331

Lab Sample ID: 380-127908-3

No Detections.

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

Lab Sample ID: 380-127908-4

No Detections.

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

No Detections.

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

Lab Sample ID: 380-127908-6

No Detections.

**Client Sample ID: FB AIEA GULCH WELLS P1 (260)
(331-003-WL102)**
PWSID Number: HI0000331

Lab Sample ID: 380-127908-7

No Detections.

**Client Sample ID: FB AIEA GULCH WELLS P2 (260)
(331-004-WL103)**
PWSID Number: HI0000331

Lab Sample ID: 380-127908-8

No Detections.

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

Lab Sample ID: 380-127908-9

No Detections.

This Detection Summary does not include radiochemical test results.

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Detection Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB KA'AMILO WELLS

Lab Sample ID: 380-127908-10

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-1

Date Collected: 12/23/24 09:39

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:09	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorohexanoic acid (PFHxA)	2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:09	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C6 PFDA	110		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C5 PFHxA	110		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C4 PFHpA	116		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C8 PFOA	114		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C9 PFNA	112		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C7 PFUnA	109		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C2 PFDoA	101		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C4 PFBA	114		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C5 PFPeA	118		50 - 200			12/30/24 06:55	12/30/24 21:09	1
13C3 PFBS	113		50 - 200			12/30/24 06:55	12/30/24 21:09	1

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Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-1

Date Collected: 12/23/24 09:39
Date Received: 12/27/24 09:25

Matrix: Drinking Water
PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	115		50 - 200	12/30/24 06:55	12/30/24 21:09	1
13C8 PFOS	113		50 - 200	12/30/24 06:55	12/30/24 21:09	1
13C2-4:2-FTS	133		50 - 200	12/30/24 06:55	12/30/24 21:09	1
13C2-6:2-FTS	122		50 - 200	12/30/24 06:55	12/30/24 21:09	1
13C2-8:2-FTS	109		50 - 200	12/30/24 06:55	12/30/24 21:09	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		12/30/24 06:12	12/31/24 16:37	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130	12/30/24 06:12	12/31/24 16:37	1
13C2 PFHxA	110		70 - 130	12/30/24 06:12	12/31/24 16:37	1
13C2 PFDA	95		70 - 130	12/30/24 06:12	12/31/24 16:37	1
13C3-GenX	111		70 - 130	12/30/24 06:12	12/31/24 16:37	1

**Client Sample ID: AIEA GULCH WELLS P1 (260)
(331-003-WL102)**

Lab Sample ID: 380-127908-2

Date Collected: 12/23/24 10:10
Date Received: 12/27/24 09:25

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-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1

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Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: AIEA GULCH WELLS P1 (260)
(331-003-WL102)

Lab Sample ID: 380-127908-2

Date Collected: 12/23/24 10:10
Date Received: 12/27/24 09:25

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6 2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	107		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C6 PFDA	108		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C5 PFHxA	117		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C4 PFHpA	125		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C8 PFOA	115		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C9 PFNA	114		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C7 PFUnA	112		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C2 PFDoA	107		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C4 PFBA	113		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C5 PFPeA	116		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C3 PFBS	117		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C3 PFHxS	117		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C8 PFOS	114		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C2-4:2-FTS	129		50 - 200	12/30/24 06:55	12/30/24 21:19	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: AIEA GULCH WELLS P1 (260)
(331-003-WL102)

Lab Sample ID: 380-127908-2

Date Collected: 12/23/24 10:10
Date Received: 12/27/24 09:25

Matrix: Drinking Water
PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-6:2-FTS	123		50 - 200	12/30/24 06:55	12/30/24 21:19	1
13C2-8:2-FTS	107		50 - 200	12/30/24 06:55	12/30/24 21:19	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	12/30/24 06:12	12/31/24 16:48	1
13C2 PFHxA	100		70 - 130	12/30/24 06:12	12/31/24 16:48	1
13C2 PFDA	90		70 - 130	12/30/24 06:12	12/31/24 16:48	1
13C3-GenX	104		70 - 130	12/30/24 06:12	12/31/24 16:48	1

Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103)

Lab Sample ID: 380-127908-3

Date Collected: 12/23/24 10:31
Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103)

Lab Sample ID: 380-127908-3

Date Collected: 12/23/24 10:31

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:29	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	109		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C6 PFDA	110		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C5 PFHxA	119		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C4 PFHpA	118		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C8 PFOA	114		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C9 PFNA	114		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C7 PFUnA	113		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C2 PFDoA	102		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C4 PFBA	116		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C5 PFPeA	119		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C3 PFBS	110		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C3 PFHxS	113		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C8 PFOS	115		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C2-4:2-FTS	122		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C2-6:2-FTS	120		50 - 200			12/30/24 06:55	12/30/24 21:29	1
13C2-8:2-FTS	103		50 - 200			12/30/24 06:55	12/30/24 21:29	1

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103)

Lab Sample ID: 380-127908-3

Date Collected: 12/23/24 10:31

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:12	12/31/24 17:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	94		70 - 130			12/30/24 06:12	12/31/24 17:09	1
13C2 PFHxA	100		70 - 130			12/30/24 06:12	12/31/24 17:09	1
13C2 PFDA	85		70 - 130			12/30/24 06:12	12/31/24 17:09	1
13C3-GenX	105		70 - 130			12/30/24 06:12	12/31/24 17:09	1

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

Lab Sample ID: 380-127908-4

Date Collected: 12/23/24 10:57

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-4

Date Collected: 12/23/24 10:57

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:38	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	114		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C6 PFDA	109		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C5 PFHxA	122		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C4 PFHpA	121		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C8 PFOA	121		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C9 PFNA	114		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C7 PFUnA	113		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C2 PFDoA	108		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C4 PFBA	119		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C5 PFPeA	115		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C3 PFBS	113		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C3 PFHxS	115		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C8 PFOS	116		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C2-4:2-FTS	119		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C2-6:2-FTS	122		50 - 200			12/30/24 06:55	12/30/24 21:38	1
13C2-8:2-FTS	105		50 - 200			12/30/24 06:55	12/30/24 21:38	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		12/30/24 06:12	12/31/24 17:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-4

Date Collected: 12/23/24 10:57

Matrix: Drinking Water

Date Received: 12/27/24 09:25

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		12/30/24 06:12	12/31/24 17:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			12/30/24 06:12	12/31/24 17:20	1
13C2 PFHxA	106		70 - 130			12/30/24 06:12	12/31/24 17:20	1
13C2 PFDA	91		70 - 130			12/30/24 06:12	12/31/24 17:20	1
13C3-GenX	106		70 - 130			12/30/24 06:12	12/31/24 17:20	1

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 21:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 21:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	117		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C6 PFDA	108		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C5 PFHxA	116		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C4 PFHpA	119		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C8 PFOA	118		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C9 PFNA	112		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C7 PFUnA	114		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C2 PFDoA	108		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C4 PFBA	116		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C5 PFPeA	119		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C3 PFBS	115		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C3 PFHxS	117		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C8 PFOS	115		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C2-4:2-FTS	135		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C2-6:2-FTS	119		50 - 200	12/30/24 06:55	12/30/24 21:57	1
13C2-8:2-FTS	108		50 - 200	12/30/24 06:55	12/30/24 21:57	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		12/30/24 06:12	12/31/24 17:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

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		12/30/24 06:12	12/31/24 17:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		70 - 130			12/30/24 06:12	12/31/24 17:31	1
13C2 PFHxA	105		70 - 130			12/30/24 06:12	12/31/24 17:31	1
13C2 PFDA	93		70 - 130			12/30/24 06:12	12/31/24 17:31	1
13C3-GenX	105		70 - 130			12/30/24 06:12	12/31/24 17:31	1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-127908-6

(331-206-TP065)

Date Collected: 12/23/24 09:39

Matrix: Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 22:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-6

Date Collected: 12/23/24 09:39

Matrix: Water

Date Received: 12/27/24 09:25

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:07	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	106		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C6 PFDA	104		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C5 PFHxA	113		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C4 PFHpA	115		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C8 PFOA	113		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C9 PFNA	106		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C7 PFUnA	109		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C2 PFDoA	101		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C4 PFBA	112		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C5 PFPeA	111		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C3 PFBS	111		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C3 PFHxS	115		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C8 PFOS	110		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C2-4:2-FTS	123		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C2-6:2-FTS	120		50 - 200			12/30/24 06:55	12/30/24 22:07	1
13C2-8:2-FTS	104		50 - 200			12/30/24 06:55	12/30/24 22:07	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		12/30/24 06:12	12/31/24 17:42	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-6

Date Collected: 12/23/24 09:39

Matrix: Water

Date Received: 12/27/24 09:25

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		70 - 130			12/30/24 06:12	12/31/24 17:42	1
13C2 PFHxA	104		70 - 130			12/30/24 06:12	12/31/24 17:42	1
13C2 PFDA	93		70 - 130			12/30/24 06:12	12/31/24 17:42	1
13C3-GenX	105		70 - 130			12/30/24 06:12	12/31/24 17:42	1

**Client Sample ID: FB AIEA GULCH WELLS P1 (260)
(331-003-WL102)**

Lab Sample ID: 380-127908-7

Date Collected: 12/23/24 10:10

Matrix: Water

Date Received: 12/27/24 09:25

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		12/30/24 06:55	12/30/24 22:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

**Client Sample ID: FB AIEA GULCH WELLS P1 (260)
(331-003-WL102)**

Lab Sample ID: 380-127908-7

**Date Collected: 12/23/24 10:10
Date Received: 12/27/24 09:25**

**Matrix: Water
PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:17	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	115		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C6 PFDA	112		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C5 PFHxA	120		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C4 PFHpA	120		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C8 PFOA	119		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C9 PFNA	114		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C7 PFUnA	115		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C2 PFDoA	103		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C4 PFBA	113		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C5 PFPeA	115		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C3 PFBS	111		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C3 PFHxS	113		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C8 PFOS	112		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C2-4:2-FTS	115		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C2-6:2-FTS	116		50 - 200			12/30/24 06:55	12/30/24 22:17	1
13C2-8:2-FTS	103		50 - 200			12/30/24 06:55	12/30/24 22:17	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		12/30/24 06:12	12/31/24 17:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB AIEA GULCH WELLS P1 (260)
(331-003-WL102)

Lab Sample ID: 380-127908-7

Date Collected: 12/23/24 10:10
Date Received: 12/27/24 09:25

Matrix: Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 17:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130			12/30/24 06:12	12/31/24 17:53	1
13C2 PFHxA	106		70 - 130			12/30/24 06:12	12/31/24 17:53	1
13C2 PFDA	94		70 - 130			12/30/24 06:12	12/31/24 17:53	1
13C3-GenX	112		70 - 130			12/30/24 06:12	12/31/24 17:53	1

Client Sample ID: FB AIEA GULCH WELLS P2 (260)
(331-004-WL103)

Lab Sample ID: 380-127908-8

Date Collected: 12/23/24 10:31
Date Received: 12/27/24 09:25

Matrix: 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		12/30/24 06:55	12/30/24 22:26	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1

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Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

**Client Sample ID: FB AIEA GULCH WELLS P2 (260)
(331-004-WL103)**

Lab Sample ID: 380-127908-8

Date Collected: 12/23/24 10:31

Matrix: Water

Date Received: 12/27/24 09:25

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
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		12/30/24 06:55	12/30/24 22:26	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C6 PFDA	109		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C5 PFHxA	119		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C4 PFHpA	117		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C8 PFOA	116		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C9 PFNA	114		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C7 PFUnA	114		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C2 PFDoA	103		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C4 PFBA	114		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C5 PFPeA	116		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C3 PFBS	115		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C3 PFHxS	121		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C8 PFOS	120		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C2-4:2-FTS	126		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C2-6:2-FTS	122		50 - 200			12/30/24 06:55	12/30/24 22:26	1
13C2-8:2-FTS	110		50 - 200			12/30/24 06:55	12/30/24 22:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			12/30/24 06:12	12/31/24 18:03	1
13C2 PFHxA	102		70 - 130			12/30/24 06:12	12/31/24 18:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB AIEA GULCH WELLS P2 (260)
(331-004-WL103)

Lab Sample ID: 380-127908-8

Date Collected: 12/23/24 10:31
Date Received: 12/27/24 09:25

Matrix: Water
PWSID Number: HI0000331

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	90		70 - 130	12/30/24 06:12	12/31/24 18:03	1
13C3-GenX	104		70 - 130	12/30/24 06:12	12/31/24 18:03	1

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

Lab Sample ID: 380-127908-9

Date Collected: 12/23/24 10:57
Date Received: 12/27/24 09:25

Matrix: Water
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		12/30/24 06:12	12/31/24 18:14	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130	12/30/24 06:12	12/31/24 18:14	1
13C2 PFHxA	103		70 - 130	12/30/24 06:12	12/31/24 18:14	1
13C2 PFDA	92		70 - 130	12/30/24 06:12	12/31/24 18:14	1
13C3-GenX	108		70 - 130	12/30/24 06:12	12/31/24 18:14	1

Client Sample ID: FB KA'AMILO WELLS

Lab Sample ID: 380-127908-10

Date Collected: 12/23/24 11:32
Date Received: 12/27/24 09:25

Matrix: Water

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		12/30/24 06:12	12/31/24 18:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB KA'AMILO WELLS

Lab Sample ID: 380-127908-10

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

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		12/30/24 06:12	12/31/24 18:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		12/30/24 06:12	12/31/24 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	100		70 - 130	12/30/24 06:12	12/31/24 18:25	1
13C2 PFHxA	101		70 - 130	12/30/24 06:12	12/31/24 18:25	1
13C2 PFDA	90		70 - 130	12/30/24 06:12	12/31/24 18:25	1
13C3-GenX	106		70 - 130	12/30/24 06:12	12/31/24 18:25	1

Action Limit Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		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)	2.2		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: AIEA GULCH WELLS P1 (260)
(331-003-WL102)
PWSID Number: HI0000331

Lab Sample ID: 380-127908-2

Compliance Check

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

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

Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103)
PWSID Number: HI0000331

Lab Sample ID: 380-127908-3

Compliance Check

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

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: AIEA GULCH WELLS P2 (260)
(331-004-WL103) (Continued)
PWSID Number: HI0000331

Lab Sample ID: 380-127908-3

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

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

Lab Sample ID: 380-127908-4

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: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS (Continued)

Lab Sample ID: 380-127908-5

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

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

Lab Sample ID: 380-127908-6

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 P1 (260) (331-003-WL102)

Lab Sample ID: 380-127908-7

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB AIEA GULCH WELLS P1 (260)
(331-003-WL102) (Continued)
PWSID Number: HI0000331

Lab Sample ID: 380-127908-7

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 Limit	RL	Method	Prep Type
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 P2 (260)
(331-004-WL103)
PWSID Number: HI0000331

Lab Sample ID: 380-127908-8

Compliance Check

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

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

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

Lab Sample ID: 380-127908-9

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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: 380-127908-1
SDG: Weekly PFAS

Client Sample ID: FB KA'AMILO WELLS

Lab Sample ID: 380-127908-10

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	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: 380-127908-1
 SDG: Weekly PFAS

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)
380-127908-1	HALAWA WELLS UNITS 1 & 2 F	99	110	95	111
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	102	100	90	104
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	94	100	85	105
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	102	106	91	106

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)
380-127907-B-1-A MS	Matrix Spike	100	113	95	109
380-127907-C-1-A MSD	Matrix Spike Duplicate	89	106	90	107
380-127908-5	KA'AMILO WELLS	100	105	93	105
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	93	104	93	105
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL102)	101	106	94	112
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL103)	102	102	90	104
380-127908-9	FB AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	101	103	92	108
380-127908-10	FB KA'AMILO WELLS	100	101	90	106
LCS 380-125748/21-A	Lab Control Sample	98	107	99	110
MBL 380-125748/19-A	Method Blank	100	117	104	117
MRL 380-125748/20-A	Lab Control Sample	96	102	95	107

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: 380-127908-1
SDG: Weekly PFAS

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-127908-1	HALAWA WELLS UNITS 1 & 2 F	101	110	110	116	114	112	109	101
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	107	108	117	125	115	114	112	107
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	109	110	119	118	114	114	113	102
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	114	109	122	121	121	114	113	108

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-127908-1	HALAWA WELLS UNITS 1 & 2 F	114	118	113	115	113	133	122	109
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	113	116	117	117	114	129	123	107
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	116	119	110	113	115	122	120	103
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	119	115	113	115	116	119	122	105

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-127908-5	KA'AMILO WELLS	117	108	116	119	118	112	114	108
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	106	104	113	115	113	106	109	101
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL102)	115	112	120	120	119	114	115	103
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL103)	108	109	119	117	116	114	114	103
380-127916-B-2-A MS	Matrix Spike	105	104	101	107	112	109	102	98
380-127916-C-2-A MSD	Matrix Spike Duplicate	104	104	101	103	106	106	102	93
LCS 380-125753/27-A	Lab Control Sample	121	112	118	115	118	114	114	113

Isotope Dilution Summary

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

Job ID: 380-127908-1
 SDG: Weekly PFAS

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)
MBL 380-125753/25-A	Method Blank	102	101	112	110	110	106	106	98
MRL 380-125753/26-A	Lab Control Sample	85	95	94	96	94	96	99	93

		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)
380-127908-5	KA'AMILO WELLS	116	119	115	117	115	135	119	108
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	112	111	111	115	110	123	120	104
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL102)	113	115	111	113	112	115	116	103
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL103)	114	116	115	121	120	126	122	110
380-127916-B-2-A MS	Matrix Spike	110	178	106	114	119	149	153	125
380-127916-C-2-A MSD	Matrix Spike Duplicate	105	166	103	108	113	146	150	119
LCS 380-125753/27-A	Lab Control Sample	114	120	116	112	115	119	122	110
MBL 380-125753/25-A	Method Blank	111	111	107	109	110	117	107	103
MRL 380-125753/26-A	Lab Control Sample	98	91	108	108	110	121	121	105

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- 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: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-125753/25-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125753

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		12/30/24 06:55	12/30/24 18:56	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C6 PFDA	101		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C5 PFHxA	112		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C4 PFHpA	110		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C8 PFOA	110		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C9 PFNA	106		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C7 PFUnA	106		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C2 PFDoA	98		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C4 PFBA	111		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C5 PFPeA	111		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C3 PFBS	107		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C3 PFHxS	109		50 - 200	12/30/24 06:55	12/30/24 18:56	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-125753/25-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125753

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C8 PFOS	110		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C2-4:2-FTS	117		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C2-6:2-FTS	107		50 - 200	12/30/24 06:55	12/30/24 18:56	1
13C2-8:2-FTS	103		50 - 200	12/30/24 06:55	12/30/24 18:56	1

Lab Sample ID: LCS 380-125753/27-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	106		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	106		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	107		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	98.8		ng/L		82	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	106		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	120	108		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	120	103		ng/L		85	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	105		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	108		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	120	106		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	120	108		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	104		ng/L		86	70 - 130
Perfluorooctanoic acid (PFOA)	120	104		ng/L		87	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	109		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	120	106		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	112		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	101		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	101		ng/L		84	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	106		ng/L		88	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	102		ng/L		85	70 - 130
Perfluoropentanoic acid (PFPeA)	120	103		ng/L		86	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	106		ng/L		88	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: LCS 380-125753/27-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	110		ng/L		91	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	121		50 - 200				
13C6 PFDA	112		50 - 200				
13C5 PFHxA	118		50 - 200				
13C4 PFHpA	115		50 - 200				
13C8 PFOA	118		50 - 200				
13C9 PFNA	114		50 - 200				
13C7 PFUnA	114		50 - 200				
13C2 PFDoA	113		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	120		50 - 200				
13C3 PFBS	116		50 - 200				
13C3 PFHxS	112		50 - 200				
13C8 PFOS	115		50 - 200				
13C2-4:2-FTS	119		50 - 200				
13C2-6:2-FTS	122		50 - 200				
13C2-8:2-FTS	110		50 - 200				

Lab Sample ID: MRL 380-125753/26-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.70	J	ng/L		85	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.86	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.70	J	ng/L		85	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.81	J	ng/L		90	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.85	J	ng/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.76	J	ng/L		88	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.90	J	ng/L		95	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.74	J	ng/L		87	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.77	J	ng/L		88	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-125753/26-A
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	1.86	J	ng/L		93	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	1.89	J	ng/L		95	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	1.81	J	ng/L		90	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.83	J	ng/L		91	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.65	J	ng/L		82	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.79	J	ng/L		89	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.84	J	ng/L		92	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	85		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	94		50 - 200
13C4 PFHpA	96		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	96		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	93		50 - 200
13C4 PFBA	98		50 - 200
13C5 PFPeA	91		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	121		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-127916-B-2-A MS
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	27	*5- F1	121	101	F1	ng/L		61	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	20	*5- F1	121	104	F1	ng/L		69	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	109		ng/L		90	70 - 130

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127916-B-2-A MS
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 125753

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		121	104		ng/L		87	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	55		121	163		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0	*5-	121	112		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	121	106		ng/L		88	70 - 130
Perfluoroheptanoic acid (PFHpA)	9.2		121	119		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	4.8	*5-	121	114		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	7.0		121	121		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	<2.0	*5-	121	112		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	160	*5- F1	121	174	F1	ng/L		13	70 - 130
Perfluorooctanoic acid (PFOA)	34	*5-	121	141		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	121	112		ng/L		93	70 - 130
Perfluorobutanoic acid (PFBA)	30		121	135		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0	*5-	121	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	105		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0	*5-	121	114		ng/L		94	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	110		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	110		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	134		ng/L		111	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	58		121	169		ng/L		92	70 - 130
Perfluoropentanoic acid (PFPeA)	12		121	117		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0	*5-	121	107		ng/L		88	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0	*5-	121	109		ng/L		90	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	105		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	101		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	109		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	98		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	178		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	119		50 - 200

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127916-B-2-A MS
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 125753

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	149		50 - 200
13C2-6:2-FTS	153		50 - 200
13C2-8:2-FTS	125		50 - 200

Lab Sample ID: 380-127916-C-2-A MSD
Matrix: Water
Analysis Batch: 125869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 125753

<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)	27	*5- F1	121	101	F1	ng/L		62	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	20	*5- F1	121	103	F1	ng/L		69	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	111		ng/L		92	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	102		ng/L		85	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	55		121	155		ng/L		83	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0	*5-	121	109		ng/L		91	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	121	114		ng/L		94	70 - 130	7	30
Perfluoroheptanoic acid (PFHpA)	9.2		121	121		ng/L		93	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	4.8	*5-	121	116		ng/L		92	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	7.0		121	120		ng/L		94	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0	*5-	121	113		ng/L		93	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	160	*5- F1	121	176	F1	ng/L		14	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	34	*5-	121	150		ng/L		96	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	121	111		ng/L		92	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	30		121	138		ng/L		89	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0	*5-	121	113		ng/L		93	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	105		ng/L		87	70 - 130	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0	*5-	121	107		ng/L		88	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	108		ng/L		89	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	108		ng/L		89	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	136		ng/L		112	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	58		121	175		ng/L		96	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	12		121	113		ng/L		84	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0	*5-	121	107		ng/L		88	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0	*5-	121	110		ng/L		91	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	104		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	101		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	93		50 - 200
13C4 PFBA	105		50 - 200
13C5 PFPeA	166		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	146		50 - 200
13C2-6:2-FTS	150		50 - 200
13C2-8:2-FTS	119		50 - 200

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

Lab Sample ID: MBL 380-125748/19-A
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125748

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		12/30/24 06:12	12/31/24 14:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		12/30/24 06:12	12/31/24 14:16	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	100		70 - 130			12/30/24 06:12	12/31/24 14:16	1
13C2 PFHxA	117		70 - 130			12/30/24 06:12	12/31/24 14:16	1
13C2 PFDA	104		70 - 130			12/30/24 06:12	12/31/24 14:16	1

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QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-125748/19-A
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 125748

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	117		70 - 130	12/30/24 06:12	12/31/24 14:16	1

Lab Sample ID: LCS 380-125748/21-A
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125748

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.2	27.1		ng/L		108	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.2	25.2		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.2	24.4		ng/L		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.2	24.1		ng/L		96	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.2	24.5		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	25.2	26.9		ng/L		107	70 - 130
Perfluorododecanoic acid (PFDoA)	25.2	24.4		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	25.2	25.5		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	25.2	24.0		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.2	25.4		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.2	25.2		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.2	26.7		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	25.2	24.0		ng/L		96	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.2	24.1		ng/L		96	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.2	25.6		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.2	24.9		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.2	24.7		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.2	28.0		ng/L		111	70 - 130

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	107		70 - 130
13C2 PFDA	99		70 - 130
13C3-GenX	110		70 - 130

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-125748/20-A
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 125748

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	1.96	J	ng/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.97	J	ng/L		98	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.04	J	ng/L		102	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.98	J	ng/L		99	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.16	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.04	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.10	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.01	J	ng/L		100	50 - 150
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.00	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.27	J	ng/L		113	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	102		70 - 130
13C2 PFDA	95		70 - 130
13C3-GenX	107		70 - 130

Lab Sample ID: 380-127907-B-1-A MS
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 125748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	28.7		ng/L		114	70 - 130
Perfluorooctanesulfonic acid (PFOS)	3.3		25.2	30.3		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	25.4		ng/L		101	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	26.9		ng/L		107	70 - 130

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QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127907-B-1-A MS
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 125748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec		
				Result	Qualifier				Limits		
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		25.2	27.5		ng/L		109	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	30.2		ng/L		114	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	26.4		ng/L		105	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.6		ng/L		105	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		25.2	26.1		ng/L		104	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	3.8		25.2	31.9		ng/L		112	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	28.4		ng/L		111	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	28.5		ng/L		111	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		25.2	28.0		ng/L		111	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	25.8		ng/L		102	70 - 130		
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.2	27.5		ng/L		109	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.5		ng/L		105	70 - 130		
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	27.3		ng/L		109	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	29.4		ng/L		117	70 - 130		
		MS MS									
Surrogate	%Recovery	Qualifier	Limits								
d5-NEtFOSAA	100		70 - 130								
13C2 PFHxA	113		70 - 130								
13C2 PFDA	95		70 - 130								
13C3-GenX	109		70 - 130								

Lab Sample ID: 380-127907-C-1-A MSD
Matrix: Water
Analysis Batch: 125939

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 125748

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec		RPD	
				Result	Qualifier				Limits	RPD	Limit	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	28.0		ng/L		111	70 - 130		2	30
Perfluorooctanesulfonic acid (PFOS)	3.3		25.2	29.1		ng/L		103	70 - 130		4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	25.3		ng/L		101	70 - 130		0	30
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		25.2	25.1		ng/L		100	70 - 130		7	30
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		25.2	24.8		ng/L		99	70 - 130		10	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	28.8		ng/L		109	70 - 130		5	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	25.7		ng/L		102	70 - 130		3	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.4		ng/L		105	70 - 130		1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.9		ng/L		103	70 - 130		1	30

QC Sample Results

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-127907-C-1-A MSD

Matrix: Water

Analysis Batch: 125939

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 125748

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Perfluorohexanesulfonic acid (PFHxS)	3.8		25.2	30.3		ng/L		105	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.7		ng/L		104	70 - 130	6	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	27.8		ng/L		108	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	26.5		ng/L		105	70 - 130	6	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	25.3		ng/L		101	70 - 130	2	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.2	27.0		ng/L		107	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.3		ng/L		105	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	26.4		ng/L		105	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	28.3		ng/L		112	70 - 130	4	30
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
d5-NEtFOSAA	89		70 - 130								
13C2 PFHxA	106		70 - 130								
13C2 PFDA	90		70 - 130								
13C3-GenX	107		70 - 130								

QC Association Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

LCMS

Prep Batch: 125748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127908-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	537.1 DW	
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	Total/NA	Drinking Water	537.1 DW	
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	537.1 DW	
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	537.1 DW	
380-127908-5	KA'AMILO WELLS	Total/NA	Water	537.1 DW	
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP01	Total/NA	Water	537.1 DW	
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL1	Total/NA	Water	537.1 DW	
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL1	Total/NA	Water	537.1 DW	
380-127908-9	FB AIEA WELLS PUMPS 1&2 (260) (331-203-TP	Total/NA	Water	537.1 DW	
380-127908-10	FB KA'AMILO WELLS	Total/NA	Water	537.1 DW	
MBL 380-125748/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-125748/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-125748/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-127907-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-127907-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 125753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127908-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	533	
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	Total/NA	Drinking Water	533	
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	533	
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	533	
380-127908-5	KA'AMILO WELLS	Total/NA	Water	533	
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP01	Total/NA	Water	533	
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL1	Total/NA	Water	533	
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL1	Total/NA	Water	533	
MBL 380-125753/25-A	Method Blank	Total/NA	Water	533	
LCS 380-125753/27-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-125753/26-A	Lab Control Sample	Total/NA	Water	533	
380-127916-B-2-A MS	Matrix Spike	Total/NA	Water	533	
380-127916-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 125869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127908-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	533	125753
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	Total/NA	Drinking Water	533	125753
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	533	125753
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	533	125753
380-127908-5	KA'AMILO WELLS	Total/NA	Water	533	125753
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP01	Total/NA	Water	533	125753
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL1	Total/NA	Water	533	125753
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL1	Total/NA	Water	533	125753
MBL 380-125753/25-A	Method Blank	Total/NA	Water	533	125753
LCS 380-125753/27-A	Lab Control Sample	Total/NA	Water	533	125753
MRL 380-125753/26-A	Lab Control Sample	Total/NA	Water	533	125753
380-127916-B-2-A MS	Matrix Spike	Total/NA	Water	533	125753
380-127916-C-2-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	125753

Analysis Batch: 125939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127908-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	537.1	125748

QC Association Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

LCMS (Continued)

Analysis Batch: 125939 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	Total/NA	Drinking Water	537.1	125748
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	537.1	125748
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP	Total/NA	Drinking Water	537.1	125748
380-127908-5	KA'AMILO WELLS	Total/NA	Water	537.1	125748
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP0	Total/NA	Water	537.1	125748
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL1	Total/NA	Water	537.1	125748
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL1	Total/NA	Water	537.1	125748
380-127908-9	FB AIEA WELLS PUMPS 1&2 (260) (331-203-TP	Total/NA	Water	537.1	125748
380-127908-10	FB KA'AMILO WELLS	Total/NA	Water	537.1	125748
MBL 380-125748/19-A	Method Blank	Total/NA	Water	537.1	125748
LCS 380-125748/21-A	Lab Control Sample	Total/NA	Water	537.1	125748
MRL 380-125748/20-A	Lab Control Sample	Total/NA	Water	537.1	125748
380-127907-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	125748
380-127907-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	125748

Lab Chronicle

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

Job ID: 380-127908-1
 SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-1

Date Collected: 12/23/24 09:39

Matrix: Drinking Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 21:09
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 16:37

**Client Sample ID: AIEA GULCH WELLS P1 (260)
 (331-003-WL102)**

Lab Sample ID: 380-127908-2

Date Collected: 12/23/24 10:10

Matrix: Drinking Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 21:19
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 16:48

**Client Sample ID: AIEA GULCH WELLS P2 (260)
 (331-004-WL103)**

Lab Sample ID: 380-127908-3

Date Collected: 12/23/24 10:31

Matrix: Drinking Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 21:29
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 17:09

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

Lab Sample ID: 380-127908-4

Date Collected: 12/23/24 10:57

Matrix: Drinking Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 21:38
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 17:20

Lab Chronicle

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

Job ID: 380-127908-1
 SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-127908-5

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 21:57
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 17:31

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-127908-6

(331-206-TP065)

Date Collected: 12/23/24 09:39

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 22:07
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 17:42

Client Sample ID: FB AIEA GULCH WELLS P1 (260)

Lab Sample ID: 380-127908-7

(331-003-WL102)

Date Collected: 12/23/24 10:10

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 22:17
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 17:53

Client Sample ID: FB AIEA GULCH WELLS P2 (260)

Lab Sample ID: 380-127908-8

(331-004-WL103)

Date Collected: 12/23/24 10:31

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			125753	XTD8	EA POM	12/30/24 06:55
Total/NA	Analysis	533		1	125869	Y5FM	EA POM	12/30/24 22:26
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 18:03

Lab Chronicle

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

Job ID: 380-127908-1
 SDG: Weekly PFAS

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

Lab Sample ID: 380-127908-9

Date Collected: 12/23/24 10:57

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 18:14

Client Sample ID: FB KA'AMILO WELLS

Lab Sample ID: 380-127908-10

Date Collected: 12/23/24 11:32

Matrix: Water

Date Received: 12/27/24 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			125748	G9MN	EA POM	12/30/24 06:12
Total/NA	Analysis	537.1		1	125939	M7ML	EA POM	12/31/24 18:25

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: 380-127908-1
SDG: Weekly PFAS

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25

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Method Summary

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

Job ID: 380-127908-1
SDG: Weekly PFAS

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: 380-127908-1
 SDG: Weekly PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-127908-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	12/23/24 09:39	12/27/24 09:25	HI0000331
380-127908-2	AIEA GULCH WELLS P1 (260) (331-003-WL102)	Drinking Water	12/23/24 10:10	12/27/24 09:25	HI0000331
380-127908-3	AIEA GULCH WELLS P2 (260) (331-004-WL103)	Drinking Water	12/23/24 10:31	12/27/24 09:25	HI0000331
380-127908-4	AIEA WELLS PUMPS 1&2 P2 (260) (331-203-TP400)	Drinking Water	12/23/24 10:57	12/27/24 09:25	HI0000331
380-127908-5	KA'AMILO WELLS	Water	12/23/24 11:32	12/27/24 09:25	
380-127908-6	FB HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Water	12/23/24 09:39	12/27/24 09:25	HI0000331
380-127908-7	FB AIEA GULCH WELLS P1 (260) (331-003-WL102)	Water	12/23/24 10:10	12/27/24 09:25	HI0000331
380-127908-8	FB AIEA GULCH WELLS P2 (260) (331-004-WL103)	Water	12/23/24 10:31	12/27/24 09:25	HI0000331
380-127908-9	FB AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	12/23/24 10:57	12/27/24 09:25	HI0000331
380-127908-10	FB KA'AMILO WELLS	Water	12/23/24 11:32	12/27/24 09:25	

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

Chain of Custody Record



Client Information		Lab PM: Arada Rachelle		COC No: 380-27941-2757 2	
Client Contact: Dr Ron Fenstermacher		E-Mail: Rachelle.Arada@eturonisus.com		Page: Page 2 of 2	
Company: City & County of Honolulu		PWSID:		Job #:	
Address: 630 South Beretania Street: Chemistry Lab		Due Date Requested:		Carrier Tracking No(s):	
City: Honolulu		TAT Requested (days):		State of Origin:	
State, Zip: HI 96843		Compliance Project: 4 No		Analysis Requested	
Phone: 808-748-5091 (tel)		PO #: C20525101 exp 05312023		533 All Analytes	
Email: rfenstermacher@hbws.org		WO #:		525 2_PREC (MOD) 525plus PLUS TICs	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111		537 1_OW_PREC - 537 1 Full List	
Site: SSOV#:		SSOV#:		5015B_DRQ_LL_CS HNL Ranges C10-C24/C24-C63/C8-C18	
Sample Identification		Sample Date		5015B_GRC_LL (MOD) GRC	
HALAWA WELLS UNITS 1&2 P1		23-Dec-2024		SUBCONTRACT 626 PAH Physis LL (EAL) + TICs	
AIEA GULCH WELLS PUMP 1		23-Dec-2024		Perform MS/MSD (Yes or No)	
AIEA GULCH WELLS PUMP 2		23-Dec-2024		Field Filtered Sample (Yes or No)	
AIEA WELLS PUMPS 1&2 (260) PZ		23-Dec-2024		Matrix	
KA'AMILO WELLS		23-Dec-2024		(W=water, S=solid, O=wastabil, B=BTX-tissue, A=air)	
FB HALAWA WELLS UNITS 1&2		23-Dec-2024		Sample Type (C=Comp, G=grab)	
FB AIEA GULCH WELLS PUMP 1		23-Dec-2024		Preservation Code:	
FB AIEA GULCH WELLS PUMP 2		23-Dec-2024		5015B_DRQ_LL_CS HNL Ranges C10-C24/C24-C63/C8-C18	
FB AIEA WELLS PUMPS 1&2 (260)		23-Dec-2024		5015B_GRC_LL (MOD) GRC	
FB KA'AMILO WELLS		23-Dec-2024		525 2_PREC (MOD) 525plus PLUS TICs	
Possible Hazard Identification		Sample Time		537 1_OW_PREC - 537 1 Full List	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		23-Dec-2024		525 2_PREC (MOD) 525plus PLUS TICs	
Deliverable Requested I II III IV Other (specify)		23-Dec-2024		533 All Analytes	
Empty Kit Relinquished by		Date:		537 1_OW_PREC - 537 1 Full List	
Relinquished by		Date/Time:		525 2_PREC (MOD) 525plus PLUS TICs	
Relinquished by		Date/Time:		533 All Analytes	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Date/Time:		537 1_OW_PREC - 537 1 Full List	
Custody Seal No		Date/Time:		525 2_PREC (MOD) 525plus PLUS TICs	
Special Instructions/QC Requirements:		Date/Time:		533 All Analytes	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Date/Time:		537 1_OW_PREC - 537 1 Full List	
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Date/Time:		525 2_PREC (MOD) 525plus PLUS TICs	
Method of Shipment: FX		Date/Time:		533 All Analytes	
Received by: FX		Date/Time:		537 1_OW_PREC - 537 1 Full List	
Received by:		Date/Time:		525 2_PREC (MOD) 525plus PLUS TICs	
Received by:		Date/Time:		533 All Analytes	
Cooler Temperature (°C) and Other Remarks:		Date/Time:		537 1_OW_PREC - 537 1 Full List	
Kooler 15.5 @ 60 = 1.52 GRL		Date/Time:		525 2_PREC (MOD) 525plus PLUS TICs	
2.13 @ 60 = 3.12 GRL		Date/Time:		533 All Analytes	
Ver 01/16/2019		Date/Time:		537 1_OW_PREC - 537 1 Full List	

ORIGIN ID-HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES, US

SHIP DATE: 26DEC24
ACTWGT: 62.00 LB
CAD: 258050552/NET4535

BILL RECIPIENT

TO EUROFINS RECEIVING DEPARTMENT
EUROFINS DRINKING WATER TESTING
941 CORPORATE CENTER DR

58CJ5/49B9/C6C4

POMONA CA 91768

REF: (626) 386-1100

DEPT. PO.



5 of 6
MPS# 7710 4137 8980
Mstr# 7710 4137 8946
WM ONTA
CA-US ONT
91768
FRI - 27 DEC 12:00P
PRIORITY OVERNIGHT



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Gtl 100*

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ORIGIN ID:HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

SHIP DATE: 26DEC24
ACTWGT: 62.00 LB
CAD: 258050552/INET4535

BILL RECIPIENT

TO **EUROFINS RECEIVING DEPARTMENT**
EUROFINS DRINKING WATER TESTING
941 CORPORATE CENTER DR

POMONA CA 91768

(626) 386-1100 REF.
INV. P.C.

58CJ5/49B9/C6C4

DEPT.



1214240910010V

FRI - 27 DEC 12:00P
PRIORITY OVERNIGHT

1 of 6

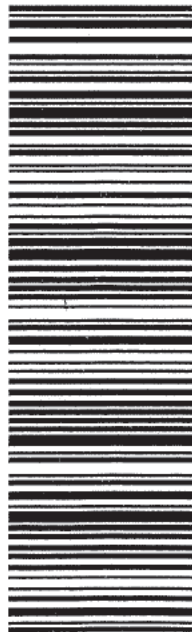
TRK# **7710 4137 8946**

MASTER

91768

WM ONTA

CA-US ONT



After printing this label
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1 Fold the printed page along the horizontal line
2 Place label in shipping pouch and affix it to your shipment

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on FedEx.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-127908-1

SDG Number: Weekly PFAS

Login Number: 127908

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Hernandez, Orlando

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	False	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

