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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
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Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL
Weekly PFAS
RUSH Weekly Red Hill

JOB NUMBER

380-118041-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-118041-1
SDG: Weekly PFAS

Qualifiers

LCMS

Qualifier	Qualifier Description
E	Result exceeded calibration range.
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: 380-118041-1

Job ID: 380-118041-1

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Job Narrative 380-118041-1

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 10/16/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C.

PFAS

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

Detection Summary

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.0		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		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)	2.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L	1		537.1	Total/NA

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

Lab Sample ID: 380-118041-2

No Detections.

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

Lab Sample ID: 380-118041-3

No Detections.

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

No Detections.

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

Lab Sample ID: 380-118041-5

No Detections.

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

Lab Sample ID: 380-118041-6

No Detections.

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

Lab Sample ID: 380-118041-7

No Detections.

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-1

Date Collected: 10/14/24 09:56

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 15:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorohexanesulfonic acid (PFHxS)	2.3		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorohexanoic acid (PFHxA)	2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoropentanoic acid (PFPeA)	2.2		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:40	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C6 PFDA	95		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C5 PFHxA	91		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C4 PFHpA	92		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C8 PFOA	91		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C9 PFNA	94		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C7 PFUnA	96		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C2 PFDoA	96		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C4 PFBA	100		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C5 PFPeA	106		50 - 200			10/19/24 17:25	10/21/24 15:40	1
13C3 PFBS	117		50 - 200			10/19/24 17:25	10/21/24 15:40	1

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Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-1

Date Collected: 10/14/24 09:56

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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	10/19/24 17:25	10/21/24 15:40	1
13C8 PFOS	116		50 - 200	10/19/24 17:25	10/21/24 15:40	1
13C2-4:2-FTS	166		50 - 200	10/19/24 17:25	10/21/24 15:40	1
13C2-6:2-FTS	135		50 - 200	10/19/24 17:25	10/21/24 15:40	1
13C2-8:2-FTS	124		50 - 200	10/19/24 17:25	10/21/24 15:40	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		10/17/24 13:45	10/19/24 20:58	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorohexanoic acid (PFHxA)	2.1		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 20:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	126		70 - 130	10/17/24 13:45	10/19/24 20:58	1
13C2 PFHxA	130		70 - 130	10/17/24 13:45	10/19/24 20:58	1
13C2 PFDA	120		70 - 130	10/17/24 13:45	10/19/24 20:58	1
13C3-GenX	127		70 - 130	10/17/24 13:45	10/19/24 20:58	1

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

Lab Sample ID: 380-118041-2

Date Collected: 10/14/24 10:28

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 15:50	1

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Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-2

Date Collected: 10/14/24 10:28

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6 2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	107		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C6 PFDA	100		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C5 PFHxA	115		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C4 PFHpA	113		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C8 PFOA	110		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C9 PFNA	109		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C7 PFUnA	95		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C2 PFDoA	90		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C4 PFBA	110		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C5 PFPeA	113		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C3 PFBS	113		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C3 PFHxS	114		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C8 PFOS	110		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C2-4:2-FTS	147		50 - 200	10/19/24 17:25	10/21/24 15:50	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-2

Date Collected: 10/14/24 10:28

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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	134		50 - 200	10/19/24 17:25	10/21/24 15:50	1
13C2-8:2-FTS	117		50 - 200	10/19/24 17:25	10/21/24 15:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/22/24 12:20	10/23/24 12:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	10/22/24 12:20	10/23/24 12:04	1
13C2 PFHxA	96		70 - 130	10/22/24 12:20	10/23/24 12:04	1
13C2 PFDA	88		70 - 130	10/22/24 12:20	10/23/24 12:04	1
13C3-GenX	86		70 - 130	10/22/24 12:20	10/23/24 12:04	1

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

Lab Sample ID: 380-118041-3

Date Collected: 10/14/24 10:54

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 15:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-3

Date Collected: 10/14/24 10:54

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 15:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 15:59	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	81		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C6 PFDA	96		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C5 PFHxA	89		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C4 PFHpA	90		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C8 PFOA	92		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C9 PFNA	96		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C7 PFUnA	96		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C2 PFDoA	97		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C4 PFBA	89		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C5 PFPeA	92		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C3 PFBS	115		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C3 PFHxS	118		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C8 PFOS	116		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C2-4:2-FTS	159		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C2-6:2-FTS	135		50 - 200			10/19/24 17:25	10/21/24 15:59	1
13C2-8:2-FTS	118		50 - 200			10/19/24 17:25	10/21/24 15:59	1

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-3

Date Collected: 10/14/24 10:54

Matrix: Drinking Water

Date Received: 10/16/24 09:45

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		10/17/24 13:45	10/19/24 21:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	129		70 - 130			10/17/24 13:45	10/19/24 21:20	1
13C2 PFHxA	129		70 - 130			10/17/24 13:45	10/19/24 21:20	1
13C2 PFDA	120		70 - 130			10/17/24 13:45	10/19/24 21:20	1
13C3-GenX	128		70 - 130			10/17/24 13:45	10/19/24 21:20	1

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:09	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C6 PFDA	76		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C5 PFHxA	89		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C4 PFHpA	89		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C8 PFOA	83		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C9 PFNA	77		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C7 PFUnA	85		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C2 PFDoA	92		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C4 PFBA	93		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C5 PFPeA	95		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C3 PFBS	114		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C3 PFHxS	119		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C8 PFOS	116		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C2-4:2-FTS	160		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C2-6:2-FTS	143		50 - 200			10/19/24 17:25	10/21/24 16:09	1
13C2-8:2-FTS	121		50 - 200			10/19/24 17:25	10/21/24 16:09	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		10/17/24 13:45	10/19/24 21:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	117		70 - 130			10/17/24 13:45	10/19/24 21:31	1
13C2 PFHxA	123		70 - 130			10/17/24 13:45	10/19/24 21:31	1
13C2 PFDA	112		70 - 130			10/17/24 13:45	10/19/24 21:31	1
13C3-GenX	123		70 - 130			10/17/24 13:45	10/19/24 21:31	1

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

Lab Sample ID: 380-118041-5

Date Collected: 10/14/24 09:56

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-5

Date Collected: 10/14/24 09:56

Matrix: Water

Date Received: 10/16/24 09:45

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:18	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C6 PFDA	106		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C5 PFHxA	110		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C4 PFHpA	112		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C8 PFOA	114		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C9 PFNA	111		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C7 PFUnA	105		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C2 PFDoA	105		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C4 PFBA	113		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C5 PFPeA	113		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C3 PFBS	114		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C3 PFHxS	116		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C8 PFOS	116		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C2-4:2-FTS	168		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C2-6:2-FTS	143		50 - 200			10/19/24 17:25	10/21/24 16:18	1
13C2-8:2-FTS	126		50 - 200			10/19/24 17:25	10/21/24 16:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1

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Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-5

Date Collected: 10/14/24 09:56

Matrix: Water

Date Received: 10/16/24 09:45

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	119		70 - 130			10/17/24 13:45	10/19/24 21:41	1
13C2 PFHxA	120		70 - 130			10/17/24 13:45	10/19/24 21:41	1
13C2 PFDA	119		70 - 130			10/17/24 13:45	10/19/24 21:41	1
13C3-GenX	116		70 - 130			10/17/24 13:45	10/19/24 21:41	1

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

Lab Sample ID: 380-118041-6

Date Collected: 10/14/24 10:28

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-6

Date Collected: 10/14/24 10:28

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:28	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C6 PFDA	102		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C5 PFHxA	97		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C4 PFHpA	101		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C8 PFOA	103		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C9 PFNA	102		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C7 PFUnA	101		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C2 PFDoA	102		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C4 PFBA	102		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C5 PFPeA	105		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C3 PFBS	119		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C3 PFHxS	122		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C8 PFOS	120		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C2-4:2-FTS	157		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C2-6:2-FTS	147		50 - 200			10/19/24 17:25	10/21/24 16:28	1
13C2-8:2-FTS	130		50 - 200			10/19/24 17:25	10/21/24 16:28	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		10/17/24 13:45	10/19/24 21:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-6

Date Collected: 10/14/24 10:28

Matrix: Water

Date Received: 10/16/24 09:45

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		10/17/24 13:45	10/19/24 21:52	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 21:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	119		70 - 130			10/17/24 13:45	10/19/24 21:52	1
13C2 PFHxA	119		70 - 130			10/17/24 13:45	10/19/24 21:52	1
13C2 PFDA	120		70 - 130			10/17/24 13:45	10/19/24 21:52	1
13C3-GenX	118		70 - 130			10/17/24 13:45	10/19/24 21:52	1

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

Lab Sample ID: 380-118041-7

Date Collected: 10/14/24 10:54

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-7

Date Collected: 10/14/24 10:54

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:37	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:37	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C6 PFDA	102		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C5 PFHxA	101		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C4 PFHpA	104		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C8 PFOA	104		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C9 PFNA	106		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C7 PFUnA	105		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C2 PFDoA	104		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C4 PFBA	96		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C5 PFPeA	96		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C3 PFBS	115		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C3 PFHxS	116		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C8 PFOS	117		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C2-4:2-FTS	147		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C2-6:2-FTS	132		50 - 200			10/19/24 17:25	10/21/24 16:37	1
13C2-8:2-FTS	123		50 - 200			10/19/24 17:25	10/21/24 16:37	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		10/17/24 13:45	10/19/24 22:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:03	1

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-7

Date Collected: 10/14/24 10:54

Matrix: Water

Date Received: 10/16/24 09:45

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		10/17/24 13:45	10/19/24 22:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	120		70 - 130			10/17/24 13:45	10/19/24 22:03	1
13C2 PFHxA	119		70 - 130			10/17/24 13:45	10/19/24 22:03	1
13C2 PFDA	112		70 - 130			10/17/24 13:45	10/19/24 22:03	1
13C3-GenX	115		70 - 130			10/17/24 13:45	10/19/24 22:03	1

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/19/24 17:25	10/21/24 16:47	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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		10/19/24 17:25	10/21/24 16:47	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C6 PFDA	107		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C5 PFHxA	110		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C4 PFHpA	115		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C8 PFOA	112		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C9 PFNA	110		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C7 PFUnA	108		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C2 PFDoA	107		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C4 PFBA	115		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C5 PFPeA	115		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C3 PFBS	118		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C3 PFHxS	123		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C8 PFOS	122		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C2-4:2-FTS	163		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C2-6:2-FTS	151		50 - 200			10/19/24 17:25	10/21/24 16:47	1
13C2-8:2-FTS	124		50 - 200			10/19/24 17:25	10/21/24 16:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/17/24 13:45	10/19/24 22:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	120		70 - 130			10/17/24 13:45	10/19/24 22:13	1
13C2 PFHxA	118		70 - 130			10/17/24 13:45	10/19/24 22:13	1
13C2 PFDA	116		70 - 130			10/17/24 13:45	10/19/24 22:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

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

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C3-GenX	118		70 - 130	10/17/24 13:45	10/19/24 22:13	1

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Action Limit Summary

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-1

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)	2.3		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		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)	2.8		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-118041-2

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

Lab Sample ID: 380-118041-3

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: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-3

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: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

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

Lab Sample ID: 380-118041-5

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: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-5

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

Lab Sample ID: 380-118041-6

Compliance Check

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

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

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

Lab Sample ID: 380-118041-7

Compliance Check

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

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

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-7

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
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

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

Surrogate Summary

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

Job ID: 380-118041-1
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)
380-118041-1	HALAWA WELLS UNITS 1 & 2 F	126	130	120	127
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	96	96	88	86
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	129	129	120	128

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)
380-118035-B-3-A MS	Matrix Spike	122	122	119	124
380-118035-C-3-A MSD	Matrix Spike Duplicate	119	127	125	127
380-118041-4	KA'AMILO WELLS	117	123	112	123
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	119	120	119	116
380-118041-6	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	119	119	120	118
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	120	119	112	115
380-118041-8	FB: KA'AMILO WELLS	120	118	116	118
380-118485-B-1-A MS	Matrix Spike	93	92	86	78
380-118485-C-1-A MSD	Matrix Spike Duplicate	95	89	83	83
LCS 380-114109/22-A	Lab Control Sample	120	114	117	114
LCS 380-114802/22-A	Lab Control Sample	99	92	90	85
MBL 380-114109/20-A	Method Blank	121	121	119	115
MBL 380-114802/20-A	Method Blank	96	92	92	82
MRL 380-114109/21-A	Lab Control Sample	123	116	115	116
MRL 380-114802/21-A	Lab Control Sample	96	92	90	78

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: 380-118041-1
SDG: Weekly PFAS

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-118041-1	HALAWA WELLS UNITS 1 & 2 F	84	95	91	92	91	94	96	96
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	107	100	115	113	110	109	95	90
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	81	96	89	90	92	96	96	97

		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)
380-118041-1	HALAWA WELLS UNITS 1 & 2 F	100	106	117	115	116	166	135	124
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	110	113	113	114	110	147	134	117
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	89	92	115	118	116	159	135	118

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

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-118041-4	KA'AMILO WELLS	80	76	89	89	83	77	85	92
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	95	106	110	112	114	111	105	105
380-118041-6	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	85	102	97	101	103	102	101	102
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	83	102	101	104	104	106	105	104
380-118041-8	FB: KA'AMILO WELLS	100	107	110	115	112	110	108	107
380-118403-B-1-A MS	Matrix Spike	105	105	108	109	109	108	105	105
380-118403-C-1-A MSD	Matrix Spike Duplicate	96	108	107	108	110	111	105	106
LCS 380-114487/22-A	Lab Control Sample	92	104	104	104	106	104	105	105
MBL 380-114487/20-A	Method Blank	97	104	106	110	107	106	105	103
MRL 380-114487/21-A	Lab Control Sample	82	104	99	107	107	105	101	106

Isotope Dilution Summary

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

Job ID: 380-118041-1
 SDG: Weekly PFAS

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-118041-4	KA'AMILO WELLS	93	95	114	119	116	160	143	121
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	113	113	114	116	116	168	143	126
380-118041-6	FB: AIEA GULCH WELLS PUMF 2 (331-202-TP072)	102	105	119	122	120	157	147	130
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	96	96	115	116	117	147	132	123
380-118041-8	FB: KA'AMILO WELLS	115	115	118	123	122	163	151	124
380-118403-B-1-A MS	Matrix Spike	111	116	109	113	112	139	134	120
380-118403-C-1-A MSD	Matrix Spike Duplicate	107	117	115	118	112	160	134	122
LCS 380-114487/22-A	Lab Control Sample	109	112	118	117	117	135	138	122
MBL 380-114487/20-A	Method Blank	104	108	114	114	115	148	136	117
MRL 380-114487/21-A	Lab Control Sample	96	101	115	117	115	153	129	116

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: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-114487/20-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114487

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		10/19/24 17:25	10/21/24 12:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.153	J	2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		10/19/24 17:25	10/21/24 12:58	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C6 PFDA	104		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C5 PFHxA	106		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C4 PFHpA	110		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C8 PFOA	107		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C9 PFNA	106		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C7 PFUnA	105		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C2 PFDoA	103		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C4 PFBA	104		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C5 PFPeA	108		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C3 PFBS	114		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C3 PFHxS	114		50 - 200	10/19/24 17:25	10/21/24 12:58	1

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QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-114487/20-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114487

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	115		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C2-4:2-FTS	148		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C2-6:2-FTS	136		50 - 200	10/19/24 17:25	10/21/24 12:58	1
13C2-8:2-FTS	117		50 - 200	10/19/24 17:25	10/21/24 12:58	1

Lab Sample ID: LCS 380-114487/22-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114487

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	107		ng/L		89	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	111		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	124		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	120	111		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	120	117		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	116		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	112		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	120	110		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	120	114		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	112		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	120	109		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	119		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	120	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	115		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	112		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	104		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	101		ng/L		84	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	114		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	120	116		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	115		ng/L		96	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: LCS 380-114487/22-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	108		ng/L		90	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	92		50 - 200				
13C6 PFDA	104		50 - 200				
13C5 PFHxA	104		50 - 200				
13C4 PFHpA	104		50 - 200				
13C8 PFOA	106		50 - 200				
13C9 PFNA	104		50 - 200				
13C7 PFUnA	105		50 - 200				
13C2 PFDoA	105		50 - 200				
13C4 PFBA	109		50 - 200				
13C5 PFPeA	112		50 - 200				
13C3 PFBS	118		50 - 200				
13C3 PFHxS	117		50 - 200				
13C8 PFOS	117		50 - 200				
13C2-4:2-FTS	135		50 - 200				
13C2-6:2-FTS	138		50 - 200				
13C2-8:2-FTS	122		50 - 200				

Lab Sample ID: MRL 380-114487/21-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.97	J	ng/L		98	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.68	J	ng/L		84	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.84	J	ng/L		92	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.03	J	ng/L		102	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.85	J	ng/L		92	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.08	J	ng/L		104	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-114487/21-A
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.17	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.06	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.38	J	ng/L		119	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.81	J	ng/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.71	J	ng/L		85	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.97	J	ng/L		99	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.81	J	ng/L		90	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	82		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	99		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	101		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	96		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	115		50 - 200
13C2-4:2-FTS	153		50 - 200
13C2-6:2-FTS	129		50 - 200
13C2-8:2-FTS	116		50 - 200

Lab Sample ID: 380-118403-B-1-A MS
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		59.9	55.3		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.9	51.8		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.9	59.2		ng/L		99	70 - 130

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118403-B-1-A MS
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		59.9	59.5		ng/L		99	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.9	61.7		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		59.9	60.1		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		59.9	61.2		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		59.9	60.7		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.9	58.1		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		59.9	58.0		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		59.9	56.7		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.9	58.6		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		59.9	55.7		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		59.9	60.9		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		59.9	59.3		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.9	60.1		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.9	62.8		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.9	61.6		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.9	55.2		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		59.9	55.6		ng/L		93	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.9	58.8		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.9	61.2		ng/L		102	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		59.9	59.4		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.9	59.5		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.9	56.2		ng/L		94	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	105		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	116		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	113		50 - 200
13C8 PFOS	112		50 - 200

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118403-B-1-A MS
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 114487

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	139		50 - 200
13C2-6:2-FTS	134		50 - 200
13C2-8:2-FTS	120		50 - 200

Lab Sample ID: 380-118403-C-1-A MSD
Matrix: Water
Analysis Batch: 114581

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 114487

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		59.9	56.9		ng/L		95	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.9	53.2		ng/L		89	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.9	58.4		ng/L		97	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.9	62.1		ng/L		104	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.9	60.1		ng/L		100	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		59.9	59.2		ng/L		99	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		59.9	60.9		ng/L		102	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		59.9	62.8		ng/L		105	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.9	59.0		ng/L		98	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		59.9	58.9		ng/L		98	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		59.9	56.9		ng/L		95	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.9	60.8		ng/L		101	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		59.9	55.8		ng/L		93	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		59.9	62.3		ng/L		104	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		59.9	62.2		ng/L		104	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.9	58.2		ng/L		97	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.9	60.0		ng/L		100	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.9	58.5		ng/L		98	70 - 130	5	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.9	58.5		ng/L		98	70 - 130	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		59.9	54.2		ng/L		91	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.9	60.5		ng/L		101	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.9	59.7		ng/L		100	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		59.9	58.4		ng/L		97	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.9	60.2		ng/L		101	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.9	58.7		ng/L		98	70 - 130	4	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	108		50 - 200
13C5 PFHxA	107		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	117		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	118		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	160		50 - 200
13C2-6:2-FTS	134		50 - 200
13C2-8:2-FTS	122		50 - 200

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

Lab Sample ID: MBL 380-114109/20-A
Matrix: Water
Analysis Batch: 114478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114109

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		10/17/24 13:45	10/19/24 17:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		10/17/24 13:45	10/19/24 17:56	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	121		70 - 130			10/17/24 13:45	10/19/24 17:56	1
13C2 PFHxA	121		70 - 130			10/17/24 13:45	10/19/24 17:56	1
13C2 PFDA	119		70 - 130			10/17/24 13:45	10/19/24 17:56	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-114109/20-A
Matrix: Water
Analysis Batch: 114478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114109

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	115		70 - 130	10/17/24 13:45	10/19/24 17:56	1

Lab Sample ID: LCS 380-114109/22-A
Matrix: Water
Analysis Batch: 114478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114109

<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)	50.0	47.0		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	55.8		ng/L		112	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	51.4		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	51.5		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	51.3		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	45.5		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	54.4		ng/L		109	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	52.6		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	52.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	56.7		ng/L		113	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	49.1		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	50.8		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	50.0	50.7		ng/L		101	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	55.0		ng/L		110	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	53.2		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	50.0	53.9		ng/L		108	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	55.9		ng/L		112	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	49.8		ng/L		100	70 - 130

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	120		70 - 130
13C2 PFHxA	114		70 - 130
13C2 PFDA	117		70 - 130
13C3-GenX	114		70 - 130

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-114109/21-A
Matrix: Water
Analysis Batch: 114478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114109

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.85	J	ng/L		92	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.92	J	ng/L		96	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.01	J	ng/L		101	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.23	J	ng/L		112	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.81	J	ng/L		91	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.15	J	ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.05	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.96	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.03	J	ng/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	123		70 - 130
13C2 PFHxA	116		70 - 130
13C2 PFDA	115		70 - 130
13C3-GenX	116		70 - 130

Lab Sample ID: 380-118035-B-3-A MS
Matrix: Water
Analysis Batch: 114478

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 114109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.3	51.8		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	150	E	50.3	212	E	ng/L		115	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	54.6		ng/L		109	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	52.4		ng/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-114802/20-A
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114802

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		10/22/24 12:20	10/23/24 10:47	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	10/22/24 12:20	10/23/24 10:47	1
13C2 PFHxA	92		70 - 130	10/22/24 12:20	10/23/24 10:47	1
13C2 PFDA	92		70 - 130	10/22/24 12:20	10/23/24 10:47	1
13C3-GenX	82		70 - 130	10/22/24 12:20	10/23/24 10:47	1

Lab Sample ID: LCS 380-114802/22-A
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.0	23.7		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	26.7		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	25.1		ng/L		100	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	26.7		ng/L		107	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	28.0		ng/L		112	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	25.8		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	25.2		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	26.8		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	25.2		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	27.2		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	22.5		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	26.9		ng/L		108	70 - 130
Perfluorononanoic acid (PFNA)	25.0	26.4		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	23.3		ng/L		93	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	25.0	25.1		ng/L		100	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	24.9		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	23.7		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	25.8		ng/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	92		70 - 130
13C2 PFDA	90		70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: LCS 380-114802/22-A
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114802

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
13C3-GenX	85		70 - 130

Lab Sample ID: MRL 380-114802/21-A
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114802

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	Limits
		Result	Qualifier				
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.09	J	ng/L		105	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.18	J	ng/L		109	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.13	J	ng/L		107	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.13	J	ng/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.21	J	ng/L		111	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.03	J	ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	2.03	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.86	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.97	J	ng/L		99	50 - 150

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	92		70 - 130
13C2 PFDA	90		70 - 130
13C3-GenX	78		70 - 130

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118485-B-1-A MS
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 114802

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.3		ng/L		93		70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.1		ng/L		104		70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	23.3		ng/L		93		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.7		ng/L		102		70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.8		ng/L		103		70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.6		ng/L		98		70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.5		ng/L		106		70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	23.6		ng/L		94		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.2		ng/L		105		70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	24.7		ng/L		98		70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	24.4		ng/L		97		70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.6		ng/L		102		70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.7		ng/L		91		70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	24.0		ng/L		96		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		25.1	25.1		ng/L		100		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	23.9		ng/L		95		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.1		ng/L		96		70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	93		70 - 130
13C2 PFHxA	92		70 - 130
13C2 PFDA	86		70 - 130
13C3-GenX	78		70 - 130

Lab Sample ID: 380-118485-C-1-A MSD
Matrix: Water
Analysis Batch: 114998

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 114802

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier						RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.1		ng/L		92		70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.2		ng/L		104		70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	23.2		ng/L		92		70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.9		ng/L		107		70 - 130	2	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-118041-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-118485-C-1-A MSD

Matrix: Water

Analysis Batch: 114998

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 114802

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		25.1	27.3		ng/L		109	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.6		ng/L		102	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.5		ng/L		98	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	25.3		ng/L		101	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.2		ng/L		96	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	25.8		ng/L		103	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	24.2		ng/L		96	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	24.8		ng/L		99	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.5		ng/L		102	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.4		ng/L		89	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	24.0		ng/L		96	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		25.1	25.2		ng/L		100	70 - 130	0	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	24.4		ng/L		97	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.6		ng/L		98	70 - 130	2	30
Surrogate	MSD	MSD	Qualifier	Limits							
d5-NEtFOSAA	95			70 - 130							
13C2 PFHxA	89			70 - 130							
13C2 PFDA	83			70 - 130							
13C3-GenX	83			70 - 130							

QC Association Summary

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

Job ID: 380-118041-1
SDG: Weekly PFAS

LCMS

Prep Batch: 114109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	537.1 DW	
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1 DW	
380-118041-4	KA'AMILO WELLS	Total/NA	Water	537.1 DW	
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC	Total/NA	Water	537.1 DW	
380-118041-6	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	537.1 DW	
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	537.1 DW	
380-118041-8	FB: KA'AMILO WELLS	Total/NA	Water	537.1 DW	
MBL 380-114109/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-114109/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-114109/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-118035-B-3-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-118035-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 114478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	537.1	114109
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1	114109
380-118041-4	KA'AMILO WELLS	Total/NA	Water	537.1	114109
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC	Total/NA	Water	537.1	114109
380-118041-6	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	537.1	114109
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	537.1	114109
380-118041-8	FB: KA'AMILO WELLS	Total/NA	Water	537.1	114109
MBL 380-114109/20-A	Method Blank	Total/NA	Water	537.1	114109
LCS 380-114109/22-A	Lab Control Sample	Total/NA	Water	537.1	114109
MRL 380-114109/21-A	Lab Control Sample	Total/NA	Water	537.1	114109
380-118035-B-3-A MS	Matrix Spike	Total/NA	Water	537.1	114109
380-118035-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	114109

Prep Batch: 114487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	533	
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	
380-118041-4	KA'AMILO WELLS	Total/NA	Water	533	
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC	Total/NA	Water	533	
380-118041-6	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	533	
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	533	
380-118041-8	FB: KA'AMILO WELLS	Total/NA	Water	533	
MBL 380-114487/20-A	Method Blank	Total/NA	Water	533	
LCS 380-114487/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-114487/21-A	Lab Control Sample	Total/NA	Water	533	
380-118403-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-118403-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 114581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP01	Total/NA	Drinking Water	533	114487
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	114487
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	114487
380-118041-4	KA'AMILO WELLS	Total/NA	Water	533	114487
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TPC	Total/NA	Water	533	114487

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-118041-1
 SDG: Weekly PFAS

LCMS (Continued)

Analysis Batch: 114581 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-6	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	533	114487
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	533	114487
380-118041-8	FB: KA'AMILO WELLS	Total/NA	Water	533	114487
MBL 380-114487/20-A	Method Blank	Total/NA	Water	533	114487
LCS 380-114487/22-A	Lab Control Sample	Total/NA	Water	533	114487
MRL 380-114487/21-A	Lab Control Sample	Total/NA	Water	533	114487
380-118403-B-1-A MS	Matrix Spike	Total/NA	Water	533	114487
380-118403-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	114487

Prep Batch: 114802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
MBL 380-114802/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-114802/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-114802/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-118485-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-118485-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 114998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	114802
MBL 380-114802/20-A	Method Blank	Total/NA	Water	537.1	114802
LCS 380-114802/22-A	Lab Control Sample	Total/NA	Water	537.1	114802
MRL 380-114802/21-A	Lab Control Sample	Total/NA	Water	537.1	114802
380-118485-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	114802
380-118485-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	114802

Lab Chronicle

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

Job ID: 380-118041-1
 SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-1

Date Collected: 10/14/24 09:56

Matrix: Drinking Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 15:40
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 20:58

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

Lab Sample ID: 380-118041-2

Date Collected: 10/14/24 10:28

Matrix: Drinking Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 15:50
Total/NA	Prep	537.1 DW			114802	HM3M	EA POM	10/22/24 12:20
Total/NA	Analysis	537.1		1	114998	SZ9R	EA POM	10/23/24 12:04

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

Lab Sample ID: 380-118041-3

Date Collected: 10/14/24 10:54

Matrix: Drinking Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 15:59
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 21:20

Client Sample ID: KA'AMILO WELLS

Lab Sample ID: 380-118041-4

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 16:09
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 21:31

Lab Chronicle

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

Job ID: 380-118041-1
 SDG: Weekly PFAS

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

Lab Sample ID: 380-118041-5

Date Collected: 10/14/24 09:56

Matrix: Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 16:18
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 21:41

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

Lab Sample ID: 380-118041-6

Date Collected: 10/14/24 10:28

Matrix: Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 16:28
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 21:52

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

Lab Sample ID: 380-118041-7

Date Collected: 10/14/24 10:54

Matrix: Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 16:37
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 22:03

Client Sample ID: FB: KA'AMILO WELLS

Lab Sample ID: 380-118041-8

Date Collected: 10/14/24 11:19

Matrix: Water

Date Received: 10/16/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			114487	N8NE	EA POM	10/19/24 17:25
Total/NA	Analysis	533		1	114581	M7ML	EA POM	10/21/24 16:47
Total/NA	Prep	537.1 DW			114109	HM3M	EA POM	10/17/24 13:45
Total/NA	Analysis	537.1		1	114478	M7ML	EA POM	10/19/24 22:13

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: 380-118041-1
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: 380-118041-1
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: 380-118041-1
 SDG: Weekly PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-118041-1	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	10/14/24 09:56	10/16/24 09:45	HI0000331
380-118041-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	10/14/24 10:28	10/16/24 09:45	HI0000331
380-118041-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	10/14/24 10:54	10/16/24 09:45	HI0000331
380-118041-4	KA'AMILO WELLS	Water	10/14/24 11:19	10/16/24 09:45	
380-118041-5	FB: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Water	10/14/24 09:56	10/16/24 09:45	
380-118041-6	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	10/14/24 10:28	10/16/24 09:45	
380-118041-7	FB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	10/14/24 10:54	10/16/24 09:45	
380-118041-8	FB: KA'AMILO WELLS	Water	10/14/24 11:19	10/16/24 09:45	

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Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia CA 91015
 Phone (626) 386-1100

Chain of Custody Record



Client Information		Lab PM Arada Rachelle		Carrier Tracking No(s) 380 27941 2757 2	
Client Contact: Dr. Ron Fenstermacher		E-Mail: Rachelle.Arada@et.eurofins.com		Page Page 2 of 2	
Company City & County of Honolulu		PWSID		Job #	
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested		Analysis Requested	
City: Honolulu		TAT Requested (days)		Total Number of Containers	
State, Zip: HI 96843		Compliance Project: Δ No		Preservation Codes	
Phone: 808-748-5091 (tel)		PO # C20525101 exp 05312023		A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D N Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Y Trizma Z other (specify)	
Email: rfenstermacher@hbws.org		WO #		Other	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project # 38001111		Special Instructions/Note	
Site #		SSON#			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Matrix (W=water, S=solid, O=wastewater, BT-TISSUE, A-Air)
HALAWA WELLS UNITS 1&2 P1	14-Oct 2024	0956	G		Water
AIEA GULCH WELLS PUMP 2	14-Oct 2024	1028	G		Water
AIEA WELLS PUMPS 1&2 (260) PZ	14-Oct 2024	1054	G		Water
KA'AMILO WELLS	14-Oct 2024	1119	G		Water
FB HALAWA WELLS UNITS 1&2	14-Oct 2024	0956			
FB AIEA GULCH WELLS PUMP 2	14-Oct-2024	1028			
FB AIEA WELLS PUMPS 1&2 (260)	14-Oct 2024	1054			
FB KA'AMILO WELLS	14-Oct 2024	1119			
Possible Hazard Identification <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 Deliverable Requested I II III IV Other (specify)					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements					
Empty Kit Relinquished by Date/Time: 10/16/2024 1400 Relinquished by: G. RENTNER Company: HBWS		Date 10/16/2024		Time 0947	
Relinquished by Date/Time:		Received by Date/Time:		Method of Shipment: FEDEX Date/Time: 10/16/2024 0945 Company: EEAP	
Relinquished by Date/Time:		Received by Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: (F51A) 1.3°-0.0°=1.3°C EL-FROZEN		Company:	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-118041-1
SDG Number: Weekly PFAS

Login Number: 118041
List Number: 1
Creator: Gerfen, Chris

List Source: Eurofins Eaton Analytical Pomona

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

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