

ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

RED-HILL
Weekly PFAS
RUSH Weekly Red Hill

JOB NUMBER

380-139180-1

Eurofins Eaton Analytical Pomona

Job Notes

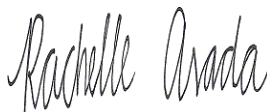
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The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval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

Compliance Statement

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

Authorization



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Authorized for release by
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Definitions/Glossary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

Qualifiers

LCMS

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

Glossary

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

Case Narrative

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

Job ID: 380-139180-1

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Job Narrative 380-139180-1

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 3/5/2025 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C.

PFAS

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

Detection Summary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1

PWSID Number: HI0000331

☐ No Detections.

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

PWSID Number: HI0000331

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L	1		537.1	Total/NA

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

Lab Sample ID: 380-139180-3

PWSID Number: HI0000331

☐ No Detections.

Client Sample ID: FB Ka'amilo Wells

Lab Sample ID: 380-139180-4

PWSID Number: HI0000331

☐ 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: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1

Date Collected: 03/03/25 11:09

Matrix: Drinking Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 17:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	79		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C6 PFDA	81		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C5 PFHxA	86		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C4 PFHpA	83		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C8 PFOA	78		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C9 PFNA	77		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C7 PFUnA	83		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C2 PFDoA	85		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C4 PFBA	89		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C5 PFPeA	92		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C3 PFBS	108		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C3 PFHxS	103		50 - 200	03/07/25 06:21	03/07/25 17:17	1

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Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1

Date Collected: 03/03/25 11:09

Matrix: Drinking Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	107		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C2-4:2-FTS	122		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C2-6:2-FTS	110		50 - 200	03/07/25 06:21	03/07/25 17:17	1
13C2-8:2-FTS	107		50 - 200	03/07/25 06:21	03/07/25 17:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 14:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130	03/07/25 13:49	03/08/25 14:54	1
13C2 PFHxA	109		70 - 130	03/07/25 13:49	03/08/25 14:54	1
13C2 PFDA	110		70 - 130	03/07/25 13:49	03/08/25 14:54	1
13C3-GenX	99		70 - 130	03/07/25 13:49	03/08/25 14:54	1

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.2		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorohexanoic acid (PFHxA)	3.2		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoropentanoic acid (PFPeA)	3.1		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	82		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C6 PFDA	71		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C5 PFHxA	85		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C4 PFHpA	84		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C8 PFOA	79		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C9 PFNA	72		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C7 PFUnA	75		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C2 PFDoA	80		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C4 PFBA	94		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C5 PFPeA	95		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C3 PFBS	105		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C3 PFHxS	102		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C8 PFOS	108		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C2-4:2-FTS	115		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C2-6:2-FTS	113		50 - 200	03/07/25 06:21	03/07/25 19:03	1
13C2-8:2-FTS	108		50 - 200	03/07/25 06:21	03/07/25 19:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

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		03/07/25 13:49	03/08/25 15:33	1
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorooctanoic acid (PFOA)	2.9		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorohexanesulfonic acid (PFHxS)	3.1		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorobutanesulfonic acid (PFBS)	2.3		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130			03/07/25 13:49	03/08/25 15:33	1
13C2 PFHxA	112		70 - 130			03/07/25 13:49	03/08/25 15:33	1
13C2 PFDA	111		70 - 130			03/07/25 13:49	03/08/25 15:33	1
13C3-GenX	102		70 - 130			03/07/25 13:49	03/08/25 15:33	1

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

Lab Sample ID: 380-139180-3

Date Collected: 03/03/25 11:09

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-3

Date Collected: 03/03/25 11:09

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C6 PFDA	104		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C5 PFHxA	101		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C4 PFHpA	103		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C8 PFOA	102		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C9 PFNA	103		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C7 PFUnA	103		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C2 PFDoA	105		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C4 PFBA	106		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C5 PFPeA	110		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C3 PFBS	106		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C3 PFHxS	103		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C8 PFOS	104		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C2-4:2-FTS	128		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C2-6:2-FTS	122		50 - 200	03/07/25 06:21	03/07/25 19:24	1
13C2-8:2-FTS	118		50 - 200	03/07/25 06:21	03/07/25 19:24	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		03/07/25 13:49	03/08/25 15:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-3

Date Collected: 03/03/25 11:09

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130			03/07/25 13:49	03/08/25 15:43	1
13C2 PFHxA	109		70 - 130			03/07/25 13:49	03/08/25 15:43	1
13C2 PFDA	106		70 - 130			03/07/25 13:49	03/08/25 15:43	1
13C3-GenX	101		70 - 130			03/07/25 13:49	03/08/25 15:43	1

Client Sample ID: FB Ka'amilo Wells

Lab Sample ID: 380-139180-4

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

Client Sample ID: FB Ka'amilo Wells

Lab Sample ID: 380-139180-4

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/25 06:21	03/07/25 19:35	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C6 PFDA	94		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C5 PFHxA	96		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C4 PFHpA	99		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C8 PFOA	100		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C9 PFNA	98		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C7 PFUnA	79		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C2 PFDoA	56		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C4 PFBA	103		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C5 PFPeA	105		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C3 PFBS	107		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C3 PFHxS	102		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C8 PFOS	106		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C2-4:2-FTS	124		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C2-6:2-FTS	115		50 - 200			03/07/25 06:21	03/07/25 19:35	1
13C2-8:2-FTS	109		50 - 200			03/07/25 06:21	03/07/25 19:35	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		03/07/25 13:49	03/08/25 15:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

Client Sample ID: FB Ka'amilo Wells

Lab Sample ID: 380-139180-4

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/25 13:49	03/08/25 15:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130			03/07/25 13:49	03/08/25 15:52	1
13C2 PFHxA	108		70 - 130			03/07/25 13:49	03/08/25 15:52	1
13C2 PFDA	109		70 - 130			03/07/25 13:49	03/08/25 15:52	1
13C3-GenX	101		70 - 130			03/07/25 13:49	03/08/25 15:52	1

Action Limit Summary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1

PWSID Number: HI0000331

Compliance Check

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

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

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL 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)	3.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.6		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		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)	3.6		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	2.9		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.1		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-139180-3

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL 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

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Action Limit Summary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-3

(Continued)

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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 Ka'amilo Wells

Lab Sample ID: 380-139180-4

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL 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: 380-139180-1
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)
380-139180-1	AIEA WELLS PUMPS 1&2 (260)	111	109	110	99
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260)	111	109	111	103
	P2 (331-203-TP400)				
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260)	112	111	112	103
	P2 (331-203-TP400)				

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)
380-139180-2	Ka'amilo Wells	111	112	111	102
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	109	109	106	101
380-139180-4	FB Ka'amilo Wells	107	108	109	101
LCS 380-140601/22-A	Lab Control Sample	109	107	106	100
MBL 380-140601/20-A	Method Blank	115	105	112	98
MRL 380-140601/21-A	Lab Control Sample	105	108	111	98

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: 380-139180-1
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)	PFDaA (50-200)
380-139180-1	AIEA WELLS PUMPS 1&2 (260)	79	81	86	83	78	77	83	85
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260)	82	66	87	87	80	74	67	73
	P2 (331-203-TP400)								
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260)	83	77	86	87	83	81	80	79
	P2 (331-203-TP400)								

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)
380-139180-1	AIEA WELLS PUMPS 1&2 (260)	89	92	108	103	107	122	110	107
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260)	90	90	110	107	111	122	117	114
	P2 (331-203-TP400)								
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260)	91	94	110	109	112	121	119	114
	P2 (331-203-TP400)								

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-139180-2	Ka'amilo Wells	82	71	85	84	79	72	75	80
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	92	104	101	103	102	103	103	105
380-139180-4	FB Ka'amilo Wells	92	94	96	99	100	98	79	56
LCS 380-140472/22-A	Lab Control Sample	90	99	98	102	101	101	98	100
MBL 380-140472/20-A	Method Blank	89	102	103	101	102	101	104	105
MRL 380-140472/21-A	Lab Control Sample	90	103	104	104	103	102	102	102

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)
380-139180-2	Ka'amilo Wells	94	95	105	102	108	115	113	108
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	106	110	106	103	104	128	122	118

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Isotope Dilution Summary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-139180-4	FB Ka'amilo Wells	103	105	107	102	106	124	115	109
LCS 380-140472/22-A	Lab Control Sample	102	106	111	107	112	125	120	109
MBL 380-140472/20-A	Method Blank	101	102	110	107	114	127	123	119
MRL 380-140472/21-A	Lab Control Sample	104	101	106	104	108	116	109	105

Surrogate Legend

HFPODA = 13C3 HFPO-DA

C6PFDA = 13C6 PFDA

13C5PHA = 13C5 PFHxA

C4PFHA = 13C4 PFHpA

C8PFOA = 13C8 PFOA

C9PFNA = 13C9 PFNA

13C7PUA = 13C7 PFUnA

PFDaA = 13C2 PFDaA

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

C3PFBS = 13C3 PFBS

C3PFHS = 13C3 PFHxS

C8PFOS = 13C8 PFOS

42FTS = 13C2-4:2-FTS

62FTS = 13C2-6:2-FTS

82FTS = 13C2-8:2-FTS

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-140472/20-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 140472

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/07/25 06:21	03/07/25 16:46	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C6 PFDA	102		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C5 PFHxA	103		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C4 PFHpA	101		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C8 PFOA	102		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C9 PFNA	101		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C7 PFUnA	104		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C2 PFDoA	105		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C4 PFBA	101		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C5 PFPeA	102		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C3 PFBS	110		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C3 PFHxS	107		50 - 200	03/07/25 06:21	03/07/25 16:46	1

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QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-140472/20-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 140472

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	114		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C2-4:2-FTS	127		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C2-6:2-FTS	123		50 - 200	03/07/25 06:21	03/07/25 16:46	1
13C2-8:2-FTS	119		50 - 200	03/07/25 06:21	03/07/25 16:46	1

Lab Sample ID: LCS 380-140472/22-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.4	57.6		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.4	58.8		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	61.0		ng/L		101	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	61.9		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	60.7		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	63.1		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDaA)	60.4	64.8		ng/L		107	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	64.0		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	62.6		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	66.0		ng/L		109	70 - 130
Perfluorononanoic acid (PFNA)	60.4	61.0		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	59.5		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	61.4		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	64.1		ng/L		106	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	64.1		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	64.6		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	59.6		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	62.0		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	67.1		ng/L		111	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.4	57.5		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.4	64.1		ng/L		106	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	58.0		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	61.1		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.4	55.1		ng/L		91	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: LCS 380-140472/22-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.4	61.4		ng/L		102	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	90		50 - 200				
13C6 PFDA	99		50 - 200				
13C5 PFHxA	98		50 - 200				
13C4 PFHpA	102		50 - 200				
13C8 PFOA	101		50 - 200				
13C9 PFNA	101		50 - 200				
13C7 PFUnA	98		50 - 200				
13C2 PFDoA	100		50 - 200				
13C4 PFBA	102		50 - 200				
13C5 PFPeA	106		50 - 200				
13C3 PFBS	111		50 - 200				
13C3 PFHxS	107		50 - 200				
13C8 PFOS	112		50 - 200				
13C2-4:2-FTS	125		50 - 200				
13C2-6:2-FTS	120		50 - 200				
13C2-8:2-FTS	109		50 - 200				

Lab Sample ID: MRL 380-140472/21-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140472

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.16	J	ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	2.16	J	ng/L		108	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.28	J	ng/L		114	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.47	J	ng/L		123	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.20	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.27	J	ng/L		113	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.47	J	ng/L		123	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.37	J	ng/L		118	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.34	J	ng/L		117	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.26	J	ng/L		112	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.29	J	ng/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.33	J	ng/L		116	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.50	J	ng/L		125	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-140472/21-A

Matrix: Water

Analysis Batch: 140627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140472

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.39	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.38	J	ng/L		118	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.57	J	ng/L		128	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.34	J	ng/L		117	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.32	J	ng/L		115	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.38	J	ng/L		118	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.46	J	ng/L		123	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.29	J	ng/L		114	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	103		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	102		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	102		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	104		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-139180-1 MS

Matrix: Drinking Water

Analysis Batch: 140627

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

Prep Type: Total/NA

Prep Batch: 140472

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.1	58.0		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	59.1		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	59.4		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1 MS

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140627

Prep Batch: 140472

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.1	61.4		ng/L		102	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.1	59.6		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.1	64.2		ng/L		107	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	65.2		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	62.2		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	61.6		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.1	65.2		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.1	61.3		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	60.0		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.1	63.6		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	65.5		ng/L		109	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.1	64.6		ng/L		108	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	61.2		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	59.6		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	65.6		ng/L		109	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		60.1	62.1		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.1	58.2		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	61.0		ng/L		101	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	58.0		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.1	65.6		ng/L		107	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	54.5		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	60.1		ng/L		100	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	82		50 - 200
13C6 PFDA	66		50 - 200
13C5 PFHxA	87		50 - 200
13C4 PFHpA	87		50 - 200
13C8 PFOA	80		50 - 200
13C9 PFNA	74		50 - 200
13C7 PFUnA	67		50 - 200
13C2 PFDoA	73		50 - 200
13C4 PFBA	90		50 - 200
13C5 PFPeA	90		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	111		50 - 200

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QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1 MS

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140627

Prep Batch: 140472

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	122		50 - 200
13C2-6:2-FTS	117		50 - 200
13C2-8:2-FTS	114		50 - 200

Lab Sample ID: 380-139180-1 MSD

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140627

Prep Batch: 140472

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 (11CI-PF3OUdS)	<2.0		60.2	57.8		ng/L		96	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		60.2	56.6		ng/L		94	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	59.4		ng/L		99	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	63.0		ng/L		105	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	62.4		ng/L		103	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	61.9		ng/L		103	70 - 130	4	30
Perfluorododecanoic acid (PFDaA)	<2.0		60.2	63.4		ng/L		105	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	63.4		ng/L		104	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	61.0		ng/L		100	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	63.5		ng/L		104	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	61.6		ng/L		102	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	59.4		ng/L		98	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	63.9		ng/L		105	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	64.2		ng/L		107	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	66.1		ng/L		110	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	61.2		ng/L		102	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	60.8		ng/L		101	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	62.7		ng/L		104	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	61.1		ng/L		101	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.2	55.7		ng/L		93	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	62.0		ng/L		103	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	57.4		ng/L		95	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	61.1		ng/L		100	70 - 130	7	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	54.5		ng/L		90	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	59.4		ng/L		99	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	83		50 - 200
13C6 PFDA	77		50 - 200
13C5 PFHxA	86		50 - 200
13C4 PFHpA	87		50 - 200
13C8 PFOA	83		50 - 200
13C9 PFNA	81		50 - 200
13C7 PFUnA	80		50 - 200
13C2 PFDoA	79		50 - 200
13C4 PFBA	91		50 - 200
13C5 PFPeA	94		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	119		50 - 200
13C2-8:2-FTS	114		50 - 200

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

Lab Sample ID: MBL 380-140601/20-A
Matrix: Water
Analysis Batch: 140677

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 140601

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		03/07/25 13:49	03/08/25 14:24	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/07/25 13:49	03/08/25 14:24	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	115		70 - 130			03/07/25 13:49	03/08/25 14:24	1
13C2 PFHxA	105		70 - 130			03/07/25 13:49	03/08/25 14:24	1
13C2 PFDA	112		70 - 130			03/07/25 13:49	03/08/25 14:24	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-140601/20-A

Matrix: Water

Analysis Batch: 140677

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 140601

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	98		70 - 130	03/07/25 13:49	03/08/25 14:24	1

Lab Sample ID: LCS 380-140601/22-A

Matrix: Water

Analysis Batch: 140677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	25.1	24.7		ng/L		98	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.1	27.8		ng/L		111	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.9		ng/L		111	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	27.5		ng/L		109	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	27.9		ng/L		111	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	26.3		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	26.9		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	27.2		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	27.9		ng/L		111	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	28.0		ng/L		112	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	26.7		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.5		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	25.1	27.9		ng/L		111	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	28.2		ng/L		112	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	27.6		ng/L		110	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.5		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	27.6		ng/L		110	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	26.4		ng/L		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	107		70 - 130
13C2 PFDA	106		70 - 130
13C3-GenX	100		70 - 130

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-140601/21-A

Matrix: Water

Analysis Batch: 140677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 140601

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.93	J	ng/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.17	J	ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.17	J	ng/L		108	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.17	J	ng/L		108	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.11	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.14	J	ng/L		107	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.20	J	ng/L		110	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.03	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.29	J	ng/L		114	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.13	J	ng/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.11	J	ng/L		105	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.13	J	ng/L		106	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.11	J	ng/L		105	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	98		70 - 130

Lab Sample ID: 380-139180-1 MS

Matrix: Drinking Water

Analysis Batch: 140677

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

Prep Type: Total/NA

Prep Batch: 140601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	26.0		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	27.7		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	28.5		ng/L		113	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	28.1		ng/L		111	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1 MS

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140677

Prep Batch: 140601

Sample Data - 100%										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	28.6		ng/L		113	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	29.1		ng/L		112	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	27.5		ng/L		109	70 - 130	
Perfluorooctanoic acid (PFOA)	<2.0		25.2	28.3		ng/L		110	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		25.2	28.8		ng/L		114	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	27.5		ng/L		106	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.8		ng/L		105	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	28.2		ng/L		110	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		25.2	28.7		ng/L		114	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	28.4		ng/L		113	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	28.4		ng/L		113	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.8		ng/L		106	70 - 130	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	27.5		ng/L		109	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.8		ng/L		106	70 - 130	

Lab Sample ID: 380-139180-1 MSD

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140677

Prep Batch: 140601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.3	26.6		ng/L		105	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.3	28.6		ng/L		113	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.3	28.8		ng/L		114	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.3	28.4		ng/L		112	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.3	28.5		ng/L		113	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.3	28.9		ng/L		111	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.3	28.0		ng/L		111	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.3	28.9		ng/L		112	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		25.3	28.9		ng/L		115	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1 MSD

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

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 140677

Prep Batch: 140601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.3	28.5		ng/L		110	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.3	27.1		ng/L		106	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.3	29.6		ng/L		115	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		25.3	29.0		ng/L		115	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.3	29.1		ng/L		115	70 - 130	3	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.3	28.1		ng/L		111	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.3	27.2		ng/L		108	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.3	28.4		ng/L		112	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.3	28.3		ng/L		112	70 - 130	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	112		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	103		70 - 130

QC Association Summary

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

Job ID: 380-139180-1
SDG: Weekly PFAS

LCMS

Prep Batch: 140472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-139180-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	
380-139180-2	Ka'amilo Wells	Total/NA	Water	533	
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	
380-139180-4	FB Ka'amilo Wells	Total/NA	Water	533	
MBL 380-140472/20-A	Method Blank	Total/NA	Water	533	
LCS 380-140472/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-140472/21-A	Lab Control Sample	Total/NA	Water	533	
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	

Prep Batch: 140601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-139180-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1 DW	
380-139180-2	Ka'amilo Wells	Total/NA	Water	537.1 DW	
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1 DW	
380-139180-4	FB Ka'amilo Wells	Total/NA	Water	537.1 DW	
MBL 380-140601/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-140601/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-140601/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1 DW	
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 140627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-139180-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	140472
380-139180-2	Ka'amilo Wells	Total/NA	Water	533	140472
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	140472
380-139180-4	FB Ka'amilo Wells	Total/NA	Water	533	140472
MBL 380-140472/20-A	Method Blank	Total/NA	Water	533	140472
LCS 380-140472/22-A	Lab Control Sample	Total/NA	Water	533	140472
MRL 380-140472/21-A	Lab Control Sample	Total/NA	Water	533	140472
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	140472
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	533	140472

Analysis Batch: 140677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-139180-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1	140601
380-139180-2	Ka'amilo Wells	Total/NA	Water	537.1	140601
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1	140601
380-139180-4	FB Ka'amilo Wells	Total/NA	Water	537.1	140601
MBL 380-140601/20-A	Method Blank	Total/NA	Water	537.1	140601
LCS 380-140601/22-A	Lab Control Sample	Total/NA	Water	537.1	140601
MRL 380-140601/21-A	Lab Control Sample	Total/NA	Water	537.1	140601
380-139180-1 MS	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1	140601
380-139180-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	537.1	140601

Lab Chronicle

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

Job ID: 380-139180-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-139180-1

Date Collected: 03/03/25 11:09

Matrix: Drinking Water

Date Received: 03/05/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			140472	XTD8	EA POM	03/07/25 06:21
Total/NA	Analysis	533		1	140627	Y5FM	EA POM	03/07/25 17:17
Total/NA	Prep	537.1 DW			140601	HM3M	EA POM	03/07/25 13:49
Total/NA	Analysis	537.1		1	140677	M7ML	EA POM	03/08/25 14:54

Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-139180-2

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			140472	XTD8	EA POM	03/07/25 06:21
Total/NA	Analysis	533		1	140627	Y5FM	EA POM	03/07/25 19:03
Total/NA	Prep	537.1 DW			140601	HM3M	EA POM	03/07/25 13:49
Total/NA	Analysis	537.1		1	140677	M7ML	EA POM	03/08/25 15:33

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

Lab Sample ID: 380-139180-3

Date Collected: 03/03/25 11:09

Matrix: Water

Date Received: 03/05/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			140472	XTD8	EA POM	03/07/25 06:21
Total/NA	Analysis	533		1	140627	Y5FM	EA POM	03/07/25 19:24
Total/NA	Prep	537.1 DW			140601	HM3M	EA POM	03/07/25 13:49
Total/NA	Analysis	537.1		1	140677	M7ML	EA POM	03/08/25 15:43

Client Sample ID: FB Ka'amilo Wells

Lab Sample ID: 380-139180-4

Date Collected: 03/03/25 11:37

Matrix: Water

Date Received: 03/05/25 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			140472	XTD8	EA POM	03/07/25 06:21
Total/NA	Analysis	533		1	140627	Y5FM	EA POM	03/07/25 19:35
Total/NA	Prep	537.1 DW			140601	HM3M	EA POM	03/07/25 13:49
Total/NA	Analysis	537.1		1	140677	M7ML	EA POM	03/08/25 15:52

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: 380-139180-1
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 *

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

Method Summary

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

Job ID: 380-139180-1
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: 380-139180-1
SDG: Weekly PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-139180-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	03/03/25 11:09	03/05/25 09:20	HI0000331
380-139180-2	Ka'amilo Wells	Water	03/03/25 11:37	03/05/25 09:20	HI0000331
380-139180-3	FB AIEA WELLS PUMPS 1&2 (260)	Water	03/03/25 11:09	03/05/25 09:20	HI0000331
380-139180-4	FB Ka'amilo Wells	Water	03/03/25 11:37	03/05/25 09:20	HI0000331

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

Chain of Custody Record

Client Information		Sampler Bailey	Lab PM Arada Rachelle	Carrier Tracking No(s)	COC No: 380-27941-2757 2
Client Contact: Kirk Iwamoto		Phone: +1 808 748 5840	E-Mail: Rachelle.Arada@eurofins.com	State of Origin:	Page: Page 2 of 2
Company: City & County of Honolulu		PWSID:		Job #:	
Address: 630 South Beretania Street, Chemistry Lab Honolulu State, Zip: HI 96843		Due Date Requested: TAT Requested (days)		Analysis Requested	
Phone: 808-748-5840 (tel)		Compliance Project: Δ No		Preservation Codes	
Email: kiwamoto@hbws.org		PO #: C20525101 exp 05312023		A HCL M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2SO4 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Y Trizma Z other (specify)	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		WO #:		H - Ascorbic Acid I - Ice J - DI Water K - EDTA L EDA Other	
Site:		SSOW#:		Total Number of Containers	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)
Aiea Wells Pumps 1&2 (260)PZ	3-Mar-2025	1109	G	Water	Water
Ka'amilo Wells	3-Mar-2025	1137	G	Water	Water
FB Aiea Wells Pumps 1&2 (260)	3-Mar-2025				
FB Ka'amilo Wells	3-Mar-2025				
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested I II III IV Other (specify)		Special Instructions/QC Requirements			
Empty Kit Relinquished by		Method of Shipment: FEDEX 39861967			
Date/Time:		Date/Time: 03/05/25 09:20			
Company:		Company:			
Relinquished by		Date/Time:			
Company:		Company:			
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 751A 1.0°-0.0°=1.0°			



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-139180-1

SDG Number: Weekly PFAS

Login Number: 139180

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Hernandez, Orlando

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	