

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

JOB NUMBER

380-149793-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



Authorized for release by
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

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Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	11
Surrogate Summary	12
Isotope Dilution Summary	13
QC Sample Results	14
QC Association Summary	25
Lab Chronicle	26
Certification Summary	27
Method Summary	28
Sample Summary	29
Chain of Custody	30
Receipt Checklists	31



Definitions/Glossary

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

Job ID: 380-149793-1
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: 380-149793-1

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Job Narrative 380-149793-1

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 5/8/2025 9:43 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 5.6°C.

PFAS

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

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Detection Summary

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

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: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-1

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorooctanesulfonic acid (PFOS)	3.3		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:30	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	76		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C6 PFDA	80		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C5 PFHxA	86		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C4 PFHpA	94		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C8 PFOA	92		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C9 PFNA	87		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C7 PFUnA	68		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C2 PFDoA	67		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C4 PFBA	102		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C5 PFPeA	92		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C3 PFBS	95		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C3 PFHxS	109		50 - 200	05/10/25 16:09	05/11/25 16:30	1

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Client Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-1

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	108		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C2-4:2-FTS	116		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C2-6:2-FTS	116		50 - 200	05/10/25 16:09	05/11/25 16:30	1
13C2-8:2-FTS	105		50 - 200	05/10/25 16:09	05/11/25 16:30	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		05/10/25 13:47	05/11/25 20:54	1
Perfluorooctanesulfonic acid (PFOS)	3.1		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 20:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130	05/10/25 13:47	05/11/25 20:54	1
13C2 PFHxA	111		70 - 130	05/10/25 13:47	05/11/25 20:54	1
13C2 PFDA	105		70 - 130	05/10/25 13:47	05/11/25 20:54	1
13C3-GenX	109		70 - 130	05/10/25 13:47	05/11/25 20:54	1

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

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		05/10/25 16:09	05/11/25 16:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1

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Client Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/10/25 16:09	05/11/25 16:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	82		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C6 PFDA	110		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C5 PFHxA	106		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C4 PFHpA	122		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C8 PFOA	122		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C9 PFNA	119		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C7 PFUnA	91		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C2 PFDoA	87		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C4 PFBA	114		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C5 PFPeA	107		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C3 PFBS	99		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C3 PFHxS	117		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C8 PFOS	113		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C2-4:2-FTS	120		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C2-6:2-FTS	125		50 - 200	05/10/25 16:09	05/11/25 16:40	1
13C2-8:2-FTS	107		50 - 200	05/10/25 16:09	05/11/25 16:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

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		05/10/25 13:47	05/11/25 21:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/25 13:47	05/11/25 21:03	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130			05/10/25 13:47	05/11/25 21:03	1
13C2 PFHxA	106		70 - 130			05/10/25 13:47	05/11/25 21:03	1
13C2 PFDA	104		70 - 130			05/10/25 13:47	05/11/25 21:03	1
13C3-GenX	101		70 - 130			05/10/25 13:47	05/11/25 21:03	1

Action Limit Summary

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-1

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 Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		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)	3.4		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 SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

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

Surrogate Summary

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-149787-E-1-A MS	Matrix Spike	110	118	115	112
380-149787-F-1-A MSD	Matrix Spike Duplicate	103	106	104	100
380-149793-1	HALAWA SHAFT VIEWING POOL	108	111	105	109
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	104	106	104	101
LCS 380-151724/21-A	Lab Control Sample	99	106	101	103
MBL 380-151724/19-A	Method Blank	95	103	102	96
MRL 380-151724/20-A	Lab Control Sample	99	104	105	99

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: 380-149793-1
SDG: Weekly PFAS

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)
380-149793-1	HALAWA SHAFT VIEWING POC	76	80	86	94	92	87	68	67
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	82	110	106	122	122	119	91	87
380-149798-B-3-A MS	Matrix Spike	91	102	113	114	112	110	110	112
380-149798-C-3-A MSD	Matrix Spike Duplicate	92	109	110	114	109	110	110	112
LCS 380-151688/24-A	Lab Control Sample	86	102	100	116	115	114	89	85
MBL 380-151688/22-A	Method Blank	72	103	106	121	116	121	90	88
MRL 380-151688/23-A	Lab Control Sample	85	105	108	126	119	119	89	87

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)
380-149793-1	HALAWA SHAFT VIEWING POC	102	92	95	109	108	116	116	105
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	114	107	99	117	113	120	125	107
380-149798-B-3-A MS	Matrix Spike	109	108	110	109	108	120	117	106
380-149798-C-3-A MSD	Matrix Spike Duplicate	111	110	111	106	109	120	118	110
LCS 380-151688/24-A	Lab Control Sample	114	104	96	113	112	113	120	103
MBL 380-151688/22-A	Method Blank	116	106	97	116	116	123	128	110
MRL 380-151688/23-A	Lab Control Sample	116	108	96	116	114	120	120	103

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C6PFDA = 13C6 PFDA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
13C7PUA = 13C7 PFUnA
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: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-151688/22-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151688

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		05/10/25 16:09	05/11/25 13:03	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	72		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C6 PFDA	103		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C5 PFHxA	106		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C4 PFHpA	121		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C8 PFOA	116		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C9 PFNA	121		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C7 PFUnA	90		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C2 PFDoA	88		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C4 PFBA	116		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C5 PFPeA	106		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C3 PFBS	97		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C3 PFHxS	116		50 - 200	05/10/25 16:09	05/11/25 13:03	1

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QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-151688/22-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 151688

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	116		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C2-4:2-FTS	123		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C2-6:2-FTS	128		50 - 200	05/10/25 16:09	05/11/25 13:03	1
13C2-8:2-FTS	110		50 - 200	05/10/25 16:09	05/11/25 13:03	1

Lab Sample ID: LCS 380-151688/24-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151688

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	42.3		ng/L		70	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.1	49.4		ng/L		82	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	53.2		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	54.9		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	53.6		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	54.4		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	55.3		ng/L		92	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	54.6		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	53.2		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	52.7		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	60.1	54.9		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	54.4		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	54.4		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	55.0		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	54.0		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	55.9		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	56.3		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	56.0		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	47.5		ng/L		79	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	55.7		ng/L		93	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	53.8		ng/L		89	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	53.6		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	53.4		ng/L		89	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	53.5		ng/L		89	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: LCS 380-151688/24-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151688

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	49.5		ng/L		82	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	86		50 - 200				
13C6 PFDA	102		50 - 200				
13C5 PFHxA	100		50 - 200				
13C4 PFHpA	116		50 - 200				
13C8 PFOA	115		50 - 200				
13C9 PFNA	114		50 - 200				
13C7 PFUnA	89		50 - 200				
13C2 PFDoA	85		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	104		50 - 200				
13C3 PFBS	96		50 - 200				
13C3 PFHxS	113		50 - 200				
13C8 PFOS	112		50 - 200				
13C2-4:2-FTS	113		50 - 200				
13C2-6:2-FTS	120		50 - 200				
13C2-8:2-FTS	103		50 - 200				

Lab Sample ID: MRL 380-151688/23-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151688

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.66	J	ng/L		83	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.83	J	ng/L		91	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.90	J	ng/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.97	J	ng/L		99	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.15	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.11	J	ng/L		106	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.12	J	ng/L		106	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-151688/23-A

Matrix: Water

Analysis Batch: 151742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151688

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.13	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.12	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.35	J	ng/L		117	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.65	J	ng/L		82	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.01	J	ng/L		101	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.85	J	ng/L		93	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.85	J	ng/L		92	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	85		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	126		50 - 200
13C8 PFOA	119		50 - 200
13C9 PFNA	119		50 - 200
13C7 PFUnA	89		50 - 200
13C2 PFDoA	87		50 - 200
13C4 PFBA	116		50 - 200
13C5 PFPeA	108		50 - 200
13C3 PFBS	96		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-149798-B-3-A MS

Matrix: Water

Analysis Batch: 151854

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 151688

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		120	107		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	105		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	105		ng/L		87	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-149798-B-3-A MS

Matrix: Water

Analysis Batch: 151854

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 151688

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		120	107		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	108		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	109		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	108		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	105		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	108		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		120	109		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	105		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	107		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	106		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	110		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	108		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	104		ng/L		87	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		120	107		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	108		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	104		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		120	105		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	106		ng/L		88	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	104		ng/L		87	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	91		50 - 200
13C6 PFDA	102		50 - 200
13C5 PFHxA	113		50 - 200
13C4 PFHpA	114		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	112		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	108		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	108		50 - 200

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QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-149798-B-3-A MS

Matrix: Water

Analysis Batch: 151854

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 151688

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	117		50 - 200
13C2-8:2-FTS	106		50 - 200

Lab Sample ID: 380-149798-C-3-A MSD

Matrix: Water

Analysis Batch: 151854

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 151688

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		120	104		ng/L		87	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		120	105		ng/L		88	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	107		ng/L		89	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	105		ng/L		87	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	106		ng/L		88	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		120	108		ng/L		90	70 - 130	0	30
Perfluorododecanoic acid (PFDaA)	<2.0		120	107		ng/L		89	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	108		ng/L		89	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	110		ng/L		91	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	113		ng/L		94	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		120	106		ng/L		88	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	107		ng/L		89	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		120	108		ng/L		89	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	108		ng/L		90	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	107		ng/L		89	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	115		ng/L		95	70 - 130	7	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	111		ng/L		92	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	107		ng/L		88	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	106		ng/L		88	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	107		ng/L		89	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	108		ng/L		89	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	106		ng/L		88	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	108		ng/L		90	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	108		ng/L		89	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	112		ng/L		93	70 - 130	7	30

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QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

<i>Isotope Dilution</i>	<i>MSD %Recovery</i>	<i>MSD Qualifier</i>	<i>Limits</i>
13C3 HFPO-DA	92		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	114		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	112		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	106		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	118		50 - 200
13C2-8:2-FTS	110		50 - 200

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

Lab Sample ID: MBL 380-151724/19-A
Matrix: Water
Analysis Batch: 151744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151724

<i>Analyte</i>	<i>MBL Result</i>	<i>MBL Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/10/25 13:47	05/11/25 18:02	1
<i>Surrogate</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
d5-NEtFOSAA	95		70 - 130			05/10/25 13:47	05/11/25 18:02	1
13C2 PFHxA	103		70 - 130			05/10/25 13:47	05/11/25 18:02	1
13C2 PFDA	102		70 - 130			05/10/25 13:47	05/11/25 18:02	1

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QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: MBL 380-151724/19-A
Matrix: Water
Analysis Batch: 151744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151724

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	96		70 - 130	05/10/25 13:47	05/11/25 18:02	1

Lab Sample ID: LCS 380-151724/21-A
Matrix: Water
Analysis Batch: 151744

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.1	44.8		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.1	46.5		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	46.4		ng/L		93	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	47.0		ng/L		94	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	44.3		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	46.2		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	45.9		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	47.8		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	46.9		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	47.7		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	47.0		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	46.1		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	50.1	46.9		ng/L		94	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	41.4		ng/L		83	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	49.6		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.1	45.5		ng/L		91	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.1	44.5		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.1	45.2		ng/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	106		70 - 130
13C2 PFDA	101		70 - 130
13C3-GenX	103		70 - 130

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: MRL 380-151724/20-A

Matrix: Water

Analysis Batch: 151744

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 151724

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.81	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.99	J	ng/L		99	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.06	J	ng/L		103	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.19	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.99	J	ng/L		100	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.95	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.90	J	ng/L		95	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	104		70 - 130
13C2 PFDA	105		70 - 130
13C3-GenX	99		70 - 130

Lab Sample ID: 380-149787-E-1-A MS

Matrix: Water

Analysis Batch: 151744

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 151724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	24.0		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	25.9		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.9		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.2		ng/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-149787-E-1-A MS

Matrix: Water

Analysis Batch: 151744

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 151724

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits		
	Result	Qualifier	Added	Result	Qualifier							
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	<2.0		25.1	25.0		ng/L		100	70 - 130			
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.4		ng/L		105	70 - 130			
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	25.9		ng/L		103	70 - 130			
Perfluorooctanoic acid (PFOA)	<2.0		25.1	26.7		ng/L		107	70 - 130			
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.1		ng/L		104	70 - 130			
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.4		ng/L		105	70 - 130			
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	25.3		ng/L		101	70 - 130			
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.5		ng/L		105	70 - 130			
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.6		ng/L		106	70 - 130			
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	24.9		ng/L		99	70 - 130			
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	28.5		ng/L		114	70 - 130			
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	24.8		ng/L		99	70 - 130			
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	24.3		ng/L		97	70 - 130			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.3		ng/L		105	70 - 130			
		MS	MS									
Surrogate	%Recovery	Qualifier	Limits									
d5-NEtFOSAA	110		70 - 130									
13C2 PFHxA	118		70 - 130									
13C2 PFDA	115		70 - 130									
13C3-GenX	112		70 - 130									

Lab Sample ID: 380-149787-F-1-A MSD

Matrix: Water

Analysis Batch: 151744

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 151724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	22.2		ng/L		89	70 - 130	8	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	23.7		ng/L		95	70 - 130	9	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	24.2		ng/L		97	70 - 130	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	23.6		ng/L		94	70 - 130	10	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	24.2		ng/L		97	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	23.4		ng/L		94	70 - 130	12	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	23.6		ng/L		94	70 - 130	9	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	24.3		ng/L		97	70 - 130	10	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.1		ng/L		96	70 - 130	8	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-149793-1
SDG: Weekly PFAS

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

Lab Sample ID: 380-149787-F-1-A MSD

Matrix: Water

Analysis Batch: 151744

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 151724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	24.2		ng/L		96	70 - 130	9	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	23.1		ng/L		92	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	23.8		ng/L		95	70 - 130	11	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	24.2		ng/L		97	70 - 130	9	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.3		ng/L		89	70 - 130	11	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	26.2		ng/L		105	70 - 130	8	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	22.9		ng/L		91	70 - 130	8	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	22.4		ng/L		90	70 - 130	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.3		ng/L		97	70 - 130	8	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	103		70 - 130
13C2 PFHxA	106		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	100		70 - 130

QC Association Summary

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

Job ID: 380-149793-1
SDG: Weekly PFAS

LCMS

Prep Batch: 151688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-149793-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
MBL 380-151688/22-A	Method Blank	Total/NA	Water	533	
LCS 380-151688/24-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-151688/23-A	Lab Control Sample	Total/NA	Water	533	
380-149798-B-3-A MS	Matrix Spike	Total/NA	Water	533	
380-149798-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 151724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-149793-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
MBL 380-151724/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-151724/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-151724/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-149787-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-149787-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 151742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-149793-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	151688
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	151688
MBL 380-151688/22-A	Method Blank	Total/NA	Water	533	151688
LCS 380-151688/24-A	Lab Control Sample	Total/NA	Water	533	151688
MRL 380-151688/23-A	Lab Control Sample	Total/NA	Water	533	151688

Analysis Batch: 151744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-149793-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1	151724
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1	151724
MBL 380-151724/19-A	Method Blank	Total/NA	Water	537.1	151724
LCS 380-151724/21-A	Lab Control Sample	Total/NA	Water	537.1	151724
MRL 380-151724/20-A	Lab Control Sample	Total/NA	Water	537.1	151724
380-149787-E-1-A MS	Matrix Spike	Total/NA	Water	537.1	151724
380-149787-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	151724

Analysis Batch: 151854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-149798-B-3-A MS	Matrix Spike	Total/NA	Water	533	151688
380-149798-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	151688

Lab Chronicle

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

Job ID: 380-149793-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-1

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			151688	E9PK	EA POM	05/10/25 16:09
Total/NA	Analysis	533		1	151742	M7ML	EA POM	05/11/25 16:30
Total/NA	Prep	537.1 DW			151724	N8NE	EA POM	05/10/25 13:47
Total/NA	Analysis	537.1		1	151744	SZ9R	EA POM	05/11/25 20:54

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-149793-2

Date Collected: 05/06/25 10:00

Matrix: Water

Date Received: 05/08/25 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			151688	E9PK	EA POM	05/10/25 16:09
Total/NA	Analysis	533		1	151742	M7ML	EA POM	05/11/25 16:40
Total/NA	Prep	537.1 DW			151724	N8NE	EA POM	05/10/25 13:47
Total/NA	Analysis	537.1		1	151744	SZ9R	EA POM	05/11/25 21:03

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: 380-149793-1
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	01-31-26

- 1
- 2
- 3
- 4
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- 16
- 17

Method Summary

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

Job ID: 380-149793-1
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: 380-149793-1
SDG: Weekly PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-149793-1	HALAWA SHAFT VIEWING POOL	Water	05/06/25 10:00	05/08/25 09:43
380-149793-2	FB: HALAWA SHAFT VIEWING POOL	Water	05/06/25 10:00	05/08/25 09:43

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

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-149793-1

SDG Number: Weekly PFAS

Login Number: 149793

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

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