eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/23/2024 10:52:04 AM

JOB DESCRIPTION

RED-HILL
Weekly PFAS

JOB NUMBER

380-113098-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

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

Rachelle Arada

Generated
9/23/2024 10:52:04 AM

Authorized for release by
Rachelle Arada, Project Manager
Rachelle.Arada@et.eurofinsus.com
(626)386-1106

Table of Contents

Definitions/Glossary

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

Job ID: 380-113098-1
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

Job Narrative
380-113098-1

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 9/13/2024 12:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8°C and 3.7°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: 380-113098-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL — Lab Sample ID: 380-113098-1

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)	3.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.9		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL — Lab Sample ID: 380-113098-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-113098-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Date Collected: 09/10/24 10:00
Date Received: 09/13/24 12:00

Lab Sample ID: 380-113098-1

Matrix: Water

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		09/19/24 10:36	09/20/24 17:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorohexanesulfonic acid (PFHxS)	**3.4**		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorooctanesulfonic acid (PFOS)	**3.1**		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C6 PFDA	*107*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C5 PFHxA	*106*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C4 PFHpA	*109*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C8 PFOA	*111*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C9 PFNA	*107*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C7 PFUnA	*107*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C2 PFDoA	*101*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C4 PFBA	*110*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C5 PFPeA	*125*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C3 PFBS	*106*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*
13C3 PFHxS	*116*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:28*	*1*

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113098-1
Matrix: Water
Date Collected: 09/10/24 10:00
Date Received: 09/13/24 12:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	115		50 - 200	09/19/24 10:36	09/20/24 17:28	1
13C2-4:2-FTS	159		50 - 200	09/19/24 10:36	09/20/24 17:28	1
13C2-6:2-FTS	149		50 - 200	09/19/24 10:36	09/20/24 17:28	1
13C2-8:2-FTS	135		50 - 200	09/19/24 10:36	09/20/24 17:28	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorooctanesulfonic acid (PFOS)	**3.6**		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorohexanesulfonic acid (PFHxS)	**3.9**		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/15/24 11:08	09/16/24 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130	09/15/24 11:08	09/16/24 20:29	1
13C2 PFHxA	102		70 - 130	09/15/24 11:08	09/16/24 20:29	1
13C2 PFDA	106		70 - 130	09/15/24 11:08	09/16/24 20:29	1
13C3-GenX	94		70 - 130	09/15/24 11:08	09/16/24 20:29	1

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113098-2
Matrix: Water
Date Collected: 09/10/24 10:00
Date Received: 09/13/24 12:00

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		09/19/24 10:36	09/20/24 17:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1

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

Job ID: 380-113098-1
SDG: Weekly PFAS

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL
Date Collected: 09/10/24 10:00
Date Received: 09/13/24 12:00

Lab Sample ID: 380-113098-2
Matrix: Water

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		09/19/24 10:36	09/20/24 17:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/19/24 10:36	09/20/24 17:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C6 PFDA	*112*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C5 PFHxA	*115*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C4 PFHpA	*119*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C8 PFOA	*120*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C9 PFNA	*114*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C7 PFUnA	*111*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C2 PFDoA	*109*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C4 PFBA	*108*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C5 PFPeA	*124*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C3 PFBS	*107*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C3 PFHxS	*116*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C8 PFOS	*117*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C2-4:2-FTS	*135*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C2-6:2-FTS	*141*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*
13C2-8:2-FTS	*127*		*50 - 200*	*09/19/24 10:36*	*09/20/24 17:38*	*1*

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Date Collected: 09/10/24 10:00
Date Received: 09/13/24 12:00

Lab Sample ID: 380-113098-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/19/24 08:47	09/19/24 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*09/19/24 08:47*	*09/19/24 20:30*	*1*
13C2 PFHxA	*99*		*70 - 130*	*09/19/24 08:47*	*09/19/24 20:30*	*1*
13C2 PFDA	*97*		*70 - 130*	*09/19/24 08:47*	*09/19/24 20:30*	*1*
13C3-GenX	*94*		*70 - 130*	*09/19/24 08:47*	*09/19/24 20:30*	*1*

Action Limit Summary

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

Job ID: 380-113098-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL — Lab Sample ID: 380-113098-1

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	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		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)	3.6		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)	3.9		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: 380-113098-2

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	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: 380-113098-1
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)
380-113096-B-1-B MS	Matrix Spike	104	107	105	95
380-113096-C-1-B MSD	Matrix Spike Duplicate	110	110	108	103
380-113098-1	HALAWA SHAFT VIEWING POOL	115	102	106	94
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	107	99	97	94
380-113429-B-4-A MS	Matrix Spike	109	103	109	99
380-113429-C-4-A MSD	Matrix Spike Duplicate	112	106	105	102
LCS 380-108480/22-A	Lab Control Sample	98	99	104	86
LCS 380-109102/21-A	Lab Control Sample	114	115	115	112
MBL 380-108480/20-A	Method Blank	102	106	109	87
MBL 380-109102/19-A	Method Blank	115	114	112	111
MRL 380-108480/21-A	Lab Control Sample	100	97	104	79
MRL 380-109102/20-A	Lab Control Sample	105	106	108	101

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: 380-113098-1
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)	PFDoA (50-200)
380-113001-B-1-A MS	Matrix Spike	93	101	95	96	99	99	99	96
380-113001-C-1-A MSD	Matrix Spike Duplicate	104	107	104	106	110	107	107	101
380-113098-1	HALAWA SHAFT VIEWING POOL	98	107	106	109	111	107	107	101
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	94	112	115	119	120	114	111	109
LCS 380-109142/22-A	Lab Control Sample	105	109	112	114	115	110	109	109
MBL 380-109142/20-A	Method Blank	100	109	115	115	117	109	109	105

		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)
380-113001-B-1-A MS	Matrix Spike	105	143	105	111	111	146	148	129
380-113001-C-1-A MSD	Matrix Spike Duplicate	103	149	105	111	112	144	147	130
380-113098-1	HALAWA SHAFT VIEWING POOL	110	125	106	116	115	159	149	135
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	108	124	107	116	117	135	141	127
LCS 380-109142/22-A	Lab Control Sample	111	120	110	114	113	135	136	122
MBL 380-109142/20-A	Method Blank	114	123	106	114	113	132	137	122

Surrogate Legend

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

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

Lab Sample ID: MBL 380-109142/20-A
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 109142

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		09/19/24 10:36	09/20/24 13:49	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C6 PFDA	*109*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C5 PFHxA	*115*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C4 PFHpA	*115*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C8 PFOA	*117*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C9 PFNA	*109*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C7 PFUnA	*109*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C2 PFDoA	*105*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C4 PFBA	*114*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C5 PFPeA	*123*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C3 PFBS	*106*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*
13C3 PFHxS	*114*		*50 - 200*	*09/19/24 10:36*	*09/20/24 13:49*	*1*

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

Lab Sample ID: MBL 380-109142/20-A
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 109142

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	113		50 - 200	09/19/24 10:36	09/20/24 13:49	1
13C2-4:2-FTS	132		50 - 200	09/19/24 10:36	09/20/24 13:49	1
13C2-6:2-FTS	137		50 - 200	09/19/24 10:36	09/20/24 13:49	1
13C2-8:2-FTS	122		50 - 200	09/19/24 10:36	09/20/24 13:49	1

Lab Sample ID: LCS 380-109142/22-A
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109142

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	51.7		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	52.4		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	52.7		ng/L		88	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	53.3		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	56.7		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	53.8		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	51.2		ng/L		85	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	54.6		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	55.1		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	53.9		ng/L		90	70 - 130
Perfluorononanoic acid (PFNA)	60.1	52.7		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	52.5		ng/L		87	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	53.0		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	54.1		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	55.6		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	58.4		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	57.3		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	54.9		ng/L		91	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	58.3		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	52.9		ng/L		88	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	55.8		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	49.7		ng/L		83	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	52.9		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	54.4		ng/L		91	70 - 130

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

Lab Sample ID: LCS 380-109142/22-A
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109142

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			60.1	54.7		ng/L		91	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*105*		*50 - 200*
13C6 PFDA	*109*		*50 - 200*
13C5 PFHxA	*112*		*50 - 200*
13C4 PFHpA	*114*		*50 - 200*
13C8 PFOA	*115*		*50 - 200*
13C9 PFNA	*110*		*50 - 200*
13C7 PFUnA	*109*		*50 - 200*
13C2 PFDoA	*109*		*50 - 200*
13C4 PFBA	*111*		*50 - 200*
13C5 PFPeA	*120*		*50 - 200*
13C3 PFBS	*110*		*50 - 200*
13C3 PFHxS	*114*		*50 - 200*
13C8 PFOS	*113*		*50 - 200*
13C2-4:2-FTS	*135*		*50 - 200*
13C2-6:2-FTS	*136*		*50 - 200*
13C2-8:2-FTS	*122*		*50 - 200*

Lab Sample ID: 380-113001-B-1-A MS
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 109142

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	50.5		ng/L		84	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	52.3		ng/L		87	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	51.5		ng/L		86	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	56.0		ng/L		93	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	2.7		60.2	61.1		ng/L		97	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		60.2	53.3		ng/L		89	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	54.1		ng/L		90	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	57.5		ng/L		92	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	56.1		ng/L		90	70 - 130		
Perfluorohexanoic acid (PFHxA)	2.6		60.2	57.5		ng/L		91	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		60.2	55.4		ng/L		92	70 - 130		
Perfluorooctanesulfonic acid (PFOS)	2.3		60.2	55.6		ng/L		88	70 - 130		
Perfluorooctanoic acid (PFOA)	6.0		60.2	59.9		ng/L		90	70 - 130		
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	54.8		ng/L		91	70 - 130		
Perfluorobutanoic acid (PFBA)	<2.0		60.2	56.4		ng/L		92	70 - 130		

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

Lab Sample ID: 380-113001-B-1-A MS
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 109142

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	56.7		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	57.5		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	54.2		ng/L		90	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	56.7		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.2	57.1		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	64.4		ng/L		107	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	51.6		ng/L		86	70 - 130
Perfluoropentanoic acid (PFPeA)	2.0		60.2	54.2		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	54.7		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	55.5		ng/L		92	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*50 - 200*
13C6 PFDA	*101*		*50 - 200*
13C5 PFHxA	*95*		*50 - 200*
13C4 PFHpA	*96*		*50 - 200*
13C8 PFOA	*99*		*50 - 200*
13C9 PFNA	*99*		*50 - 200*
13C7 PFUnA	*99*		*50 - 200*
13C2 PFDoA	*96*		*50 - 200*
13C4 PFBA	*105*		*50 - 200*
13C5 PFPeA	*143*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*111*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*146*		*50 - 200*
13C2-6:2-FTS	*148*		*50 - 200*
13C2-8:2-FTS	*129*		*50 - 200*

Lab Sample ID: 380-113001-C-1-A MSD
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 109142

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	52.6		ng/L		87	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	53.1		ng/L		88	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	54.4		ng/L		90	70 - 130	5	30

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

Lab Sample ID: 380-113001-C-1-A MSD
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 109142

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		60.4	53.6		ng/L		89	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	2.7		60.4	61.1		ng/L		97	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	53.5		ng/L		89	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	53.9		ng/L		89	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	56.1		ng/L		90	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	55.8		ng/L		90	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	2.6		60.4	57.8		ng/L		91	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	56.2		ng/L		93	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	2.3		60.4	55.2		ng/L		88	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	6.0		60.4	58.3		ng/L		87	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	54.6		ng/L		90	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	56.4		ng/L		91	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	56.6		ng/L		94	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	55.8		ng/L		92	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	57.5		ng/L		95	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	57.9		ng/L		96	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	56.6		ng/L		94	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	67.0		ng/L		111	70 - 130	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	52.6		ng/L		87	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	2.0		60.4	51.4		ng/L		82	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	55.5		ng/L		92	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	57.0		ng/L		94	70 - 130	3	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*107*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*106*		*50 - 200*
13C8 PFOA	*110*		*50 - 200*
13C9 PFNA	*107*		*50 - 200*
13C7 PFUnA	*107*		*50 - 200*
13C2 PFDoA	*101*		*50 - 200*
13C4 PFBA	*103*		*50 - 200*
13C5 PFPeA	*149*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*111*		*50 - 200*
13C8 PFOS	*112*		*50 - 200*

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

Lab Sample ID: 380-113001-C-1-A MSD
Matrix: Water
Analysis Batch: 109391

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 109142

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C2-4:2-FTS	144		50 - 200
13C2-6:2-FTS	147		50 - 200
13C2-8:2-FTS	130		50 - 200

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

Lab Sample ID: MBL 380-108480/20-A
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 108480

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/15/24 11:08	09/16/24 16:39	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130	09/15/24 11:08	09/16/24 16:39	1
13C2 PFHxA	106		70 - 130	09/15/24 11:08	09/16/24 16:39	1
13C2 PFDA	109		70 - 130	09/15/24 11:08	09/16/24 16:39	1
13C3-GenX	87		70 - 130	09/15/24 11:08	09/16/24 16:39	1

Lab Sample ID: LCS 380-108480/22-A
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108480

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			50.0	42.4		ng/L		85	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			50.0	52.1		ng/L		104	70 - 130		

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

Lab Sample ID: LCS 380-108480/22-A
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	50.0	50.5		ng/L		101	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	50.5		ng/L		101	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	48.9		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	48.9		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	50.1		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	51.8		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	50.7		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	55.4		ng/L		111	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	48.3		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	49.3		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	50.0	51.3		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	49.9		ng/L		100	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	49.2		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	53.4		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	52.4		ng/L		105	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	46.2		ng/L		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*98*		*70 - 130*
13C2 PFHxA	*99*		*70 - 130*
13C2 PFDA	*104*		*70 - 130*
13C3-GenX	*86*		*70 - 130*

Lab Sample ID: MRL 380-108480/21-A
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108480

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.34	J	ng/L		117	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.25	J	ng/L		112	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.12	J	ng/L		106	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.19	J	ng/L		110	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.10	J	ng/L		105	50 - 150

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

Lab Sample ID: MRL 380-108480/21-A
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108480

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.31	J	ng/L		116	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.41	J	ng/L		120	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.19	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.09	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.31	J	ng/L		116	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.22	J	ng/L		111	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.05	J	ng/L		103	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*100*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C2 PFDA	*104*		*70 - 130*
13C3-GenX	*79*		*70 - 130*

Lab Sample ID: 380-113096-B-1-B MS
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 108480

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		25.0	23.8		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.0	27.0		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.0	25.7		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.0	25.5		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.0	26.2		ng/L		105	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.0	26.6		ng/L		107	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.0	25.8		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.0	26.8		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.0	26.3		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.0	28.4		ng/L		113	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.0	26.9		ng/L		108	70 - 130

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

Lab Sample ID: 380-113096-B-1-B MS
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 108480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	<2.0		25.0	26.7		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.0	25.6		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.0	24.6		ng/L		98	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.0	24.6		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.0	28.4		ng/L		114	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.0	26.8		ng/L		107	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.0	25.5		ng/L		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*104*		*70 - 130*
13C2 PFHxA	*107*		*70 - 130*
13C2 PFDA	*105*		*70 - 130*
13C3-GenX	*95*		*70 - 130*

Lab Sample ID: 380-113096-C-1-B MSD
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 108480

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	24.7		ng/L		99	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.7		ng/L		111	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.9		ng/L		107	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	27.1		ng/L		108	70 - 130	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	27.2		ng/L		109	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	27.5		ng/L		110	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.2		ng/L		105	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	28.0		ng/L		112	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.7		ng/L		107	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.4		ng/L		109	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.7		ng/L		107	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.5		ng/L		110	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.7		ng/L		106	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	24.3		ng/L		97	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	25.3		ng/L		101	70 - 130	3	30

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

Lab Sample ID: 380-113096-C-1-B MSD
Matrix: Water
Analysis Batch: 108594

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 108480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.5		ng/L		110	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.4		ng/L		101	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.9		ng/L		103	70 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*110*		*70 - 130*
13C2 PFHxA	*110*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*103*		*70 - 130*

Lab Sample ID: MBL 380-109102/19-A
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 109102

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/19/24 08:47	09/19/24 19:04	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*115*		*70 - 130*	*09/19/24 08:47*	*09/19/24 19:04*	*1*
13C2 PFHxA	*114*		*70 - 130*	*09/19/24 08:47*	*09/19/24 19:04*	*1*
13C2 PFDA	*112*		*70 - 130*	*09/19/24 08:47*	*09/19/24 19:04*	*1*
13C3-GenX	*111*		*70 - 130*	*09/19/24 08:47*	*09/19/24 19:04*	*1*

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

Lab Sample ID: LCS 380-109102/21-A
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.0	25.4		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	26.5		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	26.2		ng/L		105	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	26.9		ng/L		108	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	26.5		ng/L		106	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	25.9		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	26.0		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	27.7		ng/L		111	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	25.3		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	26.2		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	24.1		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	25.9		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	25.0	26.3		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	27.2		ng/L		109	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	26.4		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	26.0		ng/L		104	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	27.0		ng/L		108	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	27.7		ng/L		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*114*		*70 - 130*
13C2 PFHxA	*115*		*70 - 130*
13C2 PFDA	*115*		*70 - 130*
13C3-GenX	*112*		*70 - 130*

Lab Sample ID: MRL 380-109102/20-A
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.52	J	ng/L		126	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.21	J	ng/L		111	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.18	J	ng/L		109	50 - 150

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

Lab Sample ID: MRL 380-109102/20-A
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.42	J	ng/L		121	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.07	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.18	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.36	J	ng/L		118	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.45	J	ng/L		123	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.38	J	ng/L		119	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*105*		*70 - 130*
13C2 PFHxA	*106*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*101*		*70 - 130*

Lab Sample ID: 380-113429-B-4-A MS
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.0	46.5		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.0	50.1		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.0	49.7		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.0	53.4		ng/L		107	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.0	51.2		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.0	47.4		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.0	49.2		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.0	51.3		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.0	47.8		ng/L		96	70 - 130

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

Lab Sample ID: 380-113429-B-4-A MS
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.0	49.9		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.0	45.5		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.0	48.4		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.0	50.3		ng/L		101	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.0	50.4		ng/L		101	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.0	47.4		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.0	52.1		ng/L		104	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.0	52.0		ng/L		104	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.0	50.7		ng/L		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*109*		*70 - 130*
13C2 PFHxA	*103*		*70 - 130*
13C2 PFDA	*109*		*70 - 130*
13C3-GenX	*99*		*70 - 130*

Lab Sample ID: 380-113429-C-4-A MSD
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 109102

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		50.2	46.7		ng/L		93	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	53.2		ng/L		106	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	51.0		ng/L		102	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	52.0		ng/L		104	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	49.5		ng/L		99	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	47.4		ng/L		94	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	49.7		ng/L		99	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	52.2		ng/L		104	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	48.8		ng/L		97	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	52.9		ng/L		105	70 - 130	6	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	49.4		ng/L		97	70 - 130	8	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	50.5		ng/L		101	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	51.1		ng/L		102	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	51.7		ng/L		103	70 - 130	2	30

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

Lab Sample ID: 380-113429-C-4-A MSD
Matrix: Water
Analysis Batch: 109218

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 109102

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	48.0		ng/L		96	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	54.2		ng/L		108	70 - 130	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	54.6		ng/L		109	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	50.8		ng/L		101	70 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*112*		*70 - 130*
13C2 PFHxA	*106*		*70 - 130*
13C2 PFDA	*105*		*70 - 130*
13C3-GenX	*102*		*70 - 130*

LCMS

Prep Batch: 108480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
MBL 380-108480/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-108480/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-108480/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-113096-B-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-113096-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 108594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1	108480
MBL 380-108480/20-A	Method Blank	Total/NA	Water	537.1	108480
LCS 380-108480/22-A	Lab Control Sample	Total/NA	Water	537.1	108480
MRL 380-108480/21-A	Lab Control Sample	Total/NA	Water	537.1	108480
380-113096-B-1-B MS	Matrix Spike	Total/NA	Water	537.1	108480
380-113096-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	108480

Prep Batch: 109102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
MBL 380-109102/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-109102/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-109102/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-113429-B-4-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-113429-C-4-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 109142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
MBL 380-109142/20-A	Method Blank	Total/NA	Water	533	
LCS 380-109142/22-A	Lab Control Sample	Total/NA	Water	533	
380-113001-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-113001-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 109218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1	109102
MBL 380-109102/19-A	Method Blank	Total/NA	Water	537.1	109102
LCS 380-109102/21-A	Lab Control Sample	Total/NA	Water	537.1	109102
MRL 380-109102/20-A	Lab Control Sample	Total/NA	Water	537.1	109102
380-113429-B-4-A MS	Matrix Spike	Total/NA	Water	537.1	109102
380-113429-C-4-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	109102

Analysis Batch: 109391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113098-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	109142
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	109142
MBL 380-109142/20-A	Method Blank	Total/NA	Water	533	109142
LCS 380-109142/22-A	Lab Control Sample	Total/NA	Water	533	109142
380-113001-B-1-A MS	Matrix Spike	Total/NA	Water	533	109142
380-113001-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	109142

Lab Chronicle

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

Job ID: 380-113098-1
SDG: Weekly PFAS

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113098-1

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			109142	G9MN	EA POM	09/19/24 10:36
Total/NA	Analysis	533		1	109391	Y5FM	EA POM	09/20/24 17:28
Total/NA	Prep	537.1 DW			108480	N8NE	EA POM	09/15/24 11:08
Total/NA	Analysis	537.1		1	108594	SZ9R	EA POM	09/16/24 20:29

Client Sample ID: FB: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113098-2

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			109142	G9MN	EA POM	09/19/24 10:36
Total/NA	Analysis	533		1	109391	Y5FM	EA POM	09/20/24 17:38
Total/NA	Prep	537.1 DW			109102	U7RS	EA POM	09/19/24 08:47
Total/NA	Analysis	537.1		1	109218	Y5FM	EA POM	09/19/24 20:30

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: 380-113098-1
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

Method Summary

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

Job ID: 380-113098-1
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: 380-113098-1
SDG: Weekly PFAS

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-113098-1	HALAWA SHAFT VIEWING POOL	Water	09/10/24 10:00	09/13/24 12:00
380-113098-2	FB: HALAWA SHAFT VIEWING POOL	Water	09/10/24 10:00	09/13/24 12:00

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768 2642
Phone (626) 386 1100

Chain of Custody Record

eurofins

Client Information	Sampler: EJ	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-28005 2757 1
Client Contact: Dr Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:	Analysis Requested		Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			Preservation Codes: R NaThioSO4; RA NaThio/HCl; Q Na2SO3; QA Na2SO3/HCl; Y Trizma; I NH4 Acetate
City: Honolulu	TAT Requested (days):			
State, Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5091(Tel)	PO #: C20525101 exp 05312023			Other:
Email: RFENSTEMACHER@hbws.org	WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site: Hawaii	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625.1 625.1_SIM	8015B_GRO_LL (MOD) GRO	8015B_DRO_LL_CS HNL Ranges C10-C24/C24 C36/C8-C18	525.2_PREC (MOD) 525plus Plus TICs	537.1_DW_PREC 537.1 Full List	533 All Analytes	Total Number of containers	Special Instructions/Note
			Preservation Code:				R	RA	Q	QA	Y	I		
Halawa Shaft Viewing Pool	9/10/24	1000	G	Water							3	3		
FB Halawa Shaft Viewing Pool	9/10/24	1000		Water							1	1		

380-113098 COC

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

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

Deliverable Requested: I II III IV Other (specify)

Special Instructions/QC Requirements: ① 7785 5112 9367

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FEDEX ② 7785 5112 9378

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[redacted]	9/11/24 1200		G.RETTNER	09/13/2024 12:00	EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 751A ① 3.8°-0.1°=3.7° ② 1.9°-0.1°=1.8° GEL-FROZEN

Ver: 04 02 2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-113098-1
SDG Number: Weekly PFAS

Login Number: 113098
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	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").	True	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	