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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

RED-HILL
Weekly: Halawa Shaft Viewing Pool

JOB NUMBER

380-172325-1

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
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Definitions/Glossary

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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: 380-172325-1

Job ID: 380-172325-1

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Job Narrative 380-172325-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/18/2025 10:04 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.5°C, 4.5°C and 4.7°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: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-172325-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

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: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-172325-1

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:05	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C6 PFDA	104		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C5 PFHxA	100		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C4 PFHpA	101		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C8 PFOA	103		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C9 PFNA	104		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C7 PFUnA	102		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C2 PFDoA	98		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C4 PFBA	103		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C5 PFPeA	115		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C3 PFBS	101		50 - 200			09/19/25 16:25	09/20/25 20:05	1
13C3 PFHxS	97		50 - 200			09/19/25 16:25	09/20/25 20:05	1

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Client Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-172325-1

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	102		50 - 200	09/19/25 16:25	09/20/25 20:05	1
13C2-4:2-FTS	119		50 - 200	09/19/25 16:25	09/20/25 20:05	1
13C2-6:2-FTS	102		50 - 200	09/19/25 16:25	09/20/25 20:05	1
13C2-8:2-FTS	92		50 - 200	09/19/25 16:25	09/20/25 20:05	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		09/21/25 11:19	09/22/25 14:47	1
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130			09/21/25 11:19	09/22/25 14:47	1
13C2 PFHxA	118		70 - 130			09/21/25 11:19	09/22/25 14:47	1
13C2 PFDA	113		70 - 130			09/21/25 11:19	09/22/25 14:47	1
13C3-GenX	119		70 - 130			09/21/25 11:19	09/22/25 14:47	1

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

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		09/19/25 16:25	09/20/25 20:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1

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Client Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

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		09/19/25 16:25	09/20/25 20:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/19/25 16:25	09/20/25 20:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C6 PFDA	106		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C5 PFHxA	106		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C4 PFHpA	108		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C8 PFOA	110		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C9 PFNA	110		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C7 PFUnA	106		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C2 PFDoA	105		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C4 PFBA	108		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C5 PFPeA	117		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C3 PFBS	98		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C3 PFHxS	98		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C8 PFOS	103		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C2-4:2-FTS	112		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C2-6:2-FTS	102		50 - 200	09/19/25 16:25	09/20/25 20:15	1
13C2-8:2-FTS	93		50 - 200	09/19/25 16:25	09/20/25 20:15	1

Client Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

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		09/21/25 11:19	09/22/25 14:56	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/21/25 11:19	09/22/25 14:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	98		70 - 130			09/21/25 11:19	09/22/25 14:56	1
13C2 PFHxA	108		70 - 130			09/21/25 11:19	09/22/25 14:56	1
13C2 PFDA	111		70 - 130			09/21/25 11:19	09/22/25 14:56	1
13C3-GenX	101		70 - 130			09/21/25 11:19	09/22/25 14:56	1

Action Limit Summary

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-172325-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-172325-1
 SDG: Weekly: Halawa Shaft Viewing Pool

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	PFHxA	PFDA	GenX
		(70-130)	(70-130)	(70-130)	(70-130)
380-172317-A-1-B MS	Matrix Spike	109	115	113	112
380-172317-A-1-C MSD	Matrix Spike Duplicate	99	108	109	106
380-172325-1	HALAWA SHAFT VIEWING POOL	115	118	113	119
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	98	108	111	101
LCS 380-175395/23-A	Lab Control Sample	100	108	111	96
MBL 380-175395/21-A	Method Blank	106	113	120	100
MRL 380-175395/22-A	Lab Control Sample	100	103	107	92

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: 380-172325-1
 SDG: Weekly: Halawa Shaft Viewing Pool

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)
380-172317-B-1-A MS	Matrix Spike	92	110	104	107	110	110	104	104
380-172317-B-1-B MSD	Matrix Spike Duplicate	86	105	95	103	106	107	107	102
380-172325-1	HALAWA SHAFT VIEWING POOL	85	104	100	101	103	104	102	98
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	86	106	106	108	110	110	106	105
LCS 380-175308/22-A	Lab Control Sample	89	110	105	106	107	109	111	105
MBL 380-175308/20-A	Method Blank	88	103	104	110	109	108	104	99
MRL 380-175308/21-A	Lab Control Sample	88	109	106	110	111	109	106	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)
380-172317-B-1-A MS	Matrix Spike	105	120	104	100	105	116	102	96
380-172317-B-1-B MSD	Matrix Spike Duplicate	103	113	105	102	105	111	107	95
380-172325-1	HALAWA SHAFT VIEWING POOL	103	115	101	97	102	119	102	92
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	108	117	98	98	103	112	102	93
LCS 380-175308/22-A	Lab Control Sample	105	111	104	100	102	107	98	92
MBL 380-175308/20-A	Method Blank	107	116	103	99	104	116	105	92
MRL 380-175308/21-A	Lab Control Sample	104	113	99	100	104	110	100	91

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: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-175308/20-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175308

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/19/25 16:25	09/20/25 16:44	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C6 PFDA	103		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C5 PFHxA	104		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C4 PFHpA	110		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C8 PFOA	109		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C9 PFNA	108		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C7 PFUnA	104		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C2 PFDoA	99		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C4 PFBA	107		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C5 PFPeA	116		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C3 PFBS	103		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C3 PFHxS	99		50 - 200	09/19/25 16:25	09/20/25 16:44	1

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QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-175308/20-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175308

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	104		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C2-4:2-FTS	116		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C2-6:2-FTS	105		50 - 200	09/19/25 16:25	09/20/25 16:44	1
13C2-8:2-FTS	92		50 - 200	09/19/25 16:25	09/20/25 16:44	1

Lab Sample ID: LCS 380-175308/22-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175308

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.4	53.5		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.4	56.6		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	60.3		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	64.2		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	61.8		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	59.0		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	60.4	60.1		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	61.5		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	60.9		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	57.7		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	60.4	58.9		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	61.1		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	58.6		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	56.7		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	59.0		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	63.2		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	61.5		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	62.7		ng/L		104	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	51.7		ng/L		86	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.4	61.1		ng/L		101	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.4	60.7		ng/L		101	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	56.8		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	62.0		ng/L		103	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.4	61.4		ng/L		102	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: LCS 380-175308/22-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175308

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.4	62.9		ng/L		104	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	89		50 - 200				
13C6 PFDA	110		50 - 200				
13C5 PFHxA	105		50 - 200				
13C4 PFHpA	106		50 - 200				
13C8 PFOA	107		50 - 200				
13C9 PFNA	109		50 - 200				
13C7 PFUnA	111		50 - 200				
13C2 PFDoA	105		50 - 200				
13C4 PFBA	105		50 - 200				
13C5 PFPeA	111		50 - 200				
13C3 PFBS	104		50 - 200				
13C3 PFHxS	100		50 - 200				
13C8 PFOS	102		50 - 200				
13C2-4:2-FTS	107		50 - 200				
13C2-6:2-FTS	98		50 - 200				
13C2-8:2-FTS	92		50 - 200				

Lab Sample ID: MRL 380-175308/21-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175308

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.75	J	ng/L		87	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.84	J	ng/L		91	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.90	J	ng/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.08	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.04	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.24	J	ng/L		111	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-175308/21-A
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175308

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.12	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.13	J	ng/L		106	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.79	J	ng/L		89	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	2.24	J	ng/L		111	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.08	J	ng/L		104	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	88		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	106		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	109		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	99		50 - 200
13C3 PFHxS	100		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	100		50 - 200
13C2-8:2-FTS	91		50 - 200

Lab Sample ID: 380-172317-B-1-A MS
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 175308

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		60.4	53.0		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	56.4		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	59.4		ng/L		98	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-172317-B-1-A MS
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 175308

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.4	61.8		ng/L		102	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	61.4		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	57.3		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	60.0		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	60.4		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	58.7		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	57.7		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	61.7		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	57.1		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	59.4		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	59.5		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	62.6		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	59.4		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	64.2		ng/L		106	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	53.0		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	61.8		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	63.5		ng/L		105	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	54.5		ng/L		90	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	60.6		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.1		ng/L		103	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	61.9		ng/L		103	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	92		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	104		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	105		50 - 200
13C5 PFPeA	120		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	100		50 - 200
13C8 PFOS	105		50 - 200

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-172317-B-1-A MS
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 175308

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	102		50 - 200
13C2-8:2-FTS	96		50 - 200

Lab Sample ID: 380-172317-B-1-B MSD
Matrix: Water
Analysis Batch: 175386

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 175308

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	53.6		ng/L		89	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	55.6		ng/L		92	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	57.7		ng/L		96	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	62.2		ng/L		103	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	60.8		ng/L		101	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	58.5		ng/L		97	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	59.0		ng/L		98	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	59.6		ng/L		99	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	61.9		ng/L		103	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	58.0		ng/L		96	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	57.1		ng/L		95	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	61.2		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	56.1		ng/L		93	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	55.9		ng/L		93	70 - 130	6	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	60.6		ng/L		101	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	61.6		ng/L		102	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	63.1		ng/L		105	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	61.3		ng/L		102	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	52.7		ng/L		88	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	61.8		ng/L		103	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	59.2		ng/L		98	70 - 130	7	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	53.3		ng/L		88	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	57.7		ng/L		96	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	59.9		ng/L		99	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	63.3		ng/L		105	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	86		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	95		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	102		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	102		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	95		50 - 200

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

Lab Sample ID: MBL 380-175395/21-A
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175395

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/21/25 11:19	09/22/25 12:52	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	106		70 - 130			09/21/25 11:19	09/22/25 12:52	1
13C2 PFHxA	113		70 - 130			09/21/25 11:19	09/22/25 12:52	1
13C2 PFDA	120		70 - 130			09/21/25 11:19	09/22/25 12:52	1

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QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-175395/21-A
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 175395

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	100	Qualifier	70 - 130	09/21/25 11:19	09/22/25 12:52	1

Lab Sample ID: LCS 380-175395/23-A
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175395

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>Limits</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>					
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.2	21.9		ng/L		87		70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.2	26.2		ng/L		104		70 - 130
Perfluoroundecanoic acid (PFUnA)	25.2	25.2		ng/L		100		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.2	23.4		ng/L		93		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.2	22.5		ng/L		89		70 - 130
Perfluorohexanoic acid (PFHxA)	25.2	24.4		ng/L		97		70 - 130
Perfluorododecanoic acid (PFDoA)	25.2	25.2		ng/L		100		70 - 130
Perfluorooctanoic acid (PFOA)	25.2	24.6		ng/L		98		70 - 130
Perfluorodecanoic acid (PFDA)	25.2	25.6		ng/L		102		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.2	26.4		ng/L		105		70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.2	26.9		ng/L		107		70 - 130
Perfluoroheptanoic acid (PFHpA)	25.2	25.1		ng/L		100		70 - 130
Perfluorononanoic acid (PFNA)	25.2	24.9		ng/L		99		70 - 130
Perfluorotetradecanoic acid (PFTA)	25.2	23.9		ng/L		95		70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.2	25.5		ng/L		102		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.2	24.9		ng/L		99		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.2	23.8		ng/L		95		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.2	23.1		ng/L		92		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	96		70 - 130

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-175395/22-A
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 175395

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.87	J	ng/L		93	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.16	J	ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.08	J	ng/L		103	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.88	J	ng/L		93	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.12	J	ng/L		105	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.10	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	2.03	J	ng/L		101	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.90	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.89	J	ng/L		94	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	103		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	92		70 - 130

Lab Sample ID: 380-172317-A-1-B MS
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 175395

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	25.4		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	25.7		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	24.4		ng/L		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.9		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-172317-A-1-B MS
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 175395

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	23.9		ng/L		95	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	26.0		ng/L		103	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	24.5		ng/L		97	70 - 130	
Perfluorooctanoic acid (PFOA)	2.0		25.2	24.9		ng/L		99	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.6		ng/L		102	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	25.4		ng/L		101	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.5		ng/L		105	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	25.5		ng/L		102	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		25.2	25.4		ng/L		101	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	19.4		ng/L		77	70 - 130	
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.2	24.7		ng/L		98	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	24.3		ng/L		97	70 - 130	
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid(11Cl-PF3OUdS)	<2.0		25.2	23.6		ng/L		94	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	25.1		ng/L		100	70 - 130	
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
d5-NEtFOSAA	109		70 - 130							
13C2 PFHxA	115		70 - 130							
13C2 PFDA	113		70 - 130							
13C3-GenX	112		70 - 130							

Lab Sample ID: 380-172317-A-1-C MSD
Matrix: Water
Analysis Batch: 175498

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 175395

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	24.0		ng/L		95	70 - 130	6	30	
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	24.6		ng/L		98	70 - 130	5	30	
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	24.4		ng/L		97	70 - 130	0	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	23.8		ng/L		95	70 - 130	5	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	23.1		ng/L		92	70 - 130	3	30	
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	25.6		ng/L		102	70 - 130	1	30	
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	25.2		ng/L		100	70 - 130	3	30	
Perfluorooctanoic acid (PFOA)	<2.0		25.2	24.9		ng/L		99	70 - 130	0	30	
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.4		ng/L		101	70 - 130	1	30	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-172325-1
 SDG: Weekly: Halawa Shaft Viewing Pool

LCMS

Prep Batch: 175308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-172325-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	Total/NA	Water	533	
MBL 380-175308/20-A	Method Blank	Total/NA	Water	533	
LCS 380-175308/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-175308/21-A	Lab Control Sample	Total/NA	Water	533	
380-172317-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-172317-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 175386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-172325-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	175308
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	Total/NA	Water	533	175308
MBL 380-175308/20-A	Method Blank	Total/NA	Water	533	175308
LCS 380-175308/22-A	Lab Control Sample	Total/NA	Water	533	175308
MRL 380-175308/21-A	Lab Control Sample	Total/NA	Water	533	175308
380-172317-B-1-A MS	Matrix Spike	Total/NA	Water	533	175308
380-172317-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	175308

Prep Batch: 175395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-172325-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	Total/NA	Water	537.1 DW	
MBL 380-175395/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-175395/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-175395/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-172317-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-172317-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 175498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-172325-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1	175395
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	Total/NA	Water	537.1	175395
MBL 380-175395/21-A	Method Blank	Total/NA	Water	537.1	175395
LCS 380-175395/23-A	Lab Control Sample	Total/NA	Water	537.1	175395
MRL 380-175395/22-A	Lab Control Sample	Total/NA	Water	537.1	175395
380-172317-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	175395
380-172317-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	175395

Lab Chronicle

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-172325-1

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			175308	E2HD	EA POM	09/19/25 16:25
Total/NA	Analysis	533		1	175386	SZ9R	EA POM	09/20/25 20:05
Total/NA	Prep	537.1 DW			175395	E9PK	EA POM	09/21/25 11:19
Total/NA	Analysis	537.1		1	175498	M7ML	EA POM	09/22/25 14:47

Client Sample ID: HALAWA SHAFT VIEWING POOL BLANK

Lab Sample ID: 380-172325-2

Date Collected: 09/16/25 09:45

Matrix: Water

Date Received: 09/18/25 10:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			175308	E2HD	EA POM	09/19/25 16:25
Total/NA	Analysis	533		1	175386	SZ9R	EA POM	09/20/25 20:15
Total/NA	Prep	537.1 DW			175395	E9PK	EA POM	09/21/25 11:19
Total/NA	Analysis	537.1		1	175498	M7ML	EA POM	09/22/25 14:56

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: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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
- 5
- 6
- 7
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- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Method Summary

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

Job ID: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

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: 380-172325-1
SDG: Weekly: Halawa Shaft Viewing Pool

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-172325-1	HALAWA SHAFT VIEWING POOL	Water	09/16/25 09:45	09/18/25 10:04	Hawaii
380-172325-2	HALAWA SHAFT VIEWING POOL BLANK	Water	09/16/25 09:45	09/18/25 10:04	Hawaii

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-172325-1

SDG Number: Weekly: Halawa Shaft Viewing Pool

Login Number: 172325

List Number: 1

Creator: Edrosa, Rey

List Source: Eurofins Eaton Analytical Pomona

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

