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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL
PFAS: Halawa Shaft Viewing Pool

JOB NUMBER

380-200180-1

Eurofins 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 Drinking Water and Wastewater West, 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: 380-200180-1
SDG: PFAS: 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: 380-200180-1

Job ID: 380-200180-1

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Job Narrative 380-200180-1

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 2/26/2026 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C.

PFAS

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

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Detection Summary

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

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: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-1

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorooctanesulfonic acid (PFOS)	2.7		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C6 PFDA	101		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C5 PFHxA	97		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C4 PFHpA	97		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C8 PFOA	98		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C9 PFNA	101		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C7 PFUnA	104		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C2 PFDoA	106		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C4 PFBA	105		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C5 PFPeA	106		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C3 PFBS	121		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C3 PFHxS	121		50 - 200	03/03/26 06:17	03/03/26 18:43	1

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Client Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-1

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	120		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C2-4:2-FTS	133		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C2-6:2-FTS	129		50 - 200	03/03/26 06:17	03/03/26 18:43	1
13C2-8:2-FTS	124		50 - 200	03/03/26 06:17	03/03/26 18:43	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorooctanesulfonic acid (PFOS)	3.7		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			02/27/26 12:00	02/28/26 17:15	1
13C2 PFHxA	100		70 - 130			02/27/26 12:00	02/28/26 17:15	1
13C2 PFDA	116		70 - 130			02/27/26 12:00	02/28/26 17:15	1
13C3-GenX	98		70 - 130			02/27/26 12:00	02/28/26 17:15	1

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1

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Client Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

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		03/03/26 06:17	03/03/26 18:52	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/03/26 06:17	03/03/26 18:52	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C6 PFDA	111		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C5 PFHxA	112		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C4 PFHpA	110		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C8 PFOA	112		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C9 PFNA	113		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C7 PFUnA	106		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C2 PFDoA	110		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C4 PFBA	113		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C5 PFPeA	111		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C3 PFBS	114		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C3 PFHxS	118		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C8 PFOS	122		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C2-4:2-FTS	131		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C2-6:2-FTS	119		50 - 200	03/03/26 06:17	03/03/26 18:52	1
13C2-8:2-FTS	120		50 - 200	03/03/26 06:17	03/03/26 18:52	1

Client Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/27/26 12:00	02/28/26 17:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			02/27/26 12:00	02/28/26 17:25	1
13C2 PFHxA	100		70 - 130			02/27/26 12:00	02/28/26 17:25	1
13C2 PFDA	116		70 - 130			02/27/26 12:00	02/28/26 17:25	1
13C3-GenX	100		70 - 130			02/27/26 12:00	02/28/26 17:25	1

Action Limit Summary

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL		RL	Method	Prep Type
				Limit				
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10		2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		ng/L	10		2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10		2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.7		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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.7		ng/L	4		2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4		2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		ng/L	10		2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10		2.0	EPA 537.1 V2	Total/NA

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4		2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4		2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10		2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10		2.0	EPA 537.1 V2	Total/NA

Surrogate Summary

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

Job ID: 380-200180-1
 SDG: PFAS: Halawa Shaft Viewing Pool

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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)
380-200180-1	Halawa Shaft Viewing Pool	110	100	116	98
380-200180-2	FB: Halawa Shaft Viewing Pool	108	100	116	100
380-200230-A-1-B MS	Matrix Spike	111	105	121	107
380-200230-A-1-C MSD	Matrix Spike Duplicate	110	102	113	107
LCS 380-209443/23-A	Lab Control Sample	98	97	116	97
MBL 380-209443/21-A	Method Blank	104	102	113	101
MRL 380-209443/22-A	Lab Control Sample	101	100	114	96

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: 380-200180-1
 SDG: PFAS: 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)	PFD _o A (50-200)
380-200175-B-1-A MS	Matrix Spike	116	122	123	117	121	120	125	114
380-200175-C-1-A MSD	Matrix Spike Duplicate	116	117	118	113	115	116	116	108
380-200180-1	Halawa Shaft Viewing Pool	89	101	97	97	98	101	104	106
380-200180-2	FB: Halawa Shaft Viewing Pool	90	111	112	110	112	113	106	110
LCS 380-210125/22-A	Lab Control Sample	105	118	120	115	116	116	120	116
MBL 380-210125/20-A	Method Blank	84	95	105	103	102	98	98	95
MRL 380-210125/21-A	Lab Control Sample	90	100	107	103	107	105	101	98

		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)
380-200175-B-1-A MS	Matrix Spike	117	124	118	118	117	119	118	113
380-200175-C-1-A MSD	Matrix Spike Duplicate	114	112	108	117	116	121	115	114
380-200180-1	Halawa Shaft Viewing Pool	105	106	121	121	120	133	129	124
380-200180-2	FB: Halawa Shaft Viewing Pool	113	111	114	118	122	131	119	120
LCS 380-210125/22-A	Lab Control Sample	114	111	112	110	108	114	109	110
MBL 380-210125/20-A	Method Blank	98	95	98	98	97	108	102	102
MRL 380-210125/21-A	Lab Control Sample	104	109	106	102	100	116	105	100

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFD_oA = 13C2 PFD_oA
- 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: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-210125/20-A
Matrix: Water
Analysis Batch: 210324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210125

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		03/03/26 06:17	03/03/26 17:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/03/26 06:17	03/03/26 17:27	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C6 PFDA	95		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C5 PFHxA	105		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C4 PFHpA	103		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C8 PFOA	102		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C9 PFNA	98		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C7 PFUnA	98		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C2 PFDoA	95		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C4 PFBA	98		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C5 PFPeA	95		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C3 PFBS	98		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C3 PFHxS	98		50 - 200	03/03/26 06:17	03/03/26 17:27	1

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QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-210125/20-A
Matrix: Water
Analysis Batch: 210324

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210125

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C8 PFOS	97		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C2-4:2-FTS	108		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C2-6:2-FTS	102		50 - 200	03/03/26 06:17	03/03/26 17:27	1
13C2-8:2-FTS	102		50 - 200	03/03/26 06:17	03/03/26 17:27	1

Lab Sample ID: LCS 380-210125/22-A
Matrix: Water
Analysis Batch: 210324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	109		ng/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	108		ng/L		90	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	104		ng/L		86	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	107		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	120	106		ng/L		88	70 - 130
Perfluorododecanoic acid (PFDoA)	120	106		ng/L		89	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	106		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	105		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	120	106		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	120	105		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	108		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	120	103		ng/L		86	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	100		ng/L		84	70 - 130
Perfluorobutanoic acid (PFBA)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	110		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	109		ng/L		91	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	110		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	114		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	109		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	100		ng/L		83	70 - 130
Perfluoropentanoic acid (PFPeA)	120	105		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	108		ng/L		90	70 - 130

QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: LCS 380-210125/22-A

Matrix: Water

Analysis Batch: 210324

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210125

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	108		ng/L		90	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	105		50 - 200				
13C6 PFDA	118		50 - 200				
13C5 PFHxA	120		50 - 200				
13C4 PFHpA	115		50 - 200				
13C8 PFOA	116		50 - 200				
13C9 PFNA	116		50 - 200				
13C7 PFUnA	120		50 - 200				
13C2 PFDoA	116		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	111		50 - 200				
13C3 PFBS	112		50 - 200				
13C3 PFHxS	110		50 - 200				
13C8 PFOS	108		50 - 200				
13C2-4:2-FTS	114		50 - 200				
13C2-6:2-FTS	109		50 - 200				
13C2-8:2-FTS	110		50 - 200				

Lab Sample ID: MRL 380-210125/21-A

Matrix: Water

Analysis Batch: 210324

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210125

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.20	J	ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.06	J	ng/L		103	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.08	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.24	J	ng/L		112	50 - 150

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QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-210125/21-A
Matrix: Water
Analysis Batch: 210324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210125

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.33	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.26	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.51	J	ng/L		125	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.23	J	ng/L		111	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.15	J	ng/L		107	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.05	J	ng/L		102	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	100		50 - 200
13C5 PFHxA	107		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	101		50 - 200
13C2 PFDoA	98		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	102		50 - 200
13C8 PFOS	100		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	100		50 - 200

Lab Sample ID: 380-200175-B-1-A MS
Matrix: Water
Analysis Batch: 210324

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 210125

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		121	111		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	108		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	107		ng/L		88	70 - 130

QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-200175-B-1-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 210324

Prep Batch: 210125

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexafluoropropylene Oxide	<2.0		121	108		ng/L		90	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	109		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	107		ng/L		88	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	109		ng/L		90	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	106		ng/L		87	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	103		ng/L		84	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	107		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	108		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	103		ng/L		85	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	104		ng/L		86	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	112		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	109		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	109		ng/L		90	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	108		ng/L		90	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	101		ng/L		84	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	101		ng/L		83	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	108		ng/L		90	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	105		ng/L		87	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	116		50 - 200
13C6 PFDA	122		50 - 200
13C5 PFHxA	123		50 - 200
13C4 PFHpA	117		50 - 200
13C8 PFOA	121		50 - 200
13C9 PFNA	120		50 - 200
13C7 PFUnA	125		50 - 200
13C2 PFDoA	114		50 - 200
13C4 PFBA	117		50 - 200
13C5 PFPeA	124		50 - 200
13C3 PFBS	118		50 - 200
13C3 PFHxS	118		50 - 200
13C8 PFOS	117		50 - 200

QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-200175-B-1-A MS

Matrix: Water

Analysis Batch: 210324

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 210125

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	118		50 - 200
13C2-8:2-FTS	113		50 - 200

Lab Sample ID: 380-200175-C-1-A MSD

Matrix: Water

Analysis Batch: 210324

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 210125

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		120	108		ng/L		90	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	109		ng/L		90	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	109		ng/L		91	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	104		ng/L		86	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	119		ng/L		98	70 - 130	9	30
Perfluorodecanoic acid (PFDA)	<2.0		120	106		ng/L		88	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	114		ng/L		95	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	111		ng/L		92	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	107		ng/L		89	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	108		ng/L		89	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		120	103		ng/L		86	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	108		ng/L		88	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		120	106		ng/L		87	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	107		ng/L		89	70 - 130	3	30
Perfluorobutanoic acid (PFBA)	<2.0		120	109		ng/L		90	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	108		ng/L		90	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	103		ng/L		86	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	113		ng/L		94	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	109		ng/L		90	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	121		ng/L		101	70 - 130	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	110		ng/L		92	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	107		ng/L		89	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	109		ng/L		89	70 - 130	7	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	110		ng/L		91	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	109		ng/L		90	70 - 130	4	30

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QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: 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	116		50 - 200
13C6 PFDA	117		50 - 200
13C5 PFHxA	118		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	116		50 - 200
13C7 PFUnA	116		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	112		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	114		50 - 200

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Lab Sample ID: MBL 380-209443/21-A
Matrix: Water
Analysis Batch: 209612

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 209443

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		02/27/26 12:00	02/28/26 16:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		02/27/26 12:00	02/28/26 16:19	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	104		70 - 130			02/27/26 12:00	02/28/26 16:19	1
13C2 PFHxA	102		70 - 130			02/27/26 12:00	02/28/26 16:19	1
13C2 PFDA	113		70 - 130			02/27/26 12:00	02/28/26 16:19	1

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QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MBL 380-209443/21-A
Matrix: Water
Analysis Batch: 209612

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 209443

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	101	Qualifier	70 - 130	02/27/26 12:00	02/28/26 16:19	1

Lab Sample ID: LCS 380-209443/23-A
Matrix: Water
Analysis Batch: 209612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 209443

<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>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Hexafluoropropylene Oxide	25.1	22.8		ng/L		91	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.1	25.6		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.3		ng/L		109	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	24.7		ng/L		99	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	24.7		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	23.8		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	28.2		ng/L		113	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	25.7		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	25.7		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.3		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	25.6		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	24.5		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	25.1	25.7		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	24.5		ng/L		98	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	27.4		ng/L		109	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	25.3		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	24.6		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	24.4		ng/L		98	70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	116		70 - 130
13C3-GenX	97		70 - 130

QC Sample Results

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-209443/22-A
Matrix: Water
Analysis Batch: 209612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 209443

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.83	J	ng/L		91	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.12	J	ng/L		106	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.91	J	ng/L		95	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.90	J	ng/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.13	J	ng/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.98	J	ng/L		99	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.88	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.87	J	ng/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	100		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	96		70 - 130

Lab Sample ID: 380-200230-A-1-B MS
Matrix: Water
Analysis Batch: 209612

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 209443

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	25.1		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.4		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.9		ng/L		111	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.2		ng/L		100	70 - 130

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QC Association Summary

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

Job ID: 380-200180-1
 SDG: PFAS: Halawa Shaft Viewing Pool

LCMS

Prep Batch: 209443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-200180-1	Halawa Shaft Viewing Pool	Total/NA	Water	537.1 DW	
380-200180-2	FB: Halawa Shaft Viewing Pool	Total/NA	Water	537.1 DW	
MBL 380-209443/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-209443/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-209443/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-200230-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-200230-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 209612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-200180-1	Halawa Shaft Viewing Pool	Total/NA	Water	EPA 537.1 V2	209443
380-200180-2	FB: Halawa Shaft Viewing Pool	Total/NA	Water	EPA 537.1 V2	209443
MBL 380-209443/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	209443
LCS 380-209443/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	209443
MRL 380-209443/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	209443
380-200230-A-1-B MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	209443
380-200230-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	209443

Prep Batch: 210125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-200180-1	Halawa Shaft Viewing Pool	Total/NA	Water	533	
380-200180-2	FB: Halawa Shaft Viewing Pool	Total/NA	Water	533	
MBL 380-210125/20-A	Method Blank	Total/NA	Water	533	
LCS 380-210125/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-210125/21-A	Lab Control Sample	Total/NA	Water	533	
380-200175-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-200175-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 210324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-200180-1	Halawa Shaft Viewing Pool	Total/NA	Water	533	210125
380-200180-2	FB: Halawa Shaft Viewing Pool	Total/NA	Water	533	210125
MBL 380-210125/20-A	Method Blank	Total/NA	Water	533	210125
LCS 380-210125/22-A	Lab Control Sample	Total/NA	Water	533	210125
MRL 380-210125/21-A	Lab Control Sample	Total/NA	Water	533	210125
380-200175-B-1-A MS	Matrix Spike	Total/NA	Water	533	210125
380-200175-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	210125

Lab Chronicle

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

Job ID: 380-200180-1
 SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-1

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			210125	XTD8	EA POM	03/03/26 06:17
Total/NA	Analysis	533		1	210324	M7ML	EA POM	03/03/26 18:43
Total/NA	Prep	537.1 DW			209443	E9PK	EA POM	02/27/26 12:00
Total/NA	Analysis	EPA 537.1 V2		1	209612	SZ9R	EA POM	02/28/26 17:15

Client Sample ID: FB: Halawa Shaft Viewing Pool

Lab Sample ID: 380-200180-2

Date Collected: 02/24/26 09:30

Matrix: Water

Date Received: 02/26/26 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			210125	XTD8	EA POM	03/03/26 06:17
Total/NA	Analysis	533		1	210324	M7ML	EA POM	03/03/26 18:52
Total/NA	Prep	537.1 DW			209443	E9PK	EA POM	02/27/26 12:00
Total/NA	Analysis	EPA 537.1 V2		1	209612	SZ9R	EA POM	02/28/26 17:25

Laboratory References:

EA POM = Eurofins 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: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Laboratory: Eurofins 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
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

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

Method Summary

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

Job ID: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	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 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: 380-200180-1
SDG: PFAS: Halawa Shaft Viewing Pool

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-200180-1	Halawa Shaft Viewing Pool	Water	02/24/26 09:30	02/26/26 09:50	Hawaii
380-200180-2	FB: Halawa Shaft Viewing Pool	Water	02/24/26 09:30	02/26/26 09:50	Hawaii

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
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- 15
- 16
- 17

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-200180-1
SDG Number: PFAS: Halawa Shaft Viewing Pool

Login Number: 200180

List Number: 1

Creator: Del Rosario, Michael

List Source: Eurofins 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).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

