

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

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

380-197844-1

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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Table of Contents

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

Definitions/Glossary

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

Job ID: 380-197844-1
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: 380-197844-1

Job ID: 380-197844-1

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Job Narrative 380-197844-1

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 2/12/2026 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°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: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-2

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: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-1

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

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		02/18/26 11:27	02/19/26 09:36	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorooctanesulfonic acid (PFOS)	3.2		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:36	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C6 PFDA	104		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C5 PFHxA	105		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C4 PFHpA	106		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C8 PFOA	106		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C9 PFNA	108		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C7 PFUnA	103		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C2 PFDoA	108		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C4 PFBA	110		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C5 PFPeA	111		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C3 PFBS	110		50 - 200			02/18/26 11:27	02/19/26 09:36	1
13C3 PFHxS	108		50 - 200			02/18/26 11:27	02/19/26 09:36	1

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Client Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-1

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	108		50 - 200	02/18/26 11:27	02/19/26 09:36	1
13C2-4:2-FTS	107		50 - 200	02/18/26 11:27	02/19/26 09:36	1
13C2-6:2-FTS	102		50 - 200	02/18/26 11:27	02/19/26 09:36	1
13C2-8:2-FTS	99		50 - 200	02/18/26 11:27	02/19/26 09:36	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		02/13/26 08:15	02/13/26 22:59	1
Perfluorooctanesulfonic acid (PFOS)	3.4		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 22:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130			02/13/26 08:15	02/13/26 22:59	1
13C2 PFHxA	122		70 - 130			02/13/26 08:15	02/13/26 22:59	1
13C2 PFDA	110		70 - 130			02/13/26 08:15	02/13/26 22:59	1
13C3-GenX	115		70 - 130			02/13/26 08:15	02/13/26 22:59	1

Client Sample ID: FB HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-2

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

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		02/18/26 11:27	02/19/26 09:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1

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Client Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: FB HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-2

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

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		02/18/26 11:27	02/19/26 09:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		02/18/26 11:27	02/19/26 09:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C6 PFDA	103		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C5 PFHxA	106		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C4 PFHpA	100		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C8 PFOA	108		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C9 PFNA	105		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C7 PFUnA	103		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C2 PFDoA	106		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C4 PFBA	109		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C5 PFPeA	102		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C3 PFBS	107		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C3 PFHxS	107		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C8 PFOS	108		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C2-4:2-FTS	99		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C2-6:2-FTS	97		50 - 200	02/18/26 11:27	02/19/26 09:46	1
13C2-8:2-FTS	97		50 - 200	02/18/26 11:27	02/19/26 09:46	1

Client Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: FB HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-2

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

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		02/13/26 08:15	02/13/26 23:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/13/26 08:15	02/13/26 23:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130			02/13/26 08:15	02/13/26 23:09	1
13C2 PFHxA	110		70 - 130			02/13/26 08:15	02/13/26 23:09	1
13C2 PFDA	111		70 - 130			02/13/26 08:15	02/13/26 23:09	1
13C3-GenX	99		70 - 130			02/13/26 08:15	02/13/26 23:09	1

Action Limit Summary

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-1

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)	3.4		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		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)	3.8		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: 380-197844-2

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: 380-197844-1
 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-197844-1	HALAWA SHAFT VIEWING POC	114	122	110	115
380-197844-2	FB HALAWA SHAFT VIEWING POOL	104	110	111	99
380-197847-A-1-B MS	Matrix Spike	110	119	106	112
380-197847-A-1-C MSD	Matrix Spike Duplicate	114	129	113	123
LCS 380-205783/21-A	Lab Control Sample	109	120	115	114
MBL 380-205783/19-A	Method Blank	98	105	111	95
MRL 380-205783/20-A	Lab Control Sample	110	117	110	109

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: 380-197844-1
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)	PFDaA (50-200)
380-197844-1	HALAWA SHAFT VIEWING POC	103	104	105	106	106	108	103	108
380-197844-2	FB HALAWA SHAFT VIEWING POOL	102	103	106	100	108	105	103	106
380-197847-B-1-A MS	Matrix Spike	103	101	102	104	106	101	103	104
380-197847-B-1-B MSD	Matrix Spike Duplicate	105	101	103	107	107	106	102	106
LCS 380-206879/22-A	Lab Control Sample	110	106	102	105	111	107	108	108
MBL 380-206879/20-A	Method Blank	104	104	104	102	111	107	101	105
MRL 380-206879/21-A	Lab Control Sample	103	102	104	103	106	105	101	108

		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)
380-197844-1	HALAWA SHAFT VIEWING POC	110	111	110	108	108	107	102	99
380-197844-2	FB HALAWA SHAFT VIEWING POOL	109	102	107	107	108	99	97	97
380-197847-B-1-A MS	Matrix Spike	110	105	106	108	108	89	95	93
380-197847-B-1-B MSD	Matrix Spike Duplicate	110	104	111	111	110	95	95	95
LCS 380-206879/22-A	Lab Control Sample	112	107	109	113	111	89	93	96
MBL 380-206879/20-A	Method Blank	110	107	106	111	112	96	97	97
MRL 380-206879/21-A	Lab Control Sample	109	106	109	109	109	96	96	94

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: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-206879/20-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206879

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		02/18/26 11:27	02/19/26 07:53	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C6 PFDA	104		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C5 PFHxA	104		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C4 PFHpA	102		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C8 PFOA	111		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C9 PFNA	107		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C7 PFUnA	101		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C2 PFDoA	105		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C4 PFBA	110		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C5 PFPeA	107		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C3 PFBS	106		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C3 PFHxS	111		50 - 200	02/18/26 11:27	02/19/26 07:53	1

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QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-206879/20-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 206879

<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	112		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C2-4:2-FTS	96		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C2-6:2-FTS	97		50 - 200	02/18/26 11:27	02/19/26 07:53	1
13C2-8:2-FTS	97		50 - 200	02/18/26 11:27	02/19/26 07:53	1

Lab Sample ID: LCS 380-206879/22-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206879

<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)	120	115		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	120		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	134		ng/L		112	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	123		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	121		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	120	123		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	120	123		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	125		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	123		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	120	128		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	120	122		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	120		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	120	123		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	123		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	120	124		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	123		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	126		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	128		ng/L		107	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	122		ng/L		101	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	122		ng/L		101	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	125		ng/L		104	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	121		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	120	122		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	127		ng/L		105	70 - 130

QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: LCS 380-206879/22-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	121		ng/L		101	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	110		50 - 200				
13C6 PFDA	106		50 - 200				
13C5 PFHxA	102		50 - 200				
13C4 PFHpA	105		50 - 200				
13C8 PFOA	111		50 - 200				
13C9 PFNA	107		50 - 200				
13C7 PFUnA	108		50 - 200				
13C2 PFDoA	108		50 - 200				
13C4 PFBA	112		50 - 200				
13C5 PFPeA	107		50 - 200				
13C3 PFBS	109		50 - 200				
13C3 PFHxS	113		50 - 200				
13C8 PFOS	111		50 - 200				
13C2-4:2-FTS	89		50 - 200				
13C2-6:2-FTS	93		50 - 200				
13C2-8:2-FTS	96		50 - 200				

Lab Sample ID: MRL 380-206879/21-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.09	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.11	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.32	J	ng/L		116	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.26	J	ng/L		113	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.13	J	ng/L		106	50 - 150

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QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-206879/21-A
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.31	J	ng/L		115	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.24	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.48	J	ng/L		124	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.15	J	ng/L		107	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	103		50 - 200
13C6 PFDA	102		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	101		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	106		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	96		50 - 200
13C2-6:2-FTS	96		50 - 200
13C2-8:2-FTS	94		50 - 200

Lab Sample ID: 380-197847-B-1-A MS
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	60.6		ng/L		100	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	61.2		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	67.0		ng/L		111	70 - 130

QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-197847-B-1-A MS
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.4	63.8		ng/L		106	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	63.1		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	63.5		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	60.2		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	62.0		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	65.5		ng/L		109	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	61.1		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	62.7		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	62.1		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	63.0		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	63.4		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	65.8		ng/L		109	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	63.4		ng/L		105	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	59.5		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	60.6		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	61.5		ng/L		102	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	60.9		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	60.6		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	64.3		ng/L		107	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	62.1		ng/L		103	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	103		50 - 200
13C6 PFDA	101		50 - 200
13C5 PFHxA	102		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	101		50 - 200
13C7 PFUnA	103		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	108		50 - 200

QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-197847-B-1-A MS
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 206879

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	89		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	93		50 - 200

Lab Sample ID: 380-197847-B-1-B MSD
Matrix: Water
Analysis Batch: 207174

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 206879

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	60.0		ng/L		99	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	59.9		ng/L		99	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	66.7		ng/L		110	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	64.1		ng/L		106	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	59.5		ng/L		99	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	65.1		ng/L		108	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.6		ng/L		104	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	61.3		ng/L		102	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.3		ng/L		102	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	62.4		ng/L		103	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	64.1		ng/L		106	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	61.0		ng/L		101	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	63.5		ng/L		105	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	65.5		ng/L		109	70 - 130	5	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	62.7		ng/L		104	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	63.9		ng/L		106	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	63.5		ng/L		105	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	67.4		ng/L		112	70 - 130	6	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	54.6		ng/L		90	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	60.1		ng/L		100	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	63.2		ng/L		105	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	61.9		ng/L		103	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	62.9		ng/L		104	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.9		ng/L		104	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	60.8		ng/L		101	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-197844-1
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	105		50 - 200
13C6 PFDA	101		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	95		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	95		50 - 200

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

Lab Sample ID: MBL 380-205783/19-A
Matrix: Water
Analysis Batch: 206022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 205783

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		02/13/26 08:15	02/13/26 20:55	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		02/13/26 08:15	02/13/26 20:55	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	98		70 - 130			02/13/26 08:15	02/13/26 20:55	1
13C2 PFHxA	105		70 - 130			02/13/26 08:15	02/13/26 20:55	1
13C2 PFDA	111		70 - 130			02/13/26 08:15	02/13/26 20:55	1

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QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-205783/19-A
Matrix: Water
Analysis Batch: 206022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 205783

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	95	Qualifier	70 - 130	02/13/26 08:15	02/13/26 20:55	1

Lab Sample ID: LCS 380-205783/21-A
Matrix: Water
Analysis Batch: 206022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 205783

<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)	25.0	25.8		ng/L		103		70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	26.3		ng/L		105		70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	27.0		ng/L		108		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	23.7		ng/L		95		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	23.4		ng/L		94		70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	27.0		ng/L		108		70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	28.4		ng/L		113		70 - 130
Perfluorooctanoic acid (PFOA)	25.0	26.7		ng/L		107		70 - 130
Perfluorodecanoic acid (PFDA)	25.0	25.2		ng/L		101		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	27.1		ng/L		108		70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	25.9		ng/L		104		70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	27.2		ng/L		109		70 - 130
Perfluorononanoic acid (PFNA)	25.0	27.7		ng/L		111		70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	23.8		ng/L		95		70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	29.3		ng/L		117		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.0	25.7		ng/L		103		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	26.7		ng/L		107		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	27.2		ng/L		109		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	120		70 - 130
13C2 PFDA	115		70 - 130
13C3-GenX	114		70 - 130

QC Sample Results

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-205783/20-A
Matrix: Water
Analysis Batch: 206022

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 205783

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.23	J	ng/L		111	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.89	J	ng/L		94	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.19	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.97	J	ng/L		99	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.43	J	ng/L		121	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.12	J	ng/L		106	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.12	J	ng/L		106	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.23	J	ng/L		111	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	117		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	109		70 - 130

Lab Sample ID: 380-197847-A-1-B MS
Matrix: Water
Analysis Batch: 206022

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 205783

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	25.0		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	25.8		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.6		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.5		ng/L		98	70 - 130

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QC Association Summary

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

LCMS

Prep Batch: 205783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-197844-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
380-197844-2	FB HALAWA SHAFT VIEWING POOL	Total/NA	Water	537.1 DW	
MBL 380-205783/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-205783/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-205783/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-197847-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-197847-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 206022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-197844-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	EPA 537.1 V2	205783
380-197844-2	FB HALAWA SHAFT VIEWING POOL	Total/NA	Water	EPA 537.1 V2	205783
MBL 380-205783/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	205783
LCS 380-205783/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	205783
MRL 380-205783/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	205783
380-197847-A-1-B MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	205783
380-197847-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	205783

Prep Batch: 206879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-197844-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
380-197844-2	FB HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	
MBL 380-206879/20-A	Method Blank	Total/NA	Water	533	
LCS 380-206879/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-206879/21-A	Lab Control Sample	Total/NA	Water	533	
380-197847-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-197847-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 207174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-197844-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	206879
380-197844-2	FB HALAWA SHAFT VIEWING POOL	Total/NA	Water	533	206879
MBL 380-206879/20-A	Method Blank	Total/NA	Water	533	206879
LCS 380-206879/22-A	Lab Control Sample	Total/NA	Water	533	206879
MRL 380-206879/21-A	Lab Control Sample	Total/NA	Water	533	206879
380-197847-B-1-A MS	Matrix Spike	Total/NA	Water	533	206879
380-197847-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	206879

Lab Chronicle

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

Job ID: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-1

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			206879	N8NE	EA POM	02/18/26 11:27
Total/NA	Analysis	533		1	207174	SZ9R	EA POM	02/19/26 09:36
Total/NA	Prep	537.1 DW			205783	E9PK	EA POM	02/13/26 08:15
Total/NA	Analysis	EPA 537.1 V2		1	206022	Y5FM	EA POM	02/13/26 22:59

Client Sample ID: FB HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-197844-2

Date Collected: 02/10/26 09:30

Matrix: Water

Date Received: 02/12/26 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			206879	N8NE	EA POM	02/18/26 11:27
Total/NA	Analysis	533		1	207174	SZ9R	EA POM	02/19/26 09:46
Total/NA	Prep	537.1 DW			205783	E9PK	EA POM	02/13/26 08:15
Total/NA	Analysis	EPA 537.1 V2		1	206022	Y5FM	EA POM	02/13/26 23:09

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: 380-197844-1
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: 380-197844-1
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: 380-197844-1
SDG: PFAS: Halawa Shaft Viewing Pool

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-197844-1	HALAWA SHAFT VIEWING POOL	Water	02/10/26 09:30	02/12/26 10:10	Hawaii
380-197844-2	FB HALAWA SHAFT VIEWING POOL	Water	02/10/26 09:30	02/12/26 10:10	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: 380-197844-1

SDG Number: PFAS: Halawa Shaft Viewing Pool

Login Number: 197844

List Number: 1

Creator: Ngo, Theodore

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").	True	
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	

