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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

RED-HILL
PFAS: Halawa Shaft Viewing Pool

JOB NUMBER

380-202871-1

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Job Notes

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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: 380-202871-1
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: 380-202871-1

Job ID: 380-202871-1

Eurofins Pomona

Job Narrative 380-202871-1

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 3/12/2026 9:40 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 3.0°C.

PFAS

Method EPA 537.1 V2: The reference method requires samples to be preserved to a pH of 6.7 The following sample was received with insufficient preservation at a pH of 6.0: FB Halawa Shaft Viewing Pool (380-202871-2). The sample(s) was preserved to the appropriate pH in the laboratory using 1.25 g preservative for method 537.1. Method EPA 537.1 V2: The following QC issues in preparation batch 380-213209 and analytical batch 380-213274 were observed: Surrogate d5-NEtFOSAA recovery for native samples Halawa Shaft Viewing Pool (380-202871-1) and 380-202871-B-1-A MS (380-3113799) was above method limits (high bias). Extracts were re-analyzed for confirmation. No volume available for re-extraction. Result not acceptable per method. Due to these QC issues, analysis of EPA 537.1 was excluded. The sample is collected weekly, thus follow up sample was collected on 03/17/26 under job # 380-204076-1. Analysis by EPA 537.1 is currently in progress. (XWB4)

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: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.3		2.0	ng/L	1		533	Total/NA

Client Sample ID: FB Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-2

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: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-1

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

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		03/19/26 06:32	03/20/26 10:45	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorooctanesulfonic acid (PFOS)	3.3		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:45	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	107		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C6 PFDA	109		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C5 PFHxA	108		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C4 PFHpA	109		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C8 PFOA	111		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C9 PFNA	108		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C7 PFUnA	104		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C2 PFDoA	105		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C4 PFBA	111		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C5 PFPeA	111		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C3 PFBS	113		50 - 200			03/19/26 06:32	03/20/26 10:45	1
13C3 PFHxS	115		50 - 200			03/19/26 06:32	03/20/26 10:45	1

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Client Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-1

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	110		50 - 200	03/19/26 06:32	03/20/26 10:45	1
13C2-4:2-FTS	127		50 - 200	03/19/26 06:32	03/20/26 10:45	1
13C2-6:2-FTS	112		50 - 200	03/19/26 06:32	03/20/26 10:45	1
13C2-8:2-FTS	103		50 - 200	03/19/26 06:32	03/20/26 10:45	1

Client Sample ID: FB Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-2

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/19/26 06:32	03/20/26 10:54	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
13C3 HFPO-DA	96		50 - 200	03/19/26 06:32	03/20/26 10:54	1		
13C6 PFDA	106		50 - 200	03/19/26 06:32	03/20/26 10:54	1		
13C5 PFHxA	108		50 - 200	03/19/26 06:32	03/20/26 10:54	1		

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Client Sample Results

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

Job ID: 380-202871-1
 SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: FB Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-2

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFHpA	108		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C8 PFOA	113		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C9 PFNA	106		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C7 PFUnA	104		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C2 PFDoA	103		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C4 PFBA	107		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C5 PFPeA	108		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C3 PFBS	113		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C3 PFHxS	116		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C8 PFOS	109		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C2-4:2-FTS	112		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C2-6:2-FTS	102		50 - 200	03/19/26 06:32	03/20/26 10:54	1
13C2-8:2-FTS	101		50 - 200	03/19/26 06:32	03/20/26 10:54	1

Action Limit Summary

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-1

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)	3.2		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.3		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA

Client Sample ID: FB Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-2

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

Surrogate Summary

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

Job ID: 380-202871-1
 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)
380-202871-1	Halawa Shaft Viewing Pool	145 S1+	103	108	95
380-202871-1 MS	Halawa Shaft Viewing Pool	135 S1+	109	103	101
380-202871-1 MSD	Halawa Shaft Viewing Pool	121	106	105	100
380-202871-2	FB Halawa Shaft Viewing Pool	94	98	104	85
LCS 380-213209/23-A	Lab Control Sample	101	116	110	109
MBL 380-213209/21-A	Method Blank	87	94	100	85
MRL 380-213209/22-A	Lab Control Sample	91	97	103	83

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: 380-202871-1
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)	PFDoA (50-200)
380-202601-B-1-A MS	Matrix Spike	95	90	97	94	93	91	94	101
380-202601-C-1-A MSD	Matrix Spike Duplicate	94	93	97	97	97	91	94	96
380-202871-1	Halawa Shaft Viewing Pool	107	109	108	109	111	108	104	105
380-202871-2	FB Halawa Shaft Viewing Pool	96	106	108	108	113	106	104	103
LCS 380-214326/22-A	Lab Control Sample	116	127	125	123	122	122	123	122
MBL 380-214326/20-A	Method Blank	91	103	106	102	106	102	101	99
MRL 380-214326/21-A	Lab Control Sample	94	107	111	106	114	109	105	107

		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)
380-202601-B-1-A MS	Matrix Spike	102	110	110	119	113	136	129	113
380-202601-C-1-A MSD	Matrix Spike Duplicate	103	102	118	120	114	138	131	115
380-202871-1	Halawa Shaft Viewing Pool	111	111	113	115	110	127	112	103
380-202871-2	FB Halawa Shaft Viewing Pool	107	108	113	116	109	112	102	101
LCS 380-214326/22-A	Lab Control Sample	124	125	119	125	121	127	128	116
MBL 380-214326/20-A	Method Blank	108	104	103	108	103	110	109	106
MRL 380-214326/21-A	Lab Control Sample	113	114	111	115	113	124	115	110

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-214326/20-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 214326

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		03/19/26 06:32	03/20/26 07:26	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/19/26 06:32	03/20/26 07:26	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C6 PFDA	103		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C5 PFHxA	106		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C4 PFHpA	102		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C8 PFOA	106		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C9 PFNA	102		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C7 PFUnA	101		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C2 PFDoA	99		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C4 PFBA	108		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C5 PFPeA	104		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C3 PFBS	103		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C3 PFHxS	108		50 - 200	03/19/26 06:32	03/20/26 07:26	1

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QC Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MBL 380-214326/20-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 214326

<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	103		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C2-4:2-FTS	110		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C2-6:2-FTS	109		50 - 200	03/19/26 06:32	03/20/26 07:26	1
13C2-8:2-FTS	106		50 - 200	03/19/26 06:32	03/20/26 07:26	1

Lab Sample ID: LCS 380-214326/22-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 214326

<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	109		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	110		ng/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	107		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	107		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	111		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	120	107		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	120	109		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	104		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	103		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	120	104		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	120	107		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	107		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	120	107		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	108		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	120	105		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	106		ng/L		88	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	108		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	108		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	105		ng/L		88	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	103		ng/L		85	70 - 130
Perfluoropentanoic acid (PFPeA)	120	105		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	110		ng/L		92	70 - 130

QC Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: LCS 380-214326/22-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 214326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	103		ng/L		86	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	116		50 - 200				
13C6 PFDA	127		50 - 200				
13C5 PFHxA	125		50 - 200				
13C4 PFHpA	123		50 - 200				
13C8 PFOA	122		50 - 200				
13C9 PFNA	122		50 - 200				
13C7 PFUnA	123		50 - 200				
13C2 PFDoA	122		50 - 200				
13C4 PFBA	124		50 - 200				
13C5 PFPeA	125		50 - 200				
13C3 PFBS	119		50 - 200				
13C3 PFHxS	125		50 - 200				
13C8 PFOS	121		50 - 200				
13C2-4:2-FTS	127		50 - 200				
13C2-6:2-FTS	128		50 - 200				
13C2-8:2-FTS	116		50 - 200				

Lab Sample ID: MRL 380-214326/21-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 214326

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.13	J	ng/L		106	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	2.17	J	ng/L		108	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.99	J	ng/L		99	50 - 150

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QC Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: MRL 380-214326/21-A
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 214326

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.35	J	ng/L		117	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.27	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.37	J	ng/L		118	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.07	J	ng/L		103	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	94		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	111		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	114		50 - 200
13C9 PFNA	109		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	124		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-202601-B-1-A MS
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 214326

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)			121	117		ng/L			-
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			121	111		ng/L			-
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			121	110		ng/L			-

QC Sample Results

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

Job ID: 380-202871-1
 SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-202601-B-1-A MS
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 214326

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		121	110		ng/L		91	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	120		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)			121	115		ng/L			-
Perfluorododecanoic acid (PFDoA)			121	112		ng/L			-
Perfluoroheptanoic acid (PFHpA)			121	111		ng/L			-
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	108		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)			121	113		ng/L			-
Perfluorononanoic acid (PFNA)	<2.0		121	112		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	110		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoroundecanoic acid (PFUnA)			121	114		ng/L			-
Perfluorobutanoic acid (PFBA)			121	114		ng/L			-
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			121	119		ng/L			-
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			121	108		ng/L			-
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			121	113		ng/L			-
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			121	100		ng/L			-
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)			121	113		ng/L			-
Perfluoro-3-methoxypropanoic acid (PFMPA)			121	114		ng/L			-
Perfluoro-4-methoxybutanoic acid (PFMBA)			121	108		ng/L			-
Perfluoropentanoic acid (PFPeA)			121	106		ng/L			-
Perfluoroheptanesulfonic acid (PFHpS)			121	115		ng/L			-
Perfluoropentanesulfonic acid (PFPeS)			121	106		ng/L			-

<i>Isotope Dilution</i>	<i>MS %Recovery</i>	<i>MS Qualifier</i>	<i>MS Limits</i>
13C3 HFPO-DA	95		50 - 200
13C6 PFDA	90		50 - 200
13C5 PFHxA	97		50 - 200
13C4 PFHpA	94		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	91		50 - 200
13C7 PFUnA	94		50 - 200
13C2 PFDoA	101		50 - 200
13C4 PFBA	102		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	119		50 - 200
13C8 PFOS	113		50 - 200

QC Sample Results

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

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

Lab Sample ID: 380-202601-B-1-A MS
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 214326

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C2-4:2-FTS	136		50 - 200
13C2-6:2-FTS	129		50 - 200
13C2-8:2-FTS	113		50 - 200

Lab Sample ID: 380-202601-C-1-A MSD
Matrix: Water
Analysis Batch: 214581

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 214326

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			121	122		ng/L			-		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			121	113		ng/L			-		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			121	106		ng/L			-		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	110		ng/L		91	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	107		ng/L		88	70 - 130	11	30
Perfluorodecanoic acid (PFDA)			121	112		ng/L			-		
Perfluorododecanoic acid (PFDoA)			121	111		ng/L			-		
Perfluoroheptanoic acid (PFHpA)			121	109		ng/L			-		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	108		ng/L		89	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)			121	112		ng/L			-		
Perfluorononanoic acid (PFNA)	<2.0		121	108		ng/L		90	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	109		ng/L		90	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		121	103		ng/L		85	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)			121	111		ng/L			-		
Perfluorobutanoic acid (PFBA)			121	109		ng/L			-		
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			121	116		ng/L			-		
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			121	109		ng/L			-		
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			121	113		ng/L			-		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			121	105		ng/L			-		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			121	112		ng/L			-		
Perfluoro-3-methoxypropanoic acid (PFMPA)			121	110		ng/L			-		
Perfluoro-4-methoxybutanoic acid (PFMBA)			121	111		ng/L			-		
Perfluoropentanoic acid (PFPeA)			121	110		ng/L			-		
Perfluoroheptanesulfonic acid (PFHpS)			121	114		ng/L			-		
Perfluoropentanesulfonic acid (PFPeS)			121	109		ng/L			-		

QC Sample Results

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

Job ID: 380-202871-1
 SDG: PFAS: Halawa Shaft Viewing Pool

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

<i>Isotope Dilution</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C3 HFPO-DA	94		50 - 200
13C6 PFDA	93		50 - 200
13C5 PFHxA	97		50 - 200
13C4 PFHpA	97		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	91		50 - 200
13C7 PFUnA	94		50 - 200
13C2 PFDoA	96		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	102		50 - 200
13C3 PFBS	118		50 - 200
13C3 PFHxS	120		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	138		50 - 200
13C2-6:2-FTS	131		50 - 200
13C2-8:2-FTS	115		50 - 200

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QC Association Summary

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

LCMS

Prep Batch: 214326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202871-1	Halawa Shaft Viewing Pool	Total/NA	Water	533	
380-202871-2	FB Halawa Shaft Viewing Pool	Total/NA	Water	533	
MBL 380-214326/20-A	Method Blank	Total/NA	Water	533	
LCS 380-214326/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-214326/21-A	Lab Control Sample	Total/NA	Water	533	
380-202601-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-202601-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 214581

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202871-1	Halawa Shaft Viewing Pool	Total/NA	Water	533	214326
380-202871-2	FB Halawa Shaft Viewing Pool	Total/NA	Water	533	214326
MBL 380-214326/20-A	Method Blank	Total/NA	Water	533	214326
LCS 380-214326/22-A	Lab Control Sample	Total/NA	Water	533	214326
MRL 380-214326/21-A	Lab Control Sample	Total/NA	Water	533	214326
380-202601-B-1-A MS	Matrix Spike	Total/NA	Water	533	214326
380-202601-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	214326

Lab Chronicle

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Client Sample ID: Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-1

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			214326	XTD8	EA POM	03/19/26 06:32
Total/NA	Analysis	533		1	214581	SZ9R	EA POM	03/20/26 10:45

Client Sample ID: FB Halawa Shaft Viewing Pool

Lab Sample ID: 380-202871-2

Date Collected: 03/10/26 09:30

Matrix: Water

Date Received: 03/12/26 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			214326	XTD8	EA POM	03/19/26 06:32
Total/NA	Analysis	533		1	214581	SZ9R	EA POM	03/20/26 10:54

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: 380-202871-1
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 *

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

Method Summary

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

Job ID: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated 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: 380-202871-1
SDG: PFAS: Halawa Shaft Viewing Pool

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-202871-1	Halawa Shaft Viewing Pool	Water	03/10/26 09:30	03/12/26 09:40	Hawaii
380-202871-2	FB Halawa Shaft Viewing Pool	Water	03/10/26 09:30	03/12/26 09:40	Hawaii

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-202871-1

SDG Number: PFAS: Halawa Shaft Viewing Pool

Login Number: 202871

List Number: 1

Creator: Gross, Drake

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).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	