

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site H1 PFAS 1633

JOB NUMBER

380-220211-1

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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: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

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: INTERA - Red-Hill-Incident

Job ID: 380-220211-1

Job ID: 380-220211-1

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Job Narrative 380-220211-1

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 sample was received on 6/17/2026 9:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

PFAS

Method QSM B-24: If aqueous samples were extracted beyond 7 days from collection, NMeFOSE, NEtFOSE, NMeFOSAA, and NEtFOSAA may be affected. If soil or tissue samples were extracted beyond 3 days from collection, NFDHA may be affected. If sample extracts, regardless of matrix, were analyzed beyond 28 days from extraction, 9Cl-PF3ONS and 11Cl-PF3OUdS may be affected. Per DoD Environmental Data Quality Workgroup Memorandum dated March 27, 2025, none of these analytes have associated regulatory limits or toxicity factors, thus any additional uncertainty associated with a holding time exceedance for these analytes will not affect current decision making and the DoD is willing to accept any additional uncertainty.

Method QSM B-24: The following sample was prepared at a reduced volume, as indicated in the Lab Chronicle, due to the nature of the sample matrix: BWS2253-H1-AQ (380-220211-1). The reporting limits (RLs) have been adjusted proportionately.

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: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-220211-1

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: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-220211-1

Date Collected: 06/16/26 11:20

Matrix: Water

Date Received: 06/17/26 09:45

Method: DoD 6.0 QSM B-24 - PFAS for QSM 6.0, Table B-24

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorobutanesulfonic acid (PFBS)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorohexanesulfonic acid (PFHxS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluorooctanesulfonamide (PFOSA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.8		8.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.8		8.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		1.3	ng/L		06/25/26 20:17	06/27/26 02:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-220211-1

Date Collected: 06/16/26 11:20

Matrix: Water

Date Received: 06/17/26 09:45

Method: DoD 6.0 QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.8		1.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.5		3.5	ng/L		06/25/26 20:17	06/27/26 02:41	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.8		8.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.8		8.8	ng/L		06/25/26 20:17	06/27/26 02:41	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	95.4		5 - 130			06/25/26 20:17	06/27/26 02:41	1
13C5 PFPeA	111		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C5 PFHxA	96.9		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C4 PFHpA	95.4		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C8 PFOA	89.2		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C9 PFNA	91.1		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C6 PFDA	59.6		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C7 PFUnA	38.3		30 - 130			06/25/26 20:17	06/27/26 02:41	1
13C2 PFDoA	20.2		10 - 130			06/25/26 20:17	06/27/26 02:41	1
13C3 PFBS	102		40 - 135			06/25/26 20:17	06/27/26 02:41	1
13C3 PFHxS	84.3		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C8 PFOS	61.9		40 - 130			06/25/26 20:17	06/27/26 02:41	1
13C8 PFOSA	75.1		40 - 130			06/25/26 20:17	06/27/26 02:41	1
d3-NMeFOSAA	50.4		40 - 170			06/25/26 20:17	06/27/26 02:41	1
d5-NEtFOSAA	40.9		25 - 135			06/25/26 20:17	06/27/26 02:41	1
13C2 4:2 FTS	107		40 - 200			06/25/26 20:17	06/27/26 02:41	1
13C2 6:2 FTS	99.2		40 - 200			06/25/26 20:17	06/27/26 02:41	1
13C2 8:2 FTS	69.7		40 - 300			06/25/26 20:17	06/27/26 02:41	1
13C3 HFPO-DA	106		40 - 130			06/25/26 20:17	06/27/26 02:41	1
d7-N-MeFOSE-M	23.9		10 - 130			06/25/26 20:17	06/27/26 02:41	1
d9-N-EtFOSE-M	20.9		10 - 130			06/25/26 20:17	06/27/26 02:41	1
d5-NEtPFOSA	22.2		10 - 130			06/25/26 20:17	06/27/26 02:41	1
d3-NMePFOSA	31.8		10 - 130			06/25/26 20:17	06/27/26 02:41	1
13C3-3:3 FTCA	104		20 - 150			06/25/26 20:17	06/27/26 02:41	1
13C3-5:3 FTCA	86.2		20 - 150			06/25/26 20:17	06/27/26 02:41	1

Method: DoD 6.0 QSM B-24 - PFAS for QSM 6.0, Table B-24 - RE

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTTrDA)	<20		20	ng/L		06/29/26 19:51	06/30/26 19:54	1
Perfluorotetradecanoic acid (PFTTeDA)	<20		20	ng/L		06/29/26 19:51	06/30/26 19:54	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFTTeDA	88.2		10 - 130			06/29/26 19:51	06/30/26 19:54	1
13C6 PFTTrDA	98.3		20 - 150			06/29/26 19:51	06/30/26 19:54	1

Action Limit Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-220211-1

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			
Perfluorooctanoic acid (PFOA)	<1.8		ng/L	4	1.8	QSM B-24	Total/NA
Perfluorononanoic acid (PFNA)	<1.8		ng/L	10	1.8	QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<1.8		ng/L	10	1.8	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<1.8		ng/L	4	1.8	QSM B-24	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		ng/L	10	1.3	QSM B-24	Total/NA

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	PFTDA (10-130)	C6PFTTrDA (20-150)				
320-133919-A-4-B MS	Matrix Spike	67.0	68.6				
320-133919-A-4-C MSD	Matrix Spike Duplicate	63.1	69.6				
380-220211-1 - RE	BWS2253-H1-AQ	88.2	98.3				
LCS 320-924435/3-A	Lab Control Sample	104	107				
LLCS 320-924435/2-A	Lab Control Sample	105	104				
MB 320-924435/1-A	Method Blank	103	96.7				
Surrogate Legend							
PFTDA = 13C2 PFTeDA							
C6PFTTrDA = 13C6 PFTTrDA							

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
380-220211-1	BWS2253-H1-AQ	95.4	111	96.9	95.4	89.2	91.1	59.6	38.3
LCS 320-923855/3-A	Lab Control Sample	97.3	85.4	91.5	86.3	92.7	100	80.6	85.4
LCSD 320-923855/4-A	Lab Control Sample Dup	98.3	83.1	86.3	76.8	99.1	98.2	81.9	84.6
LLCS 320-923855/2-A	Lab Control Sample	96.2	86.2	86.3	81.7	93.5	94.2	77.2	85.4
MB 320-923855/1-A	Method Blank	98.2	88.3	89.4	82.6	91.9	95.2	75.2	86.1
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)	M242FTS (40-200)
380-220211-1	BWS2253-H1-AQ	20.2	102	84.3	61.9	75.1	50.4	40.9	107
LCS 320-923855/3-A	Lab Control Sample	79.5	92.5	85.9	85.4	82.2	88.7	89.1	97.4
LCSD 320-923855/4-A	Lab Control Sample Dup	88.2	98.0	91.1	91.2	84.2	89.0	93.6	107
LLCS 320-923855/2-A	Lab Control Sample	81.5	92.9	87.3	83.2	81.0	87.6	92.0	96.0
MB 320-923855/1-A	Method Blank	81.9	96.4	92.5	89.3	83.2	91.6	93.8	106
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)	3-3:3 FTC/ (20-150)
380-220211-1	BWS2253-H1-AQ	99.2	69.7	106	23.9	20.9	22.2	31.8	104
LCS 320-923855/3-A	Lab Control Sample	95.2	88.8	93.9	65.5	62.3	61.2	67.4	81.3
LCSD 320-923855/4-A	Lab Control Sample Dup	100	97.2	89.7	69.2	68.7	64.9	72.3	79.4
LLCS 320-923855/2-A	Lab Control Sample	108	95.9	90.3	65.2	66.7	63.2	70.4	76.2
MB 320-923855/1-A	Method Blank	104	104	95.0	70.1	67.7	63.6	71.4	80.2
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	3-5:3 FTC/ (20-150)							
380-220211-1	BWS2253-H1-AQ	86.2							
LCS 320-923855/3-A	Lab Control Sample	72.9							
LCSD 320-923855/4-A	Lab Control Sample Dup	72.5							
LLCS 320-923855/2-A	Lab Control Sample	75.3							
MB 320-923855/1-A	Method Blank	76.6							
Surrogate Legend									
PFBA = 13C4 PFBA									
PFPeA = 13C5 PFPeA									

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Isotope Dilution Summary

Client: City & County of Honolulu

Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoA = 13C2 PFDoA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 PFOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = 13C2 4:2 FTS
M262FTS = 13C2 6:2 FTS
M282FTS = 13C2 8:2 FTS
HFPODA = 13C3 HFPO-DA
NMFm = d7-N-MeFOSE-M
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
d3NMFSA = d3-NMePFOSA
C3-3:3 FTCA = 13C3-3:3 FTCA
C3-5:3 FTCA = 13C3-5:3 FTCA

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24

Lab Sample ID: MB 320-923855/1-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 923855

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		06/25/26 20:17	06/26/26 19:01	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		06/25/26 20:17	06/26/26 19:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		06/25/26 20:17	06/26/26 19:01	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: MB 320-923855/1-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 923855

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFESA)	<2.0		2.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		06/25/26 20:17	06/26/26 19:01	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		06/25/26 20:17	06/26/26 19:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		06/25/26 20:17	06/26/26 19:01	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	98.2		5 - 130			06/25/26 20:17	06/26/26 19:01	1
13C5 PFPeA	88.3		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C5 PFHxA	89.4		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C4 PFHpA	82.6		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C8 PFOA	91.9		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C9 PFNA	95.2		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C6 PFDA	75.2		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C7 PFUnA	86.1		30 - 130			06/25/26 20:17	06/26/26 19:01	1
13C2 PFDoA	81.9		10 - 130			06/25/26 20:17	06/26/26 19:01	1
13C3 PFBS	96.4		40 - 135			06/25/26 20:17	06/26/26 19:01	1
13C3 PFHxS	92.5		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C8 PFOS	89.3		40 - 130			06/25/26 20:17	06/26/26 19:01	1
13C8 PFOSA	83.2		40 - 130			06/25/26 20:17	06/26/26 19:01	1
d3-NMeFOSAA	91.6		40 - 170			06/25/26 20:17	06/26/26 19:01	1
d5-NEtFOSAA	93.8		25 - 135			06/25/26 20:17	06/26/26 19:01	1
13C2 4:2 FTS	106		40 - 200			06/25/26 20:17	06/26/26 19:01	1
13C2 6:2 FTS	104		40 - 200			06/25/26 20:17	06/26/26 19:01	1
13C2 8:2 FTS	104		40 - 300			06/25/26 20:17	06/26/26 19:01	1
13C3 HFPO-DA	95.0		40 - 130			06/25/26 20:17	06/26/26 19:01	1
d7-N-MeFOSE-M	70.1		10 - 130			06/25/26 20:17	06/26/26 19:01	1
d9-N-EtFOSE-M	67.7		10 - 130			06/25/26 20:17	06/26/26 19:01	1
d5-NEtPFOSA	63.6		10 - 130			06/25/26 20:17	06/26/26 19:01	1
d3-NMePFOSA	71.4		10 - 130			06/25/26 20:17	06/26/26 19:01	1
13C3-3:3 FTCA	80.2		20 - 150			06/25/26 20:17	06/26/26 19:01	1
13C3-5:3 FTCA	76.6		20 - 150			06/25/26 20:17	06/26/26 19:01	1

Lab Sample ID: LCS 320-923855/3-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	74.8		ng/L		93	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	43.1		ng/L		108	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	33.3		ng/L		83	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	36.6		ng/L		91	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	37.3		ng/L		93	70 - 150
Perfluorononanoic acid (PFNA)	40.0	36.6		ng/L		92	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	42.4		ng/L		106	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	36.0		ng/L		90	70 - 145

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LCS 320-923855/3-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorododecanoic acid (PFDoA)	40.0	38.1		ng/L		95	70 - 140
Perfluorobutanesulfonic acid (PFBS)	71.0	73.3		ng/L		103	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.2		ng/L		104	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.9		ng/L		104	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.1		ng/L		113	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	34.5		ng/L		93	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	41.1		ng/L		107	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.6		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	31.4		ng/L		81	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	74.2		ng/L		99	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	78.9		ng/L		104	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	84.5		ng/L		110	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	36.4		ng/L		91	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.2		ng/L		101	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.7		ng/L		102	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.6		ng/L		94	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	33.8		ng/L		84	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	200		ng/L		100	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	206		ng/L		103	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	30.8		ng/L		103	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	33.6		ng/L		89	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	40.4		ng/L		101	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	42.1		ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	43.9		ng/L		110	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	40.6		ng/L		109	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	35.0		ng/L		93	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	35.0		ng/L		98	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	74.9		ng/L		94	65 - 130

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LCS 320-923855/3-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	193		ng/L		97	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	163		ng/L		81	50 - 145
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
13C4 PFBA	97.3		5 - 130				
13C5 PFPeA	85.4		40 - 130				
13C5 PFHxA	91.5		40 - 130				
13C4 PFHpA	86.3		40 - 130				
13C8 PFOA	92.7		40 - 130				
13C9 PFNA	100		40 - 130				
13C6 PFDA	80.6		40 - 130				
13C7 PFUnA	85.4		30 - 130				
13C2 PFDoA	79.5		10 - 130				
13C3 PFBS	92.5		40 - 135				
13C3 PFHxS	85.9		40 - 130				
13C8 PFOS	85.4		40 - 130				
13C8 PFOSA	82.2		40 - 130				
d3-NMeFOSAA	88.7		40 - 170				
d5-NEtFOSAA	89.1		25 - 135				
13C2 4:2 FTS	97.4		40 - 200				
13C2 6:2 FTS	95.2		40 - 200				
13C2 8:2 FTS	88.8		40 - 300				
13C3 HFPO-DA	93.9		40 - 130				
d7-N-MeFOSE-M	65.5		10 - 130				
d9-N-EtFOSE-M	62.3		10 - 130				
d5-NEtPFOSA	61.2		10 - 130				
d3-NMePFOSA	67.4		10 - 130				
13C3-3:3 FTCA	81.3		20 - 150				
13C3-5:3 FTCA	72.9		20 - 150				

Lab Sample ID: LCSD 320-923855/4-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	82.2		ng/L		103	70 - 140	9	30
Perfluoropentanoic acid (PFPeA)	40.0	45.3		ng/L		113	65 - 135	5	30
Perfluorohexanoic acid (PFHxA)	40.0	40.7		ng/L		102	70 - 145	20	30
Perfluoroheptanoic acid (PFHpA)	40.0	43.3		ng/L		108	70 - 150	17	30
Perfluorooctanoic acid (PFOA)	40.0	42.2		ng/L		106	70 - 150	12	30
Perfluorononanoic acid (PFNA)	40.0	39.5		ng/L		99	70 - 150	8	30
Perfluorodecanoic acid (PFDA)	40.0	48.5		ng/L		121	70 - 140	14	30
Perfluoroundecanoic acid (PFUnA)	40.0	40.6		ng/L		102	70 - 145	12	30
Perfluorododecanoic acid (PFDoA)	40.0	40.3		ng/L		101	70 - 140	5	30
Perfluorobutanesulfonic acid (PFBS)	71.0	78.8		ng/L		111	60 - 145	7	30

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LCSD 320-923855/4-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	37.6	42.6		ng/L		113	65 - 140	8	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	41.5		ng/L		114	65 - 145	9	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	43.7		ng/L		115	70 - 150	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.6		ng/L		98	55 - 150	6	30
Perfluorononanesulfonic acid (PFNS)	38.5	41.0		ng/L		107	65 - 145	0	30
Perfluorodecanesulfonic acid (PFDS)	38.6	38.5		ng/L		100	60 - 145	8	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.4		ng/L		94	50 - 145	15	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	78.9		ng/L		105	70 - 145	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	80.4		ng/L		106	65 - 155	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	87.2		ng/L		113	60 - 150	3	30
Perfluorooctanesulfonamide (PFOSA)	40.0	38.6		ng/L		97	70 - 145	6	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.4		ng/L		106	60 - 150	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.1		ng/L		108	65 - 145	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.5		ng/L		104	50 - 140	10	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.9		ng/L		90	70 - 145	6	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	212		ng/L		106	70 - 145	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	216		ng/L		108	70 - 135	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	32.4		ng/L		108	70 - 140	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.0		ng/L		98	65 - 145	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	44.9		ng/L		112	60 - 150	11	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	38.8		ng/L		97	50 - 150	8	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	46.6		ng/L		116	55 - 140	6	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	43.0		ng/L		115	70 - 155	6	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	38.4		ng/L		102	55 - 160	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	38.1		ng/L		107	70 - 140	8	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	78.2		ng/L		98	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	210		ng/L		105	70 - 135	8	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	175		ng/L		87	50 - 145	7	30

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QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C4 PFBA	98.3		5 - 130
13C5 PFPeA	83.1		40 - 130
13C5 PFHxA	86.3		40 - 130
13C4 PFHpA	76.8		40 - 130
13C8 PFOA	99.1		40 - 130
13C9 PFNA	98.2		40 - 130
13C6 PFDA	81.9		40 - 130
13C7 PFUnA	84.6		30 - 130
13C2 PFDoA	88.2		10 - 130
13C3 PFBS	98.0		40 - 135
13C3 PFHxS	91.1		40 - 130
13C8 PFOS	91.2		40 - 130
13C8 PFOSA	84.2		40 - 130
d3-NMeFOSAA	89.0		40 - 170
d5-NEtFOSAA	93.6		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	100		40 - 200
13C2 8:2 FTS	97.2		40 - 300
13C3 HFPO-DA	89.7		40 - 130
d7-N-MeFOSE-M	69.2		10 - 130
d9-N-EtFOSE-M	68.7		10 - 130
d5-NEtPFOSA	64.9		10 - 130
d3-NMePFOSA	72.3		10 - 130
13C3-3:3 FTCA	79.4		20 - 150
13C3-5:3 FTCA	72.5		20 - 150

Lab Sample ID: LLCS 320-923855/2-A
Matrix: Water
Analysis Batch: 923970

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 923855

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.04		ng/L		100	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.51		ng/L		113	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.26		ng/L		106	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.29		ng/L		107	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.38		ng/L		110	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.10		ng/L		103	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.94		ng/L		123	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.00		ng/L		100	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.33		ng/L		108	70 - 140
Perfluorobutanesulfonic acid (PFBS)	7.10	8.19		ng/L		115	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.25		ng/L		113	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.23		ng/L		116	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.56		ng/L		120	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.94		ng/L		106	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.53		ng/L		118	65 - 145

Eurofins Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LLCS 320-923855/2-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923855

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorodecanesulfonic acid (PFDS)	3.86	4.11		ng/L		106	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.77		ng/L		97	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	8.09		ng/L		108	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	7.88		ng/L		103	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.92		ng/L		116	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.04		ng/L		101	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.38		ng/L		109	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.42		ng/L		110	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.29		ng/L		107	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.67		ng/L		92	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.8		ng/L		109	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.9		ng/L		110	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.17		ng/L		106	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.84		ng/L		101	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.34		ng/L		109	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.63		ng/L		116	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.84		ng/L		121	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	4.47		ng/L		120	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	4.14		ng/L		110	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	3.57	4.10		ng/L		115	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.29		ng/L		104	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	19.9		ng/L		99	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	19.4		ng/L		97	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	96.2		5 - 130
13C5 PFPeA	86.2		40 - 130
13C5 PFHxA	86.3		40 - 130
13C4 PFHpA	81.7		40 - 130
13C8 PFOA	93.5		40 - 130
13C9 PFNA	94.2		40 - 130

Eurofins Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LLCs 320-923855/2-A

Matrix: Water

Analysis Batch: 923970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923855

Isotope Dilution	LLCS LLCs		Limits
	%Recovery	Qualifier	
13C6 PFDA	77.2		40 - 130
13C7 PFUnA	85.4		30 - 130
13C2 PFDoA	81.5		10 - 130
13C3 PFBS	92.9		40 - 135
13C3 PFHxS	87.3		40 - 130
13C8 PFOS	83.2		40 - 130
13C8 PFOSA	81.0		40 - 130
d3-NMeFOSAA	87.6		40 - 170
d5-NEtFOSAA	92.0		25 - 135
13C2 4:2 FTS	96.0		40 - 200
13C2 6:2 FTS	108		40 - 200
13C2 8:2 FTS	95.9		40 - 300
13C3 HFPO-DA	90.3		40 - 130
d7-N-MeFOSE-M	65.2		10 - 130
d9-N-EtFOSE-M	66.7		10 - 130
d5-NEtPFOSA	63.2		10 - 130
d3-NMePFOSA	70.4		10 - 130
13C3-3:3 FTCA	76.2		20 - 150
13C3-5:3 FTCA	75.3		20 - 150

Lab Sample ID: MB 320-924435/1-A

Matrix: Water

Analysis Batch: 924546

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 924435

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/29/26 19:51	06/30/26 16:21	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		06/29/26 19:51	06/30/26 16:21	1
Isotope Dilution	MB MB		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
13C2 PFTeDA	103		10 - 130			06/29/26 19:51	06/30/26 16:21	1
13C6 PFTrDA	96.7		20 - 150			06/29/26 19:51	06/30/26 16:21	1

Lab Sample ID: LCS 320-924435/3-A

Matrix: Water

Analysis Batch: 924546

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 924435

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorotridecanoic acid (PFTrDA)	40.0	42.4		ng/L		106	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	40.3		ng/L		101	60 - 140
Isotope Dilution	LCS LCS		Limits				
	%Recovery	Qualifier					
13C2 PFTeDA	104		10 - 130				
13C6 PFTrDA	107		20 - 150				

QC Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method: QSM B-24 - PFAS for QSM 6.0, Table B-24 (Continued)

Lab Sample ID: LLCS 320-924435/2-A

Matrix: Water

Analysis Batch: 924546

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 924435

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorotridecanoic acid (PFTrDA)			4.00	4.85		ng/L		121	65 - 140		
Perfluorotetradecanoic acid (PFTeDA)			4.00	4.41		ng/L		110	60 - 140		
		LLCS	LLCS								
		%Recovery	Qualifier	Limits							
Isotope Dilution											
13C2 PFTeDA		105		10 - 130							
13C6 PFTrDA		104		20 - 150							

Lab Sample ID: 320-133919-A-4-B MS

Matrix: Water

Analysis Batch: 924546

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 924435

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorotridecanoic acid (PFTrDA)	<1.6		33.2	37.0		ng/L		112	65 - 140		
Perfluorotetradecanoic acid (PFTeDA)	<1.6		33.2	32.3		ng/L		97	60 - 140		
		MS	MS								
		%Recovery	Qualifier	Limits							
Isotope Dilution											
13C2 PFTeDA		67.0		10 - 130							
13C6 PFTrDA		68.6		20 - 150							

Lab Sample ID: 320-133919-A-4-C MSD

Matrix: Water

Analysis Batch: 924546

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 924435

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTrDA)	<1.6		33.4	37.3		ng/L		112	65 - 140	1	30
Perfluorotetradecanoic acid (PFTeDA)	<1.6		33.4	33.9		ng/L		102	60 - 140	5	30
		MSD	MSD								
		%Recovery	Qualifier	Limits							
Isotope Dilution											
13C2 PFTeDA		63.1		10 - 130							
13C6 PFTrDA		69.6		20 - 150							

QC Association Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

LCMS

Prep Batch: 923855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220211-1	BWS2253-H1-AQ	Total/NA	Water	1633	
MB 320-923855/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-923855/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-923855/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-923855/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 923970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220211-1	BWS2253-H1-AQ	Total/NA	Water	QSM B-24	923855
MB 320-923855/1-A	Method Blank	Total/NA	Water	QSM B-24	923855
LCS 320-923855/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	923855
LCSD 320-923855/4-A	Lab Control Sample Dup	Total/NA	Water	QSM B-24	923855
LLCS 320-923855/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	923855

Prep Batch: 924435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220211-1 - RE	BWS2253-H1-AQ	Total/NA	Water	1633	
MB 320-924435/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-924435/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-924435/2-A	Lab Control Sample	Total/NA	Water	1633	
320-133919-A-4-B MS	Matrix Spike	Total/NA	Water	1633	
320-133919-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	1633	

Analysis Batch: 924546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220211-1 - RE	BWS2253-H1-AQ	Total/NA	Water	QSM B-24	924435
MB 320-924435/1-A	Method Blank	Total/NA	Water	QSM B-24	924435
LCS 320-924435/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	924435
LLCS 320-924435/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	924435
320-133919-A-4-B MS	Matrix Spike	Total/NA	Water	QSM B-24	924435
320-133919-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	QSM B-24	924435

Lab Chronicle

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Client Sample ID: BWS2253-H1-AQ
Date Collected: 06/16/26 11:20
Date Received: 06/17/26 09:45

Lab Sample ID: 380-220211-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			923855	A1M	EET SAC	06/25/26 20:17
Total/NA	Analysis	QSM B-24		1	923970	C1P	EET SAC	06/27/26 02:41
Total/NA	Prep	1633	RE		924435	EBH	EET SAC	06/29/26 19:51
Total/NA	Analysis	QSM B-24	RE	1	924546	K1S	EET SAC	06/30/26 19:54

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA00044	06-30-26
Alaska (UST)	State	17-020	02-22-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468.03	01-20-27
Arizona	State	AZ0708	08-11-26
Arkansas DEQ	State	88-0691	05-17-27
California	State	2897	01-31-28
Colorado	State	CA00044	08-31-26
Florida	NELAP	E87570	06-30-26
Georgia	State	4040	01-29-27
Illinois	NELAP	200060	03-31-27
Kansas	NELAP	E-10375	10-31-26
Louisiana	NELAP	01944	06-30-26
Louisiana (All)	NELAP	01944	06-30-26
Maine	State	CA00004	04-14-28
Massachusetts	State	M-CA044	06-30-26
Michigan	State	9947	08-03-26
Minnesota	NELAP	006-999-474	12-31-26
Nevada	State	CA00044	07-31-26
New Jersey	NELAP	CA005	06-30-26
New York	NELAP	11666	04-01-27
Ohio	State	41252	01-29-27
Oregon	NELAP	4040	01-29-27
Texas	NELAP	T104704399-23-17	05-31-27
US Fish & Wildlife	US Federal Programs	A22139	04-30-27
USDA	US Federal Programs	525-23-59-76739	03-01-27
Utah	NELAP	CA000442023-16	02-28-27
Virginia	NELAP	460278	09-30-26
Washington	State	C581	05-06-27
West Virginia (DW)	State	9930C	01-31-27
West Virginia DEP	State	422	07-31-26
Wisconsin	State	998204680	08-31-26
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Pomona

Method Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Method	Method Description	Protocol	Laboratory
QSM B-24	PFAS for QSM 6.0, Table B-24	DoD 6.0	EET SAC
1633	Solid-Phase Extraction (SPE)	EPA	EET SAC

Protocol References:

DoD 6.0 = Department of Defense Quality Systems Manual V6.0
EPA = US Environmental Protection Agency

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-220211-1
SDG: Site H1 PFAS 1633

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-220211-1	BWS2253-H1-AQ	Water	06/16/26 11:20	06/17/26 09:45	Hawaii

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

Ver: 05/06/2024

Ver-03/20/2026

Ver 05/06/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-220211-1
SDG Number: Site H1 PFAS 1633

Login Number: 220211

List Number: 1

Creator: Edrosa, Rey

List Source: Eurofins Pomona

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-220211-1
SDG Number: Site H1 PFAS 1633

Login Number: 220211

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 06/17/26 05:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	2189957
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	