

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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Generated 8/14/2026 9:33:21 AM

JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site D2 PFAS 1633

JOB NUMBER

380-230013-1

Eurofins Pomona

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: 380-230013-1
SDG: Site D2 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: 380-230013-1

Job ID: 380-230013-1

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Job Narrative 380-230013-1

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 8/11/2026 9:20 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 1.7°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 discolored and contained particulates prior to extraction or yielded discolored extracts: BWS2254-D2-AQ (380-230013-1)

Method QSM B-24: Per client request, the following samples BWS2254-D2-AQ (380-230013-1) with elevated total suspended solids (TSS) in the sample containers were fortified with Extracted Internal Standards (EIS), equilibrated, and centrifuged. The aqueous phase was separated and then extracted using Solid Phase Extraction (SPE). A rinse of the solid residue was added to the aqueous sample prior to extraction. Potential outcomes of this approach include elevated reporting limits and poor EIS recoveries that may preferentially sorb to the particulates leading to qualified QC in the final results.

Method QSM B-24: One or more continuing calibration verifications (CCV) and/or continuing calibration blanks (CCB) in analytical batches 320-931875 recovered outside control limits for one or more Extracted Internal Standards/Isotope Dilution Analytes (EIS/IDAs). Recovery for the affected EIS/IDAs in associated laboratory QC aliquots and client samples were evaluated and corrective action was performed as required. Otherwise, the data have been reported.

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: 380-230013-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-230013-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	5.6		1.5	ng/L	1		QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.8		1.5	ng/L	1		QSM B-24	Total/NA

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: 380-230013-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-230013-1

Date Collected: 08/10/26 10:45

Matrix: Water

Date Received: 08/11/26 09:20

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)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoropentanoic acid (PFPeA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorohexanoic acid (PFHxA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoroheptanoic acid (PFHpA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorooctanoic acid (PFOA)	5.6		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorononanoic acid (PFNA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorodecanoic acid (PFDA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoroundecanoic acid (PFUnA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorododecanoic acid (PFDoA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorotridecanoic acid (PFTrDA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorotetradecanoic acid (PFTeDA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorobutanesulfonic acid (PFBS)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoropentanesulfonic acid (PFPeS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorohexanesulfonic acid (PFHxS)	9.8		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorooctanesulfonic acid (PFOS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorononanesulfonic acid (PFNS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorodecanesulfonic acid (PFDS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorododecanesulfonic acid (PFDoS)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluorooctanesulfonamide (PFOSA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<7.6		7.6	ng/L		08/12/26 19:47	08/13/26 22:20	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<7.6		7.6	ng/L		08/12/26 19:47	08/13/26 22:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.1		1.1	ng/L		08/12/26 19:47	08/13/26 22:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1

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Client Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-230013-1

Date Collected: 08/10/26 10:45

Matrix: Water

Date Received: 08/11/26 09:20

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
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFESA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 22:20	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.0		3.0	ng/L		08/12/26 19:47	08/13/26 22:20	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<7.6		7.6	ng/L		08/12/26 19:47	08/13/26 22:20	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<7.6		7.6	ng/L		08/12/26 19:47	08/13/26 22:20	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	86.2		5 - 130			08/12/26 19:47	08/13/26 22:20	1
13C5 PFPeA	95.8		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C5 PFHxA	86.5		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C4 PFHpA	77.5		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C8 PFOA	87.1		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C9 PFNA	93.3		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C6 PFDA	80.1		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C7 PFUnA	80.7		30 - 130			08/12/26 19:47	08/13/26 22:20	1
13C2 PFDoA	80.9		10 - 130			08/12/26 19:47	08/13/26 22:20	1
13C2 PFTeDA	81.2		10 - 130			08/12/26 19:47	08/13/26 22:20	1
13C6 PFTriDA	75.6		20 - 150			08/12/26 19:47	08/13/26 22:20	1
13C3 PFBS	96.0		40 - 135			08/12/26 19:47	08/13/26 22:20	1
13C3 PFHxS	93.1		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C8 PFOS	86.9		40 - 130			08/12/26 19:47	08/13/26 22:20	1
13C8 PFOSA	96.8		40 - 130			08/12/26 19:47	08/13/26 22:20	1
d3-NMeFOSAA	74.4		40 - 170			08/12/26 19:47	08/13/26 22:20	1
d5-NEtFOSAA	78.0		25 - 135			08/12/26 19:47	08/13/26 22:20	1
13C2 4:2 FTS	108		40 - 200			08/12/26 19:47	08/13/26 22:20	1
13C2 6:2 FTS	116		40 - 200			08/12/26 19:47	08/13/26 22:20	1
13C2 8:2 FTS	88.8		40 - 300			08/12/26 19:47	08/13/26 22:20	1
13C3 HFPO-DA	69.4		40 - 130			08/12/26 19:47	08/13/26 22:20	1
d7-N-MeFOSE-M	80.9		10 - 130			08/12/26 19:47	08/13/26 22:20	1
d9-N-EtFOSE-M	77.8		10 - 130			08/12/26 19:47	08/13/26 22:20	1
d5-NEtPFOSA	70.6		10 - 130			08/12/26 19:47	08/13/26 22:20	1
d3-NMePFOSA	73.8		10 - 130			08/12/26 19:47	08/13/26 22:20	1
13C3-3:3 FTCA	119		20 - 150			08/12/26 19:47	08/13/26 22:20	1
13C3-5:3 FTCA	101		20 - 150			08/12/26 19:47	08/13/26 22:20	1

Action Limit Summary

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-230013-1

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)	5.6		ng/L	4	1.5	QSM B-24	Total/NA
Perfluorononanoic acid (PFNA)	<1.5		ng/L	10	1.5	QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.8		ng/L	10	1.5	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<1.5		ng/L	4	1.5	QSM B-24	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.1		ng/L	10	1.1	QSM B-24	Total/NA

Isotope Dilution Summary

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

Job ID: 380-230013-1
SDG: Site D2 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	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
380-230013-1	BWS2254-D2-AQ	86.2	95.8	86.5	77.5	87.1	93.3	80.1	80.7
LCS 320-931781/3-A	Lab Control Sample	88.8	102	94.2	105	95.0	95.7	80.9	82.3
LCSD 320-931781/4-A	Lab Control Sample Dup	86.1	90.8	90.1	86.1	89.1	106	80.8	90.8
LLCS 320-931781/2-A	Lab Control Sample	85.4	100	86.3	82.1	89.5	93.4	86.6	95.6
MB 320-931781/1-A	Method Blank	87.9	96.5	94.2	97.2	91.9	98.9	83.4	90.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C6PFTTrDA (20-150)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)
380-230013-1	BWS2254-D2-AQ	80.9	81.2	75.6	96.0	93.1	86.9	96.8	74.4
LCS 320-931781/3-A	Lab Control Sample	91.1	88.8	88.4	106	99.4	92.6	94.0	78.6
LCSD 320-931781/4-A	Lab Control Sample Dup	98.1	90.6	97.6	101	91.2	89.6	99.2	74.1
LLCS 320-931781/2-A	Lab Control Sample	92.9	87.1	85.7	97.4	93.0	96.0	96.8	83.3
MB 320-931781/1-A	Method Blank	82.7	86.0	93.6	98.6	94.5	92.6	96.8	78.4

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-135)	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)
380-230013-1	BWS2254-D2-AQ	78.0	108	116	88.8	69.4	80.9	77.8	70.6
LCS 320-931781/3-A	Lab Control Sample	82.9	114	125	97.9	87.6	83.6	78.4	64.7
LCSD 320-931781/4-A	Lab Control Sample Dup	83.6	102	105	94.6	86.4	89.1	85.9	73.9
LLCS 320-931781/2-A	Lab Control Sample	77.5	114	110	94.1	76.2	83.0	77.3	62.9
MB 320-931781/1-A	Method Blank	83.5	115	118	93.1	79.4	87.8	82.2	69.0

		Percent Isotope Dilution Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	d3NMFSA (10-130)	3:3:3 FTC/ (20-150)	3:5:3 FTC/ (20-150)
380-230013-1	BWS2254-D2-AQ	73.8	119	101
LCS 320-931781/3-A	Lab Control Sample	63.9	118	110
LCSD 320-931781/4-A	Lab Control Sample Dup	75.1	119	119
LLCS 320-931781/2-A	Lab Control Sample	66.3	104	94.3
MB 320-931781/1-A	Method Blank	71.2	101	101

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDaA = 13C2 PFDaA
PFTDA = 13C2 PFTeDA
C6PFTTrDA = 13C6 PFTTrDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
PFOSA = 13C8 PFOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M242FTS = 13C2 4:2 FTS

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Isotope Dilution Summary

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

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: MB 320-931781/1-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 931781

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		08/12/26 19:47	08/13/26 18:13	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		08/12/26 19:47	08/13/26 18:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		08/12/26 19:47	08/13/26 18:13	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: MB 320-931781/1-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 931781

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		08/12/26 19:47	08/13/26 18:13	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		08/12/26 19:47	08/13/26 18:13	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		08/12/26 19:47	08/13/26 18:13	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	87.9		5 - 130	08/12/26 19:47	08/13/26 18:13	1
13C5 PFPeA	96.5		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C5 PFHxA	94.2		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C4 PFHpA	97.2		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C8 PFOA	91.9		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C9 PFNA	98.9		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C6 PFDA	83.4		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C7 PFUnA	90.4		30 - 130	08/12/26 19:47	08/13/26 18:13	1
13C2 PFDoA	82.7		10 - 130	08/12/26 19:47	08/13/26 18:13	1
13C2 PFTeDA	86.0		10 - 130	08/12/26 19:47	08/13/26 18:13	1
13C6 PFTrDA	93.6		20 - 150	08/12/26 19:47	08/13/26 18:13	1
13C3 PFBS	98.6		40 - 135	08/12/26 19:47	08/13/26 18:13	1
13C3 PFHxS	94.5		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C8 PFOS	92.6		40 - 130	08/12/26 19:47	08/13/26 18:13	1
13C8 PFOSA	96.8		40 - 130	08/12/26 19:47	08/13/26 18:13	1
d3-NMeFOSAA	78.4		40 - 170	08/12/26 19:47	08/13/26 18:13	1
d5-NEtFOSAA	83.5		25 - 135	08/12/26 19:47	08/13/26 18:13	1
13C2 4:2 FTS	115		40 - 200	08/12/26 19:47	08/13/26 18:13	1
13C2 6:2 FTS	118		40 - 200	08/12/26 19:47	08/13/26 18:13	1
13C2 8:2 FTS	93.1		40 - 300	08/12/26 19:47	08/13/26 18:13	1
13C3 HFPO-DA	79.4		40 - 130	08/12/26 19:47	08/13/26 18:13	1
d7-N-MeFOSE-M	87.8		10 - 130	08/12/26 19:47	08/13/26 18:13	1
d9-N-EtFOSE-M	82.2		10 - 130	08/12/26 19:47	08/13/26 18:13	1
d5-NEtPFOSA	69.0		10 - 130	08/12/26 19:47	08/13/26 18:13	1
d3-NMePFOSA	71.2		10 - 130	08/12/26 19:47	08/13/26 18:13	1
13C3-3:3 FTCA	101		20 - 150	08/12/26 19:47	08/13/26 18:13	1
13C3-5:3 FTCA	101		20 - 150	08/12/26 19:47	08/13/26 18:13	1

Lab Sample ID: LCS 320-931781/3-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	80.0	83.4		ng/L		104	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	32.1		ng/L		80	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	43.6		ng/L		109	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	37.9		ng/L		95	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	37.0		ng/L		92	70 - 150

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCS 320-931781/3-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanoic acid (PFNA)	40.0	40.7		ng/L		102	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	44.4		ng/L		111	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	42.2		ng/L		106	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	40.7		ng/L		102	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	36.9		ng/L		92	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	35.4		ng/L		88	60 - 140
Perfluorobutanesulfonic acid (PFBS)	71.0	57.8		ng/L		81	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	37.2		ng/L		99	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	30.5		ng/L		84	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	36.4		ng/L		95	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	35.5		ng/L		96	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	34.6		ng/L		90	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	35.5		ng/L		92	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	28.2		ng/L		73	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	77.0		ng/L		103	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	76.2		ng/L		100	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	81.5		ng/L		106	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.6		ng/L		106	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.5		ng/L		101	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.7		ng/L		97	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.7		ng/L		102	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.2		ng/L		90	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	203		ng/L		102	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	215		ng/L		107	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	29.4		ng/L		98	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	39.5		ng/L		104	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.4		ng/L		106	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	40.8		ng/L		102	50 - 150

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCS 320-931781/3-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.4		ng/L		111	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	34.2		ng/L		92	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	34.1		ng/L		90	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	25.2		ng/L		71	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	79.9		ng/L		100	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	196		ng/L		98	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	230		ng/L		115	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	88.8		5 - 130
13C5 PFPeA	102		40 - 130
13C5 PFHxA	94.2		40 - 130
13C4 PFHpA	105		40 - 130
13C8 PFOA	95.0		40 - 130
13C9 PFNA	95.7		40 - 130
13C6 PFDA	80.9		40 - 130
13C7 PFUnA	82.3		30 - 130
13C2 PFDoA	91.1		10 - 130
13C2 PFTeDA	88.8		10 - 130
13C6 PFTrDA	88.4		20 - 150
13C3 PFBS	106		40 - 135
13C3 PFHxS	99.4		40 - 130
13C8 PFOS	92.6		40 - 130
13C8 PFOSA	94.0		40 - 130
d3-NMeFOSAA	78.6		40 - 170
d5-NEtFOSAA	82.9		25 - 135
13C2 4:2 FTS	114		40 - 200
13C2 6:2 FTS	125		40 - 200
13C2 8:2 FTS	97.9		40 - 300
13C3 HFPO-DA	87.6		40 - 130
d7-N-MeFOSE-M	83.6		10 - 130
d9-N-EtFOSE-M	78.4		10 - 130
d5-NEtPFOSA	64.7		10 - 130
d3-NMePFOSA	63.9		10 - 130
13C3-3:3 FTCA	118		20 - 150
13C3-5:3 FTCA	110		20 - 150

Lab Sample ID: LCSD 320-931781/4-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	79.0		ng/L		99	70 - 140	5	30
Perfluoropentanoic acid (PFPeA)	40.0	35.5		ng/L		89	65 - 135	10	30

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCSD 320-931781/4-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	40.0	44.4		ng/L		111	70 - 145	2	30
Perfluoroheptanoic acid (PFHpA)	40.0	42.1		ng/L		105	70 - 150	10	30
Perfluorooctanoic acid (PFOA)	40.0	39.7		ng/L		99	70 - 150	7	30
Perfluorononanoic acid (PFNA)	40.0	39.2		ng/L		98	70 - 150	4	30
Perfluorodecanoic acid (PFDA)	40.0	43.6		ng/L		109	70 - 140	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	40.4		ng/L		101	70 - 145	4	30
Perfluorododecanoic acid (PFDoA)	40.0	40.6		ng/L		101	70 - 140	0	30
Perfluorotridecanoic acid (PFTrDA)	40.0	39.3		ng/L		98	65 - 140	7	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	34.0		ng/L		85	60 - 140	4	30
Perfluorobutanesulfonic acid (PFBS)	71.0	56.5		ng/L		80	60 - 145	2	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.3		ng/L		105	65 - 140	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	30.0		ng/L		82	65 - 145	2	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.3		ng/L		103	70 - 150	8	30
Perfluorooctanesulfonic acid (PFOS)	37.2	36.8		ng/L		99	55 - 150	3	30
Perfluorononanesulfonic acid (PFNS)	38.5	34.1		ng/L		89	65 - 145	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.1		ng/L		94	60 - 145	2	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	28.6		ng/L		74	50 - 145	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	79.1		ng/L		105	70 - 145	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	80.1		ng/L		105	65 - 155	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	81.2		ng/L		106	60 - 150	0	30
Perfluorooctanesulfonamide (PFOSA)	40.0	41.1		ng/L		103	70 - 145	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	38.2		ng/L		95	60 - 150	6	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	38.3		ng/L		96	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.2		ng/L		106	50 - 140	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	36.8		ng/L		92	70 - 145	2	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	199		ng/L		99	70 - 145	2	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	206		ng/L		103	70 - 135	4	30
Hexafluoropropylene Oxide	30.0	33.8		ng/L		113	70 - 140	14	30
Dimer Acid (HFPO-DA)									
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	38.8		ng/L		102	65 - 145	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.3		ng/L		113	60 - 150	7	30

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCSD 320-931781/4-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	46.4		ng/L		116	50 - 150	13	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	46.5		ng/L		116	55 - 140	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	35.7		ng/L		96	70 - 155	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	36.3		ng/L		96	55 - 160	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	25.6		ng/L		72	70 - 140	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	75.9		ng/L		95	65 - 130	5	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	185		ng/L		92	70 - 135	6	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	241		ng/L		120	50 - 145	5	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFBA	86.1		5 - 130						
13C5 PFPeA	90.8		40 - 130						
13C5 PFHxA	90.1		40 - 130						
13C4 PFHpA	86.1		40 - 130						
13C8 PFOA	89.1		40 - 130						
13C9 PFNA	106		40 - 130						
13C6 PFDA	80.8		40 - 130						
13C7 PFUnA	90.8		30 - 130						
13C2 PFDoA	98.1		10 - 130						
13C2 PFTeDA	90.6		10 - 130						
13C6 PFTrDA	97.6		20 - 150						
13C3 PFBS	101		40 - 135						
13C3 PFHxS	91.2		40 - 130						
13C8 PFOS	89.6		40 - 130						
13C8 PFOSA	99.2		40 - 130						
d3-NMeFOSAA	74.1		40 - 170						
d5-NEtFOSAA	83.6		25 - 135						
13C2 4:2 FTS	102		40 - 200						
13C2 6:2 FTS	105		40 - 200						
13C2 8:2 FTS	94.6		40 - 300						
13C3 HFPO-DA	86.4		40 - 130						
d7-N-MeFOSE-M	89.1		10 - 130						
d9-N-EtFOSE-M	85.9		10 - 130						
d5-NEtPFOSA	73.9		10 - 130						
d3-NMePFOSA	75.1		10 - 130						
13C3-3:3 FTCA	119		20 - 150						
13C3-5:3 FTCA	119		20 - 150						

QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LLCS 320-931781/2-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.39		ng/L		105	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.62		ng/L		91	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.43		ng/L		111	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.79		ng/L		95	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.28		ng/L		107	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.98		ng/L		100	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.34		ng/L		108	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	4.05		ng/L		101	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.19		ng/L		105	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.20		ng/L		105	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	3.70		ng/L		93	60 - 140
Perfluorobutanesulfonic acid (PFBS)	7.10	6.06		ng/L		85	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.02		ng/L		107	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.35		ng/L		92	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.20		ng/L		110	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.60		ng/L		97	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.53		ng/L		92	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.64		ng/L		94	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.17		ng/L		82	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	8.30		ng/L		111	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	7.68		ng/L		101	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	7.74		ng/L		101	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.28		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.36		ng/L		109	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.22		ng/L		105	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	3.90		ng/L		98	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.14		ng/L		104	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	21.6		ng/L		108	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	23.2		ng/L		116	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.30		ng/L		110	70 - 140

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QC Sample Results

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LLCS 320-931781/2-A

Matrix: Water

Analysis Batch: 931875

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 931781

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.23		ng/L		112	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.07		ng/L		102	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.94		ng/L		124	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	3.66		ng/L		91	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	3.40		ng/L		91	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	3.74		ng/L		99	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.03		ng/L		85	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.26		ng/L		103	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	18.8		ng/L		94	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	23.1		ng/L		115	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	85.4		5 - 130
13C5 PFPeA	100		40 - 130
13C5 PFHxA	86.3		40 - 130
13C4 PFHpA	82.1		40 - 130
13C8 PFOA	89.5		40 - 130
13C9 PFNA	93.4		40 - 130
13C6 PFDA	86.6		40 - 130
13C7 PFUnA	95.6		30 - 130
13C2 PFDoA	92.9		10 - 130
13C2 PFTeDA	87.1		10 - 130
13C6 PFTriDA	85.7		20 - 150
13C3 PFBS	97.4		40 - 135
13C3 PFHxS	93.0		40 - 130
13C8 PFOS	96.0		40 - 130
13C8 PFOSA	96.8		40 - 130
d3-NMeFOSAA	83.3		40 - 170
d5-NEtFOSAA	77.5		25 - 135
13C2 4:2 FTS	114		40 - 200
13C2 6:2 FTS	110		40 - 200
13C2 8:2 FTS	94.1		40 - 300
13C3 HFPO-DA	76.2		40 - 130
d7-N-MeFOSE-M	83.0		10 - 130
d9-N-EtFOSE-M	77.3		10 - 130
d5-NEtPFOSA	62.9		10 - 130
d3-NMePFOSA	66.3		10 - 130
13C3-3:3 FTCA	104		20 - 150
13C3-5:3 FTCA	94.3		20 - 150

QC Association Summary

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

LCMS

Prep Batch: 931781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-230013-1	BWS2254-D2-AQ	Total/NA	Water	1633	
MB 320-931781/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-931781/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-931781/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-931781/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 931875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-230013-1	BWS2254-D2-AQ	Total/NA	Water	QSM B-24	931781
MB 320-931781/1-A	Method Blank	Total/NA	Water	QSM B-24	931781
LCS 320-931781/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	931781
LCSD 320-931781/4-A	Lab Control Sample Dup	Total/NA	Water	QSM B-24	931781
LLCS 320-931781/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	931781

Lab Chronicle

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

Job ID: 380-230013-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ
Date Collected: 08/10/26 10:45
Date Received: 08/11/26 09:20

Lab Sample ID: 380-230013-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			931781	MNL	EET SAC	08/12/26 19:47
Total/NA	Analysis	QSM B-24		1	931875	K1S	EET SAC	08/13/26 22:20

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: 380-230013-1
SDG: Site D2 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	06-30-27
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
Arkansas DEQ	State	88-0691	05-17-27
California	State	2897	01-31-28
Colorado	State	CA00044	08-31-26
Florida	NELAP	E87570	06-30-27
Georgia	State	4040	01-29-27
Illinois	NELAP	200060	03-31-27
Kansas	NELAP	E-10375	10-31-26
Louisiana (All)	NELAP	01944	06-30-27
Maine	State	CA00004	04-14-28
Massachusetts	State	M-CA044	07-01-27
Minnesota	NELAP	006-999-474	12-31-26
Nevada	State	CA00044	07-31-27
New Jersey	NELAP	CA005	06-30-27
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	CA000442026-20	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	07-31-27
Wisconsin	State	998204680	08-31-26
Wyoming	State Program	8TMS-L	01-28-19 *

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

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Method Summary

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

Job ID: 380-230013-1
SDG: Site D2 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: 380-230013-1
SDG: Site D2 PFAS 1633

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-230013-1	BWS2254-D2-AQ	Water	08/10/26 10:45	08/11/26 09:20	Hawaii

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

8/14/2026

Ver-03/20/2026

Chain of Custody Record

Client Information		Sampler: H Bentley (808) 321-0683		Lab PVI: Lopez, Maria	Carrier Tracking No(s):	COC No:
Client Contact: Mr Ervin Kawata		Phone: 858-205-0730		E-Mail: Maria.Lopez@et.eurofins.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: City & County of Honolulu		PWSID:		Analysis Requested		
Address: 630 South Beretania Street		Due Date Requested:		Preservation Codes A - HCL N - None		
City: Honolulu		TAT Requested (days): Standard		Other:		
State, Zip: HI, 96843		Compliance Project: ☐ Yes ☒ No		Total Number of containers		
Phone: 808-748-5066		PO #:		1633 DODS - EPA Method 1633 Std List		
Email: ekawata@hbws.org		WO #:		Perform MS/MSD (Yes or No)		
Project Name: INTERA - Red-Hill-Incident		Project #: 38000861		Field Filtered Sample (Yes or No)		
Site: D2		SSOW#:		1633 DODS - EPA Method 1633 Std List		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Urinate, Sweat, On-skin, On-cloth, On-tissue, Air, DW-drinking water)	Special Instructions/Note:
BWS2254-D2-AQ		8/16/26	10:45	G	Water	BILL TO POMONA EEA
380-230013 Chain of Custody						
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						
Deliverable Requested I, II, III, IV, Other (specify)						
Empty Kit Relinquished by		Date:		Method of Shipment:		
Relinquished by: [Signature]		Date/Time: 8/16/26 14:00		Received by: [Signature]		
Relinquished by:		Date/Time:		Received by:		
Relinquished by:		Date/Time:		Received by:		
Custody Seal Intact: ☒ Yes ☐ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 1.7°C		

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-230013-1
SDG Number: Site D2 PFAS 1633

Login Number: 230013

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	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-230013-1
SDG Number: Site D2 PFAS 1633

Login Number: 230013

List Number: 2

Creator: Morazzini, Dominic S

List Source: Eurofins Sacramento

List Creation: 08/11/26 05:24 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	Seal present with no number.
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	1.2
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	