

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site A

JOB NUMBER

380-173302-1

Eurofins Eaton Analytical 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 Eaton Analytical, 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



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Definitions/Glossary

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

Job ID: 380-173302-1
SDG: Site A

Qualifiers

LCMS

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

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: 380-173302-1

Job ID: 380-173302-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-173302-1

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 9/25/2025 9:30 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 1.0°C.

PFAS

Method 1633_DOD6: 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 1633_DOD6: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 320-878307 and analytical batch 320-878481 recovered outside control limits for the following analytes: Nonafluoro-3,6-dioxaheptanoic acid (NFDHA).

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

Eurofins Eaton Analytical Pomona

Detection Summary

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

Job ID: 380-173302-1
SDG: Site A

Client Sample ID: BWS2254-A-AQ

Lab Sample ID: 380-173302-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	11		3.2	ng/L	1		QSM B-24	Total/NA
Perfluoropentanoic acid (PFPeA)	28		1.6	ng/L	1		QSM B-24	Total/NA
Perfluorohexanoic acid (PFHxA)	16		1.6	ng/L	1		QSM B-24	Total/NA
Perfluoroheptanoic acid (PFHpA)	7.7		1.6	ng/L	1		QSM B-24	Total/NA
Perfluorooctanoic acid (PFOA)	22		1.6	ng/L	1		QSM B-24	Total/NA
Perfluorobutanesulfonic acid (PFBS)	65		1.6	ng/L	1		QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		1.6	ng/L	1		QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	10		1.6	ng/L	1		QSM B-24	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-173302-1
SDG: Site A

Client Sample ID: BWS2254-A-AQ

Lab Sample ID: 380-173302-1

Date Collected: 09/24/25 10:10

Matrix: Water

Date Received: 09/25/25 09:30

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)	11		3.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoropentanoic acid (PFPeA)	28		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorohexanoic acid (PFHxA)	16		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoroheptanoic acid (PFHpA)	7.7		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorooctanoic acid (PFOA)	22		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorononanoic acid (PFNA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorodecanoic acid (PFDA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoroundecanoic acid (PFUnA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorododecanoic acid (PFDoA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorotridecanoic acid (PFTrDA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorotetradecanoic acid (PFTeDA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorobutanesulfonic acid (PFBS)	65		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoropentanesulfonic acid (PFPeS)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorohexanesulfonic acid (PFHxS)	14		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorooctanesulfonic acid (PFOS)	10		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorononanesulfonic acid (PFNS)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorodecanesulfonic acid (PFDS)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorododecanesulfonic acid (PFDoS)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.2		3.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.2		3.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.2		3.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluorooctanesulfonamide (PFOSA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.0		8.0	ng/L		09/30/25 04:26	10/01/25 08:21	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.0		8.0	ng/L		09/30/25 04:26	10/01/25 08:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		1.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.6 *1		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1

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Client Sample Results

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

Job ID: 380-173302-1
SDG: Site A

Client Sample ID: BWS2254-A-AQ

Lab Sample ID: 380-173302-1

Date Collected: 09/24/25 10:10

Matrix: Water

Date Received: 09/25/25 09:30

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
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.6		1.6	ng/L		09/30/25 04:26	10/01/25 08:21	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.2		3.2	ng/L		09/30/25 04:26	10/01/25 08:21	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.0		8.0	ng/L		09/30/25 04:26	10/01/25 08:21	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.0		8.0	ng/L		09/30/25 04:26	10/01/25 08:21	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	85.9		5 - 130			09/30/25 04:26	10/01/25 08:21	1
13C5 PFPeA	90.3		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C5 PFHxA	100		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C4 PFHpA	92.1		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C8 PFOA	94.4		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C9 PFNA	83.1		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C6 PFDA	94.6		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C7 PFUnA	93.2		30 - 130			09/30/25 04:26	10/01/25 08:21	1
13C2 PFDoA	72.3		10 - 130			09/30/25 04:26	10/01/25 08:21	1
13C2 PFTeDA	69.8		10 - 130			09/30/25 04:26	10/01/25 08:21	1
13C3 PFBS	90.0		40 - 135			09/30/25 04:26	10/01/25 08:21	1
13C3 PFHxS	89.5		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C8 PFOS	93.8		40 - 130			09/30/25 04:26	10/01/25 08:21	1
13C8 PFOSA	87.5		40 - 130			09/30/25 04:26	10/01/25 08:21	1
d3-NMeFOSAA	90.3		40 - 170			09/30/25 04:26	10/01/25 08:21	1
d5-NEtFOSAA	89.8		25 - 135			09/30/25 04:26	10/01/25 08:21	1
13C2 4:2 FTS	93.7		40 - 200			09/30/25 04:26	10/01/25 08:21	1
13C2 6:2 FTS	94.4		40 - 200			09/30/25 04:26	10/01/25 08:21	1
13C2 8:2 FTS	90.7		40 - 300			09/30/25 04:26	10/01/25 08:21	1
13C3 HFPO-DA	98.7		40 - 130			09/30/25 04:26	10/01/25 08:21	1
d7-N-MeFOSE-M	75.9		10 - 130			09/30/25 04:26	10/01/25 08:21	1
d9-N-EtFOSE-M	78.3		10 - 130			09/30/25 04:26	10/01/25 08:21	1
d5-NEtPFOSA	67.4		10 - 130			09/30/25 04:26	10/01/25 08:21	1
d3-NMePFOSA	70.8		10 - 130			09/30/25 04:26	10/01/25 08:21	1

Action Limit Summary

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

Job ID: 380-173302-1
SDG: Site A

Client Sample ID: BWS2254-A-AQ

Lab Sample ID: 380-173302-1

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)	22		ng/L	4	1.6	QSM B-24	Total/NA
Perfluorononanoic acid (PFNA)	<1.6		ng/L	10	1.6	QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14		ng/L	10	1.6	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	10		ng/L	4	1.6	QSM B-24	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		ng/L	10	1.2	QSM B-24	Total/NA

Isotope Dilution Summary

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

Job ID: 380-173302-1
SDG: Site A

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)
380-173302-1	BWS2254-A-AQ	85.9	90.3	100	92.1	94.4	83.1	94.6	93.2
LCS 320-878307/3-A	Lab Control Sample	87.9	84.2	96.0	94.8	99.8	78.5	107	109
LCSD 320-878307/4-A	Lab Control Sample Dup	90.4	90.1	87.0	86.7	95.5	85.5	92.5	83.6
LLCS 320-878307/2-A	Lab Control Sample	88.7	91.9	97.0	92.4	94.6	88.3	91.5	102
MB 320-878307/1-A	Method Blank	88.4	87.9	95.6	102	96.8	84.0	106	92.3

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)	d5NEFOS (25-135)
380-173302-1	BWS2254-A-AQ	72.3	69.8	90.0	89.5	93.8	87.5	90.3	89.8
LCS 320-878307/3-A	Lab Control Sample	96.5	83.0	92.1	97.6	107	91.3	96.3	99.2
LCSD 320-878307/4-A	Lab Control Sample Dup	83.2	67.3	95.9	85.5	98.5	81.5	82.6	87.2
LLCS 320-878307/2-A	Lab Control Sample	71.4	70.6	85.2	96.5	102	90.5	94.5	91.3
MB 320-878307/1-A	Method Blank	82.2	79.7	91.5	92.2	104	92.4	98.3	101

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)	d3NMFSA (10-130)
380-173302-1	BWS2254-A-AQ	93.7	94.4	90.7	98.7	75.9	78.3	67.4	70.8
LCS 320-878307/3-A	Lab Control Sample	125	95.4	112	89.9	81.6	85.2	69.4	70.7
LCSD 320-878307/4-A	Lab Control Sample Dup	112	94.7	94.3	93.5	77.4	80.4	66.1	64.8
LLCS 320-878307/2-A	Lab Control Sample	106	96.7	111	95.0	84.9	85.0	75.2	71.8
MB 320-878307/1-A	Method Blank	117	92.1	106	101	84.8	82.0	73.7	70.4

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
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

QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: MB 320-878307/1-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 878307

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		09/30/25 04:26	10/01/25 03:58	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		09/30/25 04:26	10/01/25 03:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		09/30/25 04:26	10/01/25 03:58	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: MB 320-878307/1-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 878307

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		09/30/25 04:26	10/01/25 03:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		09/30/25 04:26	10/01/25 03:58	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		09/30/25 04:26	10/01/25 03:58	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		09/30/25 04:26	10/01/25 03:58	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.4		5 - 130	09/30/25 04:26	10/01/25 03:58	1
13C5 PFPeA	87.9		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C5 PFHxA	95.6		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C4 PFHpA	102		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C8 PFOA	96.8		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C9 PFNA	84.0		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C6 PFDA	106		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C7 PFUnA	92.3		30 - 130	09/30/25 04:26	10/01/25 03:58	1
13C2 PFDoA	82.2		10 - 130	09/30/25 04:26	10/01/25 03:58	1
13C2 PFTeDA	79.7		10 - 130	09/30/25 04:26	10/01/25 03:58	1
13C3 PFBS	91.5		40 - 135	09/30/25 04:26	10/01/25 03:58	1
13C3 PFHxS	92.2		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C8 PFOS	104		40 - 130	09/30/25 04:26	10/01/25 03:58	1
13C8 PFOSA	92.4		40 - 130	09/30/25 04:26	10/01/25 03:58	1
d3-NMeFOSAA	98.3		40 - 170	09/30/25 04:26	10/01/25 03:58	1
d5-NEtFOSAA	101		25 - 135	09/30/25 04:26	10/01/25 03:58	1
13C2 4:2 FTS	117		40 - 200	09/30/25 04:26	10/01/25 03:58	1
13C2 6:2 FTS	92.1		40 - 200	09/30/25 04:26	10/01/25 03:58	1
13C2 8:2 FTS	106		40 - 300	09/30/25 04:26	10/01/25 03:58	1
13C3 HFPO-DA	101		40 - 130	09/30/25 04:26	10/01/25 03:58	1
d7-N-MeFOSE-M	84.8		10 - 130	09/30/25 04:26	10/01/25 03:58	1
d9-N-EtFOSE-M	82.0		10 - 130	09/30/25 04:26	10/01/25 03:58	1
d5-NEtPFOSA	73.7		10 - 130	09/30/25 04:26	10/01/25 03:58	1
d3-NMePFOSA	70.4		10 - 130	09/30/25 04:26	10/01/25 03:58	1

Lab Sample ID: LCS 320-878307/3-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	92.2		ng/L		115	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	44.9		ng/L		112	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	40.0		ng/L		100	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	40.6		ng/L		102	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	41.2		ng/L		103	70 - 150
Perfluorononanoic acid (PFNA)	40.0	38.4		ng/L		96	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	35.2		ng/L		88	70 - 140

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QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LCS 320-878307/3-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	37.9		ng/L		95	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	43.4		ng/L		109	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	45.2		ng/L		113	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	50.4		ng/L		126	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	35.7		ng/L		100	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.2		ng/L		104	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.4		ng/L		102	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	33.9		ng/L		89	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.4		ng/L		98	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	36.5		ng/L		95	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	33.9		ng/L		88	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	31.0		ng/L		80	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	69.2		ng/L		92	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	78.0		ng/L		102	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	71.0		ng/L		92	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	41.2		ng/L		103	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	46.2		ng/L		115	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	47.9		ng/L		120	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.8		ng/L		102	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.9		ng/L		102	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	209		ng/L		105	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	207		ng/L		103	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	28.0		ng/L		93	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	40.6		ng/L		107	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	45.1		ng/L		113	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	37.3		ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	47.3		ng/L		118	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	39.1		ng/L		105	70 - 155

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QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LCS 320-878307/3-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	38.9		ng/L		103	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	33.8		ng/L		95	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	95.9		ng/L		120	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	205		ng/L		103	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	184		ng/L		92	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	87.9		5 - 130
13C5 PFPeA	84.2		40 - 130
13C5 PFHxA	96.0		40 - 130
13C4 PFHpA	94.8		40 - 130
13C8 PFOA	99.8		40 - 130
13C9 PFNA	78.5		40 - 130
13C6 PFDA	107		40 - 130
13C7 PFUnA	109		30 - 130
13C2 PFDoA	96.5		10 - 130
13C2 PFTeDA	83.0		10 - 130
13C3 PFBS	92.1		40 - 135
13C3 PFHxS	97.6		40 - 130
13C8 PFOS	107		40 - 130
13C8 PFOSA	91.3		40 - 130
d3-NMeFOSAA	96.3		40 - 170
d5-NEtFOSAA	99.2		25 - 135
13C2 4:2 FTS	125		40 - 200
13C2 6:2 FTS	95.4		40 - 200
13C2 8:2 FTS	112		40 - 300
13C3 HFPO-DA	89.9		40 - 130
d7-N-MeFOSE-M	81.6		10 - 130
d9-N-EtFOSE-M	85.2		10 - 130
d5-NEtPFOSA	69.4		10 - 130
d3-NMePFOSA	70.7		10 - 130

Lab Sample ID: LCSD 320-878307/4-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	80.0	88.8		ng/L		111	70 - 140	4	30
Perfluoropentanoic acid (PFPeA)	40.0	51.4		ng/L		129	65 - 135	14	30
Perfluorohexanoic acid (PFHxA)	40.0	42.9		ng/L		107	70 - 145	7	30
Perfluoroheptanoic acid (PFHpA)	40.0	41.7		ng/L		104	70 - 150	3	30
Perfluorooctanoic acid (PFOA)	40.0	38.9		ng/L		97	70 - 150	6	30
Perfluorononanoic acid (PFNA)	40.0	35.6		ng/L		89	70 - 150	7	30
Perfluorodecanoic acid (PFDA)	40.0	37.2		ng/L		93	70 - 140	6	30

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QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LCSD 320-878307/4-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	40.0	40.2		ng/L		101	70 - 145	6	30
Perfluorododecanoic acid (PFDoA)	40.0	41.8		ng/L		104	70 - 140	4	30
Perfluorotridecanoic acid (PFTrDA)	40.0	44.8		ng/L		112	65 - 140	1	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.3		ng/L		98	60 - 140	25	30
Perfluorobutanesulfonic acid (PFBS)	35.5	33.3		ng/L		94	60 - 145	7	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	41.4		ng/L		110	65 - 140	6	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	40.6		ng/L		111	65 - 145	8	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	34.2		ng/L		90	70 - 150	1	30
Perfluorooctanesulfonic acid (PFOS)	37.2	35.1		ng/L		94	55 - 150	3	30
Perfluorononanesulfonic acid (PFNS)	38.5	34.2		ng/L		89	65 - 145	7	30
Perfluorodecanesulfonic acid (PFDS)	38.6	32.3		ng/L		84	60 - 145	5	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	30.2		ng/L		78	50 - 145	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	88.4		ng/L		118	70 - 145	24	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	73.4		ng/L		96	65 - 155	6	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	84.7		ng/L		110	60 - 150	18	30
Perfluorooctanesulfonamide (PFOSA)	40.0	44.3		ng/L		111	70 - 145	7	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	47.6		ng/L		119	60 - 150	3	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	42.8		ng/L		107	65 - 145	11	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.7		ng/L		102	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.0		ng/L		102	70 - 145	0	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	210		ng/L		105	70 - 145	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	208		ng/L		104	70 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	28.6		ng/L		95	70 - 140	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	37.7		ng/L		100	65 - 145	8	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	48.5		ng/L		121	60 - 150	7	30
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	40.0	50.9	*1	ng/L		127	50 - 150	31	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	44.3		ng/L		111	55 - 140	7	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	35.1		ng/L		94	70 - 155	11	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LCSD 320-878307/4-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	36.9		ng/L		98	55 - 160	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	37.8		ng/L		106	70 - 140	11	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	96.0		ng/L		120	65 - 130	0	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	237		ng/L		118	70 - 135	14	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	214		ng/L		107	50 - 145	15	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFBA	90.4		5 - 130
13C5 PFPeA	90.1		40 - 130
13C5 PFHxA	87.0		40 - 130
13C4 PFHpA	86.7		40 - 130
13C8 PFOA	95.5		40 - 130
13C9 PFNA	85.5		40 - 130
13C6 PFDA	92.5		40 - 130
13C7 PFUnA	83.6		30 - 130
13C2 PFDoA	83.2		10 - 130
13C2 PFTeDA	67.3		10 - 130
13C3 PFBS	95.9		40 - 135
13C3 PFHxS	85.5		40 - 130
13C8 PFOS	98.5		40 - 130
13C8 PFOSA	81.5		40 - 130
d3-NMeFOSAA	82.6		40 - 170
d5-NEtFOSAA	87.2		25 - 135
13C2 4:2 FTS	112		40 - 200
13C2 6:2 FTS	94.7		40 - 200
13C2 8:2 FTS	94.3		40 - 300
13C3 HFPO-DA	93.5		40 - 130
d7-N-MeFOSE-M	77.4		10 - 130
d9-N-EtFOSE-M	80.4		10 - 130
d5-NEtPFOSA	66.1		10 - 130
d3-NMePFOSA	64.8		10 - 130

Lab Sample ID: LLCS 320-878307/2-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.58		ng/L		107	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.66		ng/L		116	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	3.97		ng/L		99	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	3.88		ng/L		97	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.60		ng/L		115	70 - 150
Perfluorononanoic acid (PFNA)	4.00	3.95		ng/L		99	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.01		ng/L		100	70 - 140

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LLCS 320-878307/2-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	4.00	3.19		ng/L		80	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.12		ng/L		103	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.53		ng/L		113	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.45		ng/L		111	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	3.29		ng/L		93	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	3.92		ng/L		104	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.56		ng/L		98	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	3.36		ng/L		88	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.70		ng/L		99	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.34		ng/L		87	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.27		ng/L		85	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.72		ng/L		70	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	8.49		ng/L		113	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	7.67		ng/L		101	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	6.84		ng/L		89	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.00		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.11		ng/L		103	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.27		ng/L		107	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.17		ng/L		104	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.48		ng/L		112	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.5		ng/L		97	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	19.7		ng/L		98	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	2.86		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	3.88		ng/L		103	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.40		ng/L		110	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.28		ng/L		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.42		ng/L		111	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	3.86		ng/L		103	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-173302-1
SDG: Site A

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

Lab Sample ID: LLCS 320-878307/2-A

Matrix: Water

Analysis Batch: 878481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 878307

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	3.76		ng/L		100	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	3.57	3.60		ng/L		101	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	9.54		ng/L		119	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.5		ng/L		102	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	18.3		ng/L		91	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	88.7		5 - 130
13C5 PFPeA	91.9		40 - 130
13C5 PFHxA	97.0		40 - 130
13C4 PFHpA	92.4		40 - 130
13C8 PFOA	94.6		40 - 130
13C9 PFNA	88.3		40 - 130
13C6 PFDA	91.5		40 - 130
13C7 PFUnA	102		30 - 130
13C2 PFDoA	71.4		10 - 130
13C2 PFTeDA	70.6		10 - 130
13C3 PFBS	85.2		40 - 135
13C3 PFHxS	96.5		40 - 130
13C8 PFOS	102		40 - 130
13C8 PFOSA	90.5		40 - 130
d3-NMeFOSAA	94.5		40 - 170
d5-NEtFOSAA	91.3		25 - 135
13C2 4:2 FTS	106		40 - 200
13C2 6:2 FTS	96.7		40 - 200
13C2 8:2 FTS	111		40 - 300
13C3 HFPO-DA	95.0		40 - 130
d7-N-MeFOSE-M	84.9		10 - 130
d9-N-EtFOSE-M	85.0		10 - 130
d5-NEtPFOSA	75.2		10 - 130
d3-NMePFOSA	71.8		10 - 130

QC Association Summary

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

Job ID: 380-173302-1
SDG: Site A

LCMS

Prep Batch: 878307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-173302-1	BWS2254-A-AQ	Total/NA	Water	1633	
MB 320-878307/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-878307/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-878307/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-878307/2-A	Lab Control Sample	Total/NA	Water	1633	

Analysis Batch: 878481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-173302-1	BWS2254-A-AQ	Total/NA	Water	QSM B-24	878307
MB 320-878307/1-A	Method Blank	Total/NA	Water	QSM B-24	878307
LCS 320-878307/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	878307
LCSD 320-878307/4-A	Lab Control Sample Dup	Total/NA	Water	QSM B-24	878307
LLCS 320-878307/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	878307

Lab Chronicle

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

Job ID: 380-173302-1
SDG: Site A

Client Sample ID: BWS2254-A-AQ
Date Collected: 09/24/25 10:10
Date Received: 09/25/25 09:30

Lab Sample ID: 380-173302-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			878307	BMS	EET SAC	09/30/25 04:26
Total/NA	Analysis	QSM B-24		1	878481	JTD	EET SAC	10/01/25 08:21

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: 380-173302-1
SDG: Site A

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	02-20-27
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	05-18-26
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-26
Florida	NELAP	E87570	06-30-26
Georgia	State	4040	01-29-26
Illinois	NELAP	200060	03-31-26
Kansas	NELAP	E-10375	10-31-25
Louisiana	NELAP	01944	06-30-26
Louisiana (All)	NELAP	01944	06-30-26
Maine	State	CA00004	04-14-26
Massachusetts	State	M-CA044	06-30-26
Michigan	State	9947	01-29-26
Minnesota	NELAP	2749448	12-31-25
Nevada	State	CA00044	07-31-26
New Jersey	NELAP	CA005	06-30-26
New York	NELAP	11666	04-01-26
Ohio	State	41252	01-29-26
Oregon	NELAP	4040	01-29-26
Texas	NELAP	T104704399-23-17	05-31-26
US Fish & Wildlife	US Federal Programs	A22139	04-30-26
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-28-26
Virginia	NELAP	460278	03-14-26
Washington	State	C581	05-05-26
West Virginia (DW)	State	9930C	02-01-26
West Virginia DEP	State	422	03-28-26
Wisconsin	State	998204680	08-31-26
Wyoming	State Program	8TMS-L	01-28-19 *

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

Eurofins Eaton Analytical Pomona

Method Summary

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

Job ID: 380-173302-1
SDG: Site A

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: 380-173302-1
SDG: Site A

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-173302-1	BWS2254-A-AQ	Water	09/24/25 10:10	09/25/25 09:30	Hawaii

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380-173302 COC

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941 Corporate Center Drive
Pomona, CA 91768-2642
Phone: 626-386-1100



380-173302 Chain of Custody

 eurofins

Environment Testing

Client Information (Sub Contract Lab)					
Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:		
Phone:	E-Mail:	State of Origin:	Page:		
N/A	Maria.Lopez@et.eurofinsus.com	Hawaii	Page 1 of 1		
Company: Eurofins Environment Testing Northern Ca Address: City: State, Zip: CA, 95805 Phone: E-mail: Project Name: SSOW#: N/A					
Due Date Requested: TAT Requested (days): PO #: WO #: Project #: 38000861 Site: Honolulu BWS Sites					
Analysis Requested					
Sample ID (Lab ID) BWS2254-A-AQ (380-173302-1)	Sample Type (C=Comp, G-grab) G	Matrix (W-water, S-solid, O-others) Water	Special Instructions/Note:		
X	G	Water	X		
Method Number: 1533 DOB/1633 SPE_12SEPA Method 1533 Sid Lit					
Notes: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analysis & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of origin listed above for analytes/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.					
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2					
Empty Kit Relinquished by: Relinquished by: Date/Time: Relinquished by: Date/Time: Relinquished by: Date/Time:					
Custody Seals Intact: Δ Yes Δ No					

Ver: 10/10/2024

Chain of Custody Record

941 Corporate Center Drive
Pomona, CA 91768

Client Information		Sampler: J. Joseph/H. Bentley/E. Kakone		Lab PM: Lopez, Maria		Carrier Tracking No(s):		COC No:	
Client Contact: Mr. Erwin Kawala		Phone: 858-205-0730		E-Mail: Maria.Lopez@eurotins.com		State of Origin: Hawaii		Page: Page 1 of 1	
City & County of Honolulu		PWSID:		Analysis Requested		Job #:			
Address: 630 South Beretania Street		Due Date Requested:		TAT Requested (days): Standard		Preservation Codes		Special Instructions/Note: x = testing comes from another container	
City: Honolulu		Compliance Project: Δ Yes Δ No		PO #: C20525101 exp 05312023		A HCL M Hexane			
State, Zip: HI 96843		Project #: 36000861		WO #: HRS-340E RED-HILL - INTERA		B NaOH N None			
Phone: 808-748-5066(Tel)		SSOW#:		Site: A		C Zn Acetate P Na2O4S			
Email: ekawata@hbws.org		Sample Date		Sample Time		D Nitric Acid Q Na2SO3			
Project Name: HRS-340E RED-HILL - INTERA		Sample Type (C=comp, G=grab)		Preservation Code		E NaHSO4 R Na2S2O3			
Site: A		Matrix (Newer, Sealed, Original, B-Tissue, A=Air)		Field Filtered Sample (Yes or No)		F MaOH S H2SO4			
Sample Identification		Sample Date		Sample Time		G Anchor T TSP Dodecahydrate			
BWS2254-A-AQ		9/24/25		10:10		H Ascorbic Acid U Acetone			
BWS2254-A-AQ		9/24/25		10:10		I Ice V MCAA			
BWS2254-A-FB		9/24/25		10:10		J DI Water W pH 4-5			
						K EDTA Y Trizma			
						L EDA Z other (specify)			
						Other:			
						Total Number of Containers			
						PFAS 1633 EEA SAC			
						PFAS 537.1 & 533 EEA			
						PFAS 1633 EEA SAC			
						Bill and Report to EEA			
						Pomona			
						Subcontract Notes			
						625 PAH EEA Pom ->			
						Ship to Caliscience			
						8015 TPH D+M, JP5, JP8			
						EEA Pom			
						8015 Gas EEA Pom			
						8260B EEA POM			
						PFAS 537.1 & 533 EEA			
						PFAS 1633 EEA SAC			
						Bill and Report to EEA			
						Pomona			
						Subcontract Notes			
						625 PAH EEA Pom ->			
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						8015 TPH D+M, JP5, JP8			
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						8015 Gas EEA Pom			
						8260B EEA POM			
						PFAS 537.1 & 533 EEA			
						PFAS 1633 EEA SAC			
						Bill and Report to EEA			
						Pomona			
						Subcontract Notes			
						625 PAH EEA Pom ->			
						Ship to Caliscience			
						8015 TPH D+M, JP5, JP8			
						EEA Pom			
						8015 Gas EEA Pom			
						8260B EEA POM			
						PFAS 537.1 & 533 EEA			
						PFAS 1633 EEA SAC			
						Bill and Report to EEA			
						Pomona			

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-173302-1

SDG Number: Site A

Login Number: 173302

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

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: 380-173302-1

SDG Number: Site A

Login Number: 173302

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 09/25/25 05:11 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
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	1.0c
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	