

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site H

JOB NUMBER

380-171053-1

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins 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



Authorized for release by
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Definitions/Glossary

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

Job ID: 380-171053-1
SDG: Site H

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: 380-171053-1

Job ID: 380-171053-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-171053-1

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 9/12/2025 7:05 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 2.7°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 continuing calibration verification (CCV) associated with batch 320-875889 recovered above the upper control limit for one or more of the following isotope dilution analyte (IDA): d3-NMeFOSAA. The associated target analyte, N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA), was within control limits in the CCV. The client samples were in control for the affected IDA. The method blank associated with this CCV was non-detect, the low level laboratory control sample, laboratory control sample, and laboratory control sample duplicate (LLCS/LCS/LCSD) recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: SiteH-BWS2253-024 (380-171053-1), (CCV 320-875889/16), (LCS 320-875703/3-A), (LLCS 320-875703/2-A), (MB 320-875703/1-A), (320-125054-A-4-A), (320-125054-A-4-B MS) and (320-125054-A-4-C MSD).

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: 380-171053-1
SDG: Site H

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171053-1

No Detections.

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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: 380-171053-1
SDG: Site H

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171053-1

Date Collected: 09/11/25 10:30

Matrix: Water

Date Received: 09/12/25 07:05

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)	<3.2		3.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoropentanoic acid (PFPeA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorohexanoic acid (PFHxA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoroheptanoic acid (PFHpA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorooctanoic acid (PFOA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorononanoic acid (PFNA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorodecanoic acid (PFDA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoroundecanoic acid (PFUnA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorododecanoic acid (PFDoA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorotridecanoic acid (PFTrDA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorotetradecanoic acid (PFTeDA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorobutanesulfonic acid (PFBS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoropentanesulfonic acid (PFPeS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorohexanesulfonic acid (PFHxS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorooctanesulfonic acid (PFOS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorononanesulfonic acid (PFNS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorodecanesulfonic acid (PFDS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorododecanesulfonic acid (PFDoS)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.2		3.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.2		3.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.2		3.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluorooctanesulfonamide (PFOSA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.0		8.0	ng/L		09/16/25 03:52	09/16/25 18:46	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.0		8.0	ng/L		09/16/25 03:52	09/16/25 18:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		1.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-171053-1
SDG: Site H

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171053-1

Date Collected: 09/11/25 10:30

Matrix: Water

Date Received: 09/12/25 07:05

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	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.6		1.6	ng/L		09/16/25 03:52	09/16/25 18:46	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.2		3.2	ng/L		09/16/25 03:52	09/16/25 18:46	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.0		8.0	ng/L		09/16/25 03:52	09/16/25 18:46	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.0		8.0	ng/L		09/16/25 03:52	09/16/25 18:46	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	95.2		5 - 130			09/16/25 03:52	09/16/25 18:46	1
13C5 PFPeA	102		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C5 PFHxA	99.8		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C4 PFHpA	95.1		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C8 PFOA	99.4		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C9 PFNA	91.3		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C6 PFDA	104		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C7 PFUnA	88.9		30 - 130			09/16/25 03:52	09/16/25 18:46	1
13C2 PFDoA	84.9		10 - 130			09/16/25 03:52	09/16/25 18:46	1
13C2 PFTeDA	85.4		10 - 130			09/16/25 03:52	09/16/25 18:46	1
13C3 PFBS	94.3		40 - 135			09/16/25 03:52	09/16/25 18:46	1
13C3 PFHxS	95.4		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C8 PFOS	107		40 - 130			09/16/25 03:52	09/16/25 18:46	1
13C8 PFOSA	104		40 - 130			09/16/25 03:52	09/16/25 18:46	1
d3-NMeFOSAA	119		40 - 170			09/16/25 03:52	09/16/25 18:46	1
d5-NEtFOSAA	105		25 - 135			09/16/25 03:52	09/16/25 18:46	1
13C2 4:2 FTS	104		40 - 200			09/16/25 03:52	09/16/25 18:46	1
13C2 6:2 FTS	100		40 - 200			09/16/25 03:52	09/16/25 18:46	1
13C2 8:2 FTS	112		40 - 300			09/16/25 03:52	09/16/25 18:46	1
13C3 HFPO-DA	98.0		40 - 130			09/16/25 03:52	09/16/25 18:46	1
d7-N-MeFOSE-M	82.2		10 - 130			09/16/25 03:52	09/16/25 18:46	1
d9-N-EtFOSE-M	86.2		10 - 130			09/16/25 03:52	09/16/25 18:46	1
d5-NEtPFOSA	96.1		10 - 130			09/16/25 03:52	09/16/25 18:46	1
d3-NMePFOSA	86.1		10 - 130			09/16/25 03:52	09/16/25 18:46	1

Action Limit Summary

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

Job ID: 380-171053-1
SDG: Site H

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171053-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Perfluorooctanoic acid (PFOA)	<1.6		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)	<1.6		ng/L	10	1.6	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<1.6		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: 380-171053-1
SDG: Site H

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)
320-125054-A-4-B MS	Matrix Spike	95.9	103	97.4	97.0	98.8	93.5	104	88.8
320-125054-A-4-C MSD	Matrix Spike Duplicate	96.9	98.6	94.1	93.8	102	98.8	116	96.3
380-171053-1	SiteH-BWS2253-024	95.2	102	99.8	95.1	99.4	91.3	104	88.9
LCS 320-875703/3-A	Lab Control Sample	99.5	107	95.7	96.3	99.8	95.3	109	91.1
LLCS 320-875703/2-A	Lab Control Sample	98.4	100	91.8	91.6	100	90.6	109	86.2
MB 320-875703/1-A	Method Blank	101	106	105	100	103	100	112	101

		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)
320-125054-A-4-B MS	Matrix Spike	87.7	79.5	99.9	101	105	100	126	107
320-125054-A-4-C MSD	Matrix Spike Duplicate	96.4	92.5	101	102	109	106	131	116
380-171053-1	SiteH-BWS2253-024	84.9	85.4	94.3	95.4	107	104	119	105
LCS 320-875703/3-A	Lab Control Sample	90.3	92.3	95.5	98.4	103	102	121	105
LLCS 320-875703/2-A	Lab Control Sample	88.3	89.2	89.9	97.1	108	103	121	105
MB 320-875703/1-A	Method Blank	104	103	101	109	114	112	138	119

		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)
320-125054-A-4-B MS	Matrix Spike	108	106	105	101	81.3	79.9	99.6	90.1
320-125054-A-4-C MSD	Matrix Spike Duplicate	104	109	117	97.8	89.8	95.3	102	93.6
380-171053-1	SiteH-BWS2253-024	104	100	112	98.0	82.2	86.2	96.1	86.1
LCS 320-875703/3-A	Lab Control Sample	107	105	109	109	85.4	84.0	97.5	86.8
LLCS 320-875703/2-A	Lab Control Sample	111	105	112	98.0	88.8	90.2	96.4	88.6
MB 320-875703/1-A	Method Blank	113	116	122	111	99.0	101	103	95.4

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

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident
d3NMFSA = d3-NMePFOSA

Job ID: 380-171053-1
SDG: Site H

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QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: MB 320-875703/1-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 875703

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		09/16/25 03:52	09/16/25 17:40	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		09/16/25 03:52	09/16/25 17:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		09/16/25 03:52	09/16/25 17:40	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: MB 320-875703/1-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 875703

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		09/16/25 03:52	09/16/25 17:40	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		09/16/25 03:52	09/16/25 17:40	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		09/16/25 03:52	09/16/25 17:40	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		5 - 130	09/16/25 03:52	09/16/25 17:40	1
13C5 PFPeA	106		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C5 PFHxA	105		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C4 PFHpA	100		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C8 PFOA	103		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C9 PFNA	100		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C6 PFDA	112		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C7 PFUnA	101		30 - 130	09/16/25 03:52	09/16/25 17:40	1
13C2 PFDoA	104		10 - 130	09/16/25 03:52	09/16/25 17:40	1
13C2 PFTeDA	103		10 - 130	09/16/25 03:52	09/16/25 17:40	1
13C3 PFBS	101		40 - 135	09/16/25 03:52	09/16/25 17:40	1
13C3 PFHxS	109		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C8 PFOS	114		40 - 130	09/16/25 03:52	09/16/25 17:40	1
13C8 PFOSA	112		40 - 130	09/16/25 03:52	09/16/25 17:40	1
d3-NMeFOSAA	138		40 - 170	09/16/25 03:52	09/16/25 17:40	1
d5-NEtFOSAA	119		25 - 135	09/16/25 03:52	09/16/25 17:40	1
13C2 4:2 FTS	113		40 - 200	09/16/25 03:52	09/16/25 17:40	1
13C2 6:2 FTS	116		40 - 200	09/16/25 03:52	09/16/25 17:40	1
13C2 8:2 FTS	122		40 - 300	09/16/25 03:52	09/16/25 17:40	1
13C3 HFPO-DA	111		40 - 130	09/16/25 03:52	09/16/25 17:40	1
d7-N-MeFOSE-M	99.0		10 - 130	09/16/25 03:52	09/16/25 17:40	1
d9-N-EtFOSE-M	101		10 - 130	09/16/25 03:52	09/16/25 17:40	1
d5-NEtPFOSA	103		10 - 130	09/16/25 03:52	09/16/25 17:40	1
d3-NMePFOSA	95.4		10 - 130	09/16/25 03:52	09/16/25 17:40	1

Lab Sample ID: LCS 320-875703/3-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	79.5		ng/L		99	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	44.0		ng/L		110	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	46.2		ng/L		115	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	42.7		ng/L		107	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	41.4		ng/L		104	70 - 150
Perfluorononanoic acid (PFNA)	40.0	42.4		ng/L		106	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	37.5		ng/L		94	70 - 140

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QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: LCS 320-875703/3-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	43.8		ng/L		109	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	44.1		ng/L		110	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	40.9		ng/L		102	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.2		ng/L		98	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	37.7		ng/L		106	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	42.5		ng/L		113	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	34.8		ng/L		95	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.4		ng/L		103	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	37.3		ng/L		100	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	39.5		ng/L		103	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	39.0		ng/L		101	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.8		ng/L		95	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	69.3		ng/L		92	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	88.0		ng/L		116	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	78.1		ng/L		102	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	40.6		ng/L		102	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	41.3		ng/L		103	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	36.5		ng/L		91	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.0		ng/L		100	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.3		ng/L		106	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	225		ng/L		112	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	202		ng/L		101	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	27.7		ng/L		92	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	40.3		ng/L		106	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	43.3		ng/L		108	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	37.3		ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	41.7		ng/L		104	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	34.5		ng/L		92	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: LCS 320-875703/3-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	33.4		ng/L		89	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	38.5		ng/L		108	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	89.1		ng/L		111	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	224		ng/L		112	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	204		ng/L		102	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	99.5		5 - 130
13C5 PFPeA	107		40 - 130
13C5 PFHxA	95.7		40 - 130
13C4 PFHpA	96.3		40 - 130
13C8 PFOA	99.8		40 - 130
13C9 PFNA	95.3		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	91.1		30 - 130
13C2 PFDoA	90.3		10 - 130
13C2 PFTeDA	92.3		10 - 130
13C3 PFBS	95.5		40 - 135
13C3 PFHxS	98.4		40 - 130
13C8 PFOS	103		40 - 130
13C8 PFOSA	102		40 - 130
d3-NMeFOSAA	121		40 - 170
d5-NEtFOSAA	105		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	105		40 - 200
13C2 8:2 FTS	109		40 - 300
13C3 HFPO-DA	109		40 - 130
d7-N-MeFOSE-M	85.4		10 - 130
d9-N-EtFOSE-M	84.0		10 - 130
d5-NEtPFOSA	97.5		10 - 130
d3-NMePFOSA	86.8		10 - 130

Lab Sample ID: LLCS 320-875703/2-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.55		ng/L		107	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.55		ng/L		114	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.72		ng/L		118	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.68		ng/L		117	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.56		ng/L		114	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.76		ng/L		119	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.07		ng/L		102	70 - 140

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QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: LLCS 320-875703/2-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	4.00	4.70		ng/L		118	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.79		ng/L		120	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.45		ng/L		111	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.24		ng/L		106	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	4.32		ng/L		122	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.44		ng/L		118	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.96		ng/L		109	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.23		ng/L		111	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.00		ng/L		108	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.04		ng/L		105	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	4.16		ng/L		108	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	4.00		ng/L		103	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	7.02		ng/L		94	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.89		ng/L		117	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	9.09		ng/L		118	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.36		ng/L		109	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.15		ng/L		104	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	3.72		ng/L		93	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.23		ng/L		106	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.48		ng/L		112	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	23.6		ng/L		118	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	21.0		ng/L		105	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.20		ng/L		107	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.31		ng/L		114	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.74		ng/L		119	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.90		ng/L		122	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.18		ng/L		104	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	3.95		ng/L		106	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: LLCS 320-875703/2-A

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	3.83		ng/L		101	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	3.57	3.96		ng/L		111	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.87		ng/L		111	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	23.3		ng/L		116	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	20.2		ng/L		101	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	98.4		5 - 130
13C5 PFPeA	100		40 - 130
13C5 PFHxA	91.8		40 - 130
13C4 PFHpA	91.6		40 - 130
13C8 PFOA	100		40 - 130
13C9 PFNA	90.6		40 - 130
13C6 PFDA	109		40 - 130
13C7 PFUnA	86.2		30 - 130
13C2 PFDoA	88.3		10 - 130
13C2 PFTeDA	89.2		10 - 130
13C3 PFBS	89.9		40 - 135
13C3 PFHxS	97.1		40 - 130
13C8 PFOS	108		40 - 130
13C8 PFOSA	103		40 - 130
d3-NMeFOSAA	121		40 - 170
d5-NEtFOSAA	105		25 - 135
13C2 4:2 FTS	111		40 - 200
13C2 6:2 FTS	105		40 - 200
13C2 8:2 FTS	112		40 - 300
13C3 HFPO-DA	98.0		40 - 130
d7-N-MeFOSE-M	88.8		10 - 130
d9-N-EtFOSE-M	90.2		10 - 130
d5-NEtPFOSA	96.4		10 - 130
d3-NMePFOSA	88.6		10 - 130

Lab Sample ID: 320-125054-A-4-B MS

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<3.3		64.7	67.2		ng/L		104	70 - 140
Perfluoropentanoic acid (PFPeA)	<1.7		32.3	32.2		ng/L		100	65 - 135
Perfluorohexanoic acid (PFHxA)	<1.7		32.3	32.0		ng/L		99	70 - 145
Perfluoroheptanoic acid (PFHpA)	<1.7		32.3	33.1		ng/L		102	70 - 150
Perfluorooctanoic acid (PFOA)	<1.7		32.3	33.4		ng/L		98	70 - 150
Perfluorononanoic acid (PFNA)	<1.7		32.3	34.2		ng/L		106	70 - 150
Perfluorodecanoic acid (PFDA)	<1.7		32.3	29.0		ng/L		90	70 - 140

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: 320-125054-A-4-B MS

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	<1.7		32.3	33.6		ng/L		104	70 - 145
Perfluorododecanoic acid (PFDoA)	<1.7		32.3	33.5		ng/L		103	70 - 140
Perfluorotridecanoic acid (PFTrDA)	<1.7		32.3	33.0		ng/L		102	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	<1.7		32.3	32.0		ng/L		99	60 - 140
Perfluorobutanesulfonic acid (PFBS)	<1.7		28.7	28.7		ng/L		100	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	<1.7		30.4	32.5		ng/L		107	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	<1.7		29.5	28.8		ng/L		92	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		30.9	31.8		ng/L		103	70 - 150
Perfluorooctanesulfonic acid (PFOS)	<1.7		30.1	28.9		ng/L		93	55 - 150
Perfluorononanesulfonic acid (PFNS)	<1.7		31.1	29.3		ng/L		94	65 - 145
Perfluorodecanesulfonic acid (PFDS)	<1.7		31.2	30.4		ng/L		97	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	<1.7		31.4	27.1		ng/L		86	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.3		60.7	57.2		ng/L		94	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.3		61.6	66.5		ng/L		108	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.3		62.1	65.4		ng/L		105	60 - 150
Perfluorooctanesulfonamide (PFOSA)	<1.7		32.3	32.8		ng/L		101	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		32.3	31.9		ng/L		99	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		32.3	28.4		ng/L		88	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		32.3	30.8		ng/L		95	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		32.3	34.4		ng/L		106	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.3		162	177		ng/L		110	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.3		162	155		ng/L		96	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		24.3	21.6		ng/L		89	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7		30.6	33.8		ng/L		111	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		32.3	34.3		ng/L		106	60 - 150
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<1.7		32.3	32.1		ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		32.3	33.6		ng/L		104	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		30.2	27.9		ng/L		92	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: 320-125054-A-4-B MS

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		30.5	27.4		ng/L		90	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.7		28.8	29.7		ng/L		103	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.3		64.7	72.2		ng/L		112	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.3		162	169		ng/L		104	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.3		162	156		ng/L		97	50 - 145

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	95.9		5 - 130
13C5 PFPeA	103		40 - 130
13C5 PFHxA	97.4		40 - 130
13C4 PFHpA	97.0		40 - 130
13C8 PFOA	98.8		40 - 130
13C9 PFNA	93.5		40 - 130
13C6 PFDA	104		40 - 130
13C7 PFUnA	88.8		30 - 130
13C2 PFDoA	87.7		10 - 130
13C2 PFTeDA	79.5		10 - 130
13C3 PFBS	99.9		40 - 135
13C3 PFHxS	101		40 - 130
13C8 PFOS	105		40 - 130
13C8 PFOSA	100		40 - 130
d3-NMeFOSAA	126		40 - 170
d5-NEtFOSAA	107		25 - 135
13C2 4:2 FTS	108		40 - 200
13C2 6:2 FTS	106		40 - 200
13C2 8:2 FTS	105		40 - 300
13C3 HFPO-DA	101		40 - 130
d7-N-MeFOSE-M	81.3		10 - 130
d9-N-EtFOSE-M	79.9		10 - 130
d5-NEtPFOSA	99.6		10 - 130
d3-NMePFOSA	90.1		10 - 130

Lab Sample ID: 320-125054-A-4-C MSD

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<3.3		63.9	67.7		ng/L		106	70 - 140	1	30
Perfluoropentanoic acid (PFPeA)	<1.7		31.9	34.2		ng/L		107	65 - 135	6	30
Perfluorohexanoic acid (PFHxA)	<1.7		31.9	36.2		ng/L		113	70 - 145	12	30
Perfluoroheptanoic acid (PFHpA)	<1.7		31.9	34.5		ng/L		108	70 - 150	4	30
Perfluorooctanoic acid (PFOA)	<1.7		31.9	33.5		ng/L		100	70 - 150	0	30
Perfluorononanoic acid (PFNA)	<1.7		31.9	33.3		ng/L		104	70 - 150	2	30
Perfluorodecanoic acid (PFDA)	<1.7		31.9	27.6		ng/L		87	70 - 140	5	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: 320-125054-A-4-C MSD

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	<1.7		31.9	33.9		ng/L		106	70 - 145	1	30
Perfluorododecanoic acid (PFDoA)	<1.7		31.9	34.1		ng/L		107	70 - 140	2	30
Perfluorotridecanoic acid (PFTrDA)	<1.7		31.9	32.7		ng/L		102	65 - 140	1	30
Perfluorotetradecanoic acid (PFTeDA)	<1.7		31.9	30.0		ng/L		94	60 - 140	7	30
Perfluorobutanesulfonic acid (PFBS)	<1.7		28.4	28.1		ng/L		99	60 - 145	2	30
Perfluoropentanesulfonic acid (PFPeS)	<1.7		30.0	32.5		ng/L		108	65 - 140	0	30
Perfluorohexanesulfonic acid (PFHxS)	<1.7		29.1	28.8		ng/L		93	65 - 145	0	30
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		30.5	30.8		ng/L		101	70 - 150	3	30
Perfluorooctanesulfonic acid (PFOS)	<1.7		29.7	28.1		ng/L		92	55 - 150	3	30
Perfluorononanesulfonic acid (PFNS)	<1.7		30.7	30.6		ng/L		100	65 - 145	5	30
Perfluorodecanesulfonic acid (PFDS)	<1.7		30.8	31.6		ng/L		103	60 - 145	4	30
Perfluorododecanesulfonic acid (PFDoS)	<1.7		31.0	28.7		ng/L		93	50 - 145	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.3		59.9	60.5		ng/L		101	70 - 145	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.3		60.8	64.3		ng/L		106	65 - 155	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.3		61.3	62.7		ng/L		102	60 - 150	4	30
Perfluorooctanesulfonamide (PFOSA)	<1.7		31.9	32.0		ng/L		100	70 - 145	2	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		31.9	31.5		ng/L		99	60 - 150	1	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		31.9	28.6		ng/L		90	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		31.9	31.5		ng/L		99	50 - 140	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		31.9	34.0		ng/L		107	70 - 145	1	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.3		160	178		ng/L		111	70 - 145	0	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.3		160	153		ng/L		96	70 - 135	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		23.9	22.5		ng/L		94	70 - 140	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7		30.2	33.2		ng/L		110	65 - 145	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		31.9	35.1		ng/L		110	60 - 150	2	30
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<1.7		31.9	30.7		ng/L		96	50 - 150	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		31.9	33.4		ng/L		105	55 - 140	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		29.8	27.9		ng/L		94	70 - 155	0	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-171053-1
SDG: Site H

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

Lab Sample ID: 320-125054-A-4-C MSD

Matrix: Water

Analysis Batch: 875889

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 875703

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		30.1	28.0		ng/L		93	55 - 160	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.7		28.5	31.3		ng/L		110	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.3		63.9	74.6		ng/L		117	65 - 130	3	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.3		160	166		ng/L		104	70 - 135	2	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.3		160	151		ng/L		95	50 - 145	3	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	MSD Limits
13C4 PFBA	96.9		5 - 130
13C5 PFPeA	98.6		40 - 130
13C5 PFHxA	94.1		40 - 130
13C4 PFHpA	93.8		40 - 130
13C8 PFOA	102		40 - 130
13C9 PFNA	98.8		40 - 130
13C6 PFDA	116		40 - 130
13C7 PFUnA	96.3		30 - 130
13C2 PFDoA	96.4		10 - 130
13C2 PFTeDA	92.5		10 - 130
13C3 PFBS	101		40 - 135
13C3 PFHxS	102		40 - 130
13C8 PFOS	109		40 - 130
13C8 PFOSA	106		40 - 130
d3-NMeFOSAA	131		40 - 170
d5-NEtFOSAA	116		25 - 135
13C2 4:2 FTS	104		40 - 200
13C2 6:2 FTS	109		40 - 200
13C2 8:2 FTS	117		40 - 300
13C3 HFPO-DA	97.8		40 - 130
d7-N-MeFOSE-M	89.8		10 - 130
d9-N-EtFOSE-M	95.3		10 - 130
d5-NEtPFOSA	102		10 - 130
d3-NMePFOSA	93.6		10 - 130

QC Association Summary

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

Job ID: 380-171053-1
SDG: Site H

LCMS

Prep Batch: 875703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171053-1	SiteH-BWS2253-024	Total/NA	Water	1633	
MB 320-875703/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-875703/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-875703/2-A	Lab Control Sample	Total/NA	Water	1633	
320-125054-A-4-B MS	Matrix Spike	Total/NA	Water	1633	
320-125054-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	1633	

Analysis Batch: 875889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171053-1	SiteH-BWS2253-024	Total/NA	Water	QSM B-24	875703
MB 320-875703/1-A	Method Blank	Total/NA	Water	QSM B-24	875703
LCS 320-875703/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	875703
LLCS 320-875703/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	875703
320-125054-A-4-B MS	Matrix Spike	Total/NA	Water	QSM B-24	875703
320-125054-A-4-C MSD	Matrix Spike Duplicate	Total/NA	Water	QSM B-24	875703

Lab Chronicle

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

Job ID: 380-171053-1
SDG: Site H

Client Sample ID: SiteH-BWS2253-024
Date Collected: 09/11/25 10:30
Date Received: 09/12/25 07:05

Lab Sample ID: 380-171053-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			875703	RMF	EET SAC	09/16/25 03:52
Total/NA	Analysis	QSM B-24		1	875889	P1P	EET SAC	09/16/25 18:46

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: 380-171053-1
SDG: Site H

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: 380-171053-1
SDG: Site H

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: 380-171053-1
SDG: Site H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-171053-1	SiteH-BWS2253-024	Water	09/11/25 10:30	09/12/25 07:05	Hawaii

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

Analysis Requested

~~9/17/2025~~

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

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A		Lab Pk: Lopez, Maria		Carrier Tracking No(s): N/A		COC No: 380-251698.1	
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Maria.Lopez@et.eurofins.com		State of Origin: Hawaii		Page: Page 1 of 1	
Company: Eurofins Environment Testing Northern Ca		Address: 880 Riverside Parkway, West Sacramento, CA 95605		Phone: 916-373-5600(Tel) 916-372-1059(Fax)		Email: N/A		Job #: 380-171053-1	
Project Name: INTERA - Red-Hill-Incident		PO #: N/A		WO #: N/A		Project #: 38000861		Preservation Codes:	
Site: Honolulu BWS Sites		TAT Requested (days): N/A		Due Date Requested: 9/25/2025		Analysis Requested		Total Number of Containers: 2	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=oil, A=air)	
Site: H-BWS2253-024 (380-171053-1)		9/11/25		10:30 Hawaiian		G		Water	
Barcode: 380-171053 Chain of Custody									
Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & 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 analysis, the sample 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:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:		7.3°C	

Ver: 10/10/2024

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-171053-1

SDG Number: Site H

Login Number: 171053

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: 380-171053-1

SDG Number: Site H

Login Number: 171053

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 09/12/25 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.	N/A	
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	2.7c
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?	N/A	
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	