

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
630 South Beretania Street
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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site H

JOB NUMBER

380-178765-1

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: 380-178765-1
SDG: Site H

Qualifiers

LCMS

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

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: 380-178765-1

Job ID: 380-178765-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-178765-1

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 10/23/2025 9:05 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 2.4°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 low level continuing calibration verification (CCVL) associated with batch 320-884017 recovered above the upper control limit for 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS). The samples and method blank (MB) associated with this CCV were non-detects, the low level laboratory control sample, laboratory control sample, and laboratory control sample duplicate (LLCS/LCS/LCSD) were within control limits for the affected analyte; therefore, the data have been reported: (CCVL 320-884017/2), (LCS 320-883582/3-A), (LLCS 320-883582/2-A) and (MB 320-883582/1-A).

Method 1633_DOD6: The low level continuing calibration verification (CCVL) associated with batch 320-884272 recovered above the upper control limit for 4,8-Dioxa-3H-perfluorononanoic acid (ADONA). The samples associated with this CCVL were non-detects for the affected analyte; therefore, the data have been reported. The associated samples are: BWS2253-H1-AQ (380-178765-1), (CCVL 320-884272/2) and (320-126644-A-6-A).

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: 380-178765-1
SDG: Site H

Client Sample ID: BWS2253-H1-AQ Lab Sample ID: 380-178765-1

No Detections.

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This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 380-178765-1
SDG: Site H

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-178765-1

Date Collected: 10/22/25 10:30

Matrix: Water

Date Received: 10/23/25 09:05

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)	<3.6		3.6	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoropentanoic acid (PFPeA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorohexanoic acid (PFHxA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoroheptanoic acid (PFHpA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorooctanoic acid (PFOA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorononanoic acid (PFNA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorodecanoic acid (PFDA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoroundecanoic acid (PFUnA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorododecanoic acid (PFDoA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorotridecanoic acid (PFTriDA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorotetradecanoic acid (PFTeDA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorobutanesulfonic acid (PFBS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoropentanesulfonic acid (PFPeS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorohexanesulfonic acid (PFHxS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorooctanesulfonic acid (PFOS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorononanesulfonic acid (PFNS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorodecanesulfonic acid (PFDS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorododecanesulfonic acid (PFDoS)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.6		3.6	ng/L		10/28/25 04:05	10/30/25 17:16	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.6		3.6	ng/L		10/28/25 04:05	10/30/25 17:16	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.6		3.6	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluorooctanesulfonamide (PFOSA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.9		8.9	ng/L		10/28/25 04:05	10/30/25 17:16	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.9		8.9	ng/L		10/28/25 04:05	10/30/25 17:16	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		1.3	ng/L		10/28/25 04:05	10/30/25 17:16	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.8 ^+		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-178765-1
SDG: Site H

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-178765-1

Date Collected: 10/22/25 10:30

Matrix: Water

Date Received: 10/23/25 09:05

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	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.8		1.8	ng/L		10/28/25 04:05	10/30/25 17:16	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.6		3.6	ng/L		10/28/25 04:05	10/30/25 17:16	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.9		8.9	ng/L		10/28/25 04:05	10/30/25 17:16	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.9		8.9	ng/L		10/28/25 04:05	10/30/25 17:16	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	73.2		5 - 130			10/28/25 04:05	10/30/25 17:16	1
13C5 PFPeA	94.2		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C5 PFHxA	92.1		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C4 PFHpA	89.3		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C8 PFOA	99.0		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C9 PFNA	100		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C6 PFDA	101		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C7 PFUnA	83.8		30 - 130			10/28/25 04:05	10/30/25 17:16	1
13C2 PFDoA	88.4		10 - 130			10/28/25 04:05	10/30/25 17:16	1
13C2 PFTeDA	74.9		10 - 130			10/28/25 04:05	10/30/25 17:16	1
13C3 PFBS	96.9		40 - 135			10/28/25 04:05	10/30/25 17:16	1
13C3 PFHxS	97.8		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C8 PFOS	103		40 - 130			10/28/25 04:05	10/30/25 17:16	1
13C8 PFOSA	98.4		40 - 130			10/28/25 04:05	10/30/25 17:16	1
d3-NMeFOSAA	101		40 - 170			10/28/25 04:05	10/30/25 17:16	1
d5-NEtFOSAA	92.6		25 - 135			10/28/25 04:05	10/30/25 17:16	1
13C2 4:2 FTS	106		40 - 200			10/28/25 04:05	10/30/25 17:16	1
13C2 6:2 FTS	90.9		40 - 200			10/28/25 04:05	10/30/25 17:16	1
13C2 8:2 FTS	94.6		40 - 300			10/28/25 04:05	10/30/25 17:16	1
13C3 HFPO-DA	75.7		40 - 130			10/28/25 04:05	10/30/25 17:16	1
d7-N-MeFOSE-M	77.0		10 - 130			10/28/25 04:05	10/30/25 17:16	1
d9-N-EtFOSE-M	76.8		10 - 130			10/28/25 04:05	10/30/25 17:16	1
d5-NEtPFOSA	83.5		10 - 130			10/28/25 04:05	10/30/25 17:16	1
d3-NMePFOSA	77.8		10 - 130			10/28/25 04:05	10/30/25 17:16	1

Action Limit Summary

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

Job ID: 380-178765-1
SDG: Site H

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-178765-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Perfluorooctanoic acid (PFOA)	<1.8		ng/L	4	1.8	QSM B-24	Total/NA
Perfluorononanoic acid (PFNA)	<1.8		ng/L	10	1.8	QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<1.8		ng/L	10	1.8	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<1.8		ng/L	4	1.8	QSM B-24	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		ng/L	10	1.3	QSM B-24	Total/NA

Isotope Dilution Summary

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

Job ID: 380-178765-1
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)
320-126644-A-6-B MS	Matrix Spike	81.8	83.7	90.1	88.6	102	109	106	95.0
320-126644-B-6-A MSD	Matrix Spike Duplicate	80.7	89.5	90.6	87.6	97.9	103	103	94.0
380-178765-1	BWS2253-H1-AQ	73.2	94.2	92.1	89.3	99.0	100	101	83.8
LCS 320-883582/3-A	Lab Control Sample	81.4	92.3	96.2	95.2	104	108	107	94.5
LLCS 320-883582/2-A	Lab Control Sample	78.2	85.2	87.2	87.6	99.5	99.4	100	74.5
MB 320-883582/1-A	Method Blank	79.6	90.6	91.9	94.0	102	108	110	96.0
		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)
320-126644-A-6-B MS	Matrix Spike	92.3	76.8	107	103	110	101	99.7	88.4
320-126644-B-6-A MSD	Matrix Spike Duplicate	99.6	78.3	102	102	102	100	93.7	88.8
380-178765-1	BWS2253-H1-AQ	88.4	74.9	96.9	97.8	103	98.4	101	92.6
LCS 320-883582/3-A	Lab Control Sample	85.5	80.0	102	101	107	86.7	101	90.1
LLCS 320-883582/2-A	Lab Control Sample	75.4	67.6	102	99.8	99.5	73.0	91.2	79.2
MB 320-883582/1-A	Method Blank	96.2	80.9	107	98.2	107	88.2	102	93.8
		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)
320-126644-A-6-B MS	Matrix Spike	97.9	89.9	103	73.5	73.6	69.6	82.3	77.0
320-126644-B-6-A MSD	Matrix Spike Duplicate	86.2	95.0	101	79.1	75.8	73.5	84.4	80.7
380-178765-1	BWS2253-H1-AQ	106	90.9	94.6	75.7	77.0	76.8	83.5	77.8
LCS 320-883582/3-A	Lab Control Sample	100	90.1	102	86.5	72.1	76.0	77.0	68.5
LLCS 320-883582/2-A	Lab Control Sample	103	82.8	92.4	74.9	54.0	54.2	62.2	55.1
MB 320-883582/1-A	Method Blank	109	87.8	94.2	81.5	72.5	73.2	79.8	74.3
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: 380-178765-1
SDG: Site H

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QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: MB 320-883582/1-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 883582

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		10/28/25 04:05	10/30/25 05:32	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		10/28/25 04:05	10/30/25 05:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		10/28/25 04:05	10/30/25 05:32	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: MB 320-883582/1-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 883582

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		10/28/25 04:05	10/30/25 05:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		10/28/25 04:05	10/30/25 05:32	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		10/28/25 04:05	10/30/25 05:32	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		10/28/25 04:05	10/30/25 05:32	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	79.6		5 - 130	10/28/25 04:05	10/30/25 05:32	1
13C5 PFPeA	90.6		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C5 PFHxA	91.9		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C4 PFHpA	94.0		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C8 PFOA	102		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C9 PFNA	108		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C6 PFDA	110		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C7 PFUnA	96.0		30 - 130	10/28/25 04:05	10/30/25 05:32	1
13C2 PFDoA	96.2		10 - 130	10/28/25 04:05	10/30/25 05:32	1
13C2 PFTeDA	80.9		10 - 130	10/28/25 04:05	10/30/25 05:32	1
13C3 PFBS	107		40 - 135	10/28/25 04:05	10/30/25 05:32	1
13C3 PFHxS	98.2		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C8 PFOS	107		40 - 130	10/28/25 04:05	10/30/25 05:32	1
13C8 PFOSA	88.2		40 - 130	10/28/25 04:05	10/30/25 05:32	1
d3-NMeFOSAA	102		40 - 170	10/28/25 04:05	10/30/25 05:32	1
d5-NEtFOSAA	93.8		25 - 135	10/28/25 04:05	10/30/25 05:32	1
13C2 4:2 FTS	109		40 - 200	10/28/25 04:05	10/30/25 05:32	1
13C2 6:2 FTS	87.8		40 - 200	10/28/25 04:05	10/30/25 05:32	1
13C2 8:2 FTS	94.2		40 - 300	10/28/25 04:05	10/30/25 05:32	1
13C3 HFPO-DA	81.5		40 - 130	10/28/25 04:05	10/30/25 05:32	1
d7-N-MeFOSE-M	72.5		10 - 130	10/28/25 04:05	10/30/25 05:32	1
d9-N-EtFOSE-M	73.2		10 - 130	10/28/25 04:05	10/30/25 05:32	1
d5-NEtPFOSA	79.8		10 - 130	10/28/25 04:05	10/30/25 05:32	1
d3-NMePFOSA	74.3		10 - 130	10/28/25 04:05	10/30/25 05:32	1

Lab Sample ID: LCS 320-883582/3-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	96.5		ng/L		121	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	50.2		ng/L		126	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	46.5		ng/L		116	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	46.2		ng/L		115	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	42.2		ng/L		105	70 - 150
Perfluorononanoic acid (PFNA)	40.0	39.7		ng/L		99	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	47.5		ng/L		119	70 - 140

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QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: LCS 320-883582/3-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	40.0	49.2		ng/L		123	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	50.0		ng/L		125	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	50.6		ng/L		127	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	53.5		ng/L		134	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	32.2		ng/L		91	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	49.6		ng/L		132	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	32.7		ng/L		90	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.9		ng/L		110	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	41.7		ng/L		112	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	40.5		ng/L		105	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	39.5		ng/L		102	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	36.4		ng/L		94	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	81.5		ng/L		109	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	94.1		ng/L		124	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	82.8		ng/L		108	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	42.5		ng/L		106	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	48.2		ng/L		121	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	46.4		ng/L		116	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.1		ng/L		103	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	50.4		ng/L		126	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	225		ng/L		112	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	222		ng/L		111	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	46.7		ng/L		123	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	51.0		ng/L		127	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	38.9		ng/L		97	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	46.4		ng/L		116	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	40.7		ng/L		109	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: LCS 320-883582/3-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	41.9		ng/L		111	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	35.7	38.7		ng/L		108	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	81.0		ng/L		101	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	177		ng/L		89	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	151		ng/L		75	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	81.4		5 - 130
13C5 PFPeA	92.3		40 - 130
13C5 PFHxA	96.2		40 - 130
13C4 PFHpA	95.2		40 - 130
13C8 PFOA	104		40 - 130
13C9 PFNA	108		40 - 130
13C6 PFDA	107		40 - 130
13C7 PFUnA	94.5		30 - 130
13C2 PFDoA	85.5		10 - 130
13C2 PFTeDA	80.0		10 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	101		40 - 130
13C8 PFOS	107		40 - 130
13C8 PFOSA	86.7		40 - 130
d3-NMeFOSAA	101		40 - 170
d5-NEtFOSAA	90.1		25 - 135
13C2 4:2 FTS	100		40 - 200
13C2 6:2 FTS	90.1		40 - 200
13C2 8:2 FTS	102		40 - 300
13C3 HFPO-DA	86.5		40 - 130
d7-N-MeFOSE-M	72.1		10 - 130
d9-N-EtFOSE-M	76.0		10 - 130
d5-NEtPFOSA	77.0		10 - 130
d3-NMePFOSA	68.5		10 - 130

Lab Sample ID: LLCS 320-883582/2-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	9.49		ng/L		119	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.82		ng/L		120	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.67		ng/L		117	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.36		ng/L		109	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.20		ng/L		105	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.02		ng/L		101	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.22		ng/L		105	70 - 140

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QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: LLCS 320-883582/2-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	4.00	5.14		ng/L		129	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.69		ng/L		117	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.71		ng/L		118	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.97		ng/L		124	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	2.99		ng/L		84	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.29		ng/L		114	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	3.07		ng/L		84	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.05		ng/L		106	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.29		ng/L		115	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.65		ng/L		95	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	3.10		ng/L		80	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	2.64		ng/L		68	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	7.61		ng/L		101	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	9.00		ng/L		118	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	8.50		ng/L		111	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.06		ng/L		102	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.38		ng/L		109	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.10		ng/L		103	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	4.04		ng/L		101	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.90		ng/L		122	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	19.6		ng/L		98	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	20.3		ng/L		102	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	2.80		ng/L		93	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.78		ng/L		126	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.63		ng/L		116	60 - 150
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.11		ng/L		103	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.37		ng/L		109	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: 380-178765-1
SDG: Site H

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

Lab Sample ID: LLCS 320-883582/2-A

Matrix: Water

Analysis Batch: 884017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	3.62		ng/L		96	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	3.57	3.83		ng/L		107	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	7.60		ng/L		95	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	16.7		ng/L		83	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	14.2		ng/L		71	50 - 145

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	Limits
13C4 PFBA	78.2		5 - 130
13C5 PFPeA	85.2		40 - 130
13C5 PFHxA	87.2		40 - 130
13C4 PFHpA	87.6		40 - 130
13C8 PFOA	99.5		40 - 130
13C9 PFNA	99.4		40 - 130
13C6 PFDA	100		40 - 130
13C7 PFUnA	74.5		30 - 130
13C2 PFDoA	75.4		10 - 130
13C2 PFTeDA	67.6		10 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	99.8		40 - 130
13C8 PFOS	99.5		40 - 130
13C8 PFOSA	73.0		40 - 130
d3-NMeFOSAA	91.2		40 - 170
d5-NEtFOSAA	79.2		25 - 135
13C2 4:2 FTS	103		40 - 200
13C2 6:2 FTS	82.8		40 - 200
13C2 8:2 FTS	92.4		40 - 300
13C3 HFPO-DA	74.9		40 - 130
d7-N-MeFOSE-M	54.0		10 - 130
d9-N-EtFOSE-M	54.2		10 - 130
d5-NEtPFOSA	62.2		10 - 130
d3-NMePFOSA	55.1		10 - 130

Lab Sample ID: 320-126644-A-6-B MS

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<3.3		64.8	74.7		ng/L		115	70 - 140
Perfluoropentanoic acid (PFPeA)	<1.7		32.4	40.9		ng/L		126	65 - 135
Perfluorohexanoic acid (PFHxA)	<1.7		32.4	38.8		ng/L		120	70 - 145
Perfluoroheptanoic acid (PFHpA)	<1.7		32.4	36.4		ng/L		112	70 - 150
Perfluorooctanoic acid (PFOA)	<1.7		32.4	33.8		ng/L		104	70 - 150
Perfluorononanoic acid (PFNA)	<1.7		32.4	31.3		ng/L		97	70 - 150
Perfluorodecanoic acid (PFDA)	<1.7		32.4	35.5		ng/L		110	70 - 140

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: 320-126644-A-6-B MS

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	<1.7		32.4	40.7		ng/L		126	70 - 145
Perfluorododecanoic acid (PFDoA)	<1.7		32.4	39.6		ng/L		122	70 - 140
Perfluorotridecanoic acid (PFTrDA)	<1.7		32.4	40.3		ng/L		124	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	<1.7		32.4	41.9		ng/L		129	60 - 140
Perfluorobutanesulfonic acid (PFBS)	<1.7		28.8	24.4		ng/L		85	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	<1.7		30.5	39.5		ng/L		130	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	<1.7		29.6	25.1		ng/L		85	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		30.9	31.8		ng/L		103	70 - 150
Perfluorooctanesulfonic acid (PFOS)	<1.7		30.1	32.2		ng/L		107	55 - 150
Perfluorononanesulfonic acid (PFNS)	<1.7		31.2	28.2		ng/L		90	65 - 145
Perfluorodecanesulfonic acid (PFDS)	<1.7		31.2	29.4		ng/L		94	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	<1.7		31.4	27.2		ng/L		86	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.3		60.8	64.9		ng/L		107	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.3		61.7	73.5		ng/L		119	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.3		62.2	65.3		ng/L		105	60 - 150
Perfluorooctanesulfonamide (PFOSA)	<1.7		32.4	33.7		ng/L		104	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		32.4	37.5		ng/L		116	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		32.4	34.8		ng/L		107	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		32.4	32.0		ng/L		99	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		32.4	38.2		ng/L		118	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.3		162	172		ng/L		106	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.3		162	176		ng/L		109	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		24.3	24.4		ng/L		100	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7	^+	30.7	41.9		ng/L		137	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		32.4	42.6		ng/L		132	60 - 150
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<1.7		32.4	34.1		ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		32.4	34.9		ng/L		108	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		30.3	33.8		ng/L		112	70 - 155

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: 320-126644-A-6-B MS

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 883582

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		30.6	34.9		ng/L		114	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.7		28.9	30.6		ng/L		106	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.3		64.8	76.1		ng/L		117	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.3		162	168		ng/L		104	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.3		162	156		ng/L		96	50 - 145

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	81.8		5 - 130
13C5 PFPeA	83.7		40 - 130
13C5 PFHxA	90.1		40 - 130
13C4 PFHpA	88.6		40 - 130
13C8 PFOA	102		40 - 130
13C9 PFNA	109		40 - 130
13C6 PFDA	106		40 - 130
13C7 PFUnA	95.0		30 - 130
13C2 PFDoA	92.3		10 - 130
13C2 PFTeDA	76.8		10 - 130
13C3 PFBS	107		40 - 135
13C3 PFHxS	103		40 - 130
13C8 PFOS	110		40 - 130
13C8 PFOSA	101		40 - 130
d3-NMeFOSAA	99.7		40 - 170
d5-NEtFOSAA	88.4		25 - 135
13C2 4:2 FTS	97.9		40 - 200
13C2 6:2 FTS	89.9		40 - 200
13C2 8:2 FTS	103		40 - 300
13C3 HFPO-DA	73.5		40 - 130
d7-N-MeFOSE-M	73.6		10 - 130
d9-N-EtFOSE-M	69.6		10 - 130
d5-NEtPFOSA	82.3		10 - 130
d3-NMePFOSA	77.0		10 - 130

Lab Sample ID: 320-126644-B-6-A MSD

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<3.3		69.2	87.4		ng/L		126	70 - 140	16	30
Perfluoropentanoic acid (PFPeA)	<1.7		34.6	43.4		ng/L		126	65 - 135	6	30
Perfluorohexanoic acid (PFHxA)	<1.7		34.6	43.8		ng/L		127	70 - 145	12	30
Perfluoroheptanoic acid (PFHpA)	<1.7		34.6	43.5		ng/L		126	70 - 150	18	30
Perfluorooctanoic acid (PFOA)	<1.7		34.6	39.8		ng/L		115	70 - 150	16	30
Perfluorononanoic acid (PFNA)	<1.7		34.6	36.4		ng/L		105	70 - 150	15	30
Perfluorodecanoic acid (PFDA)	<1.7		34.6	41.1		ng/L		119	70 - 140	15	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: 320-126644-B-6-A MSD

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 883582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoroundecanoic acid (PFUnA)	<1.7		34.6	43.8		ng/L		127	70 - 145	7	30
Perfluorododecanoic acid (PFDoA)	<1.7		34.6	42.0		ng/L		122	70 - 140	6	30
Perfluorotridecanoic acid (PFTrDA)	<1.7		34.6	44.3		ng/L		128	65 - 140	10	30
Perfluorotetradecanoic acid (PFTeDA)	<1.7		34.6	46.3		ng/L		134	60 - 140	10	30
Perfluorobutanesulfonic acid (PFBS)	<1.7		30.7	26.9		ng/L		88	60 - 145	9	30
Perfluoropentanesulfonic acid (PFPeS)	<1.7		32.5	44.1		ng/L		136	65 - 140	11	30
Perfluorohexanesulfonic acid (PFHxS)	<1.7		31.5	28.0		ng/L		89	65 - 145	11	30
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		33.0	36.5		ng/L		111	70 - 150	14	30
Perfluorooctanesulfonic acid (PFOS)	<1.7		32.2	36.3		ng/L		113	55 - 150	12	30
Perfluorononanesulfonic acid (PFNS)	<1.7		33.3	33.9		ng/L		102	65 - 145	18	30
Perfluorodecanesulfonic acid (PFDS)	<1.7		33.3	35.3		ng/L		106	60 - 145	18	30
Perfluorododecanesulfonic acid (PFDoS)	<1.7		33.5	30.4		ng/L		91	50 - 145	11	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.3		64.9	77.5		ng/L		119	70 - 145	18	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.3		65.8	78.2		ng/L		119	65 - 155	6	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.3		66.4	70.4		ng/L		106	60 - 150	8	30
Perfluorooctanesulfonamide (PFOSA)	<1.7		34.6	36.5		ng/L		106	70 - 145	8	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		34.6	39.4		ng/L		114	60 - 150	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		34.6	37.1		ng/L		107	65 - 145	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		34.6	36.6		ng/L		106	50 - 140	13	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		34.6	42.6		ng/L		123	70 - 145	11	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.3		173	192		ng/L		111	70 - 145	11	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.3		173	194		ng/L		112	70 - 135	10	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		25.9	24.5		ng/L		95	70 - 140	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7	^+	32.7	43.3		ng/L		132	65 - 145	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		34.6	41.1		ng/L		119	60 - 150	4	30
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<1.7		34.6	45.9		ng/L		133	50 - 150	30	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		34.6	40.0		ng/L		116	55 - 140	14	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		32.3	36.7		ng/L		114	70 - 155	8	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-178765-1
SDG: Site H

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

Lab Sample ID: 320-126644-B-6-A MSD

Matrix: Water

Analysis Batch: 884272

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 883582

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		32.6	37.3		ng/L		114	55 - 160	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.7		30.8	34.7		ng/L		112	70 - 140	13	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.3		69.2	80.3		ng/L		116	65 - 130	5	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.3		173	189		ng/L		109	70 - 135	12	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.3		173	174		ng/L		101	50 - 145	11	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	MSD Limits
13C4 PFBA	80.7		5 - 130
13C5 PFPeA	89.5		40 - 130
13C5 PFHxA	90.6		40 - 130
13C4 PFHpA	87.6		40 - 130
13C8 PFOA	97.9		40 - 130
13C9 PFNA	103		40 - 130
13C6 PFDA	103		40 - 130
13C7 PFUnA	94.0		30 - 130
13C2 PFDoA	99.6		10 - 130
13C2 PFTeDA	78.3		10 - 130
13C3 PFBS	102		40 - 135
13C3 PFHxS	102		40 - 130
13C8 PFOS	102		40 - 130
13C8 PFOSA	100		40 - 130
d3-NMeFOSAA	93.7		40 - 170
d5-NEtFOSAA	88.8		25 - 135
13C2 4:2 FTS	86.2		40 - 200
13C2 6:2 FTS	95.0		40 - 200
13C2 8:2 FTS	101		40 - 300
13C3 HFPO-DA	79.1		40 - 130
d7-N-MeFOSE-M	75.8		10 - 130
d9-N-EtFOSE-M	73.5		10 - 130
d5-NEtPFOSA	84.4		10 - 130
d3-NMePFOSA	80.7		10 - 130

QC Association Summary

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

Job ID: 380-178765-1
SDG: Site H

LCMS

Prep Batch: 883582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178765-1	BWS2253-H1-AQ	Total/NA	Water	1633	
MB 320-883582/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-883582/3-A	Lab Control Sample	Total/NA	Water	1633	
LLCS 320-883582/2-A	Lab Control Sample	Total/NA	Water	1633	
320-126644-A-6-B MS	Matrix Spike	Total/NA	Water	1633	
320-126644-B-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	1633	

Analysis Batch: 884017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-883582/1-A	Method Blank	Total/NA	Water	QSM B-24	883582
LCS 320-883582/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	883582
LLCS 320-883582/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	883582

Analysis Batch: 884272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178765-1	BWS2253-H1-AQ	Total/NA	Water	QSM B-24	883582
320-126644-A-6-B MS	Matrix Spike	Total/NA	Water	QSM B-24	883582
320-126644-B-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	QSM B-24	883582

Lab Chronicle

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

Job ID: 380-178765-1
SDG: Site H

Client Sample ID: BWS2253-H1-AQ
Date Collected: 10/22/25 10:30
Date Received: 10/23/25 09:05

Lab Sample ID: 380-178765-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			883582	RMF	EET SAC	10/28/25 04:05
Total/NA	Analysis	QSM B-24		1	884272	C1P	EET SAC	10/30/25 17:16

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: 380-178765-1
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	02-01-26
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: 380-178765-1
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: 380-178765-1
SDG: Site H

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-178765-1	BWS2253-H1-AQ	Water	10/22/25 10:30	10/23/25 09:05	Hawaii

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

[illegible]

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-178765-1

SDG Number: Site H

Login Number: 178765

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: 380-178765-1

SDG Number: Site H

Login Number: 178765

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 10/23/25 06:21 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	2.4c
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	