

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 4/29/2026 3:53:31 PM

JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site D2 PFAS 1633

JOB NUMBER

380-209763-1

Eurofins 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 Drinking Water and Wastewater West, LLC Project Manager.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.
(DW, Water matrices)

Authorization



Authorized for release by
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

Generated
4/29/2026 3:53:31 PM

Table of Contents

Cover Page 1

Table of Contents 3

Definitions/Glossary 4

Case Narrative 5

Detection Summary 6

Client Sample Results 7

Action Limit Summary 9

Isotope Dilution Summary 10

QC Sample Results 12

QC Association Summary 24

Lab Chronicle 25

Certification Summary 26

Method Summary 27

Sample Summary 28

Chain of Custody 29

Receipt Checklists 32



Definitions/Glossary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte 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: 380-209763-1

Job ID: 380-209763-1

Eurofins Pomona

Job Narrative 380-209763-1

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 4/22/2026 9:40 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

PFAS

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

Method QSM B-24: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: BWS2254-D2-AQ (380-209763-1) and (380-209383-A-1-A). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method QSM B-24: The Isotope Dilution Analyte (IDA) recovery associated with the following matrix spike (MS) sample is above the method recommended limit for 13C3-3:3 FTCA: (380-209383-A-1-B MS). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries. This IDA is in control in the matrix spike duplicate (MSD). Additionally, the matrix spike recoveries for the associated target compounds are within limits in this MS sample, therefore there is no adverse impact from this anomaly.

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

Eurofins Pomona

Detection Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-209763-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	5.2		1.7	ng/L	1		QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11		1.7	ng/L	1		QSM B-24	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Pomona

Client Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-209763-1

Date Collected: 04/21/26 11:30

Matrix: Water

Date Received: 04/22/26 09:40

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)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoropentanoic acid (PFPeA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorohexanoic acid (PFHxA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoroheptanoic acid (PFHpA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorooctanoic acid (PFOA)	5.2		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorononanoic acid (PFNA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorodecanoic acid (PFDA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoroundecanoic acid (PFUnA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorododecanoic acid (PFDoA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorotridecanoic acid (PFTrDA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorotetradecanoic acid (PFTeDA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorobutanesulfonic acid (PFBS)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoropentanesulfonic acid (PFPeS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorohexanesulfonic acid (PFHxS)	11		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorooctanesulfonic acid (PFOS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoronanesulfonic acid (PFNS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorodecanesulfonic acid (PFDS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorododecanesulfonic acid (PFDoS)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluorooctanesulfonamide (PFOSA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.4		8.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.4		8.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		1.3	ng/L		04/23/26 21:01	04/28/26 10:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-209763-1

Date Collected: 04/21/26 11:30

Matrix: Water

Date Received: 04/22/26 09:40

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	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFESA)	<1.7		1.7	ng/L		04/23/26 21:01	04/28/26 10:30	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.4		3.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.4		8.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.4		8.4	ng/L		04/23/26 21:01	04/28/26 10:30	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	87.6		5 - 130			04/23/26 21:01	04/28/26 10:30	1
13C5 PFPeA	113		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C5 PFHxA	85.3		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C4 PFHpA	90.9		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C8 PFOA	99.8		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C9 PFNA	92.9		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C6 PFDA	91.8		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C7 PFUnA	78.4		30 - 130			04/23/26 21:01	04/28/26 10:30	1
13C2 PFDoA	86.1		10 - 130			04/23/26 21:01	04/28/26 10:30	1
13C2 PFTeDA	81.8		10 - 130			04/23/26 21:01	04/28/26 10:30	1
13C6 PFTriDA	86.2		20 - 150			04/23/26 21:01	04/28/26 10:30	1
13C3 PFBS	89.7		40 - 135			04/23/26 21:01	04/28/26 10:30	1
13C3 PFHxS	87.7		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C8 PFOS	83.1		40 - 130			04/23/26 21:01	04/28/26 10:30	1
13C8 PFOSA	72.1		40 - 130			04/23/26 21:01	04/28/26 10:30	1
d3-NMeFOSAA	69.7		40 - 170			04/23/26 21:01	04/28/26 10:30	1
d5-NEtFOSAA	68.3		25 - 135			04/23/26 21:01	04/28/26 10:30	1
13C2 4:2 FTS	78.4		40 - 200			04/23/26 21:01	04/28/26 10:30	1
13C2 6:2 FTS	79.6		40 - 200			04/23/26 21:01	04/28/26 10:30	1
13C2 8:2 FTS	79.6		40 - 300			04/23/26 21:01	04/28/26 10:30	1
13C3 HFPO-DA	84.2		40 - 130			04/23/26 21:01	04/28/26 10:30	1
d7-N-MeFOSE-M	61.4		10 - 130			04/23/26 21:01	04/28/26 10:30	1
d9-N-EtFOSE-M	59.8		10 - 130			04/23/26 21:01	04/28/26 10:30	1
d5-NEtPFOSA	63.6		10 - 130			04/23/26 21:01	04/28/26 10:30	1
d3-NMePFOSA	63.0		10 - 130			04/23/26 21:01	04/28/26 10:30	1
13C3-3:3 FTCA	184	*5+	20 - 150			04/23/26 21:01	04/28/26 10:30	1
13C3-5:3 FTCA	81.5		20 - 150			04/23/26 21:01	04/28/26 10:30	1

Action Limit Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-209763-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Perfluorooctanoic acid (PFOA)	5.2		ng/L	4	1.7	QSM B-24	Total/NA
Perfluorononanoic acid (PFNA)	<1.7		ng/L	10	1.7	QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11		ng/L	10	1.7	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<1.7		ng/L	4	1.7	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: 380-209763-1
SDG: Site D2 PFAS 1633

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (5-130)	PFPeA (40-130)	13C5PHA (40-130)	C4PFHA (40-130)	C8PFOA (40-130)	C9PFNA (40-130)	C6PFDA (40-130)	13C7PUA (30-130)
380-209383-A-1-B MS	Matrix Spike	92.6	126	85.0	94.2	113	98.4	91.1	82.4
380-209383-A-1-C MSD	Matrix Spike Duplicate	88.0	112	85.8	95.6	102	90.8	92.2	83.0
380-209763-1	BWS2254-D2-AQ	87.6	113	85.3	90.9	99.8	92.9	91.8	78.4
LCS 320-913393/3-A	Lab Control Sample	88.7	100	83.9	90.7	104	95.0	88.3	79.9
LCSD 320-913393/4-A	Lab Control Sample Dup	91.0	92.1	81.5	87.8	101	86.0	92.0	76.4
LLCS 320-913393/2-A	Lab Control Sample	86.2	96.7	82.1	85.6	96.2	95.3	92.5	88.8
MB 320-913393/1-A	Method Blank	88.0	95.2	84.0	90.4	93.7	90.8	86.2	74.7
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDaA (10-130)	PFTDA (10-130)	C6PFTTrDA (20-150)	C3PFBS (40-135)	C3PFHS (40-130)	C8PFOS (40-130)	PFOSA (40-130)	d3NMFOS (40-170)
380-209383-A-1-B MS	Matrix Spike	88.5	75.2	88.6	98.3	94.7	86.6	74.6	74.0
380-209383-A-1-C MSD	Matrix Spike Duplicate	95.0	84.2	85.7	92.9	85.9	85.3	75.8	70.5
380-209763-1	BWS2254-D2-AQ	86.1	81.8	86.2	89.7	87.7	83.1	72.1	69.7
LCS 320-913393/3-A	Lab Control Sample	82.4	78.5	81.5	91.7	86.7	81.4	62.7	64.4
LCSD 320-913393/4-A	Lab Control Sample Dup	88.6	76.0	84.9	92.2	87.2	85.1	71.7	68.7
LLCS 320-913393/2-A	Lab Control Sample	101	94.1	98.1	86.2	85.8	83.3	71.6	69.9
MB 320-913393/1-A	Method Blank	89.7	82.7	83.5	85.3	83.2	83.2	68.3	67.7
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (25-135)	M242FTS (40-200)	M262FTS (40-200)	M282FTS (40-300)	HFPODA (40-130)	NMFM (10-130)	NEFM (10-130)	d5NPFSA (10-130)
380-209383-A-1-B MS	Matrix Spike	69.2	79.9	88.4	84.0	84.2	61.6	62.9	67.1
380-209383-A-1-C MSD	Matrix Spike Duplicate	70.2	73.5	82.7	82.9	81.2	62.5	62.5	67.6
380-209763-1	BWS2254-D2-AQ	68.3	78.4	79.6	79.6	84.2	61.4	59.8	63.6
LCS 320-913393/3-A	Lab Control Sample	57.0	70.0	73.2	75.2	88.3	54.8	51.4	47.5
LCSD 320-913393/4-A	Lab Control Sample Dup	69.3	68.3	76.5	73.1	80.9	65.8	64.1	61.1
LLCS 320-913393/2-A	Lab Control Sample	64.3	67.2	71.8	74.2	81.0	63.6	62.9	59.2
MB 320-913393/1-A	Method Blank	67.8	67.3	72.7	70.4	80.2	61.9	58.7	55.7
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d3NMFSA (10-130)	3-3:3 FTC/ (20-150)	3-5:3 FTC/ (20-150)					
380-209383-A-1-B MS	Matrix Spike	61.3	220 *5+	80.9					
380-209383-A-1-C MSD	Matrix Spike Duplicate	65.8	135	90.9					
380-209763-1	BWS2254-D2-AQ	63.0	184 *5+	81.5					
LCS 320-913393/3-A	Lab Control Sample	51.2	88.9	83.7					
LCSD 320-913393/4-A	Lab Control Sample Dup	65.9	85.0	74.0					
LLCS 320-913393/2-A	Lab Control Sample	64.1	88.4	84.0					
MB 320-913393/1-A	Method Blank	57.5	90.5	79.4					

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

Eurofins Pomona

Isotope Dilution Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

- C6PFTTrDA = 13C6 PFTTrDA
- C3PFBS = 13C3 PFBS
- C3PFHS = 13C3 PFHxS
- C8PFOS = 13C8 PFOS
- PFOSA = 13C8 PFOSA
- d3NMFOS = d3-NMeFOSAA
- d5NEFOS = d5-NEtFOSAA
- M242FTS = 13C2 4:2 FTS
- M262FTS = 13C2 6:2 FTS
- M282FTS = 13C2 8:2 FTS
- HFPODA = 13C3 HFPO-DA
- NMFM = d7-N-MeFOSE-M
- NEFM = d9-N-EtFOSE-M
- d5NPFSA = d5-NEtPFOSA
- d3NMFSA = d3-NMePFOSA
- C3-3:3 FTCA = 13C3-3:3 FTCA
- C3-5:3 FTCA = 13C3-5:3 FTCA

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

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: MB 320-913393/1-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 913393

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		04/23/26 21:01	04/28/26 04:06	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		04/23/26 21:01	04/28/26 04:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		04/23/26 21:01	04/28/26 04:06	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: MB 320-913393/1-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 913393

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		04/23/26 21:01	04/28/26 04:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		04/23/26 21:01	04/28/26 04:06	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		04/23/26 21:01	04/28/26 04:06	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		04/23/26 21:01	04/28/26 04:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	88.0		5 - 130	04/23/26 21:01	04/28/26 04:06	1
13C5 PFPeA	95.2		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C5 PFHxA	84.0		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C4 PFHpA	90.4		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C8 PFOA	93.7		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C9 PFNA	90.8		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C6 PFDA	86.2		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C7 PFUnA	74.7		30 - 130	04/23/26 21:01	04/28/26 04:06	1
13C2 PFDoA	89.7		10 - 130	04/23/26 21:01	04/28/26 04:06	1
13C2 PFTeDA	82.7		10 - 130	04/23/26 21:01	04/28/26 04:06	1
13C6 PFTrDA	83.5		20 - 150	04/23/26 21:01	04/28/26 04:06	1
13C3 PFBS	85.3		40 - 135	04/23/26 21:01	04/28/26 04:06	1
13C3 PFHxS	83.2		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C8 PFOS	83.2		40 - 130	04/23/26 21:01	04/28/26 04:06	1
13C8 PFOSA	68.3		40 - 130	04/23/26 21:01	04/28/26 04:06	1
d3-NMeFOSAA	67.7		40 - 170	04/23/26 21:01	04/28/26 04:06	1
d5-NEtFOSAA	67.8		25 - 135	04/23/26 21:01	04/28/26 04:06	1
13C2 4:2 FTS	67.3		40 - 200	04/23/26 21:01	04/28/26 04:06	1
13C2 6:2 FTS	72.7		40 - 200	04/23/26 21:01	04/28/26 04:06	1
13C2 8:2 FTS	70.4		40 - 300	04/23/26 21:01	04/28/26 04:06	1
13C3 HFPO-DA	80.2		40 - 130	04/23/26 21:01	04/28/26 04:06	1
d7-N-MeFOSE-M	61.9		10 - 130	04/23/26 21:01	04/28/26 04:06	1
d9-N-EtFOSE-M	58.7		10 - 130	04/23/26 21:01	04/28/26 04:06	1
d5-NEtPFOSA	55.7		10 - 130	04/23/26 21:01	04/28/26 04:06	1
d3-NMePFOSA	57.5		10 - 130	04/23/26 21:01	04/28/26 04:06	1
13C3-3:3 FTCA	90.5		20 - 150	04/23/26 21:01	04/28/26 04:06	1
13C3-5:3 FTCA	79.4		20 - 150	04/23/26 21:01	04/28/26 04:06	1

Lab Sample ID: LCS 320-913393/3-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	70.5		ng/L		88	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	33.7		ng/L		84	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	39.5		ng/L		99	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	37.0		ng/L		92	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	32.1		ng/L		80	70 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCS 320-913393/3-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanoic acid (PFNA)	40.0	34.0		ng/L		85	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	35.5		ng/L		89	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	38.0		ng/L		95	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	33.3		ng/L		83	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	34.5		ng/L		86	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.2		ng/L		98	60 - 140
Perfluorobutanesulfonic acid (PFBS)	35.5	31.3		ng/L		88	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	32.9		ng/L		87	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	32.6		ng/L		89	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	37.1		ng/L		97	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	36.4		ng/L		98	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	32.5		ng/L		84	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	31.1		ng/L		81	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	32.1		ng/L		83	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	68.8		ng/L		92	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	76.3		ng/L		100	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	72.5		ng/L		94	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	39.7		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	38.8		ng/L		97	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	40.1		ng/L		100	65 - 145
N-methylperfluorooctanesulfonamide (NMeFOSAA)	40.0	39.3		ng/L		98	50 - 140
N-ethylperfluorooctanesulfonamide (NEtFOSAA)	40.0	36.9		ng/L		92	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	187		ng/L		94	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	194		ng/L		97	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	28.4		ng/L		95	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	36.3		ng/L		96	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	32.4		ng/L		81	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	38.2		ng/L		96	50 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCS 320-913393/3-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	33.6		ng/L		84	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	33.2		ng/L		89	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	30.0		ng/L		80	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	35.7	35.6		ng/L		100	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	74.6		ng/L		93	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	181		ng/L		90	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	179		ng/L		89	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	88.7		5 - 130
13C5 PFPeA	100		40 - 130
13C5 PFHxA	83.9		40 - 130
13C4 PFHpA	90.7		40 - 130
13C8 PFOA	104		40 - 130
13C9 PFNA	95.0		40 - 130
13C6 PFDA	88.3		40 - 130
13C7 PFUnA	79.9		30 - 130
13C2 PFDoA	82.4		10 - 130
13C2 PFTeDA	78.5		10 - 130
13C6 PFTrDA	81.5		20 - 150
13C3 PFBS	91.7		40 - 135
13C3 PFHxS	86.7		40 - 130
13C8 PFOS	81.4		40 - 130
13C8 PFOSA	62.7		40 - 130
d3-NMeFOSAA	64.4		40 - 170
d5-NEtFOSAA	57.0		25 - 135
13C2 4:2 FTS	70.0		40 - 200
13C2 6:2 FTS	73.2		40 - 200
13C2 8:2 FTS	75.2		40 - 300
13C3 HFPO-DA	88.3		40 - 130
d7-N-MeFOSE-M	54.8		10 - 130
d9-N-EtFOSE-M	51.4		10 - 130
d5-NEtPFOSA	47.5		10 - 130
d3-NMePFOSA	51.2		10 - 130
13C3-3:3 FTCA	88.9		20 - 150
13C3-5:3 FTCA	83.7		20 - 150

Lab Sample ID: LCSD 320-913393/4-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	76.4		ng/L		96	70 - 140	8	30
Perfluoropentanoic acid (PFPeA)	40.0	37.4		ng/L		93	65 - 135	10	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCSD 320-913393/4-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	40.0	39.7		ng/L		99	70 - 145	0	30
Perfluoroheptanoic acid (PFHpA)	40.0	38.7		ng/L		97	70 - 150	5	30
Perfluorooctanoic acid (PFOA)	40.0	34.3		ng/L		86	70 - 150	7	30
Perfluorononanoic acid (PFNA)	40.0	39.4		ng/L		99	70 - 150	15	30
Perfluorodecanoic acid (PFDA)	40.0	35.4		ng/L		88	70 - 140	1	30
Perfluoroundecanoic acid (PFUnA)	40.0	42.2		ng/L		106	70 - 145	10	30
Perfluorododecanoic acid (PFDoA)	40.0	38.4		ng/L		96	70 - 140	14	30
Perfluorotridecanoic acid (PFTrDA)	40.0	37.2		ng/L		93	65 - 140	8	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	41.9		ng/L		105	60 - 140	7	30
Perfluorobutanesulfonic acid (PFBS)	35.5	35.2		ng/L		99	60 - 145	12	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	35.7		ng/L		95	65 - 140	8	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.5		ng/L		97	65 - 145	8	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	39.1		ng/L		102	70 - 150	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.6		ng/L		104	55 - 150	6	30
Perfluorononanesulfonic acid (PFNS)	38.5	37.1		ng/L		96	65 - 145	13	30
Perfluorodecanesulfonic acid (PFDS)	38.6	36.6		ng/L		95	60 - 145	16	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	38.2		ng/L		98	50 - 145	17	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	75.0		ng/L		100	70 - 145	9	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	79.1		ng/L		104	65 - 155	4	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	85.2		ng/L		111	60 - 150	16	30
Perfluorooctanesulfonamide (PFOSA)	40.0	41.1		ng/L		103	70 - 145	4	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.6		ng/L		101	60 - 150	4	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	39.0		ng/L		98	65 - 145	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.5		ng/L		99	50 - 140	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.9		ng/L		90	70 - 145	3	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	200		ng/L		100	70 - 145	6	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	197		ng/L		98	70 - 135	2	30
Hexafluoropropylene Oxide	30.0	29.7		ng/L		99	70 - 140	4	30
Dimer Acid (HFPO-DA)									
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	39.9		ng/L		106	65 - 145	9	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	40.9		ng/L		102	60 - 150	23	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LCSD 320-913393/4-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	40.5		ng/L		101	50 - 150	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	37.1		ng/L		93	55 - 140	10	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	33.8		ng/L		91	70 - 155	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	37.4		ng/L		99	55 - 160	22	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	36.5		ng/L		102	70 - 140	2	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	77.4		ng/L		97	65 - 130	4	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	208		ng/L		104	70 - 135	14	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	187		ng/L		93	50 - 145	4	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFBA	91.0		5 - 130						
13C5 PFPeA	92.1		40 - 130						
13C5 PFHxA	81.5		40 - 130						
13C4 PFHpA	87.8		40 - 130						
13C8 PFOA	101		40 - 130						
13C9 PFNA	86.0		40 - 130						
13C6 PFDA	92.0		40 - 130						
13C7 PFUnA	76.4		30 - 130						
13C2 PFDoA	88.6		10 - 130						
13C2 PFTeDA	76.0		10 - 130						
13C6 PFTrDA	84.9		20 - 150						
13C3 PFBS	92.2		40 - 135						
13C3 PFHxS	87.2		40 - 130						
13C8 PFOS	85.1		40 - 130						
13C8 PFOSA	71.7		40 - 130						
d3-NMeFOSAA	68.7		40 - 170						
d5-NEtFOSAA	69.3		25 - 135						
13C2 4:2 FTS	68.3		40 - 200						
13C2 6:2 FTS	76.5		40 - 200						
13C2 8:2 FTS	73.1		40 - 300						
13C3 HFPO-DA	80.9		40 - 130						
d7-N-MeFOSE-M	65.8		10 - 130						
d9-N-EtFOSE-M	64.1		10 - 130						
d5-NEtPFOSA	61.1		10 - 130						
d3-NMePFOSA	65.9		10 - 130						
13C3-3:3 FTCA	85.0		20 - 150						
13C3-5:3 FTCA	74.0		20 - 150						

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LLCS 320-913393/2-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.43		ng/L		105	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	4.02		ng/L		101	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.94		ng/L		123	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.98		ng/L		124	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.35		ng/L		109	70 - 150
Perfluorononanoic acid (PFNA)	4.00	4.64		ng/L		116	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.69		ng/L		117	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	5.19		ng/L		130	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.28		ng/L		107	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.15		ng/L		104	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.06		ng/L		102	60 - 140
Perfluorobutanesulfonic acid (PFBS)	3.55	4.21		ng/L		118	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.17		ng/L		111	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.35		ng/L		119	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.41		ng/L		116	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	4.59		ng/L		124	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	4.41		ng/L		114	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	4.40		ng/L		114	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	4.47		ng/L		115	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	9.38		ng/L		125	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.81		ng/L		116	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	9.53		ng/L		124	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.93		ng/L		123	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	4.88		ng/L		122	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	4.82		ng/L		120	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	5.54		ng/L		139	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	4.32		ng/L		108	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	24.3		ng/L		122	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	23.6		ng/L		118	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.51		ng/L		117	70 - 140

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: LLCS 320-913393/2-A

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.71		ng/L		124	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.25		ng/L		106	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	5.08		ng/L		127	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.03		ng/L		101	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	4.07		ng/L		109	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	4.57		ng/L		121	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	4.36		ng/L		122	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.36		ng/L		104	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	21.5		ng/L		108	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	21.9		ng/L		110	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	86.2		5 - 130
13C5 PFPeA	96.7		40 - 130
13C5 PFHxA	82.1		40 - 130
13C4 PFHpA	85.6		40 - 130
13C8 PFOA	96.2		40 - 130
13C9 PFNA	95.3		40 - 130
13C6 PFDA	92.5		40 - 130
13C7 PFUnA	88.8		30 - 130
13C2 PFDoA	101		10 - 130
13C2 PFTeDA	94.1		10 - 130
13C6 PFTriDA	98.1		20 - 150
13C3 PFBS	86.2		40 - 135
13C3 PFHxS	85.8		40 - 130
13C8 PFOS	83.3		40 - 130
13C8 PFOSA	71.6		40 - 130
d3-NMeFOSAA	69.9		40 - 170
d5-NEtFOSAA	64.3		25 - 135
13C2 4:2 FTS	67.2		40 - 200
13C2 6:2 FTS	71.8		40 - 200
13C2 8:2 FTS	74.2		40 - 300
13C3 HFPO-DA	81.0		40 - 130
d7-N-MeFOSE-M	63.6		10 - 130
d9-N-EtFOSE-M	62.9		10 - 130
d5-NEtPFOSA	59.2		10 - 130
d3-NMePFOSA	64.1		10 - 130
13C3-3:3 FTCA	88.4		20 - 150
13C3-5:3 FTCA	84.0		20 - 150

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: 380-209383-A-1-B MS

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<3.5		71.7	72.4		ng/L		101	70 - 140
Perfluoropentanoic acid (PFPeA)	<1.7		35.8	32.5		ng/L		89	65 - 135
Perfluorohexanoic acid (PFHxA)	<1.7		35.8	37.6		ng/L		104	70 - 145
Perfluoroheptanoic acid (PFHpA)	<1.7		35.8	37.0		ng/L		103	70 - 150
Perfluorooctanoic acid (PFOA)	<1.7		35.8	31.9		ng/L		85	70 - 150
Perfluorononanoic acid (PFNA)	<1.7		35.8	37.2		ng/L		104	70 - 150
Perfluorodecanoic acid (PFDA)	<1.7		35.8	34.2		ng/L		95	70 - 140
Perfluoroundecanoic acid (PFUnA)	<1.7		35.8	36.7		ng/L		102	70 - 145
Perfluorododecanoic acid (PFDoA)	<1.7		35.8	33.9		ng/L		95	70 - 140
Perfluorotridecanoic acid (PFTrDA)	<1.7		35.8	35.0		ng/L		98	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	<1.7		35.8	44.4		ng/L		124	60 - 140
Perfluorobutanesulfonic acid (PFBS)	<3.5		31.8	30.4		ng/L		95	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	<1.7		33.7	32.1		ng/L		95	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	<1.7		32.7	32.8		ng/L		99	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		34.2	35.8		ng/L		105	70 - 150
Perfluorooctanesulfonic acid (PFOS)	<1.7		33.3	35.0		ng/L		103	55 - 150
Perfluorononanesulfonic acid (PFNS)	<1.7		34.5	32.6		ng/L		94	65 - 145
Perfluorodecanesulfonic acid (PFDS)	<1.7		34.6	33.7		ng/L		97	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	<1.7		34.8	36.0		ng/L		104	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.5		67.2	69.2		ng/L		103	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.5		68.2	67.2		ng/L		98	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.5		68.8	76.8		ng/L		112	60 - 150
Perfluorooctanesulfonamide (PFOSA)	<1.7		35.8	38.6		ng/L		108	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		35.8	42.1		ng/L		118	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		35.8	37.0		ng/L		103	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		35.8	35.9		ng/L		100	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		35.8	35.7		ng/L		100	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.7		179	191		ng/L		107	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.7		179	182		ng/L		101	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		26.9	30.1		ng/L		112	70 - 140

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: 380-209383-A-1-B MS

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7		33.9	39.8		ng/L		117	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		35.8	28.7		ng/L		80	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.7		35.8	38.4		ng/L		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		35.8	34.7		ng/L		97	55 - 140
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid	<1.7		33.5	32.1		ng/L		96	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		33.8	32.5		ng/L		96	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	<1.7		32.0	34.5		ng/L		108	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.5		71.7	73.6		ng/L		103	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.7		179	198		ng/L		111	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.7		179	195		ng/L		109	50 - 145

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	92.6		5 - 130
13C5 PFPeA	126		40 - 130
13C5 PFHxA	85.0		40 - 130
13C4 PFHpA	94.2		40 - 130
13C8 PFOA	113		40 - 130
13C9 PFNA	98.4		40 - 130
13C6 PFDA	91.1		40 - 130
13C7 PFUnA	82.4		30 - 130
13C2 PFDoA	88.5		10 - 130
13C2 PFTeDA	75.2		10 - 130
13C6 PFTTrDA	88.6		20 - 150
13C3 PFBS	98.3		40 - 135
13C3 PFHxS	94.7		40 - 130
13C8 PFOS	86.6		40 - 130
13C8 PFOSA	74.6		40 - 130
d3-NMeFOSAA	74.0		40 - 170
d5-NEtFOSAA	69.2		25 - 135
13C2 4:2 FTS	79.9		40 - 200
13C2 6:2 FTS	88.4		40 - 200
13C2 8:2 FTS	84.0		40 - 300
13C3 HFPO-DA	84.2		40 - 130
d7-N-MeFOSE-M	61.6		10 - 130
d9-N-EtFOSE-M	62.9		10 - 130
d5-NEtPFOSA	67.1		10 - 130
d3-NMePFOSA	61.3		10 - 130
13C3-3:3 FTCA	220	*5+	20 - 150
13C3-5:3 FTCA	80.9		20 - 150

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: 380-209383-A-1-C MSD

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<3.5		70.3	68.1		ng/L		97	70 - 140	6	30
Perfluoropentanoic acid (PFPeA)	<1.7		35.1	31.4		ng/L		88	65 - 135	3	30
Perfluorohexanoic acid (PFHxA)	<1.7		35.1	36.1		ng/L		102	70 - 145	4	30
Perfluoroheptanoic acid (PFHpA)	<1.7		35.1	33.5		ng/L		95	70 - 150	10	30
Perfluorooctanoic acid (PFOA)	<1.7		35.1	31.0		ng/L		84	70 - 150	3	30
Perfluorononanoic acid (PFNA)	<1.7		35.1	30.9		ng/L		88	70 - 150	18	30
Perfluorodecanoic acid (PFDA)	<1.7		35.1	31.9		ng/L		91	70 - 140	7	30
Perfluoroundecanoic acid (PFUnA)	<1.7		35.1	35.0		ng/L		100	70 - 145	5	30
Perfluorododecanoic acid (PFDoA)	<1.7		35.1	29.7		ng/L		85	70 - 140	13	30
Perfluorotridecanoic acid (PFTrDA)	<1.7		35.1	34.0		ng/L		97	65 - 140	3	30
Perfluorotetradecanoic acid (PFTeDA)	<1.7		35.1	37.1		ng/L		106	60 - 140	18	30
Perfluorobutanesulfonic acid (PFBS)	<3.5		31.2	28.9		ng/L		93	60 - 145	5	30
Perfluoropentanesulfonic acid (PFPeS)	<1.7		33.0	29.8		ng/L		90	65 - 140	7	30
Perfluorohexanesulfonic acid (PFHxS)	<1.7		32.0	29.8		ng/L		91	65 - 145	10	30
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		33.5	33.1		ng/L		99	70 - 150	8	30
Perfluorooctanesulfonic acid (PFOS)	<1.7		32.7	31.8		ng/L		96	55 - 150	10	30
Perfluorononanesulfonic acid (PFNS)	<1.7		33.8	29.5		ng/L		87	65 - 145	10	30
Perfluorodecanesulfonic acid (PFDS)	<1.7		33.9	30.3		ng/L		90	60 - 145	10	30
Perfluorododecanesulfonic acid (PFDoS)	<1.7		34.1	31.3		ng/L		92	50 - 145	14	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.5		65.9	68.3		ng/L		104	70 - 145	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.5		66.9	67.4		ng/L		101	65 - 155	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.5		67.5	64.8		ng/L		96	60 - 150	17	30
Perfluorooctanesulfonamide (PFOSA)	<1.7		35.1	35.5		ng/L		101	70 - 145	8	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		35.1	34.3		ng/L		98	60 - 150	21	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		35.1	33.5		ng/L		95	65 - 145	10	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		35.1	38.5		ng/L		110	50 - 140	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		35.1	31.9		ng/L		91	70 - 145	11	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.7		176	174		ng/L		99	70 - 145	9	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.7		176	176		ng/L		100	70 - 135	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		26.4	26.0		ng/L		99	70 - 140	15	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Lab Sample ID: 380-209383-A-1-C MSD

Matrix: Water

Analysis Batch: 913957

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 913393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.7		33.2	37.4		ng/L		112	65 - 145	6	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		35.1	29.3		ng/L		84	60 - 150	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.7		35.1	34.9		ng/L		99	50 - 150	9	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		35.1	32.6		ng/L		93	55 - 140	6	30
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid	<1.7		32.8	30.6		ng/L		93	70 - 155	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		33.2	30.8		ng/L		93	55 - 160	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	<1.7		31.3	34.0		ng/L		109	70 - 140	1	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.5		70.3	64.2		ng/L		91	65 - 130	14	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.7		176	169		ng/L		96	70 - 135	16	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.7		176	176		ng/L		100	50 - 145	10	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C4 PFBA	88.0		5 - 130
13C5 PFPeA	112		40 - 130
13C5 PFHxA	85.8		40 - 130
13C4 PFHpA	95.6		40 - 130
13C8 PFOA	102		40 - 130
13C9 PFNA	90.8		40 - 130
13C6 PFDA	92.2		40 - 130
13C7 PFUnA	83.0		30 - 130
13C2 PFDoA	95.0		10 - 130
13C2 PFTeDA	84.2		10 - 130
13C6 PFTriDA	85.7		20 - 150
13C3 PFBS	92.9		40 - 135
13C3 PFHxS	85.9		40 - 130
13C8 PFOS	85.3		40 - 130
13C8 PFOSA	75.8		40 - 130
d3-NMeFOSAA	70.5		40 - 170
d5-NEtFOSAA	70.2		25 - 135
13C2 4:2 FTS	73.5		40 - 200
13C2 6:2 FTS	82.7		40 - 200
13C2 8:2 FTS	82.9		40 - 300
13C3 HFPO-DA	81.2		40 - 130
d7-N-MeFOSE-M	62.5		10 - 130
d9-N-EtFOSE-M	62.5		10 - 130
d5-NEtPFOSA	67.6		10 - 130
d3-NMePFOSA	65.8		10 - 130
13C3-3:3 FTCA	135		20 - 150
13C3-5:3 FTCA	90.9		20 - 150

QC Association Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

LCMS

Prep Batch: 913393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-209763-1	BWS2254-D2-AQ	Total/NA	Water	1633	
MB 320-913393/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-913393/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-913393/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-913393/2-A	Lab Control Sample	Total/NA	Water	1633	
380-209383-A-1-B MS	Matrix Spike	Total/NA	Water	1633	
380-209383-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	1633	

Analysis Batch: 913957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-209763-1	BWS2254-D2-AQ	Total/NA	Water	QSM B-24	913393
MB 320-913393/1-A	Method Blank	Total/NA	Water	QSM B-24	913393
LCS 320-913393/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	913393
LCSD 320-913393/4-A	Lab Control Sample Dup	Total/NA	Water	QSM B-24	913393
LLCS 320-913393/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	913393
380-209383-A-1-B MS	Matrix Spike	Total/NA	Water	QSM B-24	913393
380-209383-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	QSM B-24	913393

Lab Chronicle

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Client Sample ID: BWS2254-D2-AQ
Date Collected: 04/21/26 11:30
Date Received: 04/22/26 09:40

Lab Sample ID: 380-209763-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			913393	A1M	EET SAC	04/23/26 21:01
Total/NA	Analysis	QSM B-24		1	913957	EMF	EET SAC	04/28/26 10:30

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: 380-209763-1
SDG: Site D2 PFAS 1633

Laboratory: Eurofins Sacramento

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

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

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

Eurofins Pomona

Method Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

Job ID: 380-209763-1
SDG: Site D2 PFAS 1633

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-209763-1	BWS2254-D2-AQ	Water	04/21/26 11:30	04/22/26 09:40	Hawaii

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

Chain of Custody Record

Ver: 10/10/2024



Client Information (Sub Contract Lab)			Sampler Lopez, Maria		Carrier Tracking No(s): 380-326512.1	
Client Contact: Shipping/Receiving			E-Mail: Maria.Lopez@et.eurofins.com		Page: Page 1 of 1	
Company Eurofins Environment Testing Northern Ca			Accreditations Required (See note): State - Hawaii		Job #: 380-209763-1	
Address: 880 Riverside Parkway City: West Sacramento State, Zip: CA, 95605			Due Date Requested: 5/5/2026		Preservation Codes: -	
Phone: 916-373-5600(Tel) 916-372-1059(Fax)			TAT Requested (days): N/A		Analysis Requested	
Email: N/A			PO #: N/A		Field Filled Sample (Yes or No)	
WO #: N/A			Project #: 38000861		Perform MS/MSD (Yes or No)	
Site: Honolulu BWS Sites			SSOW#: N/A		1633 DODE/1633 SPE_125(MOD) EPA Method 1633	
Sample Identification - Client ID (Lab ID)			Sample Date		Field Filled Sample (Yes or No)	
BWS2254-D2-AQ (380-209763-1)			4/21/26		1633 DODE/1633 SPE_125(MOD) EPA Method 1633	
Sample Type (C=Comp, G=grab)			Sample Time		Field Filled Sample (Yes or No)	
G			11:30 Hawaiian		1633 DODE/1633 SPE_125(MOD) EPA Method 1633	
Matrix (Water, Seawater, Other)			Preservation Code		Field Filled Sample (Yes or No)	
Water			G		1633 DODE/1633 SPE_125(MOD) EPA Method 1633	
Special Instructions/Note:			Total Number of Containers		Special Instructions/Note:	
N/A			2		N/A	
Note: Since laboratory accreditations are subject to change, Eurofins Drinking Water and Wastewater West, 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/matrix being analyzed, the samples must be shipped back to the Eurofins Drinking Water and Wastewater West, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Drinking Water and Wastewater West, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Drinking Water and Wastewater West, LLC.						
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by Relinquished by Relinquished by Relinquished by Custody Seal No. 2189494 Custody Seals Intact: Yes No Cooler Temperature(s) °C and Other Remarks: 0.0 °C						

Chain of Custody Record



Client Information		Sampler: HB 8083210683		Lab PM: Lopez, Maria		Carrier Tracking No(s):		COC No: 380-109453-32613 1	
Client Contact: Hamarr Bentley		Phone: 858 905 2430		E-Mail: Maria Lopez@eurofins.com		State of Origin: HI		Page: Page 1 of 1	
Company: INTERA CITY & COUNTY HONOLULU		PWSID:		Analysis Requested		Job #:		Preservation Codes: N - None	
Address: 3444 Kapaeha Street		Due Date Requested:		1633_DDB - EPA Method 1633 Std List		Total Number of Containers		Other	
City: Kailua		TAT Requested (days): STANDARD		Perform MS/MSD (Yes or No)					
State, Zip: HI 96734 96843		Compliance Project: Δ Yes Δ No		Field Filtered Sample (Yes or No)					
Phone: 808-748-5094		PO #: C20525101 exp 05312023		Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Email: hbentley@intera.com		WO #: 38000861		4/21/26		11:30		6	
Project Name: INTERA - Red-Hill Incident		SSOW#:		Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Site: Hawaii D2				4/21/26		11:30		6	
Matrix (Water, Solid, On-water, On-land, Benthic, Air, Dredging)				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
BNS2254-D2-AR				4/21/26		11:30		6	
Sample Identification				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
BNS2254-D2-AR				4/21/26		11:30		6	
Possible Hazard Identification				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Deliverable Requested I II III IV Other (specify)				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Empty Kit Relinquished by				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Relinquished by				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Relinquished by				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Relinquished by				Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
Custody Seals Intact: Yes Δ No		Custody Seal No		2189694		Cooler Temperature(s) °C and Other Remarks: 0.6 °C			

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-209763-1
SDG Number: Site D2 PFAS 1633

Login Number: 209763

List Number: 1

Creator: Ngo, Theodore

List Source: Eurofins Pomona

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-209763-1
SDG Number: Site D2 PFAS 1633

Login Number: 209763

List Number: 2

Creator: Morazzini, Dominic S

List Source: Eurofins Sacramento

List Creation: 04/22/26 06:12 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	2189694
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6
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	