

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site S1 PFAS 1633

JOB NUMBER

380-220490-1

Eurofins Pomona

Job Notes

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 380-220490-1

Job ID: 380-220490-1

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Job Narrative 380-220490-1

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 6/18/2026 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 1.5°C.

PFAS

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

Method QSM B-24: the low level continuing calibration verification (CCVL) and the continuing calibration verification (CCV) associated with batch 320-924171 recovered above the upper control limit for the following isotope dilution analyte (IDA): 13C2 4:2 FTS. The associated target analyte, 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS), was within control limits in the CCV. The client samples were in control for the affected IDA. The method blank associated with this CCV was non-detect for the associated target analytes, the low level laboratory control sample/laboratory control sample/laboratory control sample duplicate recoveries were in control for the associated target analyte; therefore, the data have been reported. The associated samples are impacted: BWS2153-S1-AQ (380-220490-1), (CCV 320-924171/32), (CCV 320-924171/34), (CCV 320-924171/36), (CCVL 320-924171/2), (LCS 320-923947/3-A), (LCSD 320-923947/4-A), (LLCS 320-923947/2-A) and (MB 320-923947/1-A).

Method QSM B-24: The continuing calibration verification (CCV) associated with batch 320-924171 recovered above the upper control limit for Perfluoroundecanoic acid (PFUnA). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is: BWS2153-S1-AQ (380-220490-1).

Method QSM B-24: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 320-923947 and analytical batch 320-924171 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method QSM B-24: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: (320-133703-A-10-B MS). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

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

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Detection Summary

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220490-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	4.6		1.7	ng/L	1		QSM B-24	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.7	ng/L	1		QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		1.7	ng/L	1		QSM B-24	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220490-1

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 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)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoropentanoic acid (PFPeA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorohexanoic acid (PFHxA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoroheptanoic acid (PFHpA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorooctanoic acid (PFOA)	4.6		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorononanoic acid (PFNA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorodecanoic acid (PFDA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoroundecanoic acid (PFUnA)	<1.7 ^+		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorododecanoic acid (PFDoA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorotridecanoic acid (PFTriDA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorotetradecanoic acid (PFTeDA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorobutanesulfonic acid (PFBS)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoropentanesulfonic acid (PFPeS)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorohexanesulfonic acid (PFHxS)	3.2		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorooctanesulfonic acid (PFOS)	15		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorononanesulfonic acid (PFNS)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorodecanesulfonic acid (PFDS)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorododecanesulfonic acid (PFDoS)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluorooctanesulfonamide (PFOSA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.3		8.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.3		8.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		1.2	ng/L		06/26/26 11:48	06/28/26 17:11	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1

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Client Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220490-1

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 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
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.7		1.7	ng/L		06/26/26 11:48	06/28/26 17:11	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.3		3.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.3		8.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.3		8.3	ng/L		06/26/26 11:48	06/28/26 17:11	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	88.2		5 - 130			06/26/26 11:48	06/28/26 17:11	1
13C5 PFPeA	81.5		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C5 PFHxA	83.6		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C4 PFHpA	83.3		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C8 PFOA	78.4		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C9 PFNA	81.0		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C6 PFDA	77.6		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C7 PFUnA	92.5		30 - 130			06/26/26 11:48	06/28/26 17:11	1
13C2 PFDoA	86.1		10 - 130			06/26/26 11:48	06/28/26 17:11	1
13C2 PFTeDA	78.5		10 - 130			06/26/26 11:48	06/28/26 17:11	1
13C6 PFTrDA	80.1		20 - 150			06/26/26 11:48	06/28/26 17:11	1
13C3 PFBS	91.4		40 - 135			06/26/26 11:48	06/28/26 17:11	1
13C3 PFHxS	89.9		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C8 PFOS	85.8		40 - 130			06/26/26 11:48	06/28/26 17:11	1
13C8 PFOSA	78.4		40 - 130			06/26/26 11:48	06/28/26 17:11	1
d3-NMeFOSAA	78.0		40 - 170			06/26/26 11:48	06/28/26 17:11	1
d5-NEtFOSAA	77.4		25 - 135			06/26/26 11:48	06/28/26 17:11	1
13C2 4:2 FTS	165		40 - 200			06/26/26 11:48	06/28/26 17:11	1
13C2 6:2 FTS	112		40 - 200			06/26/26 11:48	06/28/26 17:11	1
13C2 8:2 FTS	109		40 - 300			06/26/26 11:48	06/28/26 17:11	1
13C3 HFPO-DA	83.9		40 - 130			06/26/26 11:48	06/28/26 17:11	1
d7-N-MeFOSE-M	55.1		10 - 130			06/26/26 11:48	06/28/26 17:11	1
d9-N-EtFOSE-M	50.1		10 - 130			06/26/26 11:48	06/28/26 17:11	1
d5-NEtPFOSA	53.1		10 - 130			06/26/26 11:48	06/28/26 17:11	1
d3-NMePFOSA	54.7		10 - 130			06/26/26 11:48	06/28/26 17:11	1
13C3-3:3 FTCA	93.4		20 - 150			06/26/26 11:48	06/28/26 17:11	1
13C3-5:3 FTCA	81.7		20 - 150			06/26/26 11:48	06/28/26 17:11	1

Action Limit Summary

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220490-1

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)	4.6		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)	3.2		ng/L	10	1.7	QSM B-24	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		ng/L	4	1.7	QSM B-24	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.2		ng/L	10	1.2	QSM B-24	Total/NA

Isotope Dilution Summary

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

Job ID: 380-220490-1
SDG: Site S1 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)
320-133703-A-10-B MS	Matrix Spike	88.3	84.2	81.7	71.5	77.3	76.6	49.0	45.5
320-133703-A-10-C MSD	Matrix Spike Duplicate	82.7	80.7	73.7	66.9	81.0	84.1	65.6	66.9
380-220490-1	BWS2153-S1-AQ	88.2	81.5	83.6	83.3	78.4	81.0	77.6	92.5
LCS 320-923947/3-A	Lab Control Sample	86.0	79.2	72.7	83.2	81.7	88.2	63.4	84.7
LCSD 320-923947/4-A	Lab Control Sample Dup	86.7	89.8	80.1	80.2	81.6	85.2	56.8	70.8
LLCS 320-923947/2-A	Lab Control Sample	86.7	82.3	73.3	80.1	80.5	82.7	69.1	80.1
MB 320-923947/1-A	Method Blank	82.4	78.4	75.0	80.2	82.5	76.9	65.7	67.6
		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)
320-133703-A-10-B MS	Matrix Spike	30.9	20.9	24.0	85.1	71.1	38.5 *5-	67.7	61.9
320-133703-A-10-C MSD	Matrix Spike Duplicate	60.1	41.0	46.2	93.1	82.5	82.9	75.6	72.9
380-220490-1	BWS2153-S1-AQ	86.1	78.5	80.1	91.4	89.9	85.8	78.4	78.0
LCS 320-923947/3-A	Lab Control Sample	81.1	72.6	78.4	84.9	82.0	82.8	82.6	83.9
LCSD 320-923947/4-A	Lab Control Sample Dup	77.1	70.5	76.4	85.1	76.6	83.6	82.5	79.4
LLCS 320-923947/2-A	Lab Control Sample	78.5	79.7	80.6	77.1	73.0	80.0	82.3	74.4
MB 320-923947/1-A	Method Blank	77.7	77.4	71.9	84.5	80.6	83.9	74.0	76.7
		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)
320-133703-A-10-B MS	Matrix Spike	54.3	107	88.3	74.1	71.3	24.6	19.7	21.0
320-133703-A-10-C MSD	Matrix Spike Duplicate	71.2	122	88.9	91.0	69.4	37.8	33.4	33.2
380-220490-1	BWS2153-S1-AQ	77.4	165	112	109	83.9	55.1	50.1	53.1
LCS 320-923947/3-A	Lab Control Sample	82.7	107	98.4	91.0	73.6	62.6	64.7	58.3
LCSD 320-923947/4-A	Lab Control Sample Dup	84.2	101	97.6	98.3	77.6	65.5	63.7	54.8
LLCS 320-923947/2-A	Lab Control Sample	75.2	107	93.3	93.7	77.1	63.5	62.3	57.7
MB 320-923947/1-A	Method Blank	73.0	100	97.0	98.2	73.8	59.8	60.7	55.4
		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)					
320-133703-A-10-B MS	Matrix Spike	30.1	83.3	82.0					
320-133703-A-10-C MSD	Matrix Spike Duplicate	40.7	69.4	70.6					
380-220490-1	BWS2153-S1-AQ	54.7	93.4	81.7					
LCS 320-923947/3-A	Lab Control Sample	62.2	80.1	87.0					
LCSD 320-923947/4-A	Lab Control Sample Dup	58.6	85.9	88.8					
LLCS 320-923947/2-A	Lab Control Sample	61.0	82.4	77.9					
MB 320-923947/1-A	Method Blank	59.7	83.0	85.5					

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

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Isotope Dilution Summary

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

Job ID: 380-220490-1
SDG: Site S1 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

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: MB 320-923947/1-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 923947

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorotridecanoic acid (PFTriDA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorotetradecanoic acid (PFTeDA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorobutanesulfonic acid (PFBS)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorononanesulfonic acid (PFNS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorodecanesulfonic acid (PFDS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorododecanesulfonic acid (PFDoS)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluorooctanesulfonamide (PFOSA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<10		10	ng/L		06/26/26 11:48	06/28/26 09:31	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<10		10	ng/L		06/26/26 11:48	06/28/26 09:31	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.5		1.5	ng/L		06/26/26 11:48	06/28/26 09:31	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: MB 320-923947/1-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 923947

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<4.0		4.0	ng/L		06/26/26 11:48	06/28/26 09:31	1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<10		10	ng/L		06/26/26 11:48	06/28/26 09:31	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<10		10	ng/L		06/26/26 11:48	06/28/26 09:31	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	82.4		5 - 130	06/26/26 11:48	06/28/26 09:31	1
13C5 PFPeA	78.4		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C5 PFHxA	75.0		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C4 PFHpA	80.2		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C8 PFOA	82.5		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C9 PFNA	76.9		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C6 PFDA	65.7		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C7 PFUnA	67.6		30 - 130	06/26/26 11:48	06/28/26 09:31	1
13C2 PFDoA	77.7		10 - 130	06/26/26 11:48	06/28/26 09:31	1
13C2 PFTeDA	77.4		10 - 130	06/26/26 11:48	06/28/26 09:31	1
13C6 PFTrDA	71.9		20 - 150	06/26/26 11:48	06/28/26 09:31	1
13C3 PFBS	84.5		40 - 135	06/26/26 11:48	06/28/26 09:31	1
13C3 PFHxS	80.6		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C8 PFOS	83.9		40 - 130	06/26/26 11:48	06/28/26 09:31	1
13C8 PFOSA	74.0		40 - 130	06/26/26 11:48	06/28/26 09:31	1
d3-NMeFOSAA	76.7		40 - 170	06/26/26 11:48	06/28/26 09:31	1
d5-NEtFOSAA	73.0		25 - 135	06/26/26 11:48	06/28/26 09:31	1
13C2 4:2 FTS	100		40 - 200	06/26/26 11:48	06/28/26 09:31	1
13C2 6:2 FTS	97.0		40 - 200	06/26/26 11:48	06/28/26 09:31	1
13C2 8:2 FTS	98.2		40 - 300	06/26/26 11:48	06/28/26 09:31	1
13C3 HFPO-DA	73.8		40 - 130	06/26/26 11:48	06/28/26 09:31	1
d7-N-MeFOSE-M	59.8		10 - 130	06/26/26 11:48	06/28/26 09:31	1
d9-N-EtFOSE-M	60.7		10 - 130	06/26/26 11:48	06/28/26 09:31	1
d5-NEtPFOSA	55.4		10 - 130	06/26/26 11:48	06/28/26 09:31	1
d3-NMePFOSA	59.7		10 - 130	06/26/26 11:48	06/28/26 09:31	1
13C3-3:3 FTCA	83.0		20 - 150	06/26/26 11:48	06/28/26 09:31	1
13C3-5:3 FTCA	85.5		20 - 150	06/26/26 11:48	06/28/26 09:31	1

Lab Sample ID: LCS 320-923947/3-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	76.6		ng/L		96	70 - 140
Perfluoropentanoic acid (PFPeA)	40.0	43.2		ng/L		108	65 - 135
Perfluorohexanoic acid (PFHxA)	40.0	44.3		ng/L		111	70 - 145
Perfluoroheptanoic acid (PFHpA)	40.0	39.0		ng/L		97	70 - 150
Perfluorooctanoic acid (PFOA)	40.0	39.8		ng/L		100	70 - 150

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LCS 320-923947/3-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorononanoic acid (PFNA)	40.0	41.8		ng/L		105	70 - 150
Perfluorodecanoic acid (PFDA)	40.0	46.8		ng/L		117	70 - 140
Perfluoroundecanoic acid (PFUnA)	40.0	39.2		ng/L		98	70 - 145
Perfluorododecanoic acid (PFDoA)	40.0	38.4		ng/L		96	70 - 140
Perfluorotridecanoic acid (PFTrDA)	40.0	41.6		ng/L		104	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	40.0	37.5		ng/L		94	60 - 140
Perfluorobutanesulfonic acid (PFBS)	71.0	61.1		ng/L		86	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	37.6	39.4		ng/L		105	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.3		ng/L		97	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.9		ng/L		110	70 - 150
Perfluorooctanesulfonic acid (PFOS)	37.2	39.5		ng/L		106	55 - 150
Perfluorononanesulfonic acid (PFNS)	38.5	37.7		ng/L		98	65 - 145
Perfluorodecanesulfonic acid (PFDS)	38.6	37.9		ng/L		98	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.9		ng/L		93	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	82.2		ng/L		110	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	70.6		ng/L		93	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	83.2		ng/L		108	60 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	38.7		ng/L		97	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	40.2		ng/L		101	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.3		ng/L		108	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.9		ng/L		107	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.7		ng/L		99	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	211		ng/L		106	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	215		ng/L		107	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	30.0	33.5		ng/L		112	70 - 140
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	41.7		ng/L		110	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	42.3		ng/L		106	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	45.1		ng/L		113	50 - 150

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LCS 320-923947/3-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	42.7		ng/L		107	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	38.0		ng/L		102	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	37.5		ng/L		99	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	39.9		ng/L		112	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	73.5		ng/L		92	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	194		ng/L		97	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	216		ng/L		108	50 - 145

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	86.0		5 - 130
13C5 PFPeA	79.2		40 - 130
13C5 PFHxA	72.7		40 - 130
13C4 PFHpA	83.2		40 - 130
13C8 PFOA	81.7		40 - 130
13C9 PFNA	88.2		40 - 130
13C6 PFDA	63.4		40 - 130
13C7 PFUnA	84.7		30 - 130
13C2 PFDoA	81.1		10 - 130
13C2 PFTeDA	72.6		10 - 130
13C6 PFTrDA	78.4		20 - 150
13C3 PFBS	84.9		40 - 135
13C3 PFHxS	82.0		40 - 130
13C8 PFOS	82.8		40 - 130
13C8 PFOSA	82.6		40 - 130
d3-NMeFOSAA	83.9		40 - 170
d5-NEtFOSAA	82.7		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	98.4		40 - 200
13C2 8:2 FTS	91.0		40 - 300
13C3 HFPO-DA	73.6		40 - 130
d7-N-MeFOSE-M	62.6		10 - 130
d9-N-EtFOSE-M	64.7		10 - 130
d5-NEtPFOSA	58.3		10 - 130
d3-NMePFOSA	62.2		10 - 130
13C3-3:3 FTCA	80.1		20 - 150
13C3-5:3 FTCA	87.0		20 - 150

Lab Sample ID: LCSD 320-923947/4-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	77.3		ng/L		97	70 - 140	1	30
Perfluoropentanoic acid (PFPeA)	40.0	41.7		ng/L		104	65 - 135	3	30

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LCSD 320-923947/4-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	40.0	41.2		ng/L		103	70 - 145	7	30
Perfluoroheptanoic acid (PFHpA)	40.0	41.5		ng/L		104	70 - 150	6	30
Perfluorooctanoic acid (PFOA)	40.0	40.3		ng/L		101	70 - 150	1	30
Perfluorononanoic acid (PFNA)	40.0	42.7		ng/L		107	70 - 150	2	30
Perfluorodecanoic acid (PFDA)	40.0	53.7		ng/L		134	70 - 140	14	30
Perfluoroundecanoic acid (PFUnA)	40.0	42.1		ng/L		105	70 - 145	7	30
Perfluorododecanoic acid (PFDoA)	40.0	36.7		ng/L		92	70 - 140	5	30
Perfluorotridecanoic acid (PFTrDA)	40.0	40.5		ng/L		101	65 - 140	3	30
Perfluorotetradecanoic acid (PFTeDA)	40.0	39.6		ng/L		99	60 - 140	5	30
Perfluorobutanesulfonic acid (PFBS)	71.0	67.2		ng/L		95	60 - 145	10	30
Perfluoropentanesulfonic acid (PFPeS)	37.6	46.1		ng/L		123	65 - 140	16	30
Perfluorohexanesulfonic acid (PFHxS)	36.5	39.3		ng/L		108	65 - 145	11	30
Perfluoroheptanesulfonic acid (PFHpS)	38.2	44.1		ng/L		116	70 - 150	5	30
Perfluorooctanesulfonic acid (PFOS)	37.2	38.5		ng/L		104	55 - 150	3	30
Perfluorononanesulfonic acid (PFNS)	38.5	37.3		ng/L		97	65 - 145	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	37.2		ng/L		96	60 - 145	2	30
Perfluorododecanesulfonic acid (PFDoS)	38.8	35.1		ng/L		90	50 - 145	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	75.0	82.2		ng/L		110	70 - 145	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	76.2	75.8		ng/L		99	65 - 155	7	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.8	77.1		ng/L		100	60 - 150	8	30
Perfluorooctanesulfonamide (PFOSA)	40.0	39.0		ng/L		97	70 - 145	1	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	40.0	42.1		ng/L		105	60 - 150	5	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	40.0	43.7		ng/L		109	65 - 145	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	46.3		ng/L		116	50 - 140	8	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.1		ng/L		105	70 - 145	6	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	200	205		ng/L		103	70 - 145	3	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	200	211		ng/L		105	70 - 135	2	30
Hexafluoropropylene Oxide	30.0	32.8		ng/L		109	70 - 140	2	30
Dimer Acid (HFPO-DA)									
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	37.8	41.0		ng/L		108	65 - 145	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	40.0	41.0		ng/L		103	60 - 150	3	30

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LCSD 320-923947/4-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	40.0	43.0		ng/L		108	50 - 150	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	37.2		ng/L		93	55 - 140	14	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	37.4	37.4		ng/L		100	70 - 155	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	37.8	36.2		ng/L		96	55 - 160	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	35.7	41.9		ng/L		118	70 - 140	5	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	80.0	81.1		ng/L		101	65 - 130	10	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	200	201		ng/L		100	70 - 135	3	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	200	201		ng/L		101	50 - 145	7	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
13C4 PFBA	86.7		5 - 130						
13C5 PFPeA	89.8		40 - 130						
13C5 PFHxA	80.1		40 - 130						
13C4 PFHpA	80.2		40 - 130						
13C8 PFOA	81.6		40 - 130						
13C9 PFNA	85.2		40 - 130						
13C6 PFDA	56.8		40 - 130						
13C7 PFUnA	70.8		30 - 130						
13C2 PFDoA	77.1		10 - 130						
13C2 PFTeDA	70.5		10 - 130						
13C6 PFTrDA	76.4		20 - 150						
13C3 PFBS	85.1		40 - 135						
13C3 PFHxS	76.6		40 - 130						
13C8 PFOS	83.6		40 - 130						
13C8 PFOSA	82.5		40 - 130						
d3-NMeFOSAA	79.4		40 - 170						
d5-NEtFOSAA	84.2		25 - 135						
13C2 4:2 FTS	101		40 - 200						
13C2 6:2 FTS	97.6		40 - 200						
13C2 8:2 FTS	98.3		40 - 300						
13C3 HFPO-DA	77.6		40 - 130						
d7-N-MeFOSE-M	65.5		10 - 130						
d9-N-EtFOSE-M	63.7		10 - 130						
d5-NEtPFOSA	54.8		10 - 130						
d3-NMePFOSA	58.6		10 - 130						
13C3-3:3 FTCA	85.9		20 - 150						
13C3-5:3 FTCA	88.8		20 - 150						

QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LLCS 320-923947/2-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.00	8.44		ng/L		106	70 - 140
Perfluoropentanoic acid (PFPeA)	4.00	3.92		ng/L		98	65 - 135
Perfluorohexanoic acid (PFHxA)	4.00	4.47		ng/L		112	70 - 145
Perfluoroheptanoic acid (PFHpA)	4.00	4.44		ng/L		111	70 - 150
Perfluorooctanoic acid (PFOA)	4.00	4.32		ng/L		108	70 - 150
Perfluorononanoic acid (PFNA)	4.00	5.14		ng/L		128	70 - 150
Perfluorodecanoic acid (PFDA)	4.00	5.13		ng/L		128	70 - 140
Perfluoroundecanoic acid (PFUnA)	4.00	5.17		ng/L		129	70 - 145
Perfluorododecanoic acid (PFDoA)	4.00	4.47		ng/L		112	70 - 140
Perfluorotridecanoic acid (PFTrDA)	4.00	4.52		ng/L		113	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	4.00	4.19		ng/L		105	60 - 140
Perfluorobutanesulfonic acid (PFBS)	7.10	7.22		ng/L		102	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	3.76	4.61		ng/L		123	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	3.65	4.22		ng/L		116	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	3.82	4.26		ng/L		112	70 - 150
Perfluorooctanesulfonic acid (PFOS)	3.72	3.99		ng/L		107	55 - 150
Perfluorononanesulfonic acid (PFNS)	3.85	3.89		ng/L		101	65 - 145
Perfluorodecanesulfonic acid (PFDS)	3.86	4.06		ng/L		105	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	3.88	3.91		ng/L		101	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	7.50	6.13		ng/L		82	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	7.62	8.18		ng/L		107	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	7.68	7.65		ng/L		100	60 - 150
Perfluorooctanesulfonamide (PFOSA)	4.00	4.29		ng/L		107	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	4.00	5.33		ng/L		133	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	4.00	5.45		ng/L		136	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4.00	5.40		ng/L		135	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	5.04		ng/L		126	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	20.0	24.6		ng/L		123	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	20.0	24.5		ng/L		123	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	3.00	3.48		ng/L		116	70 - 140

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: LLCS 320-923947/2-A

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3.78	4.08		ng/L		108	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.00	4.61		ng/L		115	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.00	4.90		ng/L		122	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.00	4.42		ng/L		111	55 - 140
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	3.74	4.00		ng/L		107	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	3.78	3.95		ng/L		105	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	3.57	3.94		ng/L		110	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	8.00	8.32		ng/L		104	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	20.0	20.9		ng/L		105	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	20.0	21.2		ng/L		106	50 - 145

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	86.7		5 - 130
13C5 PFPeA	82.3		40 - 130
13C5 PFHxA	73.3		40 - 130
13C4 PFHpA	80.1		40 - 130
13C8 PFOA	80.5		40 - 130
13C9 PFNA	82.7		40 - 130
13C6 PFDA	69.1		40 - 130
13C7 PFUnA	80.1		30 - 130
13C2 PFDoA	78.5		10 - 130
13C2 PFTeDA	79.7		10 - 130
13C6 PFTriDA	80.6		20 - 150
13C3 PFBS	77.1		40 - 135
13C3 PFHxS	73.0		40 - 130
13C8 PFOS	80.0		40 - 130
13C8 PFOSA	82.3		40 - 130
d3-NMeFOSAA	74.4		40 - 170
d5-NEtFOSAA	75.2		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	93.3		40 - 200
13C2 8:2 FTS	93.7		40 - 300
13C3 HFPO-DA	77.1		40 - 130
d7-N-MeFOSE-M	63.5		10 - 130
d9-N-EtFOSE-M	62.3		10 - 130
d5-NEtPFOSA	57.7		10 - 130
d3-NMePFOSA	61.0		10 - 130
13C3-3:3 FTCA	82.4		20 - 150
13C3-5:3 FTCA	77.9		20 - 150

QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: 320-133703-A-10-B MS

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	<3.4		66.1	66.4		ng/L		101	70 - 140
Perfluoropentanoic acid (PFPeA)	<1.7		33.0	35.4		ng/L		107	65 - 135
Perfluorohexanoic acid (PFHxA)	<1.7		33.0	31.5		ng/L		95	70 - 145
Perfluoroheptanoic acid (PFHpA)	<1.7		33.0	36.3		ng/L		110	70 - 150
Perfluorooctanoic acid (PFOA)	<1.7		33.0	33.6		ng/L		102	70 - 150
Perfluorononanoic acid (PFNA)	<1.7		33.0	32.5		ng/L		98	70 - 150
Perfluorodecanoic acid (PFDA)	<1.7		33.0	40.6		ng/L		123	70 - 140
Perfluoroundecanoic acid (PFUnA)	<1.7	F2	33.0	30.9		ng/L		93	70 - 145
Perfluorododecanoic acid (PFDoA)	<1.7		33.0	35.2		ng/L		107	70 - 140
Perfluorotridecanoic acid (PFTrDA)	<1.7		33.0	36.6		ng/L		111	65 - 140
Perfluorotetradecanoic acid (PFTeDA)	<1.7		33.0	31.4		ng/L		95	60 - 140
Perfluorobutanesulfonic acid (PFBS)	<3.4		58.7	62.4		ng/L		106	60 - 145
Perfluoropentanesulfonic acid (PFPeS)	<1.7		31.1	35.3		ng/L		114	65 - 140
Perfluorohexanesulfonic acid (PFHxS)	<1.7		30.1	30.1		ng/L		100	65 - 145
Perfluoroheptanesulfonic acid (PFHpS)	<1.7	F1 F2	31.5	49.9	F1	ng/L		158	70 - 150
Perfluorooctanesulfonic acid (PFOS)	<1.7		30.7	33.7		ng/L		110	55 - 150
Perfluorononanesulfonic acid (PFNS)	<1.7		31.8	25.8		ng/L		81	65 - 145
Perfluorodecanesulfonic acid (PFDS)	<1.7		31.9	20.9		ng/L		66	60 - 145
Perfluorododecanesulfonic acid (PFDoS)	<1.7		32.1	19.9		ng/L		62	50 - 145
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.4		62.0	61.2		ng/L		99	70 - 145
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.4		62.9	69.5		ng/L		110	65 - 155
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.4		63.4	63.8		ng/L		101	60 - 150
Perfluorooctanesulfonamide (PFOSA)	<1.7		33.0	32.2		ng/L		98	70 - 145
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		33.0	33.7		ng/L		102	60 - 150
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		33.0	37.7		ng/L		114	65 - 145
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		33.0	34.9		ng/L		106	50 - 140
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		33.0	34.6		ng/L		105	70 - 145
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.4		165	178		ng/L		108	70 - 145
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.4		165	180		ng/L		109	70 - 135
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		24.8	26.4		ng/L		107	70 - 140

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: 320-133703-A-10-B MS

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 923947

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		31.3	35.9		ng/L		115	65 - 145
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		33.0	31.6		ng/L		96	60 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.7		33.0	31.5		ng/L		95	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		33.0	34.1		ng/L		103	55 - 140
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid	<1.7		30.9	26.2		ng/L		85	70 - 155
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		31.2	23.1		ng/L		74	55 - 160
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	<1.7		29.5	27.3		ng/L		93	70 - 140
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.4		66.1	64.9		ng/L		98	65 - 130
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.4		165	160		ng/L		97	70 - 135
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.4		165	147		ng/L		89	50 - 145

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	88.3		5 - 130
13C5 PFPeA	84.2		40 - 130
13C5 PFHxA	81.7		40 - 130
13C4 PFHpA	71.5		40 - 130
13C8 PFOA	77.3		40 - 130
13C9 PFNA	76.6		40 - 130
13C6 PFDA	49.0		40 - 130
13C7 PFUnA	45.5		30 - 130
13C2 PFDoA	30.9		10 - 130
13C2 PFTeDA	20.9		10 - 130
13C6 PFTTrDA	24.0		20 - 150
13C3 PFBS	85.1		40 - 135
13C3 PFHxS	71.1		40 - 130
13C8 PFOS	38.5	*5-	40 - 130
13C8 PFOSA	67.7		40 - 130
d3-NMeFOSAA	61.9		40 - 170
d5-NEtFOSAA	54.3		25 - 135
13C2 4:2 FTS	107		40 - 200
13C2 6:2 FTS	88.3		40 - 200
13C2 8:2 FTS	74.1		40 - 300
13C3 HFPO-DA	71.3		40 - 130
d7-N-MeFOSE-M	24.6		10 - 130
d9-N-EtFOSE-M	19.7		10 - 130
d5-NEtPFOSA	21.0		10 - 130
d3-NMePFOSA	30.1		10 - 130
13C3-3:3 FTCA	83.3		20 - 150
13C3-5:3 FTCA	82.0		20 - 150

QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: 320-133703-A-10-C MSD

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 923947

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	<3.4		71.2	75.8		ng/L		106	70 - 140	13	30
Perfluoropentanoic acid (PFPeA)	<1.7		35.6	35.0		ng/L		98	65 - 135	1	30
Perfluorohexanoic acid (PFHxA)	<1.7		35.6	35.1		ng/L		99	70 - 145	11	30
Perfluoroheptanoic acid (PFHpA)	<1.7		35.6	36.8		ng/L		103	70 - 150	2	30
Perfluorooctanoic acid (PFOA)	<1.7		35.6	38.1		ng/L		107	70 - 150	12	30
Perfluorononanoic acid (PFNA)	<1.7		35.6	37.3		ng/L		105	70 - 150	14	30
Perfluorodecanoic acid (PFDA)	<1.7		35.6	41.4		ng/L		116	70 - 140	2	30
Perfluoroundecanoic acid (PFUnA)	<1.7	F2	35.6	43.6	F2	ng/L		123	70 - 145	34	30
Perfluorododecanoic acid (PFDoA)	<1.7		35.6	36.4		ng/L		102	70 - 140	3	30
Perfluorotridecanoic acid (PFTrDA)	<1.7		35.6	38.7		ng/L		109	65 - 140	6	30
Perfluorotetradecanoic acid (PFTeDA)	<1.7		35.6	34.8		ng/L		98	60 - 140	10	30
Perfluorobutanesulfonic acid (PFBS)	<3.4		63.2	61.1		ng/L		97	60 - 145	2	30
Perfluoropentanesulfonic acid (PFPeS)	<1.7		33.5	38.9		ng/L		116	65 - 140	10	30
Perfluorohexanesulfonic acid (PFHxS)	<1.7		32.5	32.7		ng/L		101	65 - 145	8	30
Perfluoroheptanesulfonic acid (PFHpS)	<1.7	F1 F2	34.0	34.7	F2	ng/L		102	70 - 150	36	30
Perfluorooctanesulfonic acid (PFOS)	<1.7		33.1	31.6		ng/L		95	55 - 150	6	30
Perfluorononanesulfonic acid (PFNS)	<1.7		34.2	32.7		ng/L		95	65 - 145	24	30
Perfluorodecanesulfonic acid (PFDS)	<1.7		34.3	28.0		ng/L		82	60 - 145	29	30
Perfluorododecanesulfonic acid (PFDoS)	<1.7		34.5	18.5		ng/L		54	50 - 145	7	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<3.4		66.8	57.1		ng/L		86	70 - 145	7	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<3.4		67.8	78.1		ng/L		115	65 - 155	12	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<3.4		68.3	75.9		ng/L		111	60 - 150	17	30
Perfluorooctanesulfonamide (PFOSA)	<1.7		35.6	35.6		ng/L		100	70 - 145	10	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	<1.7		35.6	38.0		ng/L		107	60 - 150	12	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	<1.7		35.6	39.9		ng/L		112	65 - 145	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<1.7		35.6	39.0		ng/L		110	50 - 140	11	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<1.7		35.6	37.3		ng/L		105	70 - 145	8	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	<8.4		178	195		ng/L		109	70 - 145	9	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	<8.4		178	188		ng/L		106	70 - 135	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.3		26.7	27.5		ng/L		103	70 - 140	4	30

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QC Sample Results

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

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

Lab Sample ID: 320-133703-A-10-C MSD

Matrix: Water

Analysis Batch: 924171

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 923947

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		33.7	32.3		ng/L		96	65 - 145	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.7		35.6	28.2		ng/L		79	60 - 150	11	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.7		35.6	35.7		ng/L		100	50 - 150	12	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.7		35.6	33.1		ng/L		93	55 - 140	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.7		33.2	30.0		ng/L		90	70 - 155	14	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.7		33.6	25.5		ng/L		76	55 - 160	10	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	<1.7		31.8	32.7		ng/L		103	70 - 140	18	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	<3.4		71.2	80.5		ng/L		113	65 - 130	22	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	<8.4		178	170		ng/L		96	70 - 135	6	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	<8.4		178	160		ng/L		90	50 - 145	9	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C4 PFBA	82.7		5 - 130
13C5 PFPeA	80.7		40 - 130
13C5 PFHxA	73.7		40 - 130
13C4 PFHpA	66.9		40 - 130
13C8 PFOA	81.0		40 - 130
13C9 PFNA	84.1		40 - 130
13C6 PFDA	65.6		40 - 130
13C7 PFUnA	66.9		30 - 130
13C2 PFDoA	60.1		10 - 130
13C2 PFTeDA	41.0		10 - 130
13C6 PFTTrDA	46.2		20 - 150
13C3 PFBS	93.1		40 - 135
13C3 PFHxS	82.5		40 - 130
13C8 PFOS	82.9		40 - 130
13C8 PFOSA	75.6		40 - 130
d3-NMeFOSAA	72.9		40 - 170
d5-NEtFOSAA	71.2		25 - 135
13C2 4:2 FTS	122		40 - 200
13C2 6:2 FTS	88.9		40 - 200
13C2 8:2 FTS	91.0		40 - 300
13C3 HFPO-DA	69.4		40 - 130
d7-N-MeFOSE-M	37.8		10 - 130
d9-N-EtFOSE-M	33.4		10 - 130
d5-NEtPFOSA	33.2		10 - 130
d3-NMePFOSA	40.7		10 - 130
13C3-3:3 FTCA	69.4		20 - 150
13C3-5:3 FTCA	70.6		20 - 150

QC Association Summary

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

LCMS

Prep Batch: 923947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220490-1	BWS2153-S1-AQ	Total/NA	Water	1633	
MB 320-923947/1-A	Method Blank	Total/NA	Water	1633	
LCS 320-923947/3-A	Lab Control Sample	Total/NA	Water	1633	
LCSD 320-923947/4-A	Lab Control Sample Dup	Total/NA	Water	1633	
LLCS 320-923947/2-A	Lab Control Sample	Total/NA	Water	1633	
320-133703-A-10-B MS	Matrix Spike	Total/NA	Water	1633	
320-133703-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Water	1633	

Analysis Batch: 924171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220490-1	BWS2153-S1-AQ	Total/NA	Water	QSM B-24	923947
MB 320-923947/1-A	Method Blank	Total/NA	Water	QSM B-24	923947
LCS 320-923947/3-A	Lab Control Sample	Total/NA	Water	QSM B-24	923947
LCSD 320-923947/4-A	Lab Control Sample Dup	Total/NA	Water	QSM B-24	923947
LLCS 320-923947/2-A	Lab Control Sample	Total/NA	Water	QSM B-24	923947
320-133703-A-10-B MS	Matrix Spike	Total/NA	Water	QSM B-24	923947
320-133703-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Water	QSM B-24	923947

Lab Chronicle

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

Job ID: 380-220490-1
SDG: Site S1 PFAS 1633

Client Sample ID: BWS2153-S1-AQ
Date Collected: 06/17/26 09:00
Date Received: 06/18/26 09:40

Lab Sample ID: 380-220490-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1633			923947	WVD	EET SAC	06/26/26 11:48
Total/NA	Analysis	QSM B-24		1	924171	N1K	EET SAC	06/28/26 17:11

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: 380-220490-1
SDG: Site S1 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	02-22-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468.03	01-20-27
Arizona	State	AZ0708	08-11-26
Arkansas DEQ	State	88-0691	05-17-27
California	State	2897	01-31-28
Colorado	State	CA00044	08-31-26
Florida	NELAP	E87570	06-30-26
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	05-31-27
US Fish & Wildlife	US Federal Programs	A22139	04-30-27
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	05-06-27
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: 380-220490-1
SDG: Site S1 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: 380-220490-1
SDG: Site S1 PFAS 1633

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-220490-1	BWS2153-S1-AQ	Water	06/17/26 09:00	06/18/26 09:40	Hawaii

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

Ver: 05/06/2024

Ver 05/06/2024



eurofins

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-220490-1
SDG Number: Site S1 PFAS 1633

Login Number: 220490

List Number: 1

Creator: Ngo, Theodore

List Source: Eurofins Pomona

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-220490-1
SDG Number: Site S1 PFAS 1633

Login Number: 220490

List Number: 2

Creator: Oropeza, Salvador

List Source: Eurofins Sacramento

List Creation: 06/18/26 07:33 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	Seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5C
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	