

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

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 11/13/2025 5:30:33 PM

JOB DESCRIPTION

RED-HILL
PFAS: Ka'amilo Wells P1/P2

JOB NUMBER

380-181198-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



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

Generated
11/13/2025 5:30:33 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	13
Surrogate Summary	15
Isotope Dilution Summary	16
QC Sample Results	17
QC Association Summary	34
Lab Chronicle	36
Certification Summary	37
Method Summary	38
Sample Summary	39
Chain of Custody	40
Receipt Checklists	41

Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: RED-HILL

Job ID: 380-181198-1

Job ID: 380-181198-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-181198-1

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 samples were received on 11/5/2025 9:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C.

PFAS

Method 533: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method control limit: Ka'amilo Wells P1 (380-181198-1), (380-181198-E-1-A MS) and (380-181198-F-1-A MSD). IDA recoveries of 13C6 PFDA, 13C9 PFNA, 13C7 PFUnA and 13C2 PFDaA bias low. Insufficient volume for re-extraction. Result not acceptable per method. PFAS results by 533 for Ka'amilo Wells P1 (380-181198-1) collected on 11/3/25 are not acceptable for compliance reporting due to QC failures of Isotope Dilution Analytes (IDA) not meeting the method limits. The sample is collected weekly thus follow up sample was collected on 11/10/25 under job # 380-182499-1. Analysis by EPA 533 is currently in progress. (XWB4)

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results. Ka'amilo Wells P1 (380-181198-1) and Ka'amilo Wells P2 (380-181198-2). (XWB4)

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

Detection Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-181198-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	5.3		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.4		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.2		2.0	ng/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.1		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.7		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	4.0		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	ng/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.1		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-181198-3

No Detections.

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-181198-1

Date Collected: 11/03/25 12:06

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorooctanesulfonic acid (PFOS)	5.3		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorohexanoic acid (PFHxA)	3.9		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorooctanoic acid (PFOA)	4.4		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorobutanesulfonic acid (PFBS)	3.2		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluoroheptanoic acid (PFHpA)	2.1		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Perfluorotridecanoic acid (PFTDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 01:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			11/06/25 03:03	11/07/25 01:59	1
13C2 PFHxA	109		70 - 130			11/06/25 03:03	11/07/25 01:59	1
13C2 PFDA	106		70 - 130			11/06/25 03:03	11/07/25 01:59	1
13C3-GenX	112		70 - 130			11/06/25 03:03	11/07/25 01:59	1

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorobutanesulfonic acid (PFBS)	2.9		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorohexanoic acid (PFHxA)	3.5		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorooctanesulfonic acid (PFOS)	4.1		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoropentanoic acid (PFPeA)	3.8		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		11/09/25 16:33	11/10/25 16:58	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	72		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C6 PFDA	74		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C5 PFHxA	75		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C4 PFHpA	78		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C8 PFOA	78		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C9 PFNA	77		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C7 PFUnA	78		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C2 PFDoA	82		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C4 PFBA	88		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C5 PFPeA	84		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C3 PFBS	111		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C3 PFHxS	106		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C8 PFOS	112		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C2-4:2-FTS	111		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C2-6:2-FTS	108		50 - 200			11/09/25 16:33	11/10/25 16:58	1
13C2-8:2-FTS	107		50 - 200			11/09/25 16:33	11/10/25 16:58	1

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorooctanesulfonic acid (PFOS)	4.7		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorohexanoic acid (PFHxA)	4.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorobutanesulfonic acid (PFBS)	3.1		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluoroheptanoic acid (PFHpA)	2.1		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			11/06/25 03:03	11/07/25 02:08	1
13C2 PFHxA	116		70 - 130			11/06/25 03:03	11/07/25 02:08	1
13C2 PFDA	118		70 - 130			11/06/25 03:03	11/07/25 02:08	1
13C3-GenX	119		70 - 130			11/06/25 03:03	11/07/25 02:08	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-181198-3

Date Collected: 11/03/25 12:06

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-181198-3

Date Collected: 11/03/25 12:06

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			11/06/25 03:03	11/07/25 02:18	1
13C2 PFHxA	111		70 - 130			11/06/25 03:03	11/07/25 02:18	1
13C2 PFDA	116		70 - 130			11/06/25 03:03	11/07/25 02:18	1
13C3-GenX	107		70 - 130			11/06/25 03:03	11/07/25 02:18	1

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		11/07/25 07:50	11/07/25 21:47	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C6 PFDA	96		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C5 PFHxA	98		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C4 PFHpA	95		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C8 PFOA	94		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C9 PFNA	94		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C7 PFUnA	94		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C2 PFDoA	95		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C4 PFBA	101		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C5 PFPeA	97		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C3 PFBS	107		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C3 PFHxS	104		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C8 PFOS	111		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C2-4:2-FTS	103		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C2-6:2-FTS	99		50 - 200			11/07/25 07:50	11/07/25 21:47	1
13C2-8:2-FTS	101		50 - 200			11/07/25 07:50	11/07/25 21:47	1

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/06/25 03:03	11/07/25 02:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	112		70 - 130			11/06/25 03:03	11/07/25 02:28	1
13C2 PFHxA	120		70 - 130			11/06/25 03:03	11/07/25 02:28	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	124		70 - 130	11/06/25 03:03	11/07/25 02:28	1
13C3-GenX	114		70 - 130	11/06/25 03:03	11/07/25 02:28	1

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

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-181198-1

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 Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.3		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.4		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

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 Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.1		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.7		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-181198-3

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 Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Action Limit Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-181198-1
 SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

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			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Surrogate Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-181198-1
 SDG: PFAS: Ka'amilo Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-181197-B-5-A MS	Matrix Spike	107	111	111	112
380-181197-C-5-A MSD	Matrix Spike Duplicate	106	109	109	110
380-181198-1	Ka'amilo Wells P1	110	109	106	112
380-181198-2	Ka'amilo Wells P2	110	116	118	119
380-181198-3	FB: Ka'amilo Wells P1	110	111	116	107
380-181198-4	FB: Ka'amilo Wells P2	112	120	124	114
LCS 380-184758/22-A	Lab Control Sample	114	124	121	125
MBL 380-184758/20-A	Method Blank	101	103	106	99
MRL 380-184758/21-A	Lab Control Sample	111	114	115	112

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
 PFHxA = 13C2 PFHxA
 PFDA = 13C2 PFDA
 GenX = 13C3-GenX



Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-180718-B-6-A MS	Matrix Spike	112	113	116	117	112	120	117	113
380-180718-C-6-A MSD	Matrix Spike Duplicate	108	110	110	111	110	113	114	115
380-181198-2	Ka'amilo Wells P2	72	74	75	78	78	77	78	82
380-181198-4	FB: Ka'amilo Wells P2	89	96	98	95	94	94	94	95
380-181198-E-1-A MS	380-181198-E-1-A MS	73	50	73	77	67	56	45 *5-	49 *5-
380-181198-F-1-A MSD	380-181198-F-1-A MSD	59	26 *5-	60	58	48 *5-	36 *5-	19 *5-	20 *5-
LCS 380-185054/21-A	Lab Control Sample	90	101	102	102	95	99	98	101
LCS 380-185301/21-A	Lab Control Sample	97	111	110	113	114	107	112	111
MBL 380-185054/19-A	Method Blank	103	103	107	109	106	101	100	96
MBL 380-185301/19-A	Method Blank	98	113	109	108	109	116	111	112
MRL 380-185054/20-A	Lab Control Sample	87	99	101	100	98	99	97	103
MRL 380-185301/20-A	Lab Control Sample	94	108	109	105	103	111	106	111

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-180718-B-6-A MS	Matrix Spike	120	113	108	111	117	111	105	112
380-180718-C-6-A MSD	Matrix Spike Duplicate	112	110	113	108	118	110	107	110
380-181198-2	Ka'amilo Wells P2	88	84	111	106	112	111	108	107
380-181198-4	FB: Ka'amilo Wells P2	101	97	107	104	111	103	99	101
380-181198-E-1-A MS	380-181198-E-1-A MS	81	79	109	112	114	117	113	110
380-181198-F-1-A MSD	380-181198-F-1-A MSD	70	66	108	105	110	108	105	103
LCS 380-185054/21-A	Lab Control Sample	104	102	110	105	110	113	110	100
LCS 380-185301/21-A	Lab Control Sample	113	110	111	108	114	113	109	110
MBL 380-185054/19-A	Method Blank	105	100	110	105	108	115	104	105
MBL 380-185301/19-A	Method Blank	114	112	115	112	117	117	112	115
MRL 380-185054/20-A	Lab Control Sample	102	101	110	104	112	116	106	102
MRL 380-185301/20-A	Lab Control Sample	111	111	112	111	119	110	108	112

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDaA = 13C2 PFDaA
- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- C3PFBS = 13C3 PFBS
- C3PFHS = 13C3 PFHxS
- C8PFOS = 13C8 PFOS
- 42FTS = 13C2-4:2-FTS
- 62FTS = 13C2-6:2-FTS
- 82FTS = 13C2-8:2-FTS

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Lab Sample ID: MBL 380-185054/19-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185054

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.61		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorododecanoic acid (PFDoA)	<0.55		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorohexanoic acid (PFHxA)	<0.47		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.44		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoroundecanoic acid (PFUnA)	<0.43		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluorobutanoic acid (PFBA)	<0.70		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.39		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.47		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		11/07/25 07:50	11/07/25 17:41	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C6 PFDA	103		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C5 PFHxA	107		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C4 PFHpA	109		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C8 PFOA	106		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C9 PFNA	101		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C7 PFUnA	100		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C2 PFDoA	96		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C4 PFBA	105		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C5 PFPeA	100		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C3 PFBS	110		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C3 PFHxS	105		50 - 200	11/07/25 07:50	11/07/25 17:41	1

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 380-185054/19-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185054

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	108		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C2-4:2-FTS	115		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C2-6:2-FTS	104		50 - 200	11/07/25 07:50	11/07/25 17:41	1
13C2-8:2-FTS	105		50 - 200	11/07/25 07:50	11/07/25 17:41	1

Lab Sample ID: LCS 380-185054/21-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185054

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	59.0		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.2	58.8		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	59.8		ng/L		99	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.2	61.3		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	63.2		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	61.7		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	61.8		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	62.8		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	63.5		ng/L		105	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	62.4		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	60.2	64.5		ng/L		107	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	60.2		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	63.1		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	63.2		ng/L		105	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	61.5		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	67.1		ng/L		111	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	63.5		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	59.5		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	62.5		ng/L		104	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.2	63.0		ng/L		105	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	58.6		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	61.0		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	62.8		ng/L		104	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	60.9		ng/L		101	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LCS 380-185054/21-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.2	64.7		ng/L		107	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	90		50 - 200				
13C6 PFDA	101		50 - 200				
13C5 PFHxA	102		50 - 200				
13C4 PFHpA	102		50 - 200				
13C8 PFOA	95		50 - 200				
13C9 PFNA	99		50 - 200				
13C7 PFUnA	98		50 - 200				
13C2 PFDoA	101		50 - 200				
13C4 PFBA	104		50 - 200				
13C5 PFPeA	102		50 - 200				
13C3 PFBS	110		50 - 200				
13C3 PFHxS	105		50 - 200				
13C8 PFOS	110		50 - 200				
13C2-4:2-FTS	113		50 - 200				
13C2-6:2-FTS	110		50 - 200				
13C2-8:2-FTS	100		50 - 200				

Lab Sample ID: MRL 380-185054/20-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.89	J	ng/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.97	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.08	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.07	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.13	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.06	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.18	J	ng/L		108	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.21	J	ng/L		110	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MRL 380-185054/20-A
Matrix: Water
Analysis Batch: 185198

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.13	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.26	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.36	J	ng/L		117	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.06	J	ng/L		103	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.90	J	ng/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.04	J	ng/L		101	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	87		50 - 200
13C6 PFDA	99		50 - 200
13C5 PFHxA	101		50 - 200
13C4 PFHpA	100		50 - 200
13C8 PFOA	98		50 - 200
13C9 PFNA	99		50 - 200
13C7 PFUnA	97		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	102		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	104		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	102		50 - 200

Lab Sample ID: 380-181198-E-1-A MS
Matrix: Water
Analysis Batch: 185198

Client Sample ID: 380-181198-E-1-A MS
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	57.9		ng/L		96	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	61.9		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	56.4		ng/L		93	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-181198-E-1-A MS
Matrix: Water
Analysis Batch: 185198

Client Sample ID: 380-181198-E-1-A MS
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.4	59.9		ng/L		99	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	3.2		60.4	66.6		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0	*5-	60.4	61.7		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	60.4	61.1	*5-	ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	60.2		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.7		60.4	66.6		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	3.6		60.4	64.5		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	<2.0	*5-	60.4	65.1		ng/L		108	70 - 130
Perfluorooctanesulfonic acid (PFOS)	4.4		60.4	64.8		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	3.9		60.4	66.1		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	60.4	64.1	*5-	ng/L		106	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	62.3		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	63.8		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	63.6		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	60.0		ng/L		99	70 - 130
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	<2.0		60.4	62.4		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	66.6		ng/L		110	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	57.5		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	58.2		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	3.8		60.4	62.6		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	60.2		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	59.4		ng/L		98	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	73		50 - 200
13C6 PFDA	50		50 - 200
13C5 PFHxA	73		50 - 200
13C4 PFHpA	77		50 - 200
13C8 PFOA	67		50 - 200
13C9 PFNA	56		50 - 200
13C7 PFUnA	45	*5-	50 - 200
13C2 PFDoA	49	*5-	50 - 200
13C4 PFBA	81		50 - 200
13C5 PFPeA	79		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	114		50 - 200

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-181198-E-1-A MS
Matrix: Water
Analysis Batch: 185198

Client Sample ID: 380-181198-E-1-A MS
Prep Type: Total/NA
Prep Batch: 185054

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	113		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-181198-F-1-A MSD
Matrix: Water
Analysis Batch: 185198

Client Sample ID: 380-181198-F-1-A MSD
Prep Type: Total/NA
Prep Batch: 185054

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.5	59.7		ng/L		99	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.5	60.0		ng/L		99	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.5	57.9		ng/L		96	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.5	61.1		ng/L		101	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	3.2		60.5	63.2		ng/L		99	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0	*5-	60.5	64.2	*5-	ng/L		106	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	60.5	61.1	*5-	ng/L		101	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.5	61.9		ng/L		99	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	3.7		60.5	66.4		ng/L		104	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	3.6		60.5	64.5		ng/L		101	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0	*5-	60.5	66.9	*5-	ng/L		111	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	4.4		60.5	64.2		ng/L		99	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	3.9		60.5	68.8	*5-	ng/L		107	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	60.5	64.1	*5-	ng/L		106	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.5	62.2		ng/L		100	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.5	65.2		ng/L		108	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.5	65.4		ng/L		108	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.5	63.0		ng/L		104	70 - 130	5	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.5	68.2		ng/L		113	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.5	57.0		ng/L		94	70 - 130	15	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.5	58.4		ng/L		97	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.5	59.7		ng/L		99	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	3.8		60.5	68.8		ng/L		108	70 - 130	9	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.5	59.4		ng/L		98	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.5	62.6		ng/L		103	70 - 130	5	30

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	59		50 - 200
13C6 PFDA	26	*5-	50 - 200
13C5 PFHxA	60		50 - 200
13C4 PFHpA	58		50 - 200
13C8 PFOA	48	*5-	50 - 200
13C9 PFNA	36	*5-	50 - 200
13C7 PFUnA	19	*5-	50 - 200
13C2 PFDoA	20	*5-	50 - 200
13C4 PFBA	70		50 - 200
13C5 PFPeA	66		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	108		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: MBL 380-185301/19-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185301

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MBL 380-185301/19-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185301

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		11/09/25 16:33	11/10/25 12:52	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C6 PFDA	113		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C5 PFHxA	109		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C4 PFHpA	108		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C8 PFOA	109		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C9 PFNA	116		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C7 PFUnA	111		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C2 PFDoA	112		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C4 PFBA	114		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C5 PFPeA	112		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C3 PFBS	115		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C3 PFHxS	112		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C8 PFOS	117		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C2-4:2-FTS	117		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C2-6:2-FTS	112		50 - 200	11/09/25 16:33	11/10/25 12:52	1
13C2-8:2-FTS	115		50 - 200	11/09/25 16:33	11/10/25 12:52	1

Lab Sample ID: LCS 380-185301/21-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	51.2		ng/L		85	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.2	55.7		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	51.6		ng/L		86	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.2	57.4		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	56.1		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	56.5		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	57.6		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	58.1		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	61.5		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	55.4		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	60.2	59.9		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	56.1		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	57.8		ng/L		96	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: LCS 380-185301/21-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	60.2	57.1		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	56.3		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	59.7		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	58.0		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	62.8		ng/L		104	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	60.2		ng/L		100	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.2	57.9		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	57.7		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	59.8		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	61.6		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	57.7		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.2	58.2		ng/L		97	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	97		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	114		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: MRL 380-185301/20-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.70	J	ng/L		85	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	1.79	J	ng/L		89	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MRL 380-185301/20-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.86	J	ng/L		92	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.89	J	ng/L		94	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.00	J	ng/L		100	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.10	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	1.90	J	ng/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.10	J	ng/L		105	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.13	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.08	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.30	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.48	J	ng/L		123	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	2.00	J	ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.08	J	ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.79	J	ng/L		89	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.08	J	ng/L		104	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	94		50 - 200
13C6 PFDA	108		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	112		50 - 200
13C3 PFHxS	111		50 - 200

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: MRL 380-185301/20-A
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185301

<i>Isotope Dilution</i>	<i>MRL %Recovery</i>	<i>MRL Qualifier</i>	<i>Limits</i>
13C8 PFOS	119		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: 380-180718-B-6-A MS
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	101		ng/L		84	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	104		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	106		ng/L		88	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	108		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	110		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	113		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	114		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	105		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	106		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	106		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	106		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	110		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	110		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	106		ng/L		88	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	119		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	112		ng/L		92	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	105		ng/L		87	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-180718-B-6-A MS
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	110		ng/L		91	70 - 130
MS MS									
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3 HFPO-DA	112		50 - 200						
13C6 PFDA	113		50 - 200						
13C5 PFHxA	116		50 - 200						
13C4 PFHpA	117		50 - 200						
13C8 PFOA	112		50 - 200						
13C9 PFNA	120		50 - 200						
13C7 PFUnA	117		50 - 200						
13C2 PFDoA	113		50 - 200						
13C4 PFBA	120		50 - 200						
13C5 PFPeA	113		50 - 200						
13C3 PFBS	108		50 - 200						
13C3 PFHxS	111		50 - 200						
13C8 PFOS	117		50 - 200						
13C2-4:2-FTS	111		50 - 200						
13C2-6:2-FTS	105		50 - 200						
13C2-8:2-FTS	112		50 - 200						

Lab Sample ID: 380-180718-C-6-A MSD
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	102		ng/L		84	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	105		ng/L		87	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	112		ng/L		93	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	111		ng/L		92	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	107		ng/L		89	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	<2.0		121	110		ng/L		91	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	111		ng/L		92	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	117		ng/L		97	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	120		ng/L		100	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	112		ng/L		92	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		121	115		ng/L		95	70 - 130	8	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	107		ng/L		89	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		121	118		ng/L		97	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	118		ng/L		97	70 - 130	6	30
Perfluorobutanoic acid (PFBA)	<2.0		121	112		ng/L		93	70 - 130	6	30

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

Lab Sample ID: 380-180718-C-6-A MSD
Matrix: Water
Analysis Batch: 185474

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 185301

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	113		ng/L		94	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	110		ng/L		91	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	117		ng/L		97	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	115		ng/L		95	70 - 130	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	113		ng/L		93	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	116		ng/L		96	70 - 130	9	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	120		ng/L		99	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		121	117		ng/L		97	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	107		ng/L		89	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	115		ng/L		95	70 - 130	4	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	MSD Limits
13C3 HFPO-DA	108		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	114		50 - 200
13C2 PFDoA	115		50 - 200
13C4 PFBA	112		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	118		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	110		50 - 200

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 380-184758/20-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 184758

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MBL 380-184758/20-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 184758

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		11/06/25 03:03	11/06/25 22:40	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130			11/06/25 03:03	11/06/25 22:40	1
13C2 PFHxA	103		70 - 130			11/06/25 03:03	11/06/25 22:40	1
13C2 PFDA	106		70 - 130			11/06/25 03:03	11/06/25 22:40	1
13C3-GenX	99		70 - 130			11/06/25 03:03	11/06/25 22:40	1

Lab Sample ID: LCS 380-184758/22-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	27.9		ng/L		111	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	27.3		ng/L		109	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	27.2		ng/L		109	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	27.0		ng/L		108	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	26.3		ng/L		105	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	27.2		ng/L		109	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	26.8		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	26.9		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	27.2		ng/L		108	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	27.8		ng/L		111	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	26.3		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	27.4		ng/L		109	70 - 130
Perfluorononanoic acid (PFNA)	25.1	27.8		ng/L		111	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 380-184758/22-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTA)	25.1	22.9		ng/L		92	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	28.2		ng/L		112	70 - 130
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	25.1	27.2		ng/L		109	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.7		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	27.3		ng/L		109	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
d5-NEtFOSAA	114		70 - 130				
13C2 PFHxA	124		70 - 130				
13C2 PFDA	121		70 - 130				
13C3-GenX	125		70 - 130				

Lab Sample ID: MRL 380-184758/21-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.42	J	ng/L		121	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.33	J	ng/L		116	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.22	J	ng/L		111	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.36	J	ng/L		118	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.15	J	ng/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.41	J	ng/L		120	50 - 150
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.25	J	ng/L		112	50 - 150

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MRL 380-184758/21-A
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.13	J	ng/L		106	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.27	J	ng/L		113	50 - 150
	<i>MRL</i>	<i>MRL</i>					
Surrogate	%Recovery	Qualifier	Limits				
<i>d5-NEtFOSAA</i>	111		70 - 130				
<i>13C2 PFHxA</i>	114		70 - 130				
<i>13C2 PFDA</i>	115		70 - 130				
<i>13C3-GenX</i>	112		70 - 130				

Lab Sample ID: 380-181197-B-5-A MS
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.4		ng/L		105	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	28.3		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.6		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.3		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.0		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	28.0		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.0		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.5		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	27.4		ng/L		109	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	28.1		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.0		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.4		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	26.5		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.6		ng/L		90	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.8		ng/L		111	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.0		ng/L		103	70 - 130
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.9		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.9		ng/L		107	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-181197-B-5-A MS
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 184758

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	107		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	112		70 - 130

Lab Sample ID: 380-181197-C-5-A MSD
Matrix: Water
Analysis Batch: 184936

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 184758

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	25.8		ng/L		102	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	29.1		ng/L		108	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.6		ng/L		106	70 - 130	0	30
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		25.2	25.4		ng/L		101	70 - 130	4	30
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		25.2	25.4		ng/L		101	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	27.7		ng/L		105	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	26.2		ng/L		104	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.5		ng/L		106	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	26.4		ng/L		105	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	29.3		ng/L		111	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	27.5		ng/L		107	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	27.7		ng/L		107	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	27.1		ng/L		108	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	23.0		ng/L		91	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	27.3		ng/L		108	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		25.2	26.6		ng/L		106	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	26.1		ng/L		104	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.6		ng/L		106	70 - 130	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	109		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	110		70 - 130

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Prep Batch: 184758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-181198-2	Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
380-181198-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-181198-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1 DW	
MBL 380-184758/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-184758/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-184758/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-181197-B-5-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-181197-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 184936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-1	Ka'amilo Wells P1	Total/NA	Water	537.1	184758
380-181198-2	Ka'amilo Wells P2	Total/NA	Water	537.1	184758
380-181198-3	FB: Ka'amilo Wells P1	Total/NA	Water	537.1	184758
380-181198-4	FB: Ka'amilo Wells P2	Total/NA	Water	537.1	184758
MBL 380-184758/20-A	Method Blank	Total/NA	Water	537.1	184758
LCS 380-184758/22-A	Lab Control Sample	Total/NA	Water	537.1	184758
MRL 380-184758/21-A	Lab Control Sample	Total/NA	Water	537.1	184758
380-181197-B-5-A MS	Matrix Spike	Total/NA	Water	537.1	184758
380-181197-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	184758

Prep Batch: 185054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-185054/19-A	Method Blank	Total/NA	Water	533	
LCS 380-185054/21-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-185054/20-A	Lab Control Sample	Total/NA	Water	533	
380-181198-E-1-A MS	380-181198-E-1-A MS	Total/NA	Water	533	
380-181198-F-1-A MSD	380-181198-F-1-A MSD	Total/NA	Water	533	

Analysis Batch: 185198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-4	FB: Ka'amilo Wells P2	Total/NA	Water	533	185054
MBL 380-185054/19-A	Method Blank	Total/NA	Water	533	185054
LCS 380-185054/21-A	Lab Control Sample	Total/NA	Water	533	185054
MRL 380-185054/20-A	Lab Control Sample	Total/NA	Water	533	185054
380-181198-E-1-A MS	380-181198-E-1-A MS	Total/NA	Water	533	185054
380-181198-F-1-A MSD	380-181198-F-1-A MSD	Total/NA	Water	533	185054

Prep Batch: 185301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-2	Ka'amilo Wells P2	Total/NA	Water	533	
MBL 380-185301/19-A	Method Blank	Total/NA	Water	533	
LCS 380-185301/21-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-185301/20-A	Lab Control Sample	Total/NA	Water	533	
380-180718-B-6-A MS	Matrix Spike	Total/NA	Water	533	
380-180718-C-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

LCMS

Analysis Batch: 185474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-181198-2	Ka'amilo Wells P2	Total/NA	Water	533	185301
MBL 380-185301/19-A	Method Blank	Total/NA	Water	533	185301
LCS 380-185301/21-A	Lab Control Sample	Total/NA	Water	533	185301
MRL 380-185301/20-A	Lab Control Sample	Total/NA	Water	533	185301
380-180718-B-6-A MS	Matrix Spike	Total/NA	Water	533	185301
380-180718-C-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	185301

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

Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-181198-1

Date Collected: 11/03/25 12:06

Matrix: Water

Date Received: 11/05/25 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			184758	G9MN	EA POM	11/06/25 03:03
Total/NA	Analysis	537.1		1	184936	SZ9R	EA POM	11/07/25 01:59

Client Sample ID: Ka'amilo Wells P2

Lab Sample ID: 380-181198-2

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			185301	N8NE	EA POM	11/09/25 16:33
Total/NA	Analysis	533		1	185474	SZ9R	EA POM	11/10/25 16:58
Total/NA	Prep	537.1 DW			184758	G9MN	EA POM	11/06/25 03:03
Total/NA	Analysis	537.1		1	184936	SZ9R	EA POM	11/07/25 02:08

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-181198-3

Date Collected: 11/03/25 12:06

Matrix: Water

Date Received: 11/05/25 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			184758	G9MN	EA POM	11/06/25 03:03
Total/NA	Analysis	537.1		1	184936	SZ9R	EA POM	11/07/25 02:18

Client Sample ID: FB: Ka'amilo Wells P2

Lab Sample ID: 380-181198-4

Date Collected: 11/03/25 12:49

Matrix: Water

Date Received: 11/05/25 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			185054	XTD8	EA POM	11/07/25 07:50
Total/NA	Analysis	533		1	185198	Y5FM	EA POM	11/07/25 21:47
Total/NA	Prep	537.1 DW			184758	G9MN	EA POM	11/06/25 03:03
Total/NA	Analysis	537.1		1	184936	SZ9R	EA POM	11/07/25 02:28

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Laboratory: Eurofins Eaton Analytical Pomona

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26

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

Method Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100



Sample Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-181198-1
SDG: PFAS: Ka'amilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-181198-1	Ka'amilo Wells P1	Water	11/03/25 12:06	11/05/25 09:55	Hawaii
380-181198-2	Ka'amilo Wells P2	Water	11/03/25 12:49	11/05/25 09:55	Hawaii
380-181198-3	FB: Ka'amilo Wells P1	Water	11/03/25 12:06	11/05/25 09:55	Hawaii
380-181198-4	FB: Ka'amilo Wells P2	Water	11/03/25 12:49	11/05/25 09:55	Hawaii

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

Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia CA 91016
 Phone (626) 386-1100

Chain of Custody Record



Client Information		Lab PM Arada Rachelle	Carrier Tracking No(s)	COC No 380-27941-2757 2											
Client Contact kirk Iwamoto		E-Mail: Rachelle.Arada@et.eurofins.com	State of Origin	Page: Page 2 of 2											
Company City & County of Honolulu		PWSID	Job #:												
Address 630 South Beretania Street, Chemistry Lab Honolulu		Due Date Requested	Analysis Requested												
City: Honolulu		TAT Requested (days): RUSH	Preservation Codes												
State, Zip: HI 96843		Compliance Project: <input type="checkbox"/> No	A - HCL B - NaOH C - Zn-Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:												
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)												
Email: kiwamoto@hbws.org		WO #:	Total Number of Containers												
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111	X												
Site:		SSOW#:	Special Instructions/Note												
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Field MS/MSD (Yes or No)	Subcontract 625 PAH Physals LL (EAL) + TICs	80159_GRO_LL - (MOD) GRO	80159_DRO_LL_CS HNL Ranges C10-C24/C24-C38/C8-C18	525.2_PREC - (MOD) 525plus PLUS TICs	537.1_DW_PREC - 537.1 Full List	533 - All Analytes			
Ka'amilo Wells P1	3-Nov-2025	206 G	Water	Water	X	X									
Ka'amilo Wells P2	3-Nov-2025	1249 G	Water	Water	X	X									
FB: Ka'amilo Wells P1	3-Nov-2025	1206	Water	Water											
FB: Ka'amilo Wells P2	3-Nov-2025	1249	Water	Water											
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological															
Deliverable Requested I II III IV Other (specify)															
Empty Kit Relinquished by:															
Relinquished by:															
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No															
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months															
Special Instructions/QC Requirements.															
Method of Shipment: FedEx 885757328033															
Received by: [Signature] Date/Time: 11/5/25 9:55 Company: HBWS															
Received by: [Signature] Date/Time: [Blank] Company: [Blank]															
Received by: [Signature] Date/Time: [Blank] Company: [Blank]															
Cooler Temperature(s) °C and Other Remarks: (B/A) 2.7 + 0.2.7 961-frozen															



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-181198-1
SDG Number: PFAS: Ka'amilo Wells P1/P2

Login Number: 181198

List Number: 1

Creator: Hernandez, Orlando

List Source: Eurofins Eaton Analytical 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").	N/A	
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	

