

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
PFAS: Ka'amilo Wells P2

JOB NUMBER

380-239019-1

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



Authorized for release by
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Definitions/Glossary

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Qualifiers

LCMS

Qualifier	Qualifier Description
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: 380-239019-1

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Job Narrative 380-239019-1

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 9/30/2026 9:21 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 2.3°C.

PFAS

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 P2 (331-600-WL085) (380-239019-1). (XWB4)

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: RED-HILL

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.0		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	4.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.1		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.3		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

No Detections.

Client Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-1

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorobutanesulfonic acid (PFBS)	2.8		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorohexanesulfonic acid (PFHxS)	3.5		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorohexanoic acid (PFHxA)	3.7		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorooctanesulfonic acid (PFOS)	5.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoropentanoic acid (PFPeA)	4.3		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 12:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C6 PFDA	109		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C5 PFHxA	103		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C4 PFHpA	105		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C8 PFOA	109		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C9 PFNA	107		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C7 PFUnA	107		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C2 PFDoA	108		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C4 PFBA	108		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C5 PFPeA	110		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C3 PFBS	103		50 - 200	09/30/26 17:36	10/01/26 12:49	1

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Client Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-1

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	106		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C8 PFOS	101		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C2-4:2-FTS	107		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C2-6:2-FTS	105		50 - 200	09/30/26 17:36	10/01/26 12:49	1
13C2-8:2-FTS	108		50 - 200	09/30/26 17:36	10/01/26 12:49	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorooctanesulfonic acid (PFOS)	5.1		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorohexanoic acid (PFHxA)	4.4		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorooctanoic acid (PFOA)	4.3		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorohexanesulfonic acid (PFHxS)	3.8		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	104		70 - 130	10/01/26 03:18	10/02/26 02:03	1
13C2 PFHxA	103		70 - 130	10/01/26 03:18	10/02/26 02:03	1
13C2 PFDA	107		70 - 130	10/01/26 03:18	10/02/26 02:03	1
13C3-GenX	107		70 - 130	10/01/26 03:18	10/02/26 02:03	1

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1

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Client Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/30/26 17:36	10/01/26 15:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C6 PFDA	102		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C5 PFHxA	100		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C4 PFHpA	103		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C8 PFOA	101		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C9 PFNA	102		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C7 PFUnA	99		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C2 PFDoA	97		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C4 PFBA	107		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C5 PFPeA	102		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C3 PFBS	102		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C3 PFHxS	107		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C8 PFOS	105		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C2-4:2-FTS	98		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C2-6:2-FTS	95		50 - 200	09/30/26 17:36	10/01/26 15:23	1
13C2-8:2-FTS	98		50 - 200	09/30/26 17:36	10/01/26 15:23	1

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Client Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/01/26 03:18	10/02/26 02:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	94		70 - 130			10/01/26 03:18	10/02/26 02:12	1
13C2 PFHxA	96		70 - 130			10/01/26 03:18	10/02/26 02:12	1
13C2 PFDA	106		70 - 130			10/01/26 03:18	10/02/26 02:12	1
13C3-GenX	89		70 - 130			10/01/26 03:18	10/02/26 02:12	1

Action Limit Summary

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-1

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	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)	5.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.1		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.3		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.8		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

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)	<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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Surrogate Summary

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-238942-B-1-A MS	Matrix Spike	104	107	113	102
380-238942-C-1-A MSD	Matrix Spike Duplicate	103	102	105	99
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	104	103	107	107
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	94	96	106	89
LCS 380-255750/22-A	Lab Control Sample	98	103	110	93
MBL 380-255750/20-A	Method Blank	95	97	108	91
MRL 380-255750/21-A	Lab Control Sample	93	94	104	85

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: 380-239019-1
SDG: PFAS: Ka'amilo Wells 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)
380-239019-1	Ka'amilo Wells P2 (331-600-WL-	101	109	103	105	109	107	107	108
380-239019-1 MS	Ka'amilo Wells P2 (331-600-WL-085)	103	107	100	104	104	106	105	104
380-239019-1 MSD	Ka'amilo Wells P2 (331-600-WL-085)	100	104	97	102	103	103	102	105
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	97	102	100	103	101	102	99	97
LCS 380-255689/22-A	Lab Control Sample	103	104	106	105	105	106	108	108
MBL 380-255689/20-A	Method Blank	97	107	101	106	106	107	104	109
MRL 380-255689/21-A	Lab Control Sample	96	105	100	102	105	106	105	105

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)
380-239019-1	Ka'amilo Wells P2 (331-600-WL-	108	110	103	106	101	107	105	108
380-239019-1 MS	Ka'amilo Wells P2 (331-600-WL-085)	108	108	108	109	107	112	104	107
380-239019-1 MSD	Ka'amilo Wells P2 (331-600-WL-085)	105	109	100	101	101	106	99	99
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	107	102	102	107	105	98	95	98
LCS 380-255689/22-A	Lab Control Sample	108	105	104	106	105	106	105	104
MBL 380-255689/20-A	Method Blank	108	107	105	107	106	110	106	107
MRL 380-255689/21-A	Lab Control Sample	107	103	108	106	108	105	104	109

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: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: MBL 380-255689/20-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255689

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.24		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0	ng/L		09/30/26 17:36	10/01/26 12:20	1
Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C6 PFDA	107		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C5 PFHxA	101		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C4 PFHpA	106		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C8 PFOA	106		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C9 PFNA	107		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C7 PFUnA	104		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C2 PFDoA	109		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C4 PFBA	108		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C5 PFPeA	107		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C3 PFBS	105		50 - 200			09/30/26 17:36	10/01/26 12:20	1
13C3 PFHxS	107		50 - 200			09/30/26 17:36	10/01/26 12:20	1

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: MBL 380-255689/20-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255689

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	09/30/26 17:36	10/01/26 12:20	1
13C2-4:2-FTS	110		50 - 200	09/30/26 17:36	10/01/26 12:20	1
13C2-6:2-FTS	106		50 - 200	09/30/26 17:36	10/01/26 12:20	1
13C2-8:2-FTS	107		50 - 200	09/30/26 17:36	10/01/26 12:20	1

Lab Sample ID: LCS 380-255689/22-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	58.9	54.7		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	58.9	57.2		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	58.9	58.4		ng/L		99	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	58.9	56.4		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	58.9	58.0		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	58.9	58.2		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDaA)	58.9	58.1		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	58.9	57.9		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	58.9	57.1		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	58.9	55.8		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	58.9	58.6		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	58.9	57.8		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	58.9	59.8		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	58.9	55.6		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	58.9	58.5		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	58.9	59.4		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	58.9	55.0		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	58.9	58.9		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	58.9	60.6		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	58.9	57.2		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	58.9	56.6		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	58.9	57.6		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	58.9	61.0		ng/L		104	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	58.9	57.0		ng/L		97	70 - 130

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: LCS 380-255689/22-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	58.9	56.0		ng/L		95	70 - 130
		LCS	LCS				
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	103		50 - 200				
13C6 PFDA	104		50 - 200				
13C5 PFHxA	106		50 - 200				
13C4 PFHpA	105		50 - 200				
13C8 PFOA	105		50 - 200				
13C9 PFNA	106		50 - 200				
13C7 PFUnA	108		50 - 200				
13C2 PFDoA	108		50 - 200				
13C4 PFBA	108		50 - 200				
13C5 PFPeA	105		50 - 200				
13C3 PFBS	104		50 - 200				
13C3 PFHxS	106		50 - 200				
13C8 PFOS	105		50 - 200				
13C2-4:2-FTS	106		50 - 200				
13C2-6:2-FTS	105		50 - 200				
13C2-8:2-FTS	104		50 - 200				

Lab Sample ID: MRL 380-255689/21-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	2.07	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.97	2.16	J	ng/L		110	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.97	2.13	J	ng/L		108	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.97	2.21	J	ng/L		112	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.97	2.12	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	1.97	2.18	J	ng/L		111	50 - 150
Perfluorododecanoic acid (PFDoA)	1.97	2.13	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.97	2.16	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.97	2.15	J	ng/L		109	50 - 150
Perfluorohexanoic acid (PFHxA)	1.97	2.05	J	ng/L		104	50 - 150
Perfluorononanoic acid (PFNA)	1.97	2.11	J	ng/L		107	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.97	2.13	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	1.97	2.07	J	ng/L		105	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.97	2.07	J	ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	1.97	2.19	J	ng/L		111	50 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: MRL 380-255689/21-A

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.97	2.21	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.97	2.13	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.97	2.40	J	ng/L		122	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.97	2.30	J	ng/L		117	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.97	2.03	J	ng/L		103	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.97	2.05	J	ng/L		104	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.97	2.16	J	ng/L		110	50 - 150
Perfluoropentanoic acid (PFPeA)	1.97	2.25	J	ng/L		114	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.97	2.07	J	ng/L		105	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.97	2.00	J	ng/L		102	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	105		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	103		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	106		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	109		50 - 200

Lab Sample ID: 380-239019-1 MS

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Prep Type: Total/NA

Prep Batch: 255689

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		59.1	57.0		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.1	57.4		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.1	60.0		ng/L		102	70 - 130

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: 380-239019-1 MS

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Prep Type: Total/NA

Prep Batch: 255689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		59.1	55.1		ng/L		93	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	2.8		59.1	60.2		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		59.1	56.3		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		59.1	57.6		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		59.1	58.1		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.5		59.1	59.5		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	3.7		59.1	59.8		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		59.1	57.2		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	5.0		59.1	61.0		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	3.8		59.1	60.7		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		59.1	56.8		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		59.1	58.5		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.1	59.3		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.1	52.0		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.1	59.5		ng/L		101	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		59.1	64.4		ng/L		109	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		59.1	59.9		ng/L		101	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.1	57.4		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.1	59.9		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	4.3		59.1	64.9		ng/L		103	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.1	57.5		ng/L		97	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.1	56.1		ng/L		94	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	103		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	104		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	108		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	107		50 - 200

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Lab Sample ID: 380-239019-1 MS

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Prep Type: Total/NA

Prep Batch: 255689

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	107		50 - 200

Lab Sample ID: 380-239019-1 MSD

Matrix: Water

Analysis Batch: 255809

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Prep Type: Total/NA

Prep Batch: 255689

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		59.1	58.9		ng/L		100	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		59.1	59.1		ng/L		100	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.1	57.4		ng/L		97	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.1	57.2		ng/L		97	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	2.8		59.1	63.5		ng/L		103	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		59.1	59.8		ng/L		101	70 - 130	6	30
Perfluorododecanoic acid (PFDaA)	<2.0		59.1	58.1		ng/L		98	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		59.1	60.6		ng/L		100	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	3.5		59.1	61.6		ng/L		98	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	3.7		59.1	64.5		ng/L		103	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		59.1	58.4		ng/L		99	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	5.0		59.1	63.6		ng/L		99	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	3.8		59.1	62.5		ng/L		99	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		59.1	58.3		ng/L		99	70 - 130	3	30
Perfluorobutanoic acid (PFBA)	<2.0		59.1	61.9		ng/L		102	70 - 130	6	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.1	62.5		ng/L		106	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.1	54.7		ng/L		93	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.1	61.0		ng/L		103	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.1	62.8		ng/L		106	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		59.1	57.7		ng/L		98	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.1	56.0		ng/L		95	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.1	57.9		ng/L		98	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	4.3		59.1	63.6		ng/L		101	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.1	60.7		ng/L		103	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.1	58.9		ng/L		99	70 - 130	5	30

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	100		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	97		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	105		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	100		50 - 200
13C3 PFHxS	101		50 - 200
13C8 PFOS	101		50 - 200
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	99		50 - 200

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Lab Sample ID: MBL 380-255750/20-A
Matrix: Water
Analysis Batch: 255858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255750

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.41		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Perfluorotridecanoic acid (PFTrDA)	<0.35		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		10/01/26 03:18	10/01/26 22:23	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	95		70 - 130			10/01/26 03:18	10/01/26 22:23	1
13C2 PFHxA	97		70 - 130			10/01/26 03:18	10/01/26 22:23	1
13C2 PFDA	108		70 - 130			10/01/26 03:18	10/01/26 22:23	1

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MBL 380-255750/20-A

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255750

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	91		70 - 130	10/01/26 03:18	10/01/26 22:23	1

Lab Sample ID: LCS 380-255750/22-A

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	24.6	21.8		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	24.6	24.3		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	24.6	25.3		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.6	23.7		ng/L		97	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	24.6	22.4		ng/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	24.6	23.5		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	24.6	24.9		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	24.6	24.7		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	24.6	26.1		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	24.6	25.5		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	24.6	24.5		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	24.6	24.6		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	24.6	26.0		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	24.6	21.8		ng/L		89	70 - 130
Perfluorotridecanoic acid (PFTrDA)	24.6	26.1		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	24.6	24.8		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	24.6	23.8		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.6	22.0		ng/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	103		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	93		70 - 130

QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-255750/21-A

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255750

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.96	1.66	J	ng/L		84	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.96	2.15	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.96	2.09	J	ng/L		106	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.96	1.92	J	ng/L		98	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.96	1.79	J	ng/L		91	50 - 150
Perfluorohexanoic acid (PFHxA)	1.96	1.95	J	ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	1.96	2.05	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	1.96	2.03	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	1.96	2.04	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.96	2.13	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.96	2.02	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.96	1.96	J	ng/L		100	50 - 150
Perfluorononanoic acid (PFNA)	1.96	2.05	J	ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTA)	1.96	1.78	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTrDA)	1.96	2.03	J	ng/L		103	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.96	2.00	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.96	1.88	J	ng/L		96	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.96	1.73	J	ng/L		88	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	93		70 - 130
13C2 PFHxA	94		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	85		70 - 130

Lab Sample ID: 380-238942-B-1-A MS

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255750

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		24.6	24.8		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	25.2		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	26.7		ng/L		108	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	25.6		ng/L		104	70 - 130

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QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: 380-238942-B-1-A MS

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255750

Table 1: Perfluorinated Acid Data									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	24.7		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	27.7		ng/L		112	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	25.7		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		24.6	27.0		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		24.6	26.4		ng/L		107	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	24.5		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	24.8		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	26.5		ng/L		108	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		24.6	27.5		ng/L		112	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	20.6		ng/L		84	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.6	25.8		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	24.5		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	22.0		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	25.8		ng/L		105	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
d5-NEtFOSAA	104		70 - 130						
13C2 PFHxA	107		70 - 130						
13C2 PFDA	113		70 - 130						
13C3-GenX	102		70 - 130						

Lab Sample ID: 380-238942-C-1-A MSD

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 255750

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		24.6	25.2		ng/L		103	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		24.6	26.3		ng/L		105	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		24.6	26.9		ng/L		109	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.6	26.3		ng/L		107	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		24.6	27.0		ng/L		110	70 - 130	9	30
Perfluorohexanoic acid (PFHxA)	<2.0		24.6	26.7		ng/L		109	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		24.6	25.4		ng/L		103	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		24.6	27.4		ng/L		110	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		24.6	27.6		ng/L		112	70 - 130	5	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: 380-238942-C-1-A MSD

Matrix: Water

Analysis Batch: 255858

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 255750

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		24.6	25.5		ng/L		104	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.6	26.2		ng/L		107	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<2.0		24.6	26.6		ng/L		108	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		24.6	27.6		ng/L		112	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		24.6	20.6		ng/L		84	70 - 130	0	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		24.6	26.2		ng/L		106	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.6	25.2		ng/L		102	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.6	24.4		ng/L		99	70 - 130	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.6	25.3		ng/L		103	70 - 130	2	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	103		70 - 130								
13C2 PFHxA	102		70 - 130								
13C2 PFDA	105		70 - 130								
13C3-GenX	99		70 - 130								

QC Association Summary

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

LCMS

Prep Batch: 255689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	
MBL 380-255689/20-A	Method Blank	Total/NA	Water	533	
LCS 380-255689/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-255689/21-A	Lab Control Sample	Total/NA	Water	533	
380-239019-1 MS	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	
380-239019-1 MSD	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	

Prep Batch: 255750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	537.1 DW	
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	537.1 DW	
MBL 380-255750/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-255750/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-255750/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-238942-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-238942-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 255809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	255689
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	255689
MBL 380-255689/20-A	Method Blank	Total/NA	Water	533	255689
LCS 380-255689/22-A	Lab Control Sample	Total/NA	Water	533	255689
MRL 380-255689/21-A	Lab Control Sample	Total/NA	Water	533	255689
380-239019-1 MS	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	255689
380-239019-1 MSD	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	533	255689

Analysis Batch: 255858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	EPA 537.1 V2	255750
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	Total/NA	Water	EPA 537.1 V2	255750
MBL 380-255750/20-A	Method Blank	Total/NA	Water	EPA 537.1 V2	255750
LCS 380-255750/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	255750
MRL 380-255750/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	255750
380-238942-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	255750
380-238942-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	255750

Lab Chronicle

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Client Sample ID: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-1

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			255689	E2HD	EA POM	09/30/26 17:36
Total/NA	Analysis	533		1	255809	M7ML	EA POM	10/01/26 12:49
Total/NA	Prep	537.1 DW			255750	G9MN	EA POM	10/01/26 03:18
Total/NA	Analysis	EPA 537.1 V2		1	255858	UKDT	EA POM	10/02/26 02:03

Client Sample ID: FB: Ka'amilo Wells P2 (331-600-WL-085)

Lab Sample ID: 380-239019-2

Date Collected: 09/28/26 12:00

Matrix: Water

Date Received: 09/30/26 09:21

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			255689	E2HD	EA POM	09/30/26 17:36
Total/NA	Analysis	533		1	255809	M7ML	EA POM	10/01/26 15:23
Total/NA	Prep	537.1 DW			255750	G9MN	EA POM	10/01/26 03:18
Total/NA	Analysis	EPA 537.1 V2		1	255858	UKDT	EA POM	10/02/26 02:12

Laboratory References:

EA POM = Eurofins 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: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-27

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Method Summary

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

Job ID: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	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 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: 380-239019-1
SDG: PFAS: Ka'amilo Wells P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-239019-1	Ka'amilo Wells P2 (331-600-WL-085)	Water	09/28/26 12:00	09/30/26 09:21	Hawaii
380-239019-2	FB: Ka'amilo Wells P2 (331-600-WL-085)	Water	09/28/26 12:00	09/30/26 09:21	Hawaii

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- 17

Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100

Monrovia, CA 91016

Phone (626) 386-1100

Chain of Custody Record



Environment Testing
America

Client Information Client Contact: kirk iwamoto City & County of Honolulu Address: 630 South Beretania Street, Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5840 (tel) Email: kiwamoto@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site:		Sampler Lab Pmt: Lopez, Maria Phone: +1 808 748 5840 E-Mail: Maria.Lopez@eurofins.com		Carrier Tracking Note(s): State of Origin:		COC No: Page: Job #:	
Due Date Requested: TAT Requested (days): RUSH Compliance Project: Δ No PO #: C20525101 exp 05312023 WO #: 38001111 Project #: 38001111 SSOW#:		Analysis Requested Preservation Codes: 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: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - PH 4-5 Y - Trizma Z - other (specify)					
Sample Identification Ka'amilo Wells P2 (331-600-WL085)		Sample Date: 28-Sep-2026 Sample Time: 1200 Sample Type (C=Comp, G=grab): G Matrix (Inorganic, Organic, Semisolid, Other): Water		Special Instructions/Note: 633 - All Analytes 637.1 DW, PREC - 637.1 Full List 635.2 PREC - (MOD) 625plus PLUS TICA 60165_DRO_LL_CS - HNL Ranges: C10-C24/C24-C38/C3- 60165_GRO_LL - (MOD) GRO SUBCONTRACT - 625 PAH Physile LL (EAL) + TICA			
FB: Ka'amilo Wells P2 (331-600-WL085)		Sample Date: 28-Sep-2026 Sample Time: 1200 Sample Type (C=Comp, G=grab): Water		Special Instructions/Note: 633 - All Analytes 637.1 DW, PREC - 637.1 Full List 635.2 PREC - (MOD) 625plus PLUS TICA 60165_DRO_LL_CS - HNL Ranges: C10-C24/C24-C38/C3- 60165_GRO_LL - (MOD) GRO SUBCONTRACT - 625 PAH Physile LL (EAL) + TICA			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)							
Empty Kit Relinquished by Date/Time: 29-Sep-2026 1400 Company: HBWS Date/Time: 29-Sep-2026 1400 Company: HBWS Date/Time: 29-Sep-2026 1400 Company: HBWS							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return to Client ☐ Disposal By Lab ☐ Archive For Months							
Special Instructions/QC Requirements. Method of Shipment: FedEx Date/Time: 9/30/26 921 Company:							
Cooler Temperature(s) °C and Other Remarks: (631A) 2.1-H-2.2: 7-23 961-100 200 Ver: 01/16/2019							

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-239019-1

SDG Number: PFAS: Ka'amilo Wells P2

Login Number: 239019

List Number: 1

Creator: Abaya, Ashton

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).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	