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# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

RED-HILL  
PFAS: Halawa Wells P1

## JOB NUMBER

380-208386-1

# Eurofins Pomona

## Job Notes

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

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

## Compliance Statement

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

## Authorization



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# Definitions/Glossary

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

## 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: 380-208386-1

**Job ID: 380-208386-1**

**Eurofins Pomona**

## Job Narrative 380-208386-1

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 4/15/2026 10:10 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: Halawa Wells P1 (331-023-WL065) (380-208386). (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: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-208386-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	2.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.0	ng/L	1		EPA 537.1 V2	Total/NA

**Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-208386-2**

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-1**

Date Collected: 04/13/26 10:37

Matrix: Drinking Water

Date Received: 04/15/26 10:10

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.6</b>		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>3.0</b>		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.3</b>		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>3.7</b>		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 09:27	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C6 PFDA	98		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C5 PFHxA	97		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C4 PFHpA	102		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C8 PFOA	99		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C9 PFNA	103		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C7 PFUnA	101		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C2 PFDoA	99		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C4 PFBA	108		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C5 PFPeA	118		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C3 PFBS	123		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C3 PFHxS	114		50 - 200	04/19/26 16:10	04/20/26 09:27	1

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# Client Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-1**

Date Collected: 04/13/26 10:37

Matrix: Drinking Water

Date Received: 04/15/26 10:10

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	115		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C2-4:2-FTS	121		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C2-6:2-FTS	119		50 - 200	04/19/26 16:10	04/20/26 09:27	1
13C2-8:2-FTS	115		50 - 200	04/19/26 16:10	04/20/26 09:27	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		04/16/26 00:28	04/16/26 08:43	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>2.5</b>		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>2.7</b>		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>2.0</b>		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>2.6</b>		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:43	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
d5-NEtFOSAA	105		70 - 130	04/16/26 00:28	04/16/26 08:43	1		
13C2 PFHxA	95		70 - 130	04/16/26 00:28	04/16/26 08:43	1		
13C2 PFDA	115		70 - 130	04/16/26 00:28	04/16/26 08:43	1		
13C3-GenX	103		70 - 130	04/16/26 00:28	04/16/26 08:43	1		

**Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-2**

Date Collected: 04/13/26 10:37

Matrix: Water

Date Received: 04/15/26 10:10

PWSID Number: HI0000331

**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		04/19/26 16:10	04/20/26 10:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1

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# Client Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-2**

Date Collected: 04/13/26 10:37

Matrix: Water

Date Received: 04/15/26 10:10

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/19/26 16:10	04/20/26 10:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C6 PFDA	107		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C5 PFHxA	109		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C4 PFHpA	106		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C8 PFOA	108		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C9 PFNA	109		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C7 PFUnA	105		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C2 PFDoA	104		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C4 PFBA	113		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C5 PFPeA	113		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C3 PFBS	115		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C3 PFHxS	111		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C8 PFOS	112		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C2-4:2-FTS	117		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C2-6:2-FTS	119		50 - 200	04/19/26 16:10	04/20/26 10:53	1
13C2-8:2-FTS	117		50 - 200	04/19/26 16:10	04/20/26 10:53	1

# Client Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-2**

Date Collected: 04/13/26 10:37

Matrix: Water

Date Received: 04/15/26 10:10

PWSID Number: HI0000331

**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		04/16/26 00:28	04/16/26 10:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/16/26 00:28	04/16/26 10:27	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	117		70 - 130			04/16/26 00:28	04/16/26 10:27	1
13C2 PFHxA	108		70 - 130			04/16/26 00:28	04/16/26 10:27	1
13C2 PFDA	111		70 - 130			04/16/26 00:28	04/16/26 10:27	1
13C3-GenX	109		70 - 130			04/16/26 00:28	04/16/26 10:27	1

# Action Limit Summary

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-1**

**PWSID Number: HI0000331**

## 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)	2.6		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		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)	2.5		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)	2.6		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: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-2**

**PWSID Number: HI0000331**

## 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	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: 380-208386-1  
 SDG: PFAS: Halawa Wells P1

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

Matrix: Drinking 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)
380-208386-1	HALAWA WELLS P1 (331-023-V	105	95	115	103
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	100	97	107	103
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	104	93	106	100

**Surrogate Legend**

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

## 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)
380-208386-2	FB: HALAWA WELLS P1 (331-0	117	108	111	109
LCS 380-220338/21-A	Lab Control Sample	93	99	111	95
MBL 380-220338/19-A	Method Blank	117	105	118	111
MRL 380-220338/20-A	Lab Control Sample	99	94	113	93

**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: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

Matrix: Drinking 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)	PFDoA (50-200)
380-208386-1	HALAWA WELLS P1 (331-023-V	97	98	97	102	99	103	101	99
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	109	109	119	109	110	111	106	107
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	112	109	109	113	110	114	112	108

		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)
380-208386-1	HALAWA WELLS P1 (331-023-V	108	118	123	114	115	121	119	115
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	110	111	110	108	110	113	111	113
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	113	115	119	118	115	119	122	122

**Surrogate Legend**

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDoA = 13C2 PFDoA
- 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

## 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)	PFDoA (50-200)
380-208386-2	FB: HALAWA WELLS P1 (331-0	98	107	109	106	108	109	105	104
LCS 380-221109/22-A	Lab Control Sample	112	113	111	108	107	109	112	114
MBL 380-221109/20-A	Method Blank	104	107	109	112	108	109	108	107
MRL 380-221109/21-A	Lab Control Sample	99	110	106	109	106	111	110	108

		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)
380-208386-2	FB: HALAWA WELLS P1 (331-0	113	113	115	111	112	117	119	117
LCS 380-221109/22-A	Lab Control Sample	114	108	123	117	118	118	113	115
MBL 380-221109/20-A	Method Blank	117	120	119	115	115	120	110	113
MRL 380-221109/21-A	Lab Control Sample	119	125	110	114	116	117	119	114

**Surrogate Legend**

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# Isotope Dilution Summary

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

HFPODA = 13C3 HFPO-DA  
C6PFDA = 13C6 PFDA  
13C5PHA = 13C5 PFHxA  
C4PFHA = 13C4 PFHpA  
C8PFOA = 13C8 PFOA  
C9PFNA = 13C9 PFNA  
13C7PUA = 13C7 PFUnA  
PFDoA = 13C2 PFDoA  
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

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# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: MBL 380-221109/20-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		04/19/26 16:10	04/20/26 08:58	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C6 PFDA	107		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C5 PFHxA	109		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C4 PFHpA	112		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C8 PFOA	108		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C9 PFNA	109		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C7 PFUnA	108		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C2 PFDoA	107		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C4 PFBA	117		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C5 PFPeA	120		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C3 PFBS	119		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C3 PFHxS	115		50 - 200	04/19/26 16:10	04/20/26 08:58	1

Eurofins Pomona

# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: MBL 380-221109/20-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

<i>Isotope Dilution</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	%Recovery	Qualifier				
13C8 PFOS	115		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C2-4:2-FTS	120		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C2-6:2-FTS	110		50 - 200	04/19/26 16:10	04/20/26 08:58	1
13C2-8:2-FTS	113		50 - 200	04/19/26 16:10	04/20/26 08:58	1

**Lab Sample ID: LCS 380-221109/22-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

<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-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	111		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	108		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	107		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	111		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	109		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	120	109		ng/L		90	70 - 130
Perfluorododecanoic acid (PFDoA)	120	110		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	114		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	113		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	120	107		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	120	119		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	106		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	120	115		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	110		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	116		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	106		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	120		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	105		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	107		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	113		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	115		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	120	117		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	112		ng/L		93	70 - 130

# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: LCS 380-221109/22-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	109		ng/L		91	70 - 130
<b>LCS LCS</b>							
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
13C3 HFPO-DA	112		50 - 200				
13C6 PFDA	113		50 - 200				
13C5 PFHxA	111		50 - 200				
13C4 PFHpA	108		50 - 200				
13C8 PFOA	107		50 - 200				
13C9 PFNA	109		50 - 200				
13C7 PFUnA	112		50 - 200				
13C2 PFDoA	114		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	108		50 - 200				
13C3 PFBS	123		50 - 200				
13C3 PFHxS	117		50 - 200				
13C8 PFOS	118		50 - 200				
13C2-4:2-FTS	118		50 - 200				
13C2-6:2-FTS	113		50 - 200				
13C2-8:2-FTS	115		50 - 200				

**Lab Sample ID: MRL 380-221109/21-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.01	J	ng/L		101	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.20	J	ng/L		110	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.18	J	ng/L		109	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.05	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.15	J	ng/L		107	50 - 150

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# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: MRL 380-221109/21-A**  
**Matrix: Water**  
**Analysis Batch: 221280**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.20	J	ng/L		110	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.24	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.09	J	ng/L		104	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.47	J	ng/L		123	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.96	J	ng/L		98	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	99		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	106		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	119		50 - 200
13C5 PFPeA	125		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	119		50 - 200
13C2-8:2-FTS	114		50 - 200

**Lab Sample ID: 380-208386-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 221280**

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

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		60.2	59.9		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	61.4		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	56.7		ng/L		94	70 - 130

# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: 380-208386-1 MS

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 221280

Prep Batch: 221109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.2	55.1		ng/L		91	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	63.9		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	57.9		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	60.3		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	59.3		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.6		60.2	63.9		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	3.0		60.2	53.7		ng/L		84	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	60.8		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.3		60.2	59.7		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	60.8		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	60.1		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	59.6		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	59.3		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	64.5		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	64.5		ng/L		107	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	48.6		ng/L		81	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	68.2		ng/L		113	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	63.9		ng/L		106	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	58.0		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	3.7		60.2	60.8		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	59.1		ng/L		98	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	60.8		ng/L		101	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	109		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	119		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	110		50 - 200

# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: 380-208386-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 221280**

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	113		50 - 200

**Lab Sample ID: 380-208386-1 MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 221280**

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**  
**Prep Type: Total/NA**  
**Prep Batch: 221109**

<b>Analyte</b>	<b>Sample Result</b>	<b>Sample Qualifier</b>	<b>Spike Added</b>	<b>MSD Result</b>	<b>MSD Qualifier</b>	<b>Unit</b>	<b>D</b>	<b>%Rec</b>	<b>%Rec Limits</b>	<b>RPD</b>	<b>RPD Limit</b>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	58.2		ng/L		97	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	63.7		ng/L		106	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	55.9		ng/L		93	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	56.6		ng/L		94	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	61.7		ng/L		100	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	57.6		ng/L		96	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	60.8		ng/L		101	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	58.2		ng/L		95	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	2.6		60.2	59.7		ng/L		95	70 - 130	7	30
Perfluorohexanoic acid (PFHxA)	3.0		60.2	60.7		ng/L		96	70 - 130	12	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	60.9		ng/L		101	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	2.3		60.2	60.4		ng/L		96	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	61.2		ng/L		99	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	57.0		ng/L		95	70 - 130	5	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	58.8		ng/L		96	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	58.6		ng/L		97	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	61.1		ng/L		101	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	60.6		ng/L		101	70 - 130	6	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	53.9		ng/L		90	70 - 130	10	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	65.4		ng/L		109	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	62.9		ng/L		104	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	57.5		ng/L		95	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	3.7		60.2	62.8		ng/L		98	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	59.7		ng/L		99	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	58.9		ng/L		98	70 - 130	3	30

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# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

<i>Isotope Dilution</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C3 HFPO-DA	112		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	114		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	119		50 - 200
13C3 PFHxS	118		50 - 200
13C8 PFOS	115		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	122		50 - 200
13C2-8:2-FTS	122		50 - 200

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

**Lab Sample ID: MBL 380-220338/19-A**  
**Matrix: Water**  
**Analysis Batch: 220440**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 220338**

<i>Analyte</i>	<i>MBL</i>	<i>MBL</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>Result</i>	<i>Qualifier</i>						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/16/26 00:28	04/16/26 08:14	1
<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>						
d5-NEtFOSAA	117		70 - 130			04/16/26 00:28	04/16/26 08:14	1
13C2 PFHxA	105		70 - 130			04/16/26 00:28	04/16/26 08:14	1
13C2 PFDA	118		70 - 130			04/16/26 00:28	04/16/26 08:14	1

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# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: MBL 380-220338/19-A**  
**Matrix: Water**  
**Analysis Batch: 220440**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 220338**

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	111	Qualifier	70 - 130	04/16/26 00:28	04/16/26 08:14	1

**Lab Sample ID: LCS 380-220338/21-A**  
**Matrix: Water**  
**Analysis Batch: 220440**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 220338**

<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>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.0	46.8	Qualifier	ng/L	-	94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	51.2	Qualifier	ng/L	-	102	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	53.5	Qualifier	ng/L	-	107	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	49.7	Qualifier	ng/L	-	99	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	47.7	Qualifier	ng/L	-	95	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	47.2	Qualifier	ng/L	-	94	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	52.7	Qualifier	ng/L	-	105	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	49.9	Qualifier	ng/L	-	100	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	54.3	Qualifier	ng/L	-	109	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	49.3	Qualifier	ng/L	-	99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	49.3	Qualifier	ng/L	-	99	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	51.3	Qualifier	ng/L	-	103	70 - 130
Perfluorononanoic acid (PFNA)	50.0	52.7	Qualifier	ng/L	-	105	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	49.1	Qualifier	ng/L	-	98	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	56.0	Qualifier	ng/L	-	112	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	50.0	54.8	Qualifier	ng/L	-	110	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	51.0	Qualifier	ng/L	-	102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	46.7	Qualifier	ng/L	-	93	70 - 130

<i>Surrogate</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	93	Qualifier	70 - 130
13C2 PFHxA	99	Qualifier	70 - 130
13C2 PFDA	111	Qualifier	70 - 130
13C3-GenX	95	Qualifier	70 - 130

# QC Sample Results

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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

**Lab Sample ID: MRL 380-220338/20-A**  
**Matrix: Water**  
**Analysis Batch: 220440**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 220338**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.84	J	ng/L		92	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.27	J	ng/L		113	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.98	J	ng/L		99	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.19	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.11	J	ng/L		106	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.41	J	ng/L		121	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.14	J	ng/L		107	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.05	J	ng/L		103	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.82	J	ng/L		91	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	94		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	93		70 - 130

**Lab Sample ID: 380-208386-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 220440**

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**  
**Prep Type: Total/NA**  
**Prep Batch: 220338**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	50.6		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.5		50.2	57.5		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	53.4		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	55.6		ng/L		111	70 - 130

Eurofins Pomona





# QC Association Summary

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

Job ID: 380-208386-1  
 SDG: PFAS: Halawa Wells P1

## LCMS

### Prep Batch: 220338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-208386-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-208386-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	537.1 DW	
MBL 380-220338/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-220338/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-220338/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	

### Analysis Batch: 220440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-208386-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	220338
380-208386-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	EPA 537.1 V2	220338
MBL 380-220338/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	220338
LCS 380-220338/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	220338
MRL 380-220338/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	220338
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	220338
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	220338

### Prep Batch: 221109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-208386-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	
380-208386-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	
MBL 380-221109/20-A	Method Blank	Total/NA	Water	533	
LCS 380-221109/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-221109/21-A	Lab Control Sample	Total/NA	Water	533	
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	

### Analysis Batch: 221280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-208386-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	221109
380-208386-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	221109
MBL 380-221109/20-A	Method Blank	Total/NA	Water	533	221109
LCS 380-221109/22-A	Lab Control Sample	Total/NA	Water	533	221109
MRL 380-221109/21-A	Lab Control Sample	Total/NA	Water	533	221109
380-208386-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	221109
380-208386-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	221109

# Lab Chronicle

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

Job ID: 380-208386-1  
 SDG: PFAS: Halawa Wells P1

**Client Sample ID: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-1**

**Date Collected: 04/13/26 10:37**

**Matrix: Drinking Water**

**Date Received: 04/15/26 10:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			221109	N8NE	EA POM	04/19/26 16:10
Total/NA	Analysis	533		1	221280	SZ9R	EA POM	04/20/26 09:27
Total/NA	Prep	537.1 DW			220338	G9MN	EA POM	04/16/26 00:28
Total/NA	Analysis	EPA 537.1 V2		1	220440	SZ9R	EA POM	04/16/26 08:43

**Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)**

**Lab Sample ID: 380-208386-2**

**Date Collected: 04/13/26 10:37**

**Matrix: Water**

**Date Received: 04/15/26 10:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			221109	N8NE	EA POM	04/19/26 16:10
Total/NA	Analysis	533		1	221280	SZ9R	EA POM	04/20/26 10:53
Total/NA	Prep	537.1 DW			220338	G9MN	EA POM	04/16/26 00:28
Total/NA	Analysis	EPA 537.1 V2		1	220440	SZ9R	EA POM	04/16/26 10:27

**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: 380-208386-1  
SDG: PFAS: Halawa Wells P1

## Laboratory: Eurofins Pomona

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

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

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

# Method Summary

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

Job ID: 380-208386-1  
SDG: PFAS: Halawa Wells P1

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: 380-208386-1  
SDG: PFAS: Halawa Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-208386-1	HALAWA WELLS P1 (331-023-WL065)	Drinking Water	04/13/26 10:37	04/15/26 10:10	HI0000331
380-208386-2	FB: HALAWA WELLS P1 (331-023-WL065)	Water	04/13/26 10:37	04/15/26 10:10	HI0000331


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**Monrovia, CA (Suite 100)**

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

**Chain of Custody Record**



<b>Client Information</b>		Sampler bailey		Lab PM: Lopez, Maria		Carrier Tracking No(s)		COC No:			
Client Contact Kirk Iwamoto		Phone: +1 808 748 5840		E-Mail: Maria.Lopez@et.eurofinsus.com		State of Origin:		Page: Page 1 of 1			
Company: City & County of Honolulu		PWSID:		<b>Analysis Requested</b>						Job #:	
Address: 630 South Beretania Street, Chemistry Lab		Due Date Requested		Field Filtered Sample (Yes or No) <input type="checkbox"/> Perform MS/MSD (Yes or No) <input type="checkbox"/> SUBCONTRACT - 625 PAH Physals LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_DRO_LL_CS - HNL Ranges: C10-C24/C24-C36/C6-C18 525.2_PREC - (MOD) 525plus PLUS TICs 537.1_DW_PREC - 537.1 Full List 533 - All Analytes						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify) Other:	
City: Honolulu		TAT Requested (days):									
State, Zip: HI, 96843		Compliance Project: <input type="checkbox"/> No									
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023									
Email: kiwamoto@hbws.org		WO #:									
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111									
Site:		SSOW#:									
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=soil/sediment, A=air)		Special Instructions/Note:	
Halawa Wells P1 (331-023-WL065)		13-Apr-2026		1037		G		Water		Preservation Code: <input checked="" type="checkbox"/> R <input checked="" type="checkbox"/> A <input type="checkbox"/> Q <input type="checkbox"/> QA <input type="checkbox"/> Y <input type="checkbox"/> I Total Number of Containers: 3 3	
FB: Halawa Wells P1 (331-023-WL065)		13-Apr-2026		1037						1 1  380-208386 COC	
<b>Possible Hazard Identification</b>					<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>						
<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					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested I, II, III, IV, Other (specify)					Special Instructions/QC Requirements						
Empty Kit Relinquished by			Date		Time		Method of Shipment: 8706 6414 2726				
Relinquished by			Date/Time: 4/20/2026		Company: HBWS		Received by: [Signature]		Date/Time: 4/15/26 10-10		Company: [Signature]
Relinquished by			Date/Time:		Company:		Received by:		Date/Time:		Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.			Cooler Temperature(s) °C and Other Remarks: 6.1/23 = 23 (see)						

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# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-208386-1  
SDG Number: PFAS: Halawa Wells P1

**Login Number: 208386**  
**List Number: 1**  
**Creator: Ngo, Theodore**

**List Source: Eurofins Pomona**

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